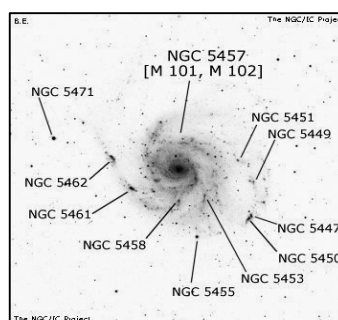
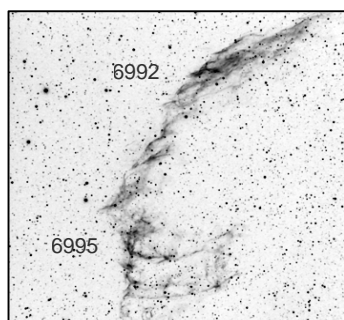
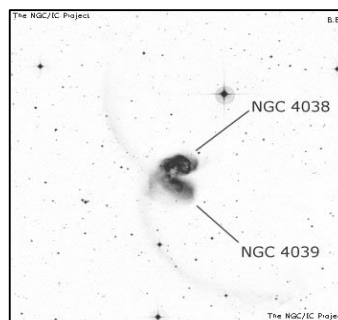
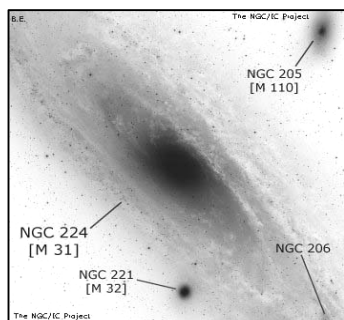


# DEEP SKY OBJECTS ILLUSTRATED OBSERVING GUIDE

## List of 7000 Deepsky Objects From SAC Catalog

## List of Select 650 Deepsky Objects with Images

(declination limit: -60 degrees south)



## Notes

|  |   |
|--|---|
| <b>NAME:</b> object common name          | <b>RA:</b> right ascension coordinate                                     |
| <b>OTHER:</b> object other name          | <b>DEC:</b> declination coordinate  |
| <b>TYPE:</b> object type                 | <b>U2K:</b> page number in Uranometria 2000 1st edition                   |
| <b>CON:</b> constellation                | <b>Class:</b> object class (see explanations)                             |
| <b>MAG:</b> object magnitude             | <b>ns:</b> number of stars in open cluster                                |
| <b>SB:</b> object surface brightness     | <b>bs:</b> brightest star in cluster, or central star in planetary nebula |
| <b>SIZE:</b> object maximum angular size | <b>SAC NOTES:</b> notes taken from SAC database                           |

## SAC Class

### **open clusters classes:**

|   |                          |                                   |
|---|--------------------------|-----------------------------------|
| I: Detached, strong concentration toward the center | 1: Small range           | p: Poor (<50 stars)               |
| II: Detached, weak concentration toward the center  | 2: Moderate range        | m: Moderately rich (50-100 stars) |
| III: Detached, no concentration toward the center   | 3: Large range           | r: Rich (>100 stars)              |
| IV: Not well detached from surrounding star field   | n: nebulousity in center |                                   |

### **globular clusters classes:**

1: least concentrated ... 12: most concentrated

### **planetary nebulae classes**

- 1: Stellar
- 2: Smooth disk (a, brighter center; b, uniform brightness; c, traces of ring structure)
- 3: Irregular disk (a, very irregular brightness distribution; b, traces of ring structure)
- 4: Ring structure
- 5: Irregular form similar to diffuse nebula
- 6: Anomalous form, no regular structure

### **galaxy classes**

- E: elliptical (E0 is roundest to E7 is flattest) ('d' is dwarf, 'c' is supergiant, 'D' has diffuse halo)  
S: Spiral ('a' has tightly wound arms, 'b' has moderately wound arms and 'c' has loosely wound arms)  
SB: Spiral with central bar  
Ir: Irregular

## General Notes for main DSO list

Objects up to magnitude 14m plotted, also objects lacking magnitude.

**All Objects plotted are from SAC 7.7 database. Data courtesy of the Saguaro Astronomy Club ([saguaroastro.org](http://saguaroastro.org))**

**Important note: Objects with Declination lower than -60° (most southern objects) weren't plotted**

"NAME" field in **bold** means: object's image is present in best 666 list

Object's common names / Messier numbers are also marked in bold

## General Notes for 650 DSO list

Objects from the following catalogs plotted

- all Herschell 400 objects,
- all Messier objects
- all Caldwell objects
- all SAC's best of NGC objects
- some of Orion's Deep Map 600 objects
- various objects of interest selected by author (around 100)

Objects with Declination lower than -60° weren't plotted

"OTHER" or "NOTES" fields in **bold** means: object's common name.

## Info and copyright notices for 650 DSO images

Most of the Images were taken from NGC/IC Project database ([www.ngcic.org](http://www.ngcic.org))

Negative DSS images were used (Data courtesy of the Digital Sky Survey, [www.archive.stsci.edu/dss](http://www.archive.stsci.edu/dss))

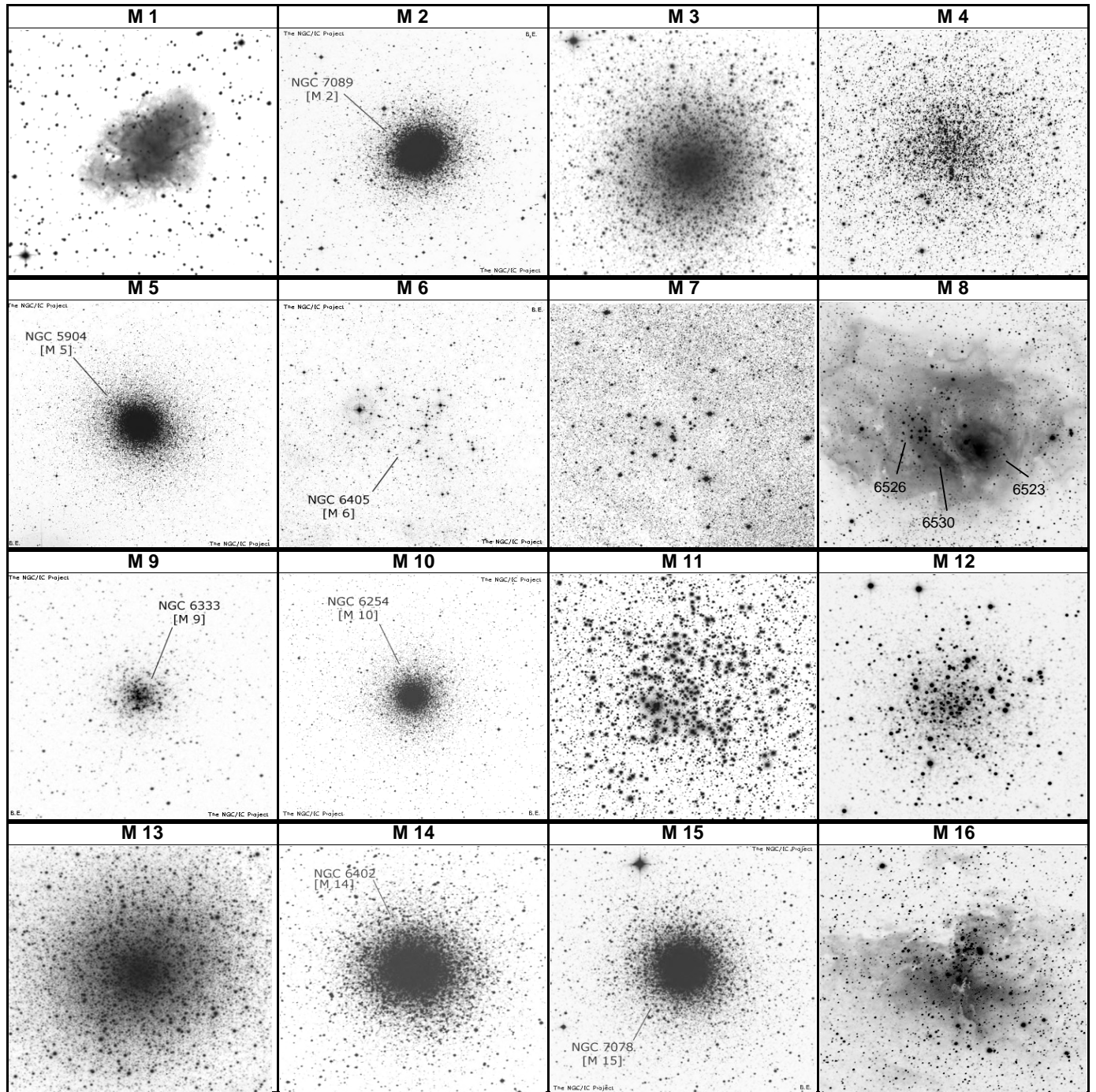
Most of the images were adjusted for brightness / contrast, to prevent saturation during printing

Some of the objects were taken from different web sites: [www.hubblesite.org](http://www.hubblesite.org), [www.ngc7000.org](http://www.ngc7000.org) (Copyright Ole Nielsen),

[www.noao.edu](http://www.noao.edu) (copyright NOAO/AURA/NSF), [www.sky-map.org](http://www.sky-map.org), [www.astrofx.com](http://www.astrofx.com), [astrosurf.com](http://astrosurf.com) (Copyright AstroSurf )

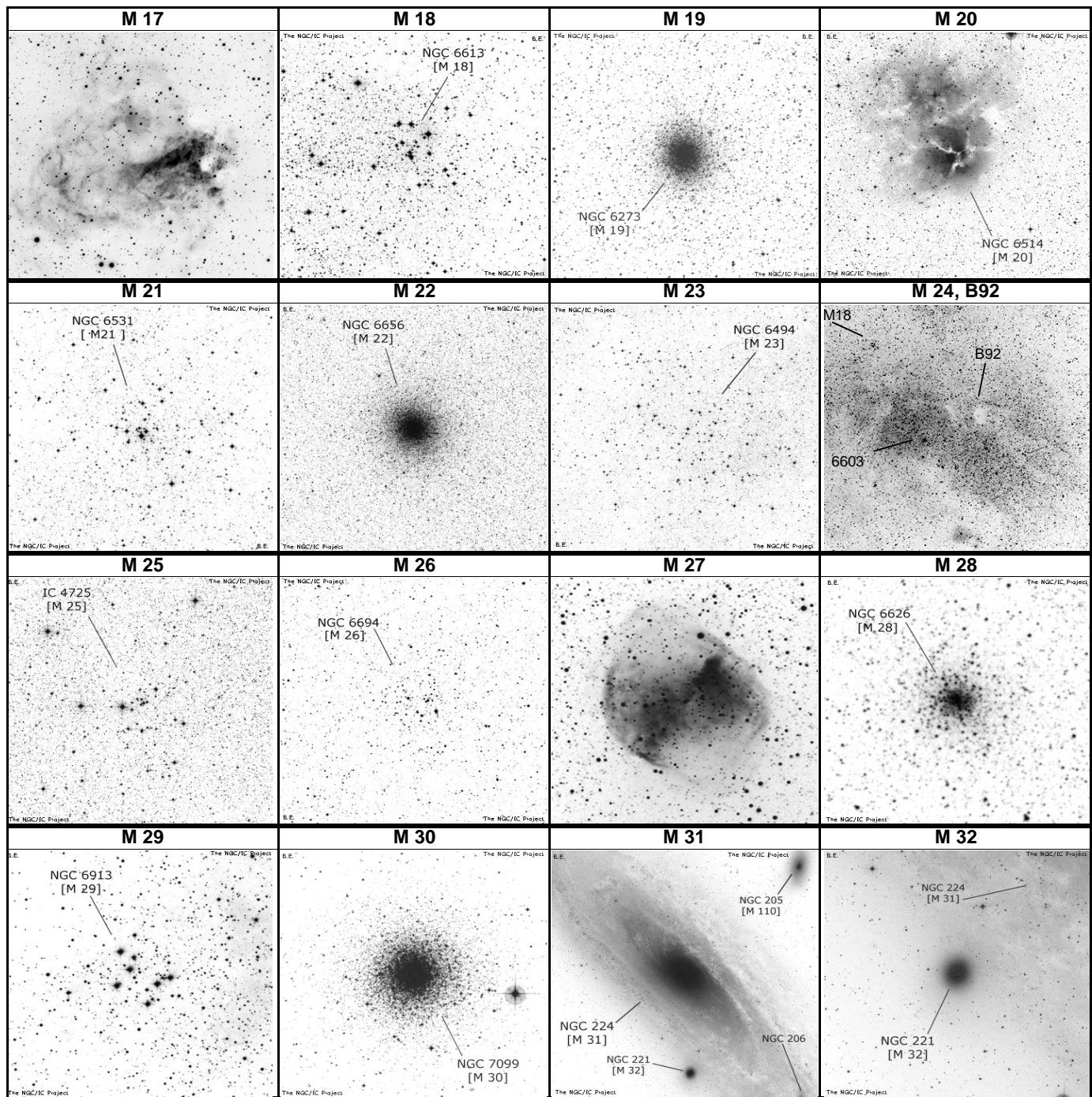
Each page contains 16 thumbnail images, with details for each objects at bottom of the page taken from SAC 7.7 database

Overall around 650 objects are plotted. Objects which appear in images are marked bold in main DSO list.



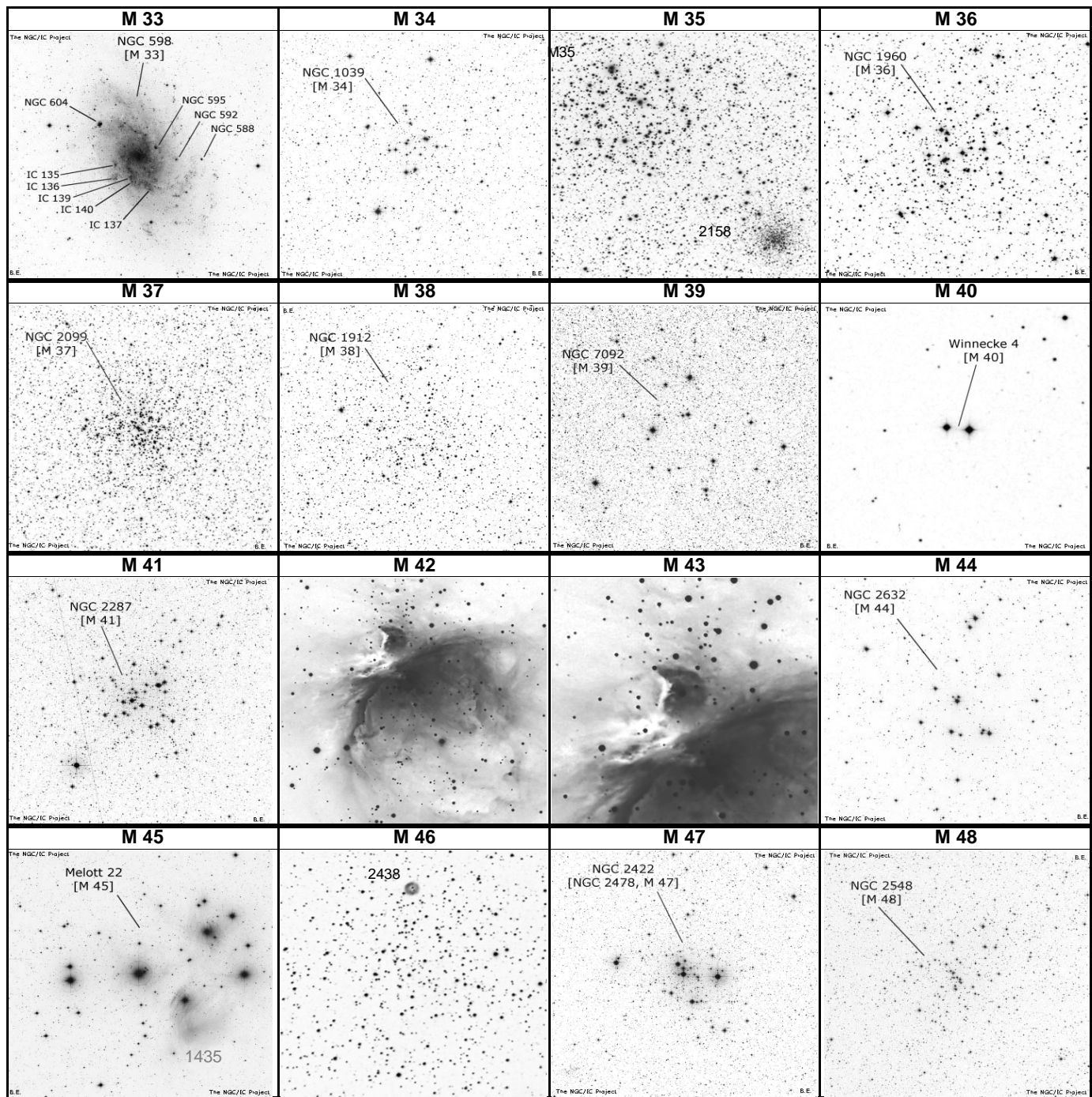
|      |          |         |     |     |      |       |         |        |     |          |     |    |      | SAC NOTES   |  |
|------|----------|---------|-----|-----|------|-------|---------|--------|-----|----------|-----|----|------|---|--|
| NAME | OTHER    | TYPE    | CON | MAG | S.B. | SIZE  | RA      | DEC    | U2K | Class    | ns  | bs | Dist |   |  |
| M 1  | NGC 1952 | SN Rem  | TAU | 8.4 | 11   | 8'    | 05 34.5 | +22 01 | 135 |          |     |    | 6.3k | <b>Crab Nebula</b> ; filaments;pulsar 16m;3C144           |  |
| M 2  | NGC 7089 | Glob CL | AQR | 6.5 | 11   | 11.7' | 21 33.5 | -00 49 | 255 | II       |     |    | 36k  | Lord Rosse-Dark area near core;* mags 13...               |  |
| M 3  | NGC 5272 | Glob CL | CVN | 6.3 | 11   | 18.6' | 13 42.2 | +28 23 | 110 | VI       |     |    | 31k  | Lord Rosse-sev dark marks within 5' of center             |  |
| M 4  | NGC 8121 | Glob CL | SCO | 5.4 | 12   | 26.3' | 18 23.8 | -26 32 | 336 | IX       |     |    | 7k   | Look for central bar structure                            |  |
| M 5  | NGC 5904 | Glob CL | SER | 5.7 | 11   | 19.9' | 15 18.6 | +02 05 | 244 | V        |     |    | 23k  | st mags 11...;superb cluster                              |  |
| M 6  | NGC 6405 | Opn CL  | SCO | 4.2 | 10   | 20'   | 17 40.3 | -32 15 | 377 | III 2 p  | 80  | 6  | 2k   | <b>Butterfly cluster</b> ;51 members to 10.5 mag incl var |  |
| M 7  | NGC 6475 | Opn CL  | SCO | 3.3 | 12   | 80'   | 17 53.9 | -34 48 | 377 | II 2 r   | 80  | 6  | 1k   | 80 members to 10th mag;Fine naked eye cluster             |  |
| M 8  | NGC 6523 | CL+Neb  | SGR | 5   | 13   | 45'   | 18 03.7 | -24 23 | 339 | E        |     |    | 6.5k | <b>Lagoon Nebula</b> ;NGC 6530 invl;dark lane crosses     |  |
| M 9  | NGC 6333 | Glob CL | OPH | 7.9 | 11   | 5.5'  | 17 19.2 | -18 31 | 337 | VIII     |     |    | 26k  | Dark neb B64 prominent to west                            |  |
| M 10 | NGC 6254 | Glob CL | OPH | 6.6 | 12   | 12.2' | 16 57.1 | -04 06 | 247 | VII      |     |    | 13k  | Lord Rosse reported dark lane in cluster                  |  |
| M 11 | NGC 6705 | Opn CL  | SCT | 5.8 | 9    | 14'   | 18 51.1 | -06 16 | 295 | I 2 r    | 500 | 8  | 6k   | 500 stars to 14th mag; <b>Wild duck cluster</b>           |  |
| M 12 | NGC 6218 | Glob CL | OPH | 6.1 | 12   | 14.5' | 16 47.2 | -01 57 | 246 | IX       |     |    | 18k  | Somewhat loose structure                                  |  |
| M 13 | NGC 6205 | Glob CL | HER | 5.8 | 12   | 23.2' | 16 41.7 | +36 28 | 114 | V        |     |    | 22k  | <b>Hercules cluster</b> ;Messier said nebula, no stars    |  |
| M 14 | NGC 6402 | Glob CL | OPH | 7.6 | 12   | 6.7'  | 17 37.6 | -03 15 | 248 | VIII     |     |    | 27k  | Many vF stars 14...                                       |  |
| M 15 | NGC 7078 | Glob CL | PEG | 6.4 | 11   | 12.3' | 21 30.0 | +12 10 | 210 | IV       |     |    | 33k  | Stars mags 13...  |  |
| M 16 | NGC 6611 | CL+Neb  | SER | 6   | 12   | 7'    | 18 18.8 | -13 47 | 294 | II 3 m n | 60  | 11 | 7k   | <b>Star Queen</b> or <b>Eagle Nebula</b> ;stars mags 8... |  |





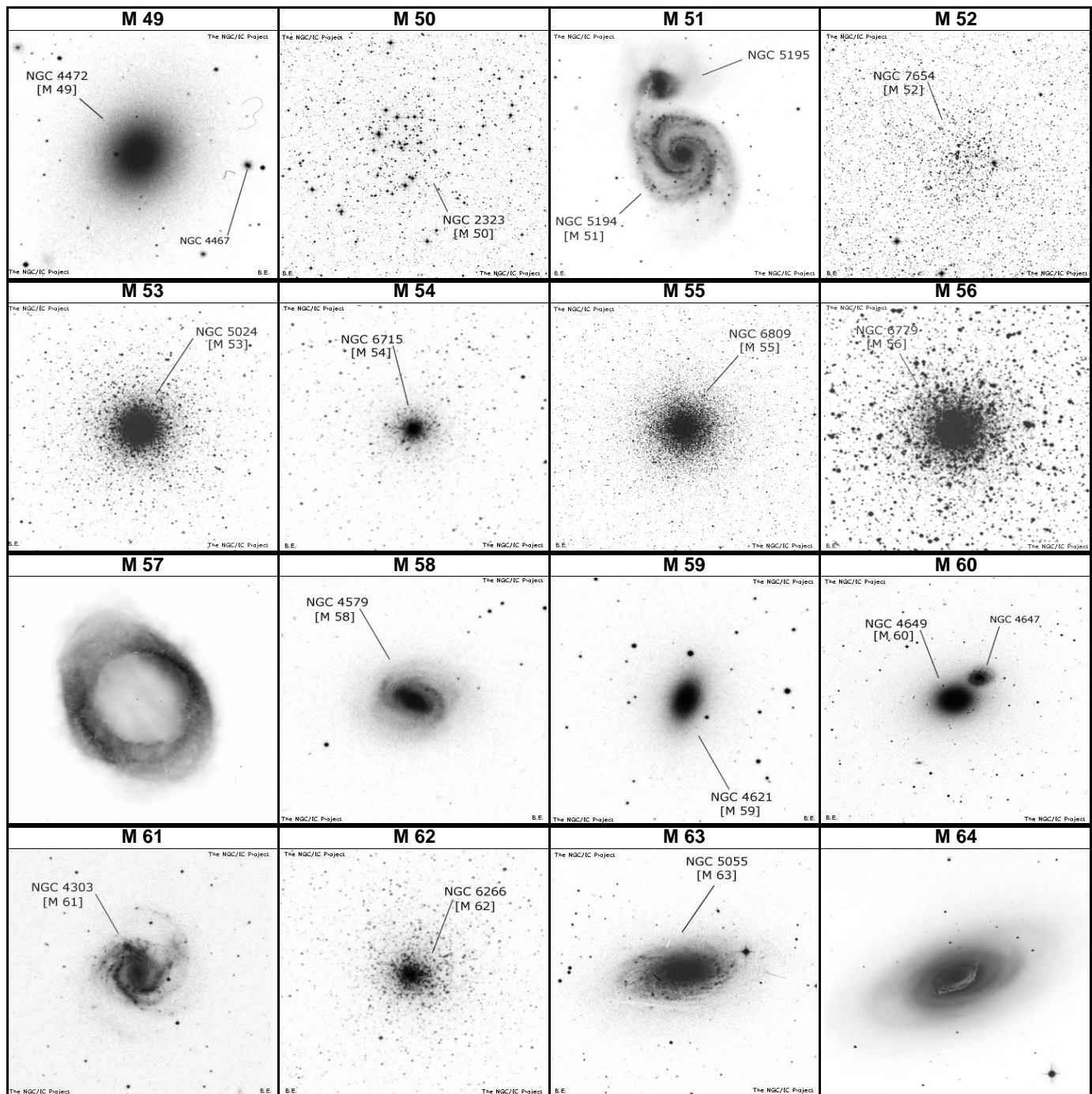
| NAME | OTHER    | TYPE    | CON | MAG | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns  | bs | Dist | SAC NOTES  |
|------|----------|---------|-----|-----|------|------|---------|--------|-----|-----------|-----|----|------|--|
| M 17 | NGC 6618 | CL+Neb  | SGR | 6   | 13   | 11'  | 18 20.8 | -18 11 | 294 | III 3 m r | 40  | 9  | 5k   | <b>Omega nebula; Swan Nebula</b> ; many F outer loops        |
| M 18 | NGC 6613 | Opn CL  | SGR | 6.9 | 12   | 9'   | 18 19.9 | -17 08 | 339 | II 3 p n  | 20  | 9  | 6k   | 12 * mag 9-10; 1 deg S of M17                                |
| M 19 | NGC 6273 | Glob CL | OPH | 6.8 | 11   | 5.3' | 17 02.6 | -26 16 | 337 | VIII      |     |    | 27k  | One of the most oblate globulars                             |
| M 20 | NGC 6514 | CL+Neb  | SGR | 6.3 | 13   | 28'  | 18 02.7 | -22 58 | 339 | E+*       | 67  | 6  | 2.2k | <b>Trifid nebula</b> ; sev dark lanes; H IV 41 & V 10; D* HN |
| M 21 | NGC 6531 | Opn CL  | SGR | 5.9 | 11   | 13'  | 18 04.2 | -22 29 | 339 | I 3 m     | 70  | 7  | 3k   | In Sgr OB1; 36 members to 12th mag                           |
| M 22 | NGC 6656 | Glob CL | SGR | 5.2 | 11   | 24'  | 18 36.4 | -23 54 | 340 | VII       |     |    | 10k  | Stars mags 11...; one of finest globs                        |
| M 23 | NGC 6494 | Opn CL  | SGR | 5.5 | 13   | 27'  | 17 57.1 | -18 59 | 338 | III 1 m   | 150 | 9  | 4.5k | 100 members to 13th mag                                      |
| M 24 | IC 4715  | Opn CL  | SGR | 3.1 | 4.3  | 95'  | 18 26.6 | -18 23 | 339 |           |     |    | 10k  | <b>Small Sagittarius Star Cloud</b> ; dark neb , 6603 inv    |
| M 25 | IC 4725  | Opn CL  | SGR | 4.6 | 12   | 29'  | 18 31.8 | -19 07 | 340 | I 2 p     | 30  | 7  | 3k   | Contains U Sgr; Stars mags 6...10                            |
| M 26 | NGC 6694 | Opn CL  | SCT | 8   | 12   | 15'  | 18 45.2 | -09 24 | 295 | I 1 m     | 30  | 10 | 5k   | Finderscope will show why Messier included it; 70*, 1        |
| M 27 | NGC 6853 | Pln Neb | VUL | 7.3 | 11.2 | 480" | 18 59.8 | +22 43 | 162 | 3(2)      |     | 14 | 1.3k | <b>dumbbell neb.</b> PK60-3.1; Lord Rosse drew 18* inv       |
| M 28 | NGC 6626 | Glob CL | SGR | 6.9 | 11   | 15'  | 18 24.5 | -24 52 | 340 | IV        |     |    | 18k  | 45' NW from Lambda Sgr; * mags 14...                         |
| M 29 | NGC 6913 | Opn CL  | CYG | 6.6 | 11   | 7'   | 20 23.9 | +38 32 | 120 | III 3 p n | 50  | 9  | 7.2k | About 20 stars mags 8...                                     |
| M 30 | NGC 7099 | Glob CL | CAP | 6.9 | 11   | 8.9' | 21 40.4 | -23 11 | 346 | V         |     |    | 25k  | Wm. Herschel saw very elliptical shape                       |
| M 31 | NGC 224  | Galaxy  | AND | 3.4 | 13.5 | 189' | 00 42.7 | +41 16 | 60  | Sb        |     |    | 2.6m | <b>Andromeda Galaxy</b> ; Local Group; nearest spiral        |
| M 32 | NGC 221  | Galaxy  | AND | 8.1 | 12.4 | 8.5' | 00 42.7 | +40 52 | 60  | E2        |     |    | 2.6m | Companion to M31; Member of Local Group                      |





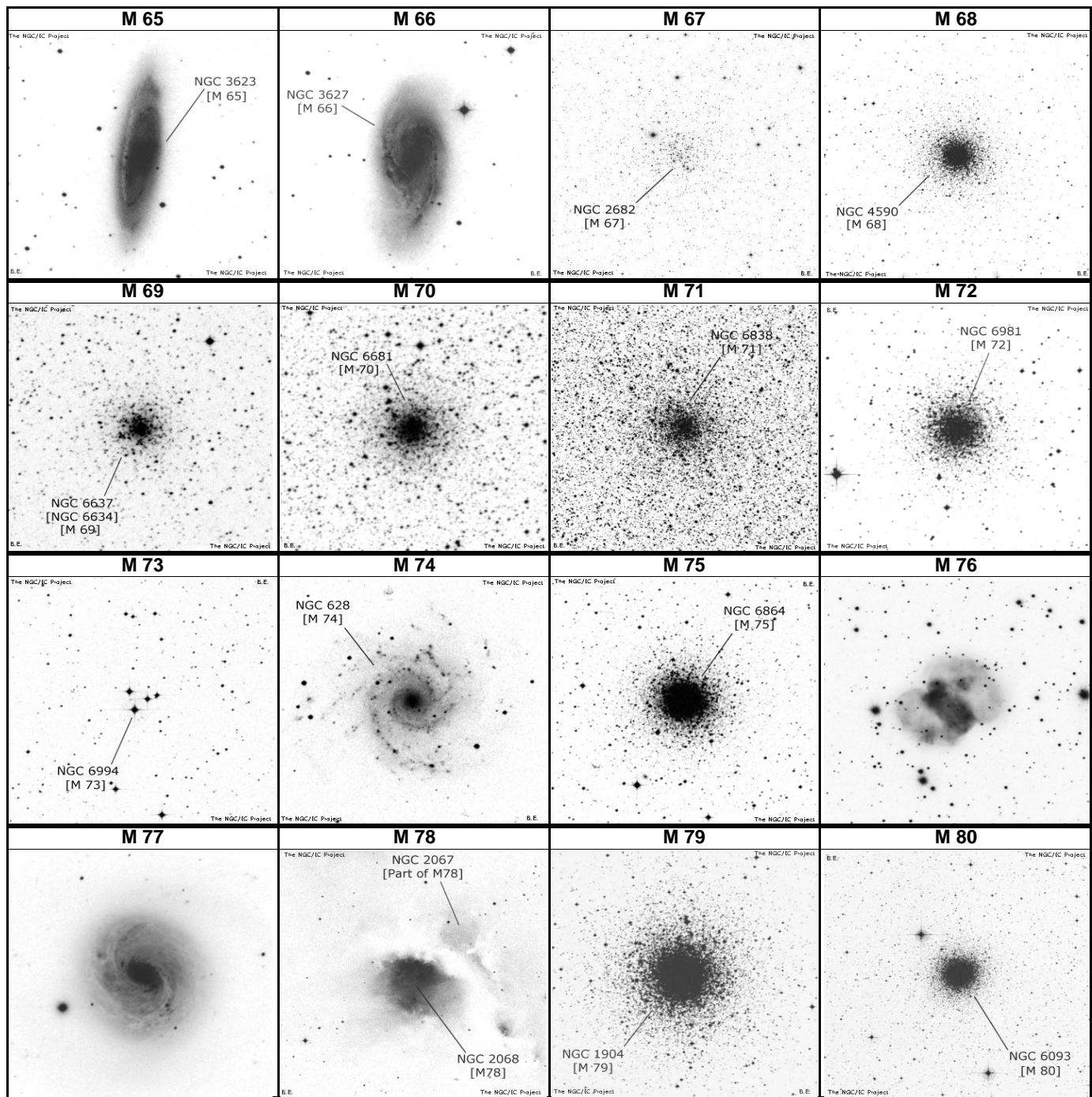
| NAME        | OTHER      | TYPE    | CON | MAG | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns  | bs | Dist | SAC NOTES  |
|-------------|------------|---------|-----|-----|------|-------|---------|--------|-----|---------|-----|----|------|--|
| <b>M 33</b> | NGC 598    | Galaxy  | TRI | 5.7 | 14.2 | 68.7' | 01 33.9 | +30 39 | 91  | Sc      |     |    | 3m   | <b>Pinwheel Galaxy</b> ; Local Group; H V 17           |
| <b>M 34</b> | NGC 1039   | Opn CL  | PER | 5.2 | -    | 35'   | 02 42.1 | +42 47 | 62  | II 3 m  | 100 | 7  | 1.4k | At least 80 true members; sev D* incl h1123 & O Strv   |
| <b>M 35</b> | NGC 2168   | Opn CL  | GEM | 5.1 | 12   | 28'   | 06 08.9 | +24 21 | 137 | III 2 m | 200 | 8  | 2.8k | Lord Rosse counted 300*; Orange * invl; NGC 2158       |
| <b>M 36</b> | NGC 1960   | Opn CL  | AUR | 6   | 12   | 12'   | 05 36.3 | +34 08 | 97  | II 3 m  | 60  | 9  | 4.1k | in Aur OB1; incl Struve 737 10.7" sep                  |
| <b>M 37</b> | NGC 2099   | Opn CL  | AUR | 5.6 | 11   | 24'   | 05 52.3 | +32 33 | 98  | II 1 r  | 150 | 9  | 4.6k | Total population 500*; dark area near center           |
| <b>M 38</b> | NGC 1912   | Opn CL  | AUR | 6.4 | 12   | 21'   | 05 28.7 | +35 51 | 97  | III 2 m | 100 | 10 | 4.2k | in Aur OB1; Burnham-shaped like Greek letter Pi        |
| <b>M 39</b> | NGC 7092   | Opn CL  | CYG | 4.6 | 11   | 32'   | 21 32.2 | +48 26 | 86  | III 2 p | 30  | 7  | 0.3k | Large but loose cluster                                |
| <b>M 40</b> | Winnecke 4 | 2 Stars | UMA | 9   | -    |       | 12 21.9 | +58 06 | 47  |         |     |    |      | D* 9 & 9.3 mag 50" sep; No nebulae                     |
| <b>M 41</b> | NGC 2287   | Opn CL  | CMA | 4.5 | 12   | 38'   | 06 46.0 | -20 45 | 318 | II 3 m  | 80  | 7  | 2.4k | 150 members to 13 mag; orange * near center            |
| <b>M 42</b> | NGC 1976   | CL+Neb  | ORI | 4   | 11   | 90'   | 05 35.3 | -05 23 | 225 | E+R     |     |    | 1.6k | <b>Orion neb</b> Trapezium* 6.7-7.7m; >50 var* invl    |
| <b>M 43</b> | NGC 1982   | Brn Neb | ORI | 7   | 13   | 20'   | 05 35.5 | -05 16 | 225 | E       |     |    | 1.6k | H III 1 ?; detached <b>part of Orion Nebula</b>        |
| <b>M 44</b> | NGC 2632   | Opn CL  | CNC | 3.1 | 13   | 95'   | 08 40.0 | +19 40 | 141 | II 2 m  | 50  | 6  | 0.5k | <b>Beehive Cluster</b> ; 200 memb to 14 mag            |
| <b>M 45</b> | Mel 22     | CL+Neb  | TAU | 1.2 | 11   | 100'  | 03 47.0 | +24 07 | 132 | I 3 r n | 100 | 3  | 0.4k | <b>Pleiades</b> ; nebs NGC 1432 and 1435 involved      |
| <b>M 46</b> | NGC 2437   | Opn CL  | PUP | 6.1 | 13   | 27'   | 07 41.8 | -14 49 | 274 | III 2 m | 100 | 9  | 5.4k | PLNNB NGC 2438 on N edge; 150 * 10-13 mag              |
| <b>M 47</b> | NGC 2422   | Opn CL  | PUP | 4.4 | 11   | 30'   | 07 36.6 | -14 29 | 274 | III 2 m | 30  | 6  | 1.6k | H VIII 38; Messier gave poor position; Strv 1121, 1120 |
| <b>M 48</b> | NGC 2548   | Opn CL  | HYA | 5.8 | 13   | 54'   | 08 13.7 | -05 45 | 275 | I 2 m   | 80  | 8  | 1.5k | Messier wrong position by 4 deg in dec; 50* 9-13ma     |



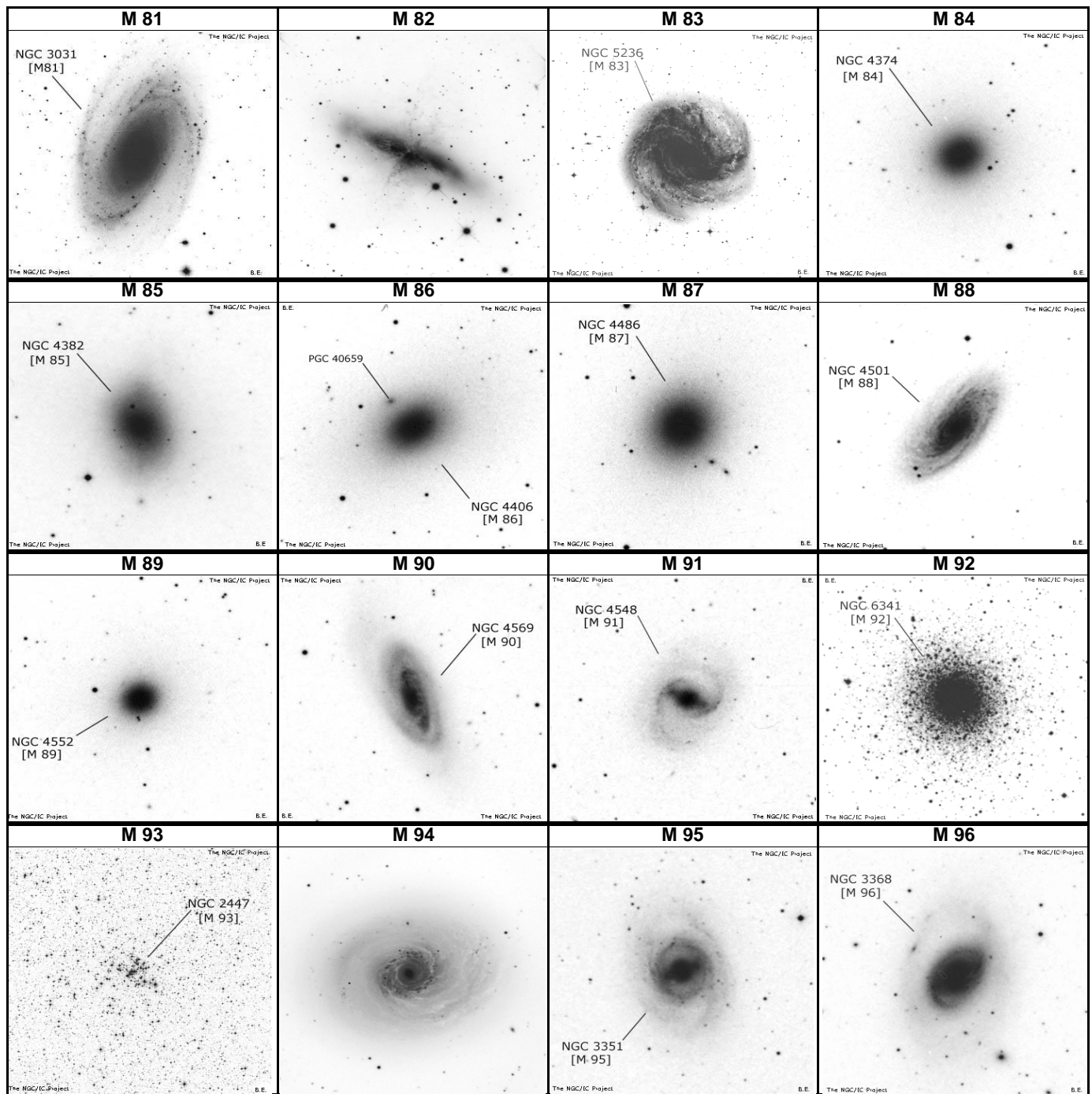


| NAME        | OTHER    | TYPE    | CON | MAG | S.B. | SIZE  | RA      | DEC    | U2K | Class  | ns  | bs | Dist | SAC NOTES   |
|-------------|----------|---------|-----|-----|------|-------|---------|--------|-----|--------|-----|----|------|---|
| <b>M 49</b> | NGC 4472 | Galaxy  | VIR | 8.4 | 13.2 | 9.8'  | 12 29.8 | +08 00 | 193 | E4     |     |    | 80m  | NGC 4467 @ 4.2'; NGC 4470 @ 10.5'; NGC 4465 @                   |
| <b>M 50</b> | NGC 2323 | Opn CL  | MON | 5.9 | 12   | 16'   | 07 02.5 | -08 23 | 273 | II 3 m | 80  | 8  | 3k   | About 100 stars mags 9...14                                     |
| <b>M 51</b> | NGC 5194 | Galaxy  | CVN | 8.4 | 12.9 | 10.8' | 13 29.9 | +47 12 | 76  | Sbc    |     |    | 37m  | <b>Whirlpool Gal</b> ; inter. pair; classic spiral, inc ngc5195 |
| <b>M 52</b> | NGC 7654 | Opn CL  | CAS | 6.9 | 12   | 13'   | 23 24.2 | +61 35 | 15  | I 2 r  | 200 | 8  | 7k   | Messier saw neby there is none                                  |
| <b>M 53</b> | NGC 5024 | Glob CL | COM | 7.7 | 12   | 14.4' | 13 12.9 | +18 10 | 150 | V      |     |    | 56k  | 1 deg NE of Alpha Comae Berenices                               |
| <b>M 54</b> | NGC 6715 | Glob CL | SGR | 7.7 | 11   | 9.1'  | 18 55.1 | -30 29 | 378 | III    |     |    | 83k  | * mags 15...  |
| <b>M 55</b> | NGC 6809 | Glob CL | SGR | 6.3 | 13   | 19'   | 19 40.0 | -30 58 | 378 | XI     |     |    | 17k  | * mags 15...  |
| <b>M 56</b> | NGC 6779 | Glob CL | LYR | 8.3 | 12   | 5'    | 19 16.6 | +30 11 | 118 | X      |     |    | 32k  | Stars 11...   |
| <b>M 57</b> | NGC 6720 | Pln Neb | LYR | 9.4 | 9.3  | 86"   | 18 53.6 | +33 02 | 117 | 4(3)   | 16  |    | 2.3k | <b>Ring Nebula</b> ; central* var 14 to 16 mag; PK63+13.1       |
| <b>M 58</b> | NGC 4579 | Galaxy  | VIR | 9.7 | 13.1 | 6'    | 12 37.7 | +11 49 | 194 | SBb    |     |    | 60m  | fine compact spiral   |
| <b>M 59</b> | NGC 4621 | Galaxy  | VIR | 9.6 | 12.9 | 5.3'  | 12 42.0 | +11 39 | 194 | E3     |     |    | 60m  | B diff N; smooth arms   |
| <b>M 60</b> | NGC 4649 | Galaxy  | VIR | 8.8 | 12.9 | 7.6'  | 12 43.7 | +11 33 | 194 | E1     |     |    | 60m  | NGC 4647 @ 2.5'   |
| <b>M 61</b> | NGC 4303 | Galaxy  | VIR | 9.6 | 13.4 | 6.5'  | 12 21.9 | +04 28 | 238 | SBbc R |     |    | 60m  | SN 1926; 1961; 1964; NGC 4301 @ 10 'H I 139; L fa               |
| <b>M 62</b> | NGC 6266 | Glob CL | OPH | 6.4 | 11   | 14.1' | 17 01.2 | -30 07 | 378 | IV     |     |    | 22k  | Asymmetrical  |
| <b>M 63</b> | NGC 5055 | Galaxy  | CVN | 8.6 | 13.3 | 12.6' | 13 15.8 | +42 02 | 76  | Sbc    |     |    | 37m  | <b>Sunflower</b> , vsvB stell. N in B inner lens; many filam    |
| <b>M 64</b> | NGC 4826 | Galaxy  | COM | 8.5 | 12.7 | 10.3' | 12 56.7 | +21 41 | 149 | Sab    |     |    | 12m  | <b>Blackeye Galaxy</b> ; dark marking near center               |



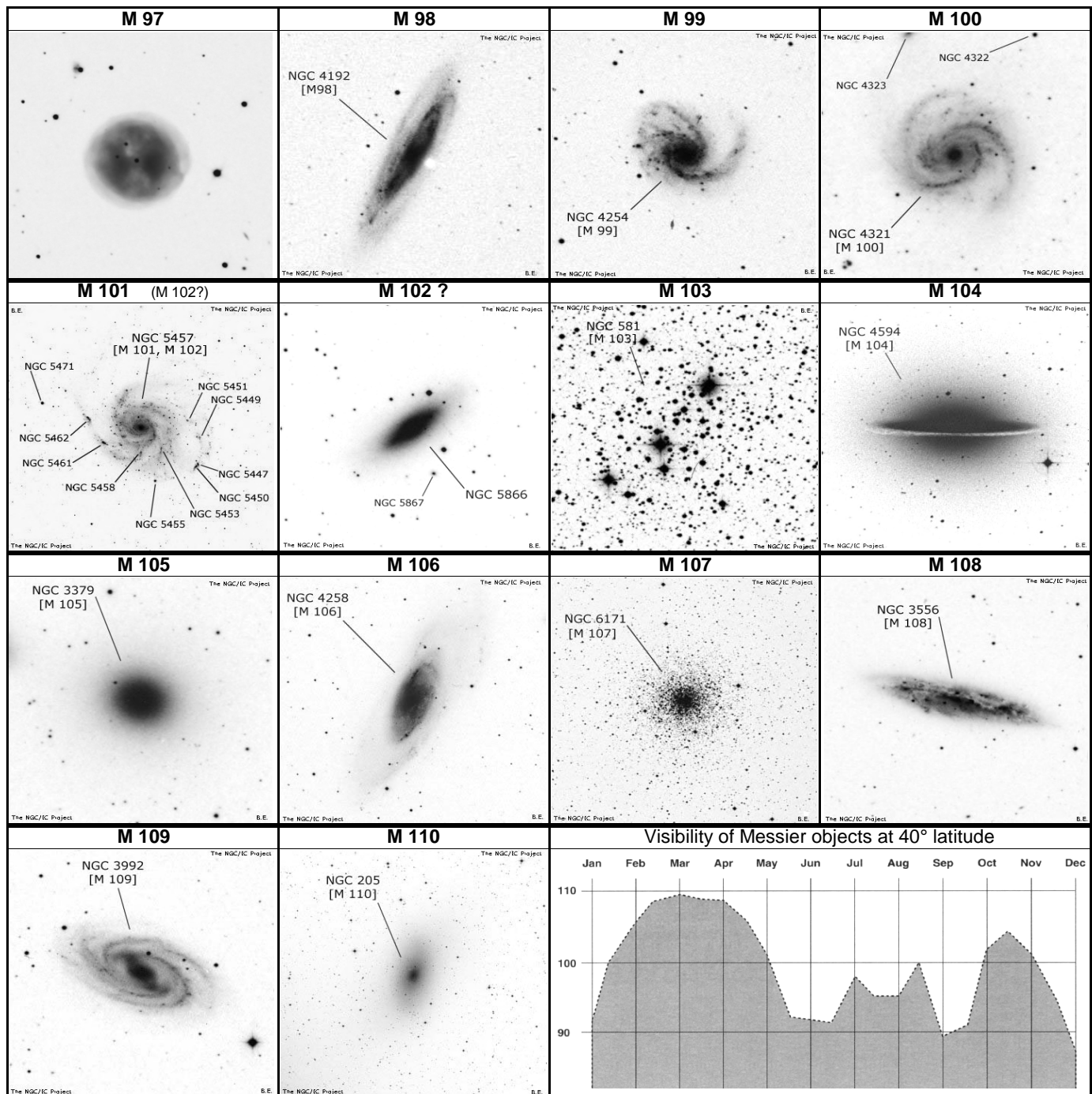


| NAME        | OTHER    | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class  | ns  | bs | Dist | SAC NOTES   |
|-------------|----------|---------|-----|------|------|------|---------|--------|-----|--------|-----|----|------|---|
| <b>M 65</b> | NGC 3623 | Galaxy  | LEO | 9.3  | 12.8 | 9'   | 11 18.9 | +13 05 | 191 | SBa    |     |    | 35m  | M66 subgroup , part of <b>leo's trio</b>                  |
| <b>M 66</b> | NGC 3627 | Galaxy  | LEO | 8.9  | 12.7 | 9.1' | 11 20.2 | +13 00 | 191 | SBb    |     |    | 35m  | brightest in group; M 65 & NGC 3628 in field              |
| <b>M 67</b> | NGC 2682 | Opn CL  | CNC | 6.9  | 13   | 30'  | 08 50.8 | +11 49 | 187 | II 2 m | 200 | 10 | 2.3k | 500 memb to 16 mag; Mallas-dark spot near center          |
| <b>M 68</b> | NGC 4590 | Glob CL | HYA | 7.3  | 13   | 9.8' | 12 39.5 | -28 45 | 329 | X      |     |    | 32k  |   |
| <b>M 69</b> | NGC 6637 | Glob CL | SGR | 7.7  | 11   | 7.1' | 18 31.4 | -32 21 | 378 | V      |     |    | 25k  |   |
| <b>M 70</b> | NGC 6681 | Glob CL | SGR | 7.8  | 11   | 7.8' | 18 43.2 | -32 18 | 378 | V      |     |    | 28k  | Curved arc of stars to NE; * mags 14...                   |
| <b>M 71</b> | NGC 6838 | Glob CL | SGE | 8.3  | 12   | 6.1' | 19 53.8 | +18 47 | 162 |        |     |    | 12k  | Arrowhead shape; stars have few metals                    |
| <b>M 72</b> | NGC 6981 | Glob CL | AQR | 9.2  | 12   | 5.9' | 20 53.5 | -12 32 | 299 | IX     |     |    | 53k  | 3 deg WSW of NGC 7009                                     |
| <b>M 73</b> | NGC 6994 | Opn CL  | AQR | 9.7  | -    | 2.8' | 20 59.0 | -12 38 | 299 | IV 1 p | 4   | 10 |      | 4 or 5 10th mag stars; Messier saw neb but there is       |
| <b>M 74</b> | NGC 628  | Galaxy  | PSC | 9.4  | 14.2 | 10'  | 01 36.7 | +15 47 | 173 | Sc     |     |    | 35m  | Fine face on spiral                                       |
| <b>M 75</b> | NGC 6864 | Glob CL | SGR | 8.6  | 11   | 8'   | 20 06.1 | -21 55 | 343 | I      |     |    | 58k  | * mags 17...  |
| <b>M 76</b> | NGC 650/ | Pln Neb | PER | 10.1 | 10.4 | 163" | 01 42.3 | +51 35 | 37  | 3(6)   |     | 18 | 3.4k | <b>Little Dumbbell</b> or <b>Cork Nebula</b> ; PK130-10.1 |
| <b>M 77</b> | NGC 1068 | Galaxy  | CET | 8.9  | 12.8 | 7.3' | 02 42.7 | -00 01 | 220 | Sbp    |     |    | 60m  | Seyfert; brtst in NGC 1068 grp                            |
| <b>M 78</b> | NGC 2068 | Brn Neb | ORI | 8    | 12   | 8'   | 05 46.8 | +00 05 | 226 | E      |     |    | 1.6k | Cornet shaped; 2 10mag * invl; 53" sep                    |
| <b>M 79</b> | NGC 1904 | Glob CL | LEP | 7.7  | 12   | 7.8' | 05 24.2 | -24 31 | 315 | V      |     |    | 40k  | Stars vF  |
| <b>M 80</b> | NGC 6093 | Glob CL | SCO | 7.3  | 11   | 5.1' | 16 17.0 | -22 59 | 336 | II     |     |    | 27k  | Extremely rich and compressed                             |

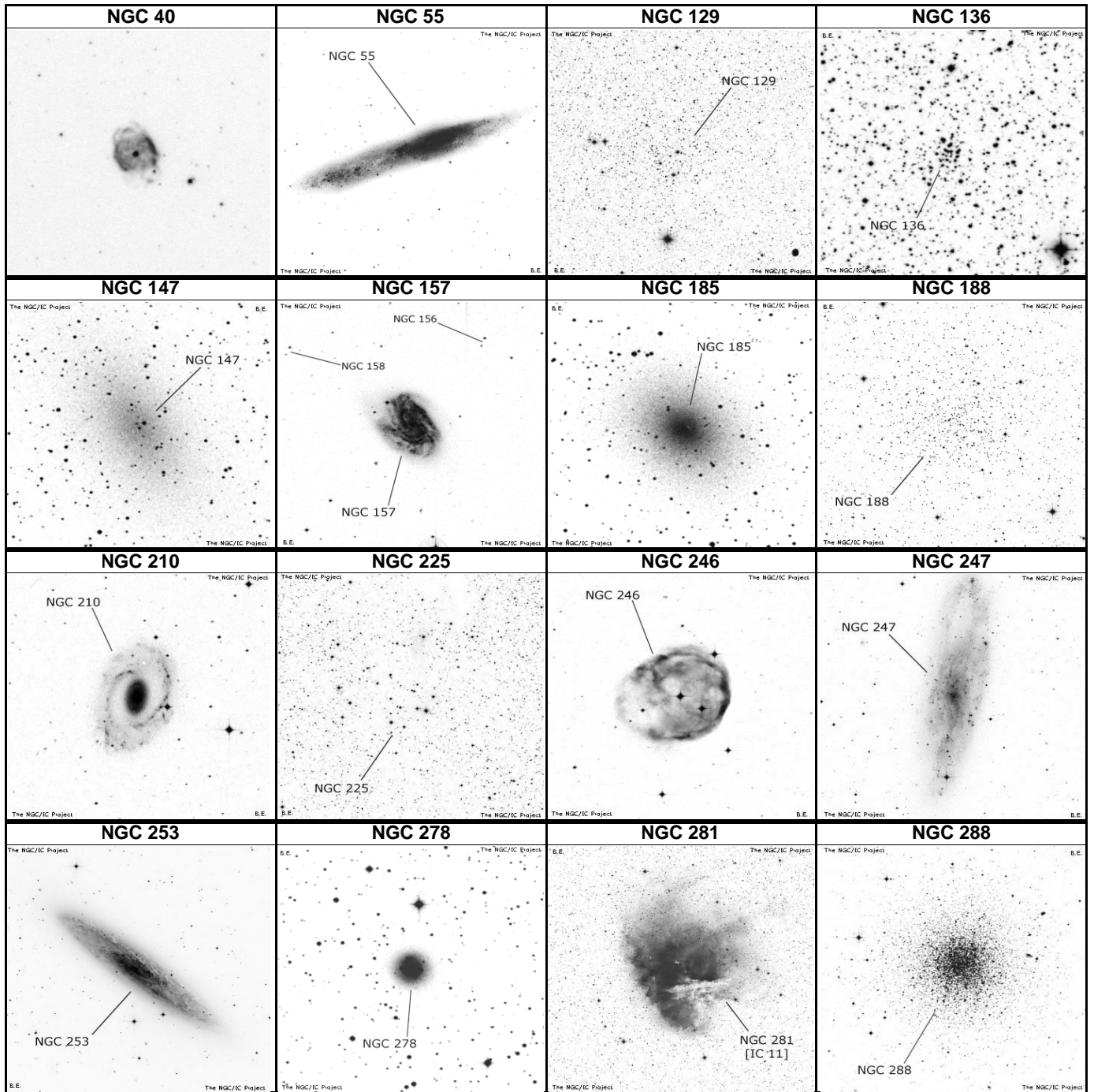


| NAME        | OTHER    | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns | bs | Dist | SAC NOTES   |
|-------------|----------|---------|-----|------|------|-------|---------|--------|-----|---------|----|----|------|---|
| <b>M 81</b> | NGC 3031 | Galaxy  | UMA | 6.9  | 13.2 | 24.9' | 09 55.6 | +69 04 | 23  | Sb      |    |    | 11m  | brightest in group, fine spiral                       |
| <b>M 82</b> | NGC 3034 | Galaxy  | UMA | 8.4  | 12.5 | 10.5' | 09 55.9 | +69 41 | 23  | Sd      |    |    | 11m  | M81 group; eruptive; H IV 79                          |
| <b>M 83</b> | NGC 5236 | Galaxy  | HYA | 7.5  | 12.8 | 13.1' | 13 37.0 | -29 52 | 370 | SBc     |    |    | 10m  | Fast SupNova producer-4 in 50 yrs                     |
| <b>M 84</b> | NGC 4374 | Galaxy  | VIR | 9.1  | 13   | 6.7'  | 12 25.1 | +12 53 | 193 | E1      |    |    | 60m  | <b>Markarian's chain; center of Virgo cluster</b>     |
| <b>M 85</b> | NGC 4382 | Galaxy  | COM | 9.1  | 12.9 | 7.4'  | 12 25.4 | +18 11 | 148 | Sa      |    |    | 60m  | SN 1960r; P w NGC 4394 @ 7.8' foll                    |
| <b>M 86</b> | NGC 4406 | Galaxy  | VIR | 8.9  | 13.2 | 9.8'  | 12 26.2 | +12 57 | 193 | E3      |    |    | 60m  | <b>Markarian's chain;</b>                             |
| <b>M 87</b> | NGC 4486 | Galaxy  | VIR | 8.6  | 13   | 8.7'  | 12 30.8 | +12 23 | 193 | E1p     |    |    | 60m  | <b>B in Virgo cluster;</b> NGC 4486A @ 7.5' ssf;      |
| <b>M 88</b> | NGC 4501 | Galaxy  | COM | 9.6  | 13   | 6.8'  | 12 32.0 | +14 25 | 193 | Sbc     |    |    | 60m  | comp @ 6.9'; mult arm spiral                          |
| <b>M 89</b> | NGC 4552 | Galaxy  | VIR | 9.8  | 13.2 | 5.3'  | 12 35.7 | +12 33 | 194 | EO      |    |    | 60m  |   |
| <b>M 90</b> | NGC 4569 | Galaxy  | VIR | 9.5  | 13.4 | 9.9'  | 12 36.8 | +13 10 | 194 | SBab    |    |    | 60m  | IC 3583 @ 6 ' ; vseBN in B diff bar w much dark matt  |
| <b>M 91</b> | NGC 4548 | Galaxy  | COM | 10.1 | 13.4 | 5.2'  | 12 35.4 | +14 30 | 194 | SBb     |    |    | 60m  | NGC 4571 @ 27 ' ; H II 120; F outer arms in S pattern |
| <b>M 92</b> | NGC 6341 | Glob CL | HER | 6.5  | 11   | 11.2' | 17 17.1 | +43 08 | 81  | IV      |    |    | 26k  | Lord Rosse saw spiral structure                       |
| <b>M 93</b> | NGC 2447 | Opn CL  | PUP | 6.2  | 12   | 22'   | 07 44.5 | -23 51 | 320 | IV 1 p  | 80 | 8  | 4.5k | 63 members to 13 mag; wedge shaped center             |
| <b>M 94</b> | NGC 4736 | Galaxy  | CVN | 8.2  | 13.1 | 12.3' | 12 50.9 | +41 07 | 75  | Sb Ring |    |    | 15m  |   |
| <b>M 95</b> | NGC 3351 | Galaxy  | LEO | 9.7  | 13.5 | 7.3'  | 10 44.0 | +11 42 | 190 | SBb     |    |    | 38m  | Leo group   |
| <b>M 96</b> | NGC 3368 | Galaxy  | LEO | 9.3  | 13.1 | 7.8'  | 10 46.8 | +11 49 | 190 | SBab F  |    |    | 38m  | comp @ 3.8'; PA 205                                   |



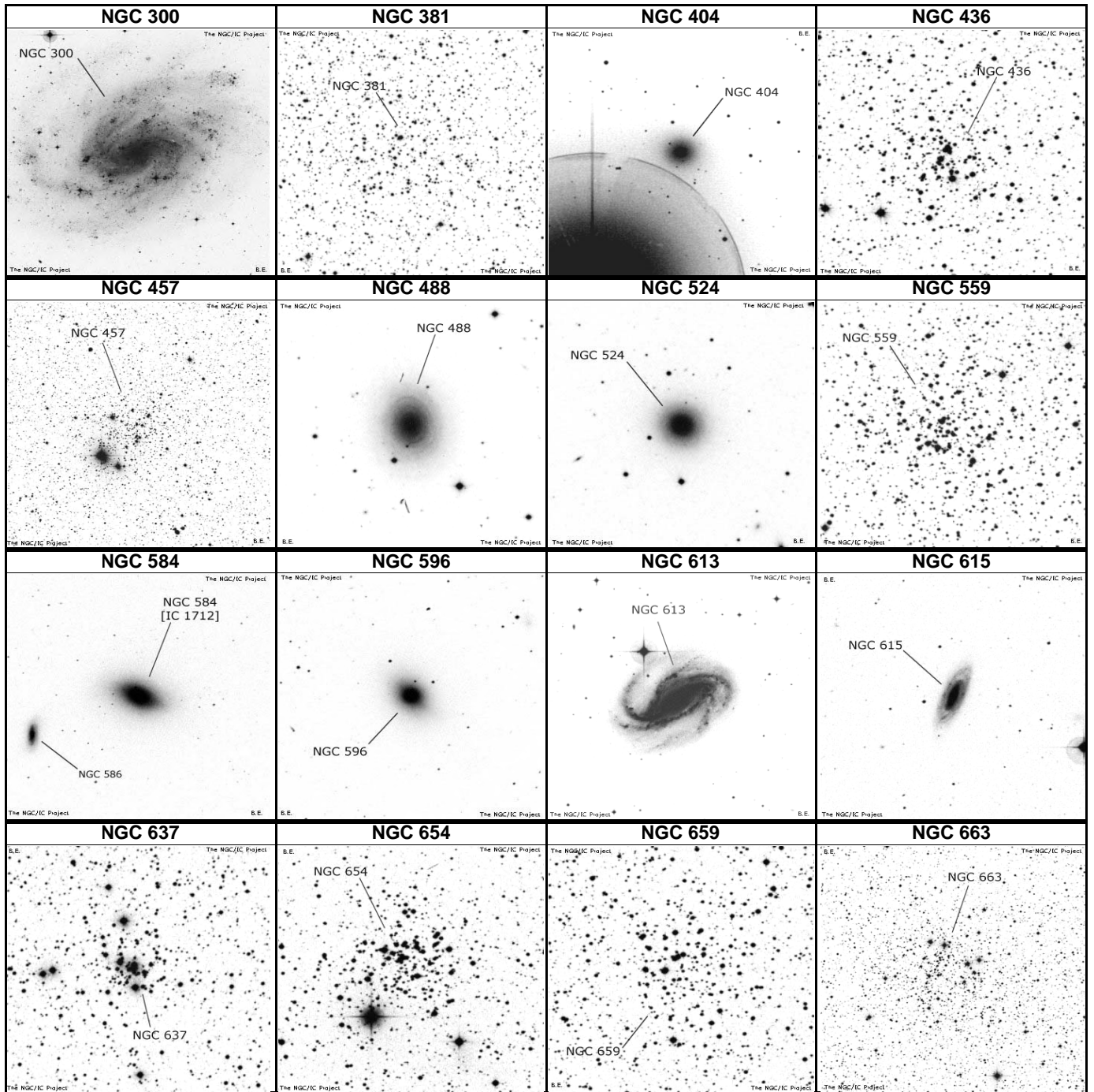


| NAME  | OTHER    | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns | bs | Dist | SAC NOTES  |
|-------|----------|---------|-----|------|------|-------|---------|--------|-----|---------|----|----|------|--|
| M 97  | NGC 3587 | Pln Neb | UMA | 11   | 12.1 | 202"  | 11 14.8 | +55 01 | 46  | 3a      |    | 14 | 2.8k | <b>Owl Nebula</b> ; PK148+57.1                         |
| M 98  | NGC 4192 | Galaxy  | COM | 10.1 | 13.6 | 9.4'  | 12 13.8 | +14 54 | 193 | SBb     |    |    | 60m  | 6 Comae Berenices is 30' east                          |
| M 99  | NGC 4254 | Galaxy  | COM | 9.9  | 13.2 | 5.3'  | 12 18.8 | +14 25 | 193 | Sc      |    |    | 60m  | SN 1967h; Norton-diff for small scope                  |
| M 100 | NGC 4321 | Galaxy  | COM | 9.4  | 13.4 | 7.5'  | 12 22.8 | +15 48 | 193 | SBbc    |    |    | 60m  | SN 1901-14-59; NGC 4322 @ 5.2'; NGC 4328 @ 6.1'        |
| M 101 | NGC 5457 | Galaxy  | UMA | 7.9  | 14.9 | 28.5' | 14 03.2 | +54 21 | 48  | SBc     |    |    | 24m  | P w NGC 5474; SN 1909; spir galax w one heavy arm      |
| M 102 | NGC 5886 | Galaxy  | DRA | 9.9  | 12.2 | 6.5'  | 15 06.5 | +55 46 | 50  | Sa      |    |    |      | vBN w dk lane and ansae; NGC 5867 small E neb;         |
| M 103 | NGC 581  | Opn CL  | CAS | 7.4  | 11   | 6'    | 01 33.4 | +60 39 | 37  | III 2 p | 40 | 11 | 8k   | in Cas OB8; incl Struve 131 6-9m 14"                   |
| M 104 | NGC 4594 | Galaxy  | VIR | 8    | 11.6 | 8.6'  | 12 40.0 | -11 37 | 284 | Sab     |    |    | 50m  | <b>Sombrero Galaxy</b> ; H I 43; dark equatorial lane; |
| M 105 | NGC 3379 | Galaxy  | LEO | 9.3  | 12.8 | 5.3'  | 10 47.8 | +12 35 | 190 | E1      |    |    | 38m  | P w NGC 3384 @ 7.2'; NGC 3389 @ 10 ' ; Leo Group       |
| M 106 | NGC 4258 | Galaxy  | CVN | 8.4  | 13.6 | 17.4' | 12 19.0 | +47 18 | 74  | SBbc    |    |    | 25m  | H V 43   |
| M 107 | NGC 6171 | Glob CL | OPH | 7.8  | 12   | 3.3'  | 16 32.5 | -13 03 | 291 | X       |    |    | 20k  | H VI 40  |
| M 108 | NGC 3556 | Galaxy  | UMA | 10   | 13.1 | 8.6'  | 11 11.5 | +55 40 | 46  | SBc     |    |    | 45m  | H V 46; M 97 is 48' SE; nearly edge-on                 |
| M 109 | NGC 3992 | Galaxy  | UMA | 9.8  | 13.6 | 7.5'  | 11 57.6 | +53 22 | 47  | SBbc    |    |    | 55m  | H IV 61; theta struc barred sp; Gamma UMa 40' NW       |
| M 110 | NGC 205  | Galaxy  | AND | 8.1  | 14   | 19.5' | 00 40.4 | +41 41 | 60  | SA0     |    |    | 2.6m | <b>M31 Companion</b> ; UGC 426; Member Local Group     |

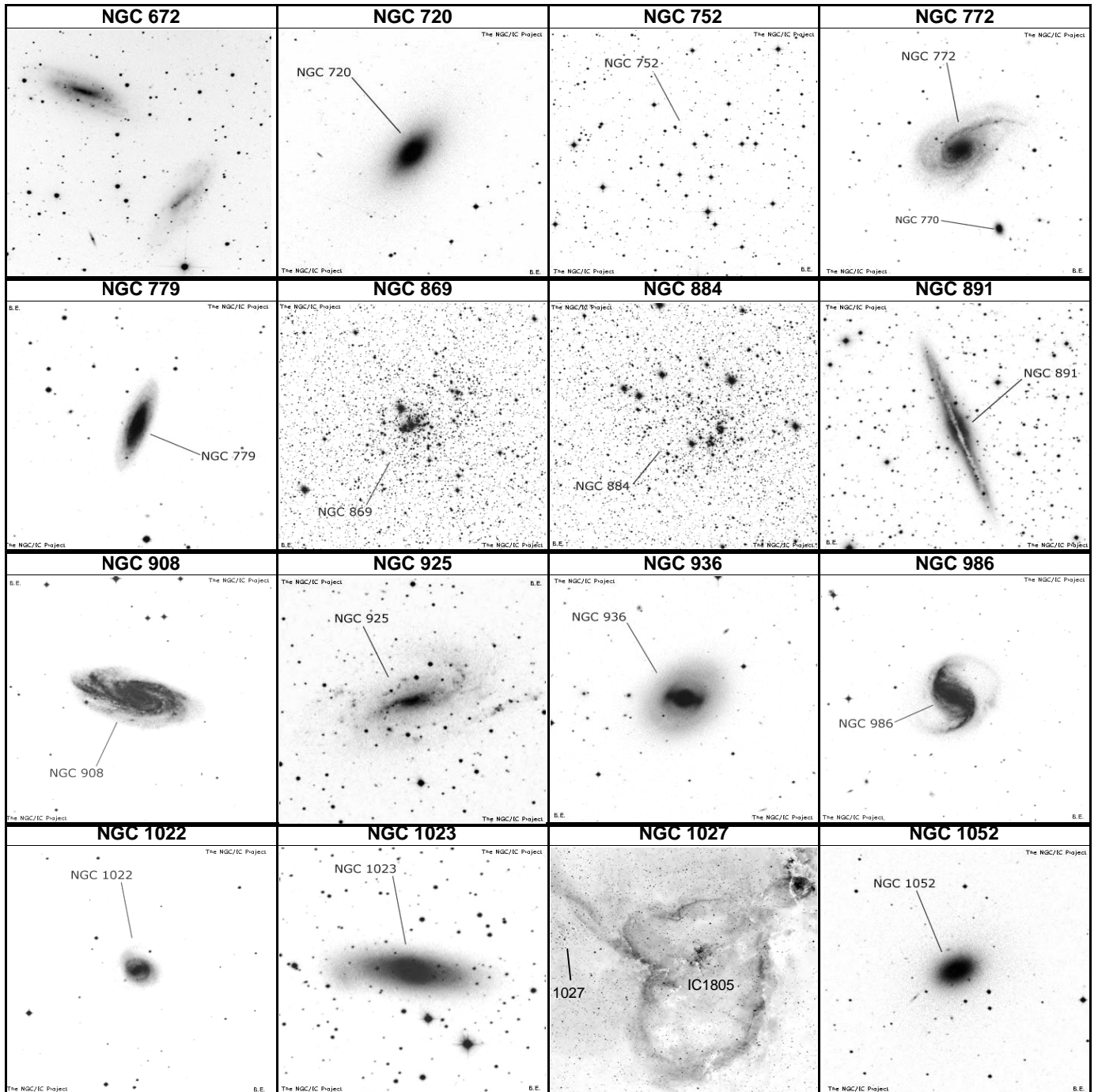


| NAME    | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES   |
|---------|-------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|----|---|
| NGC 40  | PK 120+9.1  | Pln Neb | CEP | 10.7 | 7.3  | 60"   | 00 13.0 | +72 31 | 3   | 3b(3)     |    | 12 | H IV 58; PK120+9.1; Lord Rosse saw spiral structure   |
| NGC 55  | Dunlop 507  | Galaxy  | SCL | 7.9  | 13.4 | 31.2' | 00 14.9 | -39 11 | 386 | SBp       |    |    | Sculptor Galaxy Group                                 |
| NGC 129 | OCL 294     | Opn CL  | CAS | 6.5  | -    | 21'   | 00 30.0 | +60 13 | 35  | IV 2 p    | 35 | 9  | H VIII 79; Contains DL Cas                            |
| NGC 136 | OCL 295     | Opn CL  | CAS | 11.5 | -    | 1.2'  | 00 31.5 | +61 31 | 15  | II 2 p    | 20 | 13 | H VI 35; 30 F*  |
| NGC 147 | UGC 328; D  | Galaxy  | CAS | 9.5  | 14.5 | 13.5' | 00 33.2 | +48 30 | 60  | dE4       |    |    | Dwarf E; P w NGC 185 at 58"; low surface br; Local G  |
| NGC 157 | MCG - 2- 2- | Galaxy  | CET | 10.4 | 12.9 | 4.1'  | 00 34.8 | -08 24 | 261 | SBbc      |    |    | H II 3  |
| NGC 185 | UGC 396     | Galaxy  | CAS | 9.2  | 14.3 | 12.5' | 00 39.0 | +48 20 | 60  | dE0       |    |    | H II 707; Dwarf elliptical; Member Local Group        |
| NGC 188 | OCL 309     | Opn CL  | CEP | 8.1  | -    | 14'   | 00 47.5 | +85 14 | 1   | II 2 r    | 20 | 12 |   |
| NGC 210 | MCG - 2- 2- | Galaxy  | CET | 10.9 | 13.8 | 4.6'  | 00 40.6 | -13 52 | 261 | SBb       |    |    | H II 452; F outer arms form encircling ring           |
| NGC 225 | OCL 305     | Opn CL  | CAS | 7    | -    | 12'   | 00 43.6 | +61 46 | 16  | III 1 p n | 15 | 9  | H VIII 78; W shaped                                   |
| NGC 246 | PK 118-74.1 | Pln Neb | CET | 10.4 | 13.5 | 240"  | 00 47.1 | -11 52 | 261 | 3b        |    | 12 | H V 25; PK118-74.1; Galaxy NGC 255 15' NNE            |
| NGC 247 | ESO 540-22  | Galaxy  | CET | 9.1  | 14.4 | 21'   | 00 47.1 | -20 46 | 306 | SBcd      |    |    | H V 20  |
| NGC 253 | ESO 474-28  | Galaxy  | SCL | 7.2  | 12.7 | 26.4' | 00 47.6 | -25 18 | 306 | SBc       |    |    | <b>sculptor galaxy</b> , arms more defined by dust    |
| NGC 278 | UGC 528     | Galaxy  | CAS | 10.8 | 12.2 | 2.4'  | 00 52.1 | +47 33 | 60  | SBb       |    |    | Lg B nucl; sev knotty massive arms; B part sharp edge |
| NGC 281 | IC 11       | CL+Neb  | CAS | 7.4  | -    | 4'    | 00 53.0 | +56 37 | 36  | E+*       |    | 9  |   |
| NGC 288 | ESO 474-S   | Glob CL | SCL | 8.1  | -    | 13.8' | 00 52.8 | -26 35 | 307 | X         |    |    | H VI 20; loose structured globular                    |



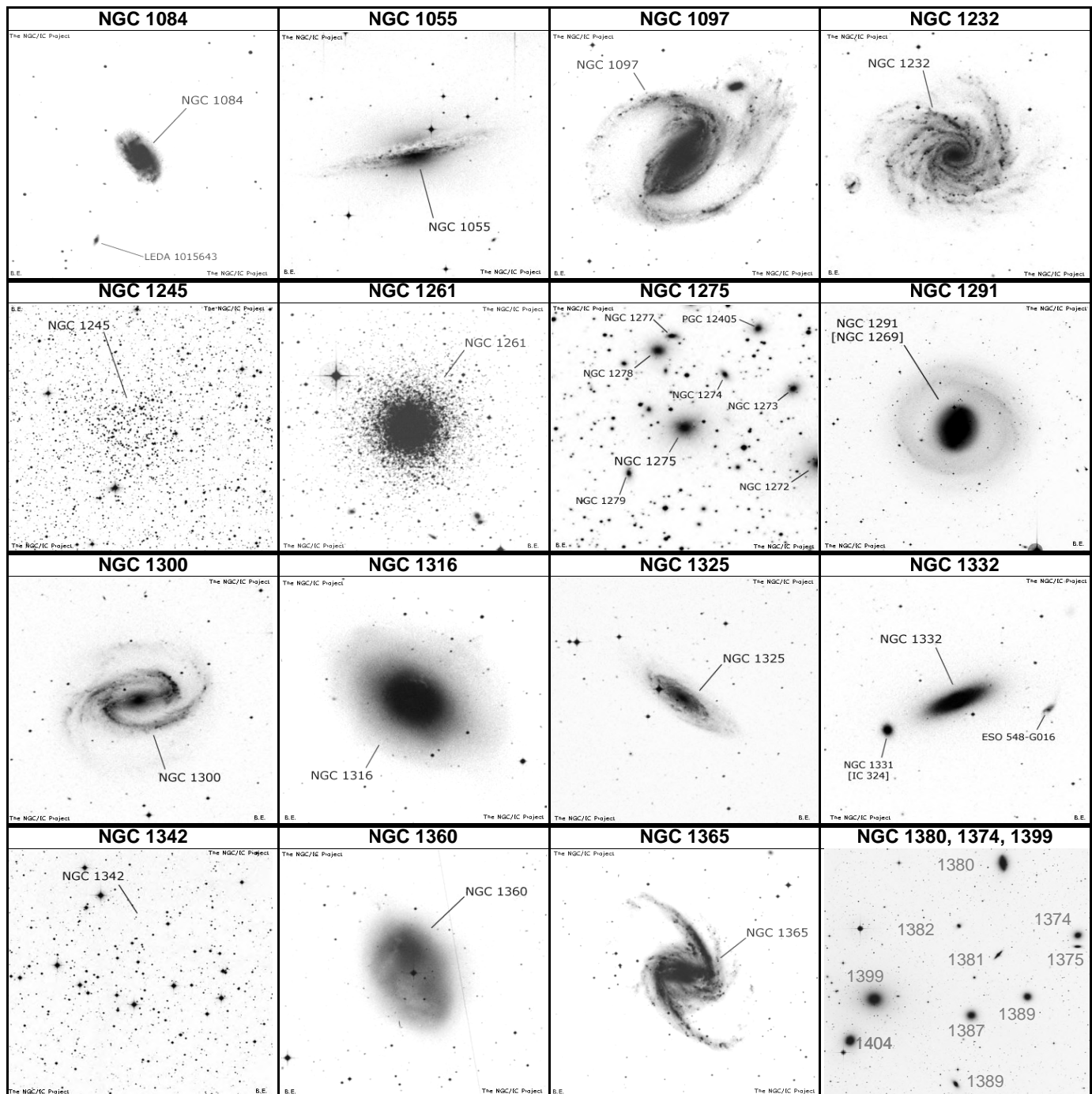


| NAME    | OTHER        | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns | bs | SAC NOTES  |
|---------|--------------|--------|-----|------|------|-------|---------|--------|-----|---------|----|----|--|
| NGC 300 | ESO 295-20   | Galaxy | SCL | 8.1  | 14.3 | 19.3' | 00 54.9 | -37 41 | 351 | Scd     |    |    | Large S-shaped, loose structured spiral            |
| NGC 381 | OCL 317      | Opn CL | CAS | 9.3  | -    | 6'    | 01 08.4 | +61 35 | 16  | III 2 p | 50 | 10 | H VIII 64; In Cas OB1?                             |
| NGC 404 | UGC 718      | Galaxy | AND | 10.3 | 12.8 | 4.3'  | 01 09.4 | +35 43 | 91  | E0      |    |    | Mirach's ghost H II 224; UGC 718; Beta AND sf 6'   |
| NGC 436 | OCL 320      | Opn CL | CAS | 8.8  | -    | 8'    | 01 16.0 | +58 49 | 36  | I 3 m   | 30 | 11 | H VII 45   |
| NGC 457 | OCL 321      | Opn CL | CAS | 6.4  | -    | 13'   | 01 19.5 | +58 17 | 36  | I 3 r   | 80 | 9  | H VII 42; Phi Cas is not a member; Not incl in mag |
| NGC 488 | UGC 907      | Galaxy | PSC | 10.3 | 13.4 | 5.4'  | 01 21.8 | +05 15 | 218 | Sb Ring |    |    | delicate spiral pattern                            |
| NGC 524 | UGC 988      | Galaxy | PSC | 10.3 | 12.3 | 3.2'  | 01 24.8 | +09 32 | 173 | Sa      |    |    | H I 151  |
| NGC 559 | OCL 322      | Opn CL | CAS | 9.5  | -    | 4.4'  | 01 29.5 | +63 19 | 16  | II 2 m  | 60 | 11 | H VII 48   |
| NGC 584 | IC 1712; H I | Galaxy | CET | 10.5 | 12.9 | 3.3'  | 01 31.3 | -06 52 | 283 | E4      |    |    |  |
| NGC 596 | MCG - 1- 5-  | Galaxy | CET | 10.9 | 13   | 2.8'  | 01 32.9 | -07 02 | 283 | E2      |    |    | H II 4   |
| NGC 613 | ESO 413-11   | Galaxy | SCL | 10.1 | 13.3 | 5.2'  | 01 34.3 | -29 25 | 352 | SBbc    |    |    | H I 281  |
| NGC 615 | MCG - 1- 5-  | Galaxy | CET | 11.6 | 13.3 | 3.4'  | 01 35.1 | -07 20 | 283 | Sb      |    |    | H II 282   |
| NGC 637 | OCL 329      | Opn CL | CAS | 8.2  | -    | 3.5'  | 01 43.1 | +64 02 | 16  | I 3 p   | 20 | 10 | H VII 49   |
| NGC 654 | OCL 330      | Opn CL | CAS | 6.5  | -    | 5'    | 01 44.0 | +61 53 | 16  | II 3 m  | 60 | 7  | H VII 46; In Cas OB8?; 50* mags 11..14             |
| NGC 659 | OCL 332      | Opn CL | CAS | 7.9  | -    | 5'    | 01 44.4 | +60 40 | 37  | III 1 p | 40 | 10 | H VIII 65; 30* mags 12...                          |
| NGC 663 | OCL 333      | Opn CL | CAS | 7.1  | -    | 16'   | 01 46.0 | +61 15 | 16  | III 2 m | 80 | 8  | H VI 31; In Cas OB8; incl Struve 151 152 & 153     |

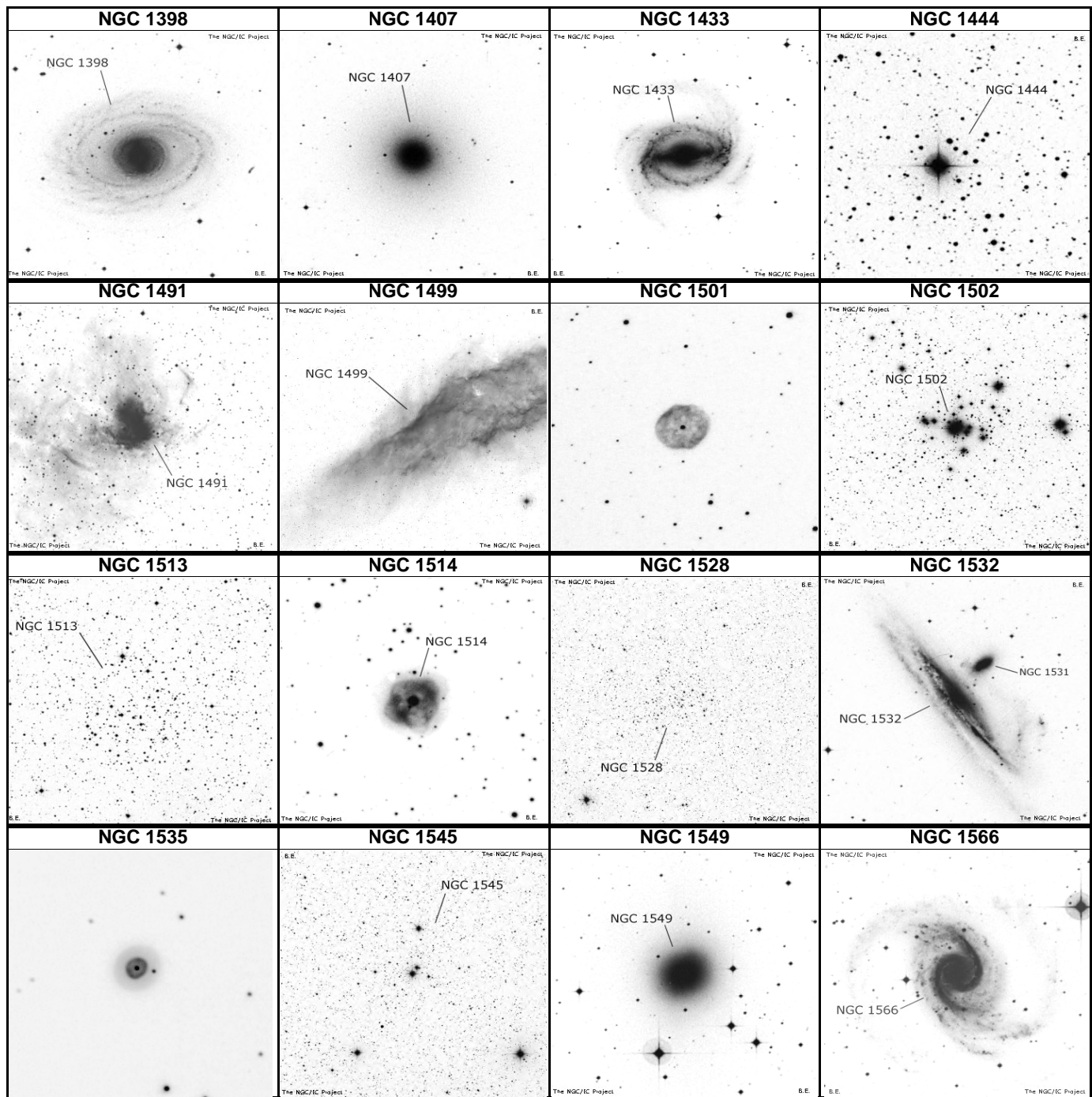


| NAME     | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs | SAC NOTES  |
|----------|-------------|--------|-----|------|------|-------|---------|--------|-----|-----------|-----|----|--|
| NGC 672  | UGC 1258    | Galaxy | TRI | 10.9 | 13.9 | 7.5'  | 01 47.9 | +27 26 | 128 | SBc       |     |    | H I 157; Brightest in group; coarse spiral . P w IC172 |
| NGC 720  | MCG - 2- 5- | Galaxy | CET | 10.2 | 12.8 | 4.4'  | 01 53.0 | -13 44 | 264 | E4        |     |    | H I 105  |
| NGC 752  | OCL 363     | Opn CL | AND | 5.7  | -    | 50'   | 01 57.7 | +37 40 | 92  | III 1 m   | 60  | 9  | H VII 32; Best in RFT or binocs; Ir scattered cl 70* m |
| NGC 772  | UGC 1466    | Galaxy | ARI | 10.3 | 13.9 | 7.5'  | 01 59.3 | +19 00 | 129 | Sb        |     |    | H I 112; Several tightly coiled arms br on NW side     |
| NGC 779  | MCG - 1- 6- | Galaxy | CET | 11.2 | 12.7 | 4.1'  | 01 59.7 | -05 58 | 264 | SBb       |     |    | H I 101; nearly edge-on spiral                         |
| NGC 869  | OCL 350     | Opn CL | PER | 5.3  | -    | 30'   | 02 19.1 | +57 08 | 37  | I 3 r     | 200 | 7  | h Per; H VI 33; in Per OB1; Double Cluster w NGC 8     |
| NGC 884  | OCL 353     | Opn CL | PER | 6.1  | -    | 30'   | 02 22.5 | +57 09 | 37  | I 3 r     | 150 | 8  | H VI 34; chi Per; in Per OB1; Double Cluster w NGC 8   |
| NGC 891  | UGC 1831    | Galaxy | AND | 9.9  | 13.6 | 13.1' | 02 22.6 | +42 21 | 62  | Sb        |     |    | NGC 1023 group; Lord Rosse drawing shows dark l        |
| NGC 908  | ESO 545-11  | Galaxy | CET | 10.2 | 13   | 6.1'  | 02 23.1 | -21 14 | 309 | SBc       |     |    | H I 153  |
| NGC 925  | UGC 1913    | Galaxy | TRI | 10.1 | 14.4 | 10.9' | 02 27.3 | +33 35 | 93  | SBcd      |     |    | H III 177; NGC 1023 group; coarse spiral               |
| NGC 936  | UGC 1929    | Galaxy | CET | 10.1 | 13.2 | 4.3'  | 02 27.6 | -01 09 | 220 | SBO-a     |     |    | H IV 23; Thick central bar; P w NGC 941 12' foll       |
| NGC 986  | ESO 299- 7  | Galaxy | FOR | 10.9 | 13.4 | 4'    | 02 33.6 | -39 03 | 389 | SBab      |     |    |  |
| NGC 1022 | MCG - 1- 7- | Galaxy | CET | 11.3 | 12.9 | 2.6'  | 02 38.5 | -06 41 | 265 | SBa       |     |    | H I 102  |
| NGC 1023 | UGC 2154    | Galaxy | PER | 9.4  | 12.8 | 8.1'  | 02 40.4 | +39 04 | 62  | E7p       |     |    | brtst in grp; more neb 10' E; lens shp F tuft on E tip |
| NGC 1027 | OCL 357     | Opn CL | CAS | 6.7  | -    | 20'   | 02 42.6 | +61 36 | 17  | III 2 p n | 40  | 9  | H VIII 66; Scattered group 12*                         |
| NGC 1052 | MCG - 1- 7- | Galaxy | CET | 10.5 | 12.5 | 2.8'  | 02 41.1 | -08 15 | 265 | Elliptica |     |    | H I 63   |



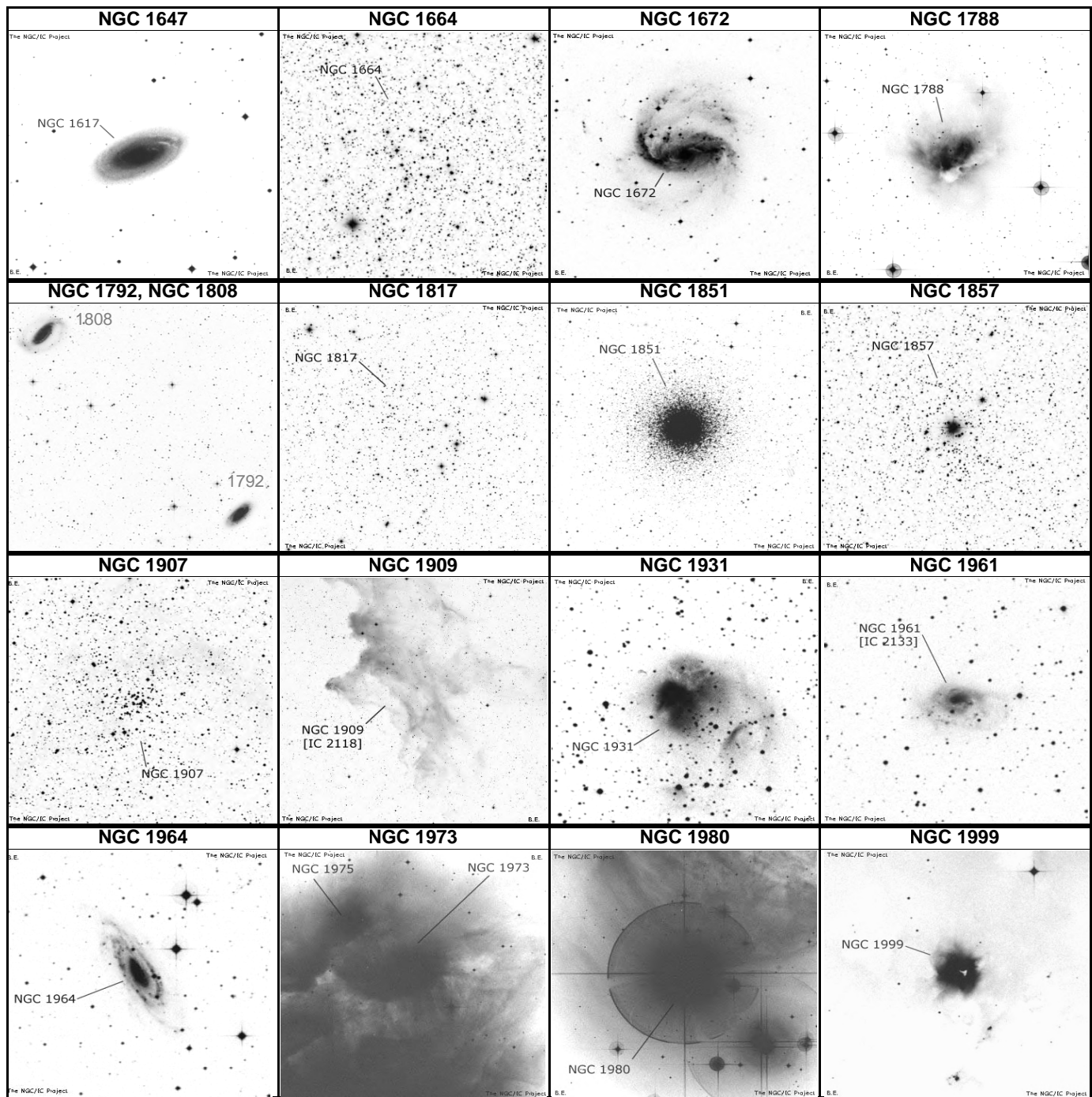


| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns  | bs | SAC NOTES   |
|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|---------|-----|----|---|
| NGC 1084 | MCG - 1- 8- | Galaxy  | ERI | 10.7 | 12.5 | 3.5'  | 02 46.0 | -07 35 | 265 | Sc      |     |    | H I 64  |
| NGC 1097 | ESO 416-20  | Galaxy  | FOR | 9.5  | 13.8 | 9.4'  | 02 46.3 | -30 17 | 354 | SBb     |     |    | H V 48  |
| NGC 1232 | ESO 547-14  | Galaxy  | ERI | 9.9  | 13.9 | 7.1'  | 03 09.8 | -20 35 | 311 | Sc      |     |    | H II 258; Excellent face-on spiral                      |
| NGC 1245 | OCL 389     | Opn CL  | PER | 8.4  | -    | 10'   | 03 14.7 | +47 14 | 63  | III 1 r | 200 | 11 | H VI 25   |
| NGC 1261 | GCL 5       | Glob CL | HOR | 8.4  | -    | 6.9'  | 03 12.3 | -55 13 | 419 | II      |     |    |   |
| NGC 1275 | 3C84; UGC 2 | Galaxy  | PER | 11.9 | 13.1 | 2.3'  | 03 19.8 | +41 31 | 63  | SO      |     |    | Seyfert; brtst in Persus Cl; center obj in dense galaxy |
| NGC 1291 | NGC 1289    | Galaxy  | ERI | 8.5  | 13.1 | 9.7'  | 03 17.3 | -41 06 | 390 | SBO-a f |     |    | comp 2; 2'; PA138; UGC 2666                             |
| NGC 1300 | ESO 547-31  | Galaxy  | ERI | 10.4 | 13.8 | 5.9'  | 03 19.7 | -19 25 | 311 | SBbc    |     |    |   |
| NGC 1316 | ESO 357-22  | Galaxy  | FOR | 8.5  | 13.4 | 11.2' | 03 22.7 | -37 13 | 355 | SBO     |     |    | Fornax Galaxy Cluster member                            |
| NGC 1325 | ESO 548- 7  | Galaxy  | ERI | 11.5 | 13.6 | 4.8'  | 03 24.4 | -21 33 | 311 | SBbc    |     |    | H IV 77   |
| NGC 1332 | ESO 548-18  | Galaxy  | ERI | 10.3 | 12.2 | 4'    | 03 26.3 | -21 20 | 311 | E7      |     |    | H I 60  |
| NGC 1342 | OCL 401     | Opn CL  | PER | 6.7  | -    | 14'   | 03 31.7 | +37 22 | 94  | III 3 p | 40  | 9  | H VIII 88   |
| NGC 1360 | PK 220-53.1 | Pln Neb | FOR | 9.4  | 13.7 | 360"  | 03 33.2 | -25 52 | 312 | 3       |     | 11 |   |
| NGC 1365 | ESO 358-17  | Galaxy  | FOR | 9.6  | 14.1 | 11'   | 03 33.6 | -36 08 | 355 | SBb     |     |    | Best example of barred spiral; Fornax Gal Cl member     |
| NGC 1374 | ESO 358-23  | Galaxy  | FOR | 11.1 | 12.9 | 2.7'  | 03 35.3 | -35 14 | 355 | E0      |     |    | Fornax Galaxy Cluster member                            |
| NGC 1380 | ESO 358-33  | Galaxy  | FOR | 12.4 | 12.8 | 2.4'  | 03 36.8 | -34 44 | 355 | SO      |     |    |   |
| NGC 1398 | ESO 482-22  | Galaxy  | FOR | 9.7  | 13.5 | 7.2'  | 03 38.9 | -26 20 | 312 | SBab    |     |    |   |
| NGC 1399 | ESO 358-45  | Galaxy  | FOR | 9.6  | 13.7 | 6.6'  | 03 38.5 | -35 27 | 355 | E1p     |     |    | Fornax Galaxy Cluster member                            |

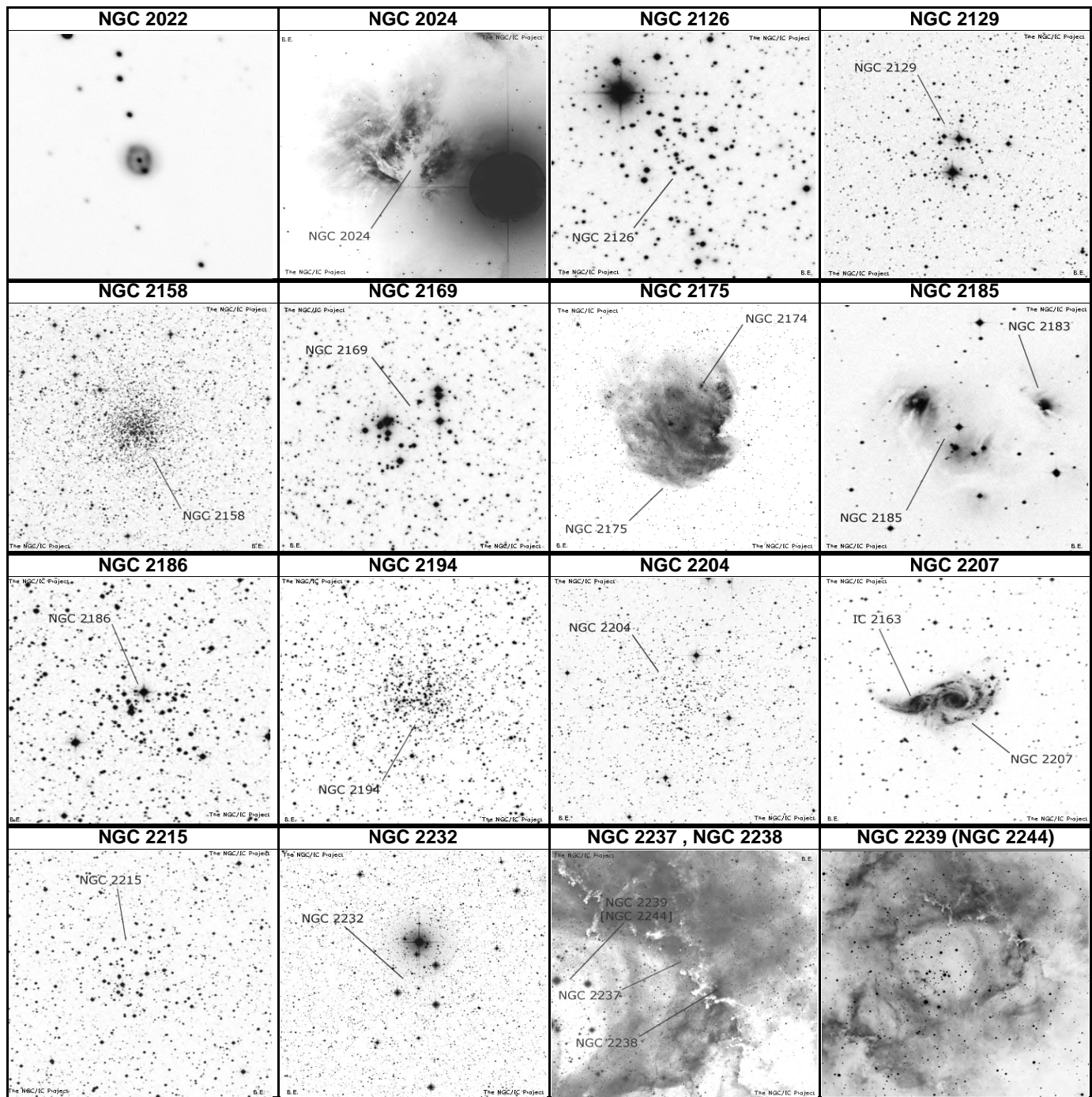


| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class  | ns | bs | SAC NOTES  |
|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|--------|----|----|--|
| NGC 1398 | ESO 482-22  | Galaxy  | FOR | 9.7  | 13.5 | 7.2'  | 03 38.9 | -26 20 | 312 | SBab   |    |    |  |
| NGC 1399 | ESO 358-45  | Galaxy  | FOR | 9.6  | 13.7 | 6.6'  | 03 38.5 | -35 27 | 355 | E1p    |    |    | Fornax Galaxy Cluster member                       |
| NGC 1407 | ESO 548-67  | Galaxy  | ERI | 9.7  | 12.9 | 4.9'  | 03 40.2 | -18 35 | 312 | EO     |    |    | H I 107  |
| NGC 1433 | ESO 249-14  | Galaxy  | HOR | 9.9  | 13.7 | 6.1'  | 03 42.0 | -47 13 | 391 | SBa    |    |    |  |
| NGC 1444 | OCL 394     | Opn CL  | PER | 6.6  | -    | 4'    | 03 49.4 | +52 40 | 39  | IV 1 p | 37 | 7  | H VIII 80; In Cam OB1?                             |
| NGC 1491 | LBN 704     | Brt Neb | PER | -    | -    | 6'    | 04 03.2 | +51 19 | 39  | E      |    |    | H I 258  |
| NGC 1499 | LBN 756     | Brt Neb | PER | 5    | -    | 160'  | 04 03.2 | +36 22 | 95  | E      |    |    | California Nebula, 0.6 deg from Xi Per             |
| NGC 1501 | PK 144+6.1  | Pln Neb | CAM | 12   | 11.6 | 56"   | 04 07.0 | +80 55 | 39  | 3      |    | 14 | H IV 53; PK144+6.1                                 |
| NGC 1502 | OCL 383     | Opn CL  | CAM | 6.9  | -    | 8'    | 04 07.8 | +62 20 | 18  | II 3 p | 45 | 7  | Incl Stv 484 5" sep PA 130 & Struve 485 18" 6" 11" |
| NGC 1513 | OCL 398     | Opn CL  | PER | 8.4  | -    | 9'    | 04 09.9 | +49 31 | 64  | II 1 m | 50 | 11 | H VII 60   |
| NGC 1514 | PK 165-15.1 | Pln Neb | TAU | 10.8 | 12.6 | 120"  | 04 09.3 | +30 47 | 95  | 3(2)   |    | 10 | H IV 69; PK165-15.1                                |
| NGC 1528 | OCL 397     | Opn CL  | PER | 6.4  | -    | 24'   | 04 15.3 | +51 13 | 39  | II 2 m | 40 | 9  | H VII 61; 80 * mag 8...; 1 deg NNW from b1 PER     |
| NGC 1532 | ESO 359-27  | Galaxy  | ERI | 9.9  | 13.8 | 11.6' | 04 12.1 | -32 52 | 356 | SBb    |    |    | NGC 1531 np 2'; Nearly edge-on                     |
| NGC 1535 | PK 206-40.1 | Pln Neb | ERI | 9.4  | 7.2  | 20"   | 04 14.3 | -12 44 | 268 | 4(2c)  |    | 12 | H IV 26; PK206-40.1                                |
| NGC 1545 | OCL 399     | Opn CL  | PER | 6.2  | -    | 18'   | 04 20.9 | +50 15 | 39  | II 2 p | 20 | 7  | H VIII 85  |
| NGC 1549 | ESO 157-18  | Galaxy  | DOR | 9.8  | 13   | 4.4'  | 04 15.8 | -55 36 | 420 | EO     |    |    | P w NGC 1553                                       |
| NGC 1566 | ESO 157-20  | Galaxy  | DOR | 9.7  | 13.9 | 8.2'  | 04 20.0 | -54 56 | 420 | SBbc   |    |    |  |



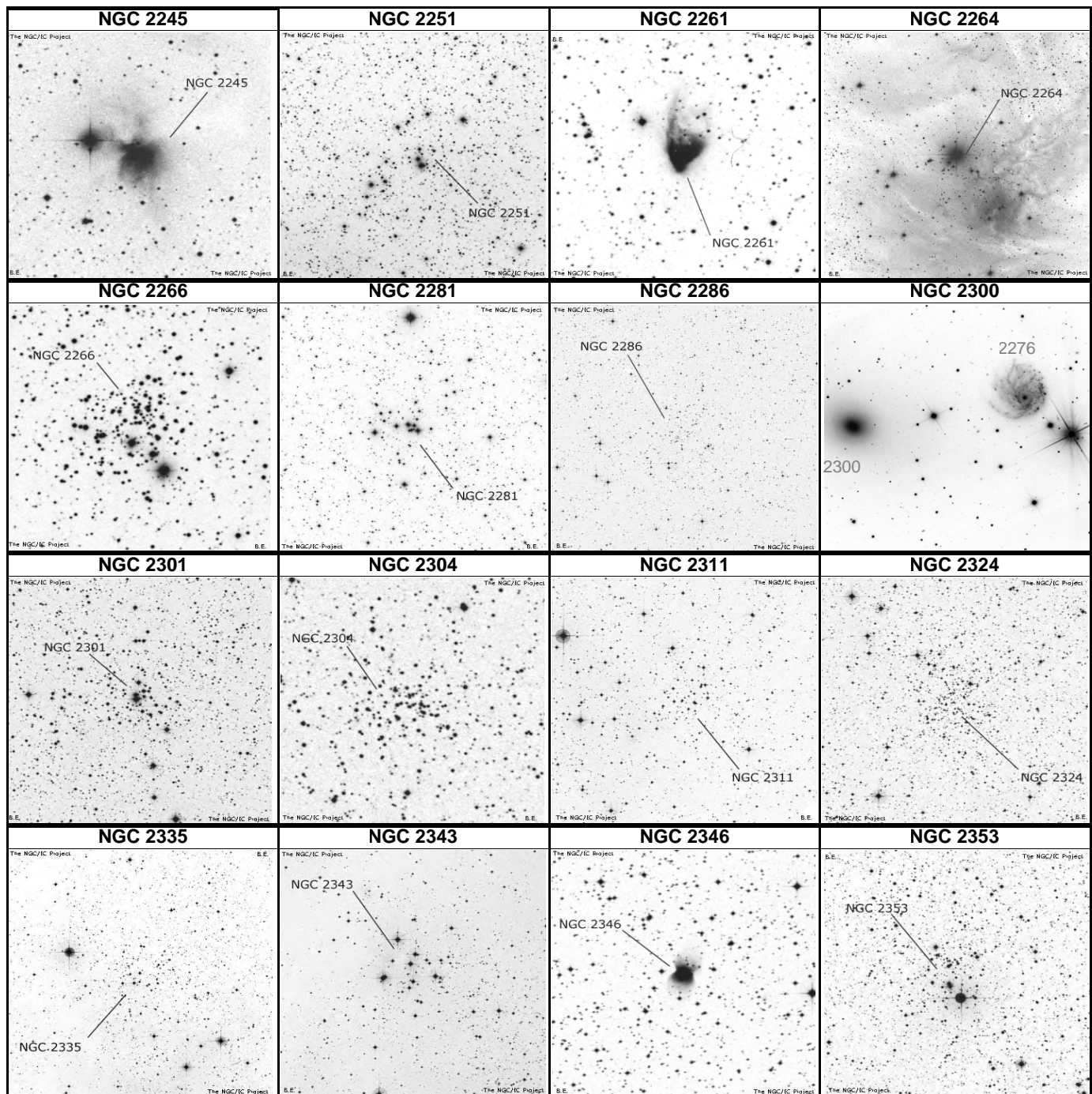


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs | SAC NOTES  |
|----------|------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|----|--|
| NGC 1647 | OCL 457    | Opn CL  | TAU | 6.4  | -    | 45'  | 04 45.9 | +19 06 | 134 | II 2 m     | 200 | 9  | H VIII 8   |
| NGC 1664 | OCL 411    | Opn CL  | AUR | 7.6  | -    | 18'  | 04 51.1 | +43 41 | 85  | III 1 p    |     | 11 | H VIII 59; 40* mags 11...                        |
| NGC 1672 | ESO 118-43 | Galaxy  | DOR | 9.7  | 13.4 | 6.7' | 04 45.7 | -59 15 | 421 | SBb        |     |    |  |
| NGC 1788 | LBN 916    | Brn Neb | ORI | -    | -    | 5'   | 05 08.9 | -03 20 | 225 | R          |     |    | H V 32; possible reflection nebula               |
| NGC 1792 | ESO 305- 6 | Galaxy  | COL | 10.2 | 12.9 | 5.6' | 05 05.2 | -37 59 | 358 | SBbc       |     |    | close to ngc 1808                                |
| NGC 1808 | ESO 305- 8 | Galaxy  | COL | 9.9  | 13.3 | 6.3' | 05 07.7 | -37 31 | 358 | SBa        |     |    | F outer arms , close to ngc1792                  |
| NGC 1817 | OCL 463    | Opn CL  | TAU | 7.7  | -    | 16'  | 05 12.4 | +16 41 | 180 | III 1 m    | 60  | 11 | H VII 4; 50 * mags 10 to 14                      |
| NGC 1851 | Dunlop 508 | Glob CL | COL | 7.1  | -    | 11'  | 05 14.1 | -40 03 | 393 | II         |     |    | X-ray source; vRi w F*                           |
| NGC 1857 | Cr 61      | Opn CL  | AUR | 7    | -    | 6'   | 05 20.1 | +39 21 | 66  | II 2 m     | 40  | 7  | H VII 33   |
| NGC 1907 | OCL 434    | Opn CL  | AUR | 8.2  | -    | 7'   | 05 28.1 | +35 20 | 97  | II 1 m n   | 30  | 11 | H VII 39   |
| NGC 1909 | IC 2118    | Brn Neb | ERI | -    | -    | 180' | 05 04.5 | -07 16 | 270 | R          |     |    | Witchhead nebula; Rigel may be illuminator       |
| NGC 1931 | OCL 441    | CL+Neb  | AUR | 10.1 | -    | 3'   | 05 31.4 | +34 15 | 97  | I 3 p n: t |     | 12 | H I 261; Contains triple ADS 4112                |
| NGC 1961 | IC 2133    | Galaxy  | CAM | 11   | 13.7 | 4.5' | 05 42.1 | +69 23 | 20  | SBbc       |     |    | H III 747; hexagonal; 2 branch arms w some knots |
| NGC 1964 | ESO 554-10 | Galaxy  | LEP | 10.8 | 13.4 | 5.5' | 05 33.4 | -21 57 | 315 | SBb        |     |    | H IV 21  |
| NGC 1973 | CED 55B    | Brn Neb | ORI | 7    | -    | 5'   | 05 35.1 | -04 44 | 225 | E          |     |    |  |
| NGC 1980 | OCL 529    | CL+Neb  | ORI | 2.5  | -    | 14'  | 05 35.4 | -05 55 | 270 | III 3 m n  |     |    | H V 31   |
| NGC 1999 | LBN 979    | Brn Neb | ORI | -    | -    | 2'   | 05 36.4 | -06 43 | 271 | E+R        |     |    | H IV 33  |



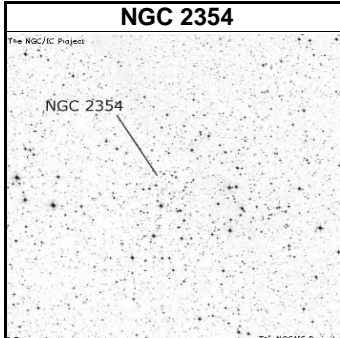
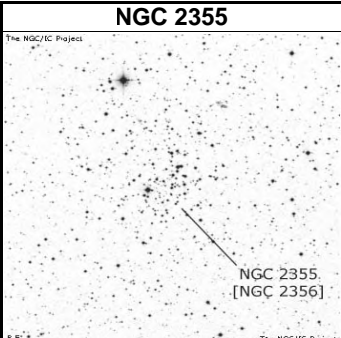
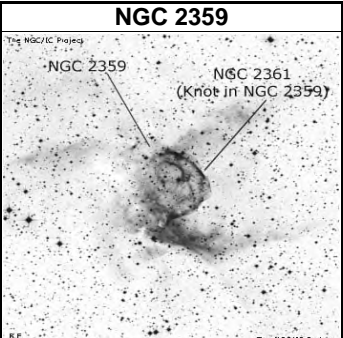
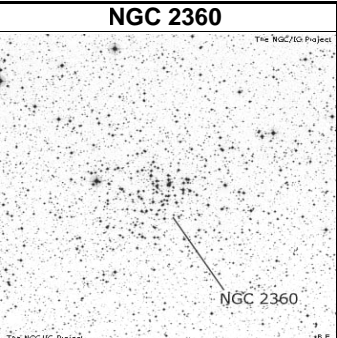
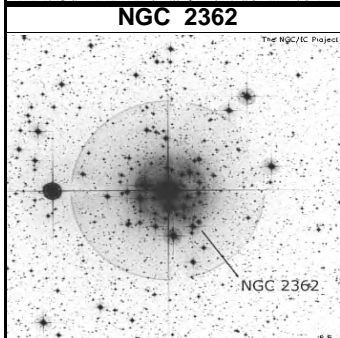
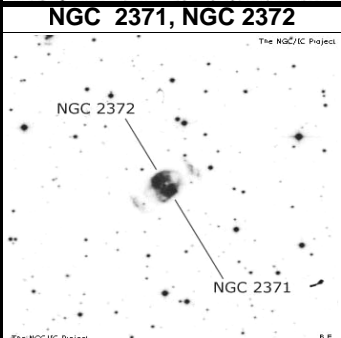
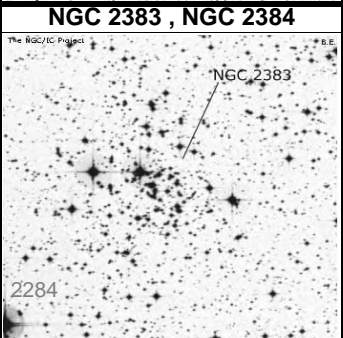
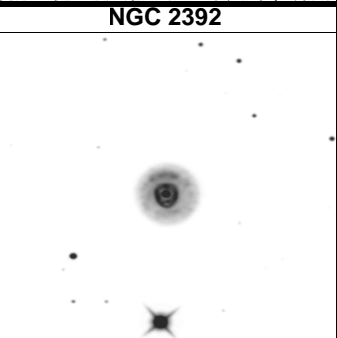
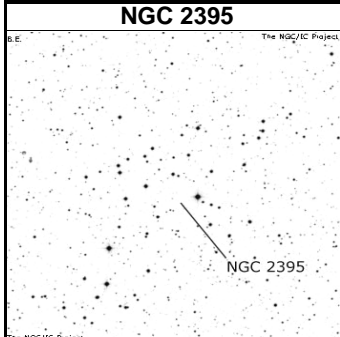
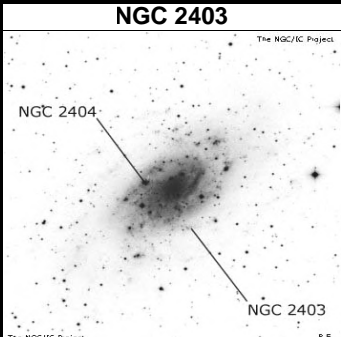
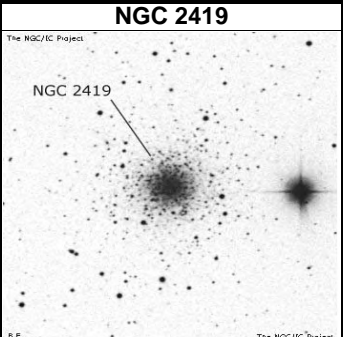
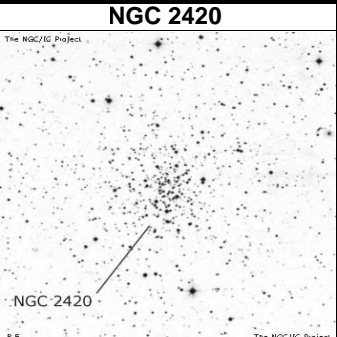
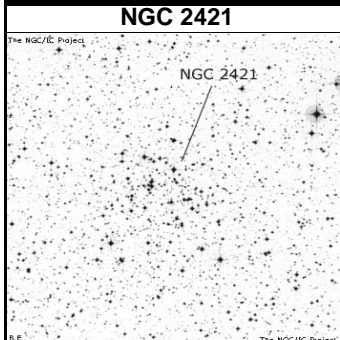
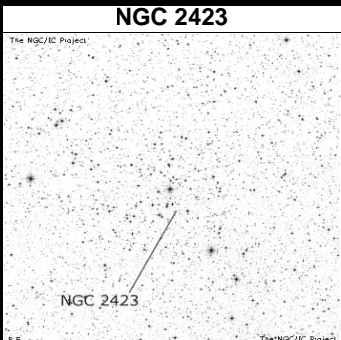
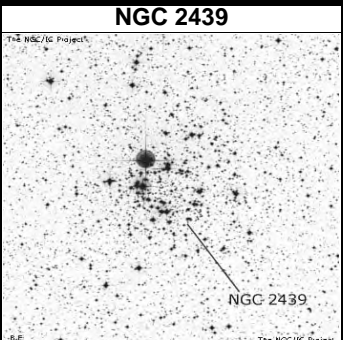
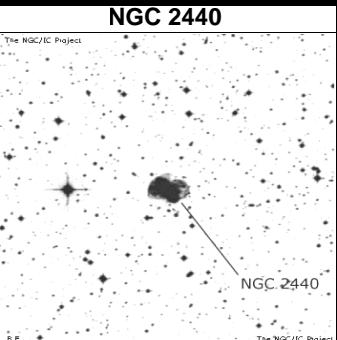
| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class    | ns  | bs | SAC NOTES  |
|----------|-------------|---------|-----|------|------|------|---------|--------|-----|----------|-----|----|--|
| NGC 2022 | PK 198-10.1 | Pln Neb | ORI | 11.7 | 9.2  | 28"  | 05 42.1 | +09 05 | 181 | 4(2)     |     | 16 | small,faint and distinct w annular form;PK198-10.1 |
| NGC 2024 | CED 55P     | Brn Neb | ORI | -    | -    | 30'  | 05 41.7 | -01 51 | 226 | E        |     |    | <b>Tank Track Neb; flame</b> , masked by Zeta Ori  |
| NGC 2126 | OCL 418     | Opn CL  | AUR | 10.2 | -    | 6'   | 06 02.5 | +49 52 | 67  | II 1 p   | 40  | 13 | H VIII 68;Scattered 20 * mags 11..14               |
| NGC 2129 | OCL 467     | Opn CL  | GEM | 6.7  | -    | 7'   | 06 00.7 | +23 19 | 136 | III 3 p  | 40  | 7  | H VIII 26  |
| NGC 2158 | OCL 468     | Opn CL  | GEM | 8.6  | -    | 5'   | 06 07.4 | +24 06 | 136 | II 3 r   |     | 12 | H VI 17;150 F* on edge of M 35                     |
| NGC 2169 | OCL 481     | Opn CL  | ORI | 5.9  | -    | 7'   | 06 08.4 | +13 58 | 182 | I 3 p n  | 30  | 7  | H VIII 24;In nebula Ced 78                         |
| NGC 2175 | OCL 476     | CL+Neb  | ORI | 6.8  | -    | 18'  | 06 09.6 | +20 29 | 137 | IV 3 p n | 60  | 8  | In Gem OB1?  |
| NGC 2185 | LBN 997     | Brn Neb | MON | -    | -    | 2'   | 06 11.0 | -06 14 | 272 | R        |     |    | H IV 20  |
| NGC 2186 | OCL 498     | Opn CL  | ORI | 8.7  | -    | 4'   | 06 12.1 | +05 28 | 227 | II 2 p   | 30  | 10 | H VII 25   |
| NGC 2194 | OCL 495     | Opn CL  | ORI | 8.5  | -    | 10'  | 06 13.8 | +12 48 | 182 | III 1 r  | 80  | 12 | H VI 5;faint,rich;look for 2169 nearby             |
| NGC 2204 | OCL 572     | Opn CL  | CMA | 8.6  | -    | 13'  | 06 15.5 | -18 40 | 317 | III 3 m  | 80  | 12 | H VII 13;About 20 F *                              |
| NGC 2207 | ESO 556- 8  | Galaxy  | CMA | 10.8 | 13.4 | 4.2' | 06 16.4 | -21 22 | 317 | SBbc RI  |     |    | Double galaxy or interacting pair                  |
| NGC 2215 | OCL 550     | Opn CL  | MON | 8.4  | -    | 11'  | 06 20.8 | -07 17 | 272 | II 2 p   | 40  | 11 | H VII 20   |
| NGC 2232 | OCL 545     | Opn CL  | MON | 3.9  | -    | 30'  | 06 28.0 | -04 51 | 227 | IV 3 p   | 20  | 5  | H VIII 25  |
| NGC 2237 | OCL 511     | CL+Neb  | MON | 5.5  | -    | 80'  | 06 30.9 | +05 03 | 227 | E        |     |    | <b>Rosette nebula</b>                              |
| NGC 2238 | LBN 948     | Brn Neb | MON | 6    | -    | 80'  | 06 30.7 | +05 01 | 227 | E        |     |    | <b>Rosette nebula</b>                              |
| NGC 2239 | NGC 2244    | Opn CL  | MON | 4.8  | -    | 24'  | 06 31.9 | +04 57 | 227 | II 3 p n | 40  |    |  |
| NGC 2244 | NGC 2239    | CL+Neb  | MON | 4.8  | -    | 24'  | 06 31.9 | +04 57 | 227 | II 3 r n | 100 | 6  | H VII 2;In Rosette nebula                          |



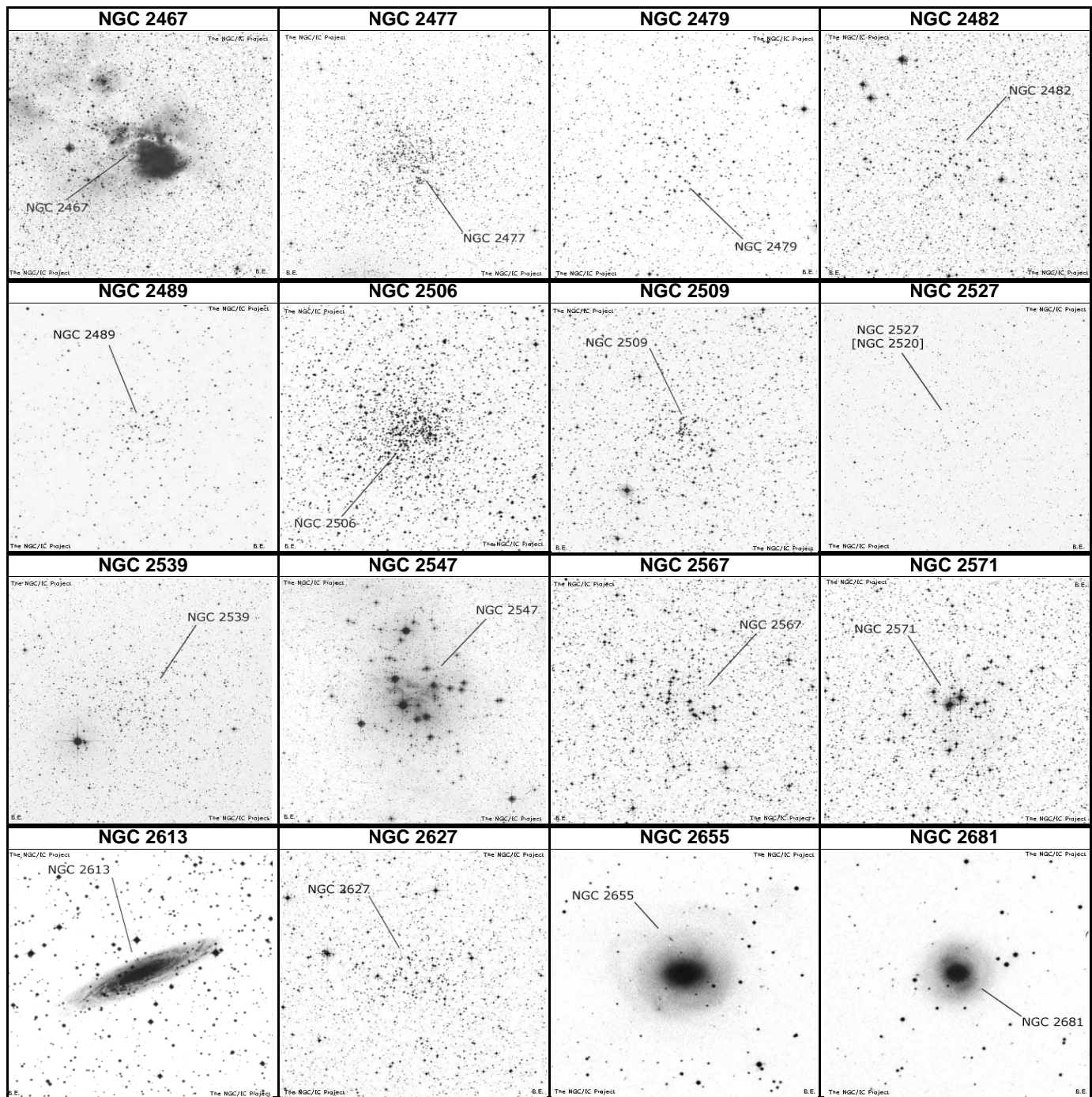


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES  |
|----------|------------|---------|-----|------|------|------|---------|--------|-----|-----------|----|----|--|
| NGC 2245 | LBN 904    | Br1 Neb | MON | -    | -    | 2'   | 06 32.7 | +10 09 | 182 | R         |    |    | H IV 3   |
| NGC 2251 | OCL 499    | Opn CL  | MON | 7.3  | -    | 10'  | 06 34.6 | +08 22 | 182 | IV 2 p    | 30 | 9  | H VIII 3   |
| NGC 2261 | LBN 920    | Br1 Neb | MON | -    | -    | 2'   | 06 39.2 | +08 45 | 182 | E+R       |    |    | Hubble's variable nebula (fan-shape); R Mon invl   |
| NGC 2264 | OCL 495    | CL+Neb  | MON | 3.9  | -    | 20'  | 06 41.0 | +09 54 | 183 | III 3 m n | 40 | 5  | Christmas Tree Cluster; Near Cone nebula           |
| NGC 2266 | OCL 471    | Opn CL  | GEM | 9.5  | -    | 7'   | 06 43.3 | +26 58 | 138 | II 2 m    | 50 | 11 | H VI 21  |
| NGC 2281 | OCL 446    | Opn CL  | AUR | 5.4  | -    | 15'  | 06 48.3 | +41 05 | 68  | I 3 p     | 30 | 7  | H VIII 71  |
| NGC 2286 | OCL 548    | Opn CL  | MON | 7.5  | -    | 15'  | 06 47.7 | -03 09 | 228 | IV 3 m    | 50 | 10 | H VIII 31  |
| NGC 2300 | UGC 3798   | Galaxy  | CEP | 11   | 12.8 | 3.5' | 07 32.3 | +85 43 | 1   | E1        |    |    | Pair with NGC 2276 at 6' and IC 1455 at 10'; vsBN  |
| NGC 2301 | OCL 540    | Opn CL  | MON | 6    | -    | 12'  | 06 51.8 | +00 28 | 228 | I 3 m     | 80 | 8  | H VI 27; 60" B...; blue&gold D* near center        |
| NGC 2304 | OCL 484    | Opn CL  | GEM | 10   | -    | 5'   | 06 55.2 | +17 59 | 138 | II 1 p    | 30 |    | H VI 2   |
| NGC 2311 | OCL 553    | Opn CL  | MON | 9.6  | -    | 7'   | 06 57.8 | -04 37 | 228 | III 2 p   | 50 | 12 | H VIII 60  |
| NGC 2324 | OCL 542    | Opn CL  | MON | 8.4  | -    | 8'   | 07 04.1 | +01 03 | 228 | II 2 r    | 70 | 10 | H VII 38   |
| NGC 2335 | OCL 562    | Opn CL  | MON | 7.2  | -    | 12'  | 07 06.8 | -10 02 | 273 | III 3 m n | 35 | 10 | H VIII 32; in Cma OB1                              |
| NGC 2343 | OCL 565    | Opn CL  | MON | 6.7  | -    | 7'   | 07 08.1 | -10 37 | 273 | III 3 p n | 20 | 8  | H VIII 33  |
| NGC 2346 | PK 215+3.1 | Pln Neb | MON | 12.5 | 11.5 | 60"  | 07 09.4 | -00 48 | 228 | 3b(6)     |    | 11 | H IV 65; PK215+3.1; cent* V651 Mon a variable star |
| NGC 2353 | OCL 567    | Opn CL  | MON | 7.1  | -    | 20'  | 07 14.5 | -10 16 | 274 | II 2 p    | 30 | 9  | H VIII 34; in Cma OB1                              |

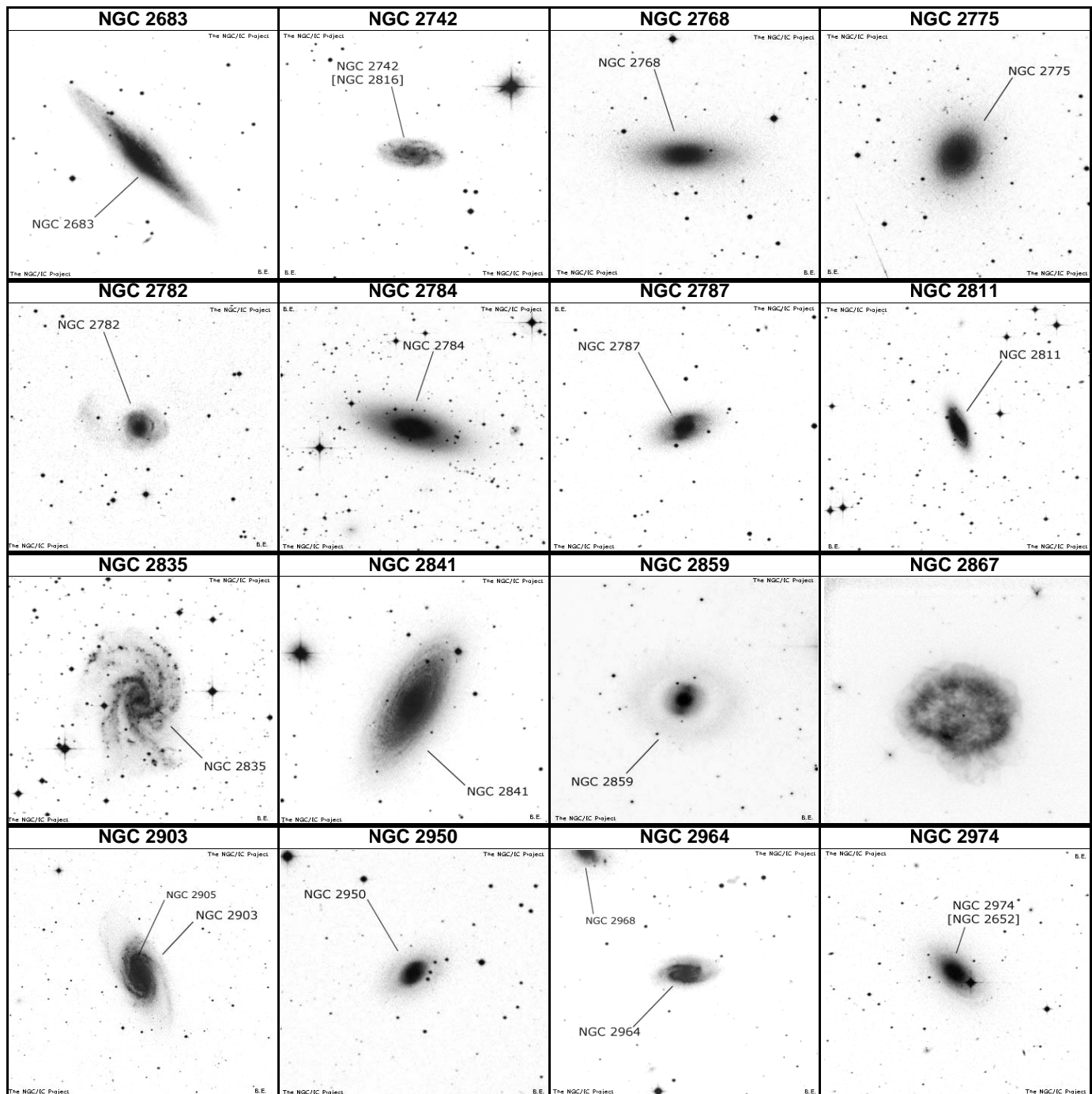


|    |            |    |     |    |      |    |         |        |     |         |     |    |   |
|---|------------|---|-----|--|------|---|---------|--------|-----|---------|-----|----|---|
|    |            |    |     |    |      |    |         |        |     |         |     |    |   |
|   |            |   |     |   |      |   |         |        |     |         |     |    |   |
|  |            |  |     |  |      |  |         |        |     |         |     |    |   |
| NAME  | OTHER      | TYPE  | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns  | bs | SAC NOTES   |
| NGC 2354  | OCL 639    | Opn CL  | CMA | 6.5  | -    | 20'   | 07 14.3 | -25 42 | 319 | III 2 m | 100 | 9  | H VII 16  |
| NGC 2355  | NGC 2358   | Opn CL  | GEM | 9.7  | -    | 9'  | 07 17.0 | +13 45 | 184 | II 2 p  | 40  | 13 | H VI 6  |
| NGC 2359  | LBN 1041   | Brn Neb   | CMA | -  | -    | 10'   | 07 18.5 | -13 14 | 274 | E       |     | 11 | <b>Duck Neb</b> ; curved filam; cent* Wolf Rayet; UHC helps |
| NGC 2360  | OCL 589    | Opn CL  | CMA | 7.2  | -    | 13'   | 07 17.7 | -15 38 | 274 | II 2 m  | 80  | 10 | H VII 12  |
| NGC 2362  | OCL 633    | Opn CL  | CMA | 4.1  | -    | 8'  | 07 18.7 | -24 57 | 319 | I 3 p n | 60  | 4  | H VII 17, 40 * to 13 mag surround Tau Cma; sev pair         |
| NGC 2371  | NGC 2372   | Pln Neb   | GEM | 11.2   | 10.5 | 74"   | 07 25.6 | +29 29 | 100 | 3a+6    |     | 15 | faint double-lobed planetary; use filter; PK189+19.1        |
| NGC 2372  | NGC 2371   | Pln Neb   | GEM | 11.2   | 10.5 | 74"   | 07 25.6 | +29 30 | 100 | 3a(4)   |     | 15 | faint double-lobed planetary; use filter; PK189+19.1        |
| NGC 2383  | OCL 616    | Opn CL  | CMA | 8.4  | -    | 6'  | 07 24.7 | -20 57 | 319 | I 3 m   | 40  | 10 | Near cluster NGC 2384                                       |
| NGC 2384  | OCL 618    | Opn CL  | CMA | 7.4  | -    | 2.5'  | 07 25.2 | -21 01 | 319 | IV 3 p  | 15  | 9  | Near cluster NGC 2383                                       |
| NGC 2392  | PK 197+17. | Pln Neb   | GEM | 8.6  | 6.8  | 47"   | 07 29.2 | +20 55 | 139 | 3b(3b)  |     | 11 | <b>Clown Face</b> or <b>Eskimo Nebula</b> ; .1; sev shells  |
| NGC 2395  | OCL 502    | Opn CL  | GEM | 8  | -    | 12'   | 07 27.2 | +13 37 | 184 | III 1 p | 30  | 10 | H VIII 11   |
| NGC 2403  | UGC 3918   | Galaxy  | CAM | 8.5  | 14.4 | 23.4'   | 07 36.8 | +65 36 | 21  | SBc     |     |    | in M81 group; many well res irreg arms; broad bar           |
| NGC 2419  | GCL 12     | Glob CL   | LYN | 10.4   | -    | 6.2'  | 07 38.1 | +38 53 | 100 | II      |     |    | H I 218; Most distant globular; Brightest * 17 mag          |
| NGC 2420  | OCL 488    | Opn CL  | GEM | 8.3  | -    | 10'   | 07 38.4 | +21 34 | 139 | I 2 r   | 100 | 11 | H VI 1  |
| NGC 2421  | OCL 626    | Opn CL  | PUP | 8.3  | -    | 10'   | 07 36.2 | -20 37 | 319 | I 2 m   | 70  | 10 | H VII 67  |
| NGC 2423  | OCL 592    | Opn CL  | PUP | 6.7  | -    | 19'   | 07 37.1 | -13 52 | 274 | IV 2 m  | 40  | 9  | H VII 28  |
| NGC 2438  | PK 231+4.2 | Pln Neb   | PUP | 11   | 11.7 | 65"   | 07 41.8 | -14 44 | 274 | 4(2)    |     | 18 | H IV 39; PK231+4.2 , <b>inside M46</b>                      |
| NGC 2439  | OCL 688    | Opn CL  | PUP | 6.9  | -    | 10'   | 07 40.8 | -31 42 | 362 | II 3 m  | 80  | 9  |   |
| NGC 2440  | PK 234+2.1 | Pln Neb   | PUP | 11.5   | 6.4  | 54"   | 07 41.9 | -18 13 | 319 | 5(3)    |     | 18 | almost starlike; irregular at high power; PK234+2.1         |



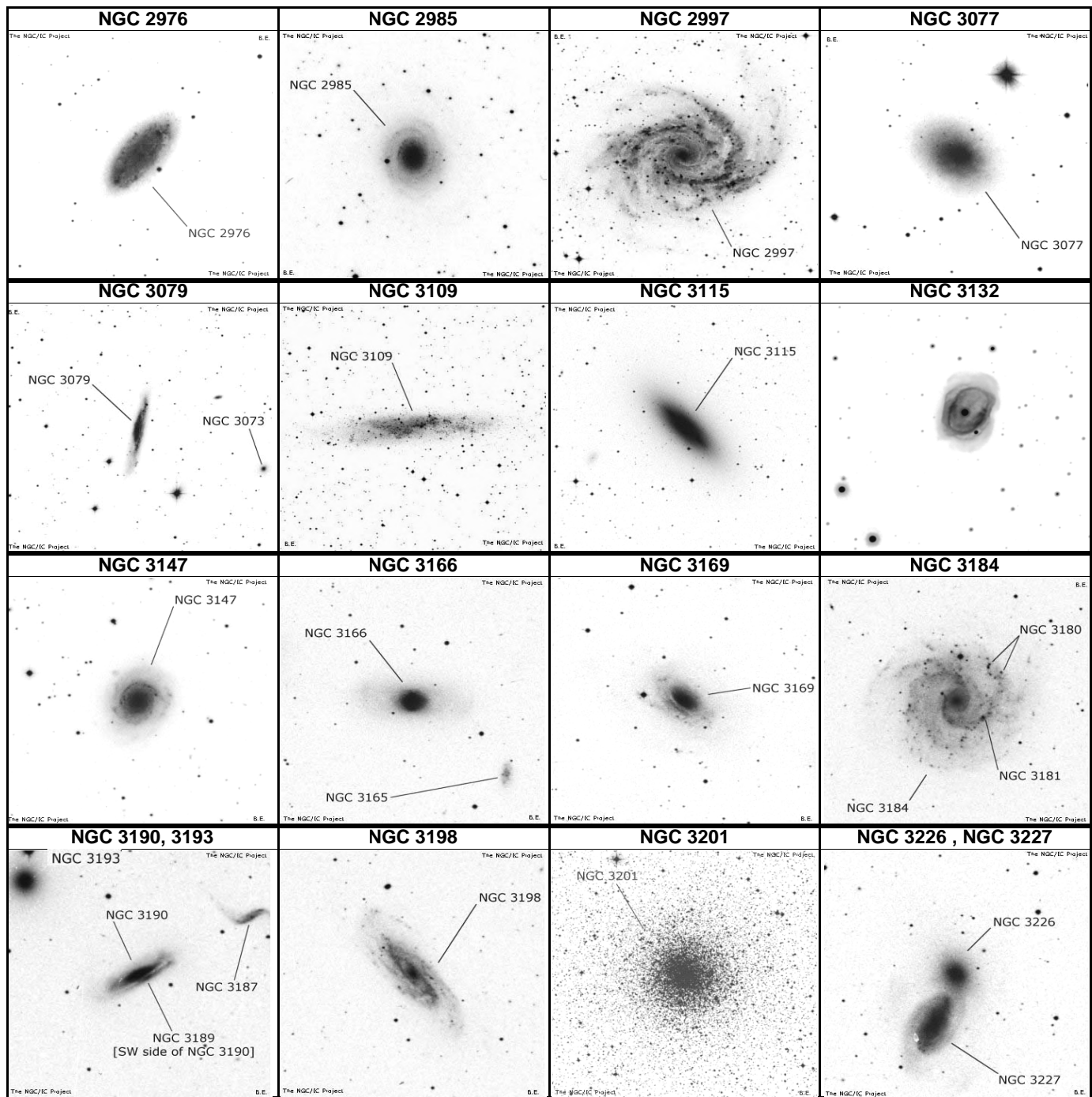


| NAME     | OTHER      | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns  | bs | SAC NOTES  |
|----------|------------|--------|-----|------|------|------|---------|--------|-----|-----------|-----|----|--|
| NGC 2467 | OCL 668    | CL+Neb | PUP | 7.1  | -    | 15'  | 07 52.5 | -26 26 | 320 | I 3 m n t | 50  |    | Scattered stars 8..12 w vF haze of neb; in PUP OB1 |
| NGC 2477 | OCL 720    | Opn CL | PUP | 5.8  | -    | 27'  | 07 52.2 | -38 32 | 362 | I 2 r : b | 200 | 12 | 300 * to 12 mag; Shapley--richest of OPNCL         |
| NGC 2479 | OCL 623    | Opn CL | PUP | 9.6  | -    | 7'   | 07 55.1 | -17 42 | 320 | III 1 m   | 45  |    | H VII 58   |
| NGC 2482 | OCL 653    | Opn CL | PUP | 7.3  | -    | 12'  | 07 55.2 | -24 15 | 320 | III 1 m   | 40  | 10 | H VII 10   |
| NGC 2489 | OCL 690    | Opn CL | PUP | 7.9  | -    | 8'   | 07 58.3 | -30 04 | 362 | II 2 m    | 45  | 11 | H VII 23   |
| NGC 2506 | OCL 593    | Opn CL | MON | 7.6  | -    | 7'   | 08 00.0 | -10 46 | 275 | I 2 r     | 150 | 11 | H VI 37  |
| NGC 2509 | OCL 630    | Opn CL | PUP | 9.3  | -    | 8'   | 08 00.8 | -19 03 | 320 | II 1 p    | 70  |    | H VIII 1   |
| NGC 2527 | NGC 2520   | Opn CL | PUP | 6.5  | -    | 22'  | 08 05.0 | -28 09 | 362 | III 1 p   | 40  | 9  | H VIII 30  |
| NGC 2539 | OCL 611    | Opn CL | PUP | 6.5  | -    | 22'  | 08 10.6 | -12 49 | 275 | II 1 m    | 50  | 9  | Rich cluster; near M46 and M47; D* 19 Pup in field |
| NGC 2547 | OCL 753    | Opn CL | VEL | 4.7  | -    | 20'  | 08 10.2 | -49 12 | 396 | II 2 p n  | 80  | 7  |  |
| NGC 2567 | OCL 708    | Opn CL | PUP | 7.4  | -    | 10'  | 08 18.5 | -30 39 | 362 | III 2 m   | 40  | 10 | H VII 64   |
| NGC 2571 | OCL 701    | Opn CL | PUP | 7    | -    | 13'  | 08 18.9 | -29 45 | 362 | IV 1 p    | 30  | 9  | H VI 39  |
| NGC 2613 | ESO 495-18 | Galaxy | PYX | 10.3 | 12.9 | 7.1' | 08 33.4 | -22 58 | 321 | Sb        |     |    | 1.2 deg W from D* Burnham 208; Nearly edge-on      |
| NGC 2627 | OCL 714    | Opn CL | PYX | 8.4  | -    | 11'  | 08 37.2 | -29 57 | 363 | III 2 m   | 60  | 11 | H VII 63   |
| NGC 2655 | UGC 4637   | Galaxy | CAM | 10.1 | 13.2 | 4.9' | 08 55.6 | +78 13 | 7   | SBO-a     |     |    | large nucleus w asym dk matter; faint outer whirls |
| NGC 2681 | UGC 4845   | Galaxy | UMA | 10.3 | 12.8 | 3.7' | 08 53.5 | +51 19 | 44  | SBO-a     |     |    | H I 242; Compact center and distinct spiral arms   |

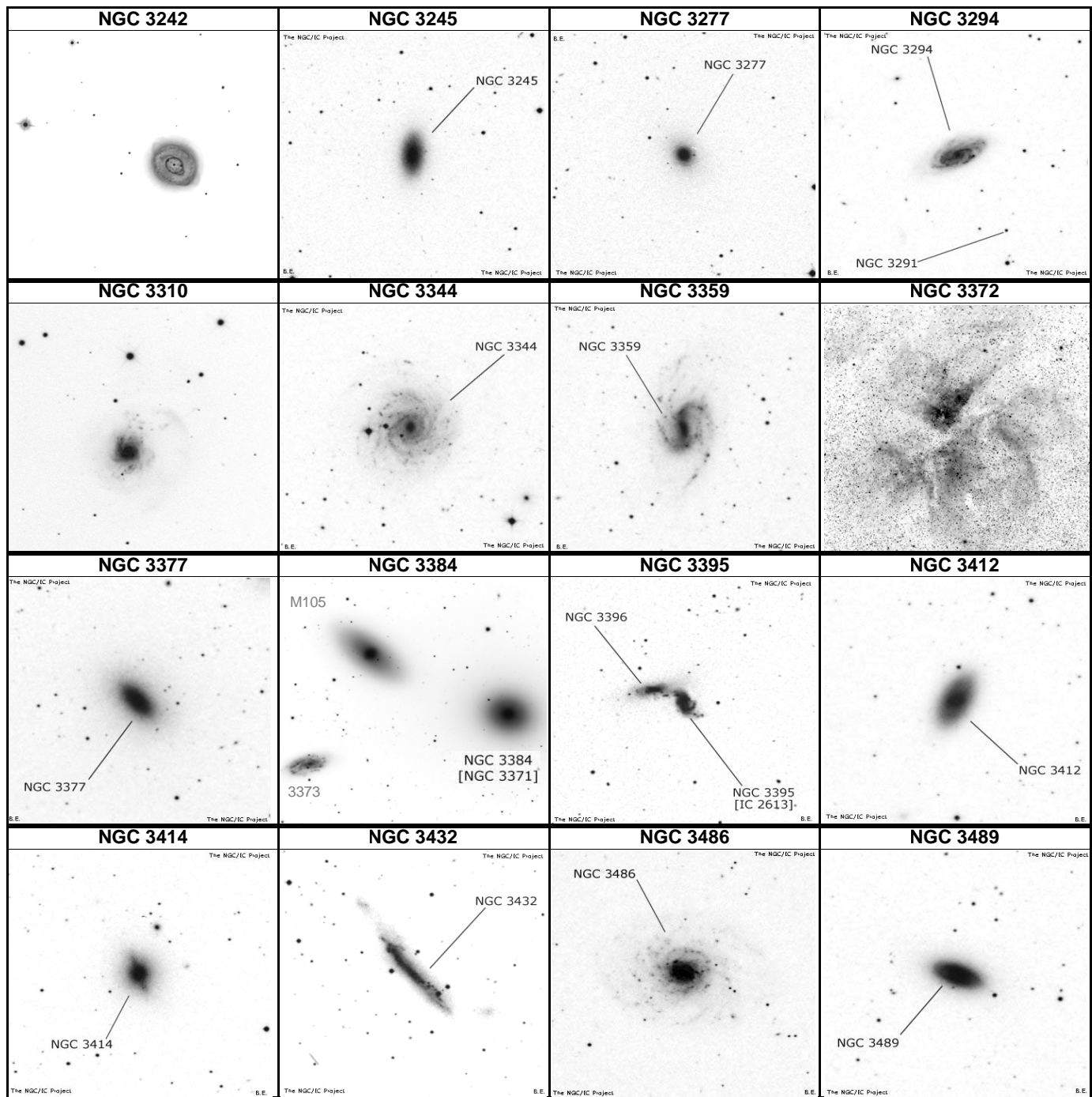


| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class   | ns | bs | SAC NOTES  |
|----------|-------------|---------|-----|------|------|------|---------|--------|-----|---------|----|----|--|
| NGC 2683 | UGC 4841    | Galaxy  | LYN | 9.8  | 12.9 | 8.8' | 08 52.7 | +33 25 | 102 | Sb      |    |    | peanut-shaped bulge; many filam; arm w dk lanes 1      |
| NGC 2742 | NGC 2816    | Galaxy  | UMA | 11.4 | 13   | 3'   | 09 07.6 | +60 29 | 44  | Sc      |    |    | H I 249; bright nucleus; several filamentary knotty an |
| NGC 2768 | UGC 4821    | Galaxy  | UMA | 9.9  | 13.7 | 8.2' | 09 11.6 | +60 02 | 44  | E5      |    |    | vsvB center; smooth neb in lens and external envel     |
| NGC 2775 | UGC 4820    | Galaxy  | CNC | 10.1 | 12.9 | 4.5' | 09 10.3 | +07 02 | 187 | Sab     |    |    | N in B smooth lens; many knotty arms form dk lane      |
| NGC 2782 | UGC 4862    | Galaxy  | LYN | 11.6 | 13.9 | 3.7' | 09 14.1 | +40 07 | 71  | SBa     |    |    | broad bar w strong dk. lane; asym smooth arms dk l     |
| NGC 2784 | ESO 497-23  | Galaxy  | HYA | 10.2 | 12.8 | 5.7' | 09 12.3 | -24 10 | 322 | SO      |    |    | H I 59   |
| NGC 2787 | UGC 4814    | Galaxy  | UMA | 10.8 | 12.6 | 3.1' | 09 19.3 | +69 12 | 23  | SBO-a   |    |    | H I 216; B nucl in B inner lens; strong narrow bar w b |
| NGC 2811 | MCG - 3-24- | Galaxy  | HYA | 11.3 | 12   | 2.2' | 09 16.2 | -16 19 | 277 | SBa     |    |    | H II 502   |
| NGC 2835 | ESO 564-35  | Galaxy  | HYA | 10.5 | 14   | 6.3' | 09 17.9 | -22 21 | 322 | SBc     |    |    | Fine multi arm spiral                                  |
| NGC 2841 | UGC 4986    | Galaxy  | UMA | 9.2  | 12.7 | 7.7' | 09 22.0 | +50 59 | 44  | Sb      |    |    | H I 205; fine spiral w symmetrical whorls              |
| NGC 2859 | UGC 5001    | Galaxy  | LMI | 10.9 | 13.8 | 4'   | 09 24.3 | +34 31 | 103 | SBO-a   |    |    | H I 137; bright nucleus in diff. bar w diff. blobs     |
| NGC 2867 | PK 278-5.1  | Pln Neb | CAR | 9.7  | 6.5  | 12"  | 09 21.4 | -58 19 | 425 | 4       |    | 16 |  |
| NGC 2903 | UGC 5079    | Galaxy  | LEO | 9    | 13.6 | 12'  | 09 32.2 | +21 30 | 143 | SBbc    |    |    | H I 56; short B nucleus bar; fine multi arm spiral     |
| NGC 2950 | UGC 5176    | Galaxy  | UMA | 10.9 | 12.5 | 2.7' | 09 42.6 | +58 51 | 45  | SBO Rir |    |    | H IV 68  |
| NGC 2964 | UGC 5183    | Galaxy  | LEO | 11.3 | 12.8 | 3'   | 09 42.9 | +31 51 | 104 | SBbc Ri |    |    | H I 114; faint bar; 2 mn. knotty arms; Mrk 404 in disc |
| NGC 2974 | MCG 0-25-   | Galaxy  | SEX | 10.9 | 13   | 3.4' | 09 42.6 | -03 42 | 233 | Sa      |    |    | H I 61; bright nucleus; 10m * @ 0.7'                   |



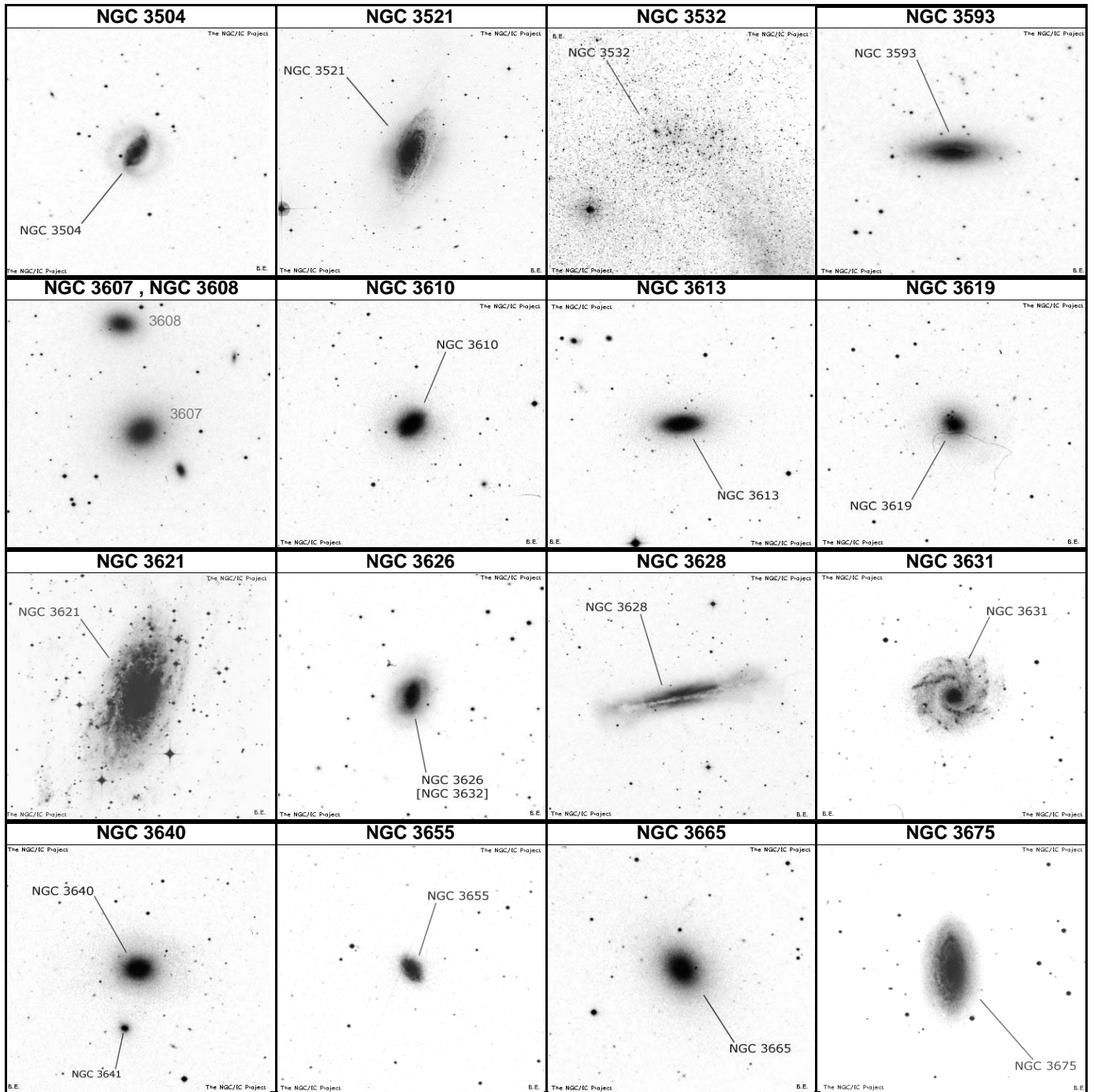


| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES  |
|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|----|--|
| NGC 2976 | UGC 5221    | Galaxy  | UMA | 10.2 | 13   | 6.2'  | 09 47.2 | +67 55 | 23  | Scp       |    |    | B main body;chaotic inner w many dk lane;F outer d         |
| NGC 2985 | UGC 5253    | Galaxy  | UMA | 10.4 | 13.3 | 4.6'  | 09 50.4 | +72 17 | 23  | Sb        |    |    | diff BN;many poor res knotty arms; P w NGC 3027            |
| NGC 2997 | ESO 434-35  | Galaxy  | ANT | 9.4  | 13.7 | 9.2'  | 09 45.6 | -31 11 | 365 | SBc       |    |    | H V 50   |
| NGC 3077 | UGC 5398    | Galaxy  | UMA | 9.9  | 13.1 | 5.2'  | 10 03.3 | +68 44 | 23  | Sd        |    |    | m81 group;dust streamers tending to radial direction       |
| NGC 3079 | UGC 5387    | Galaxy  | UMA | 10.9 | 13.4 | 8.1'  | 10 02.0 | +55 41 | 45  | SBc       |    |    | H V 47;brightest of 3;comp 6.5 nf;0.9'x0.4';mag 14.1       |
| NGC 3109 | ESO 498-38  | Galaxy  | HYA | 9.9  | 14.4 | 19.7' | 10 03.1 | -26 10 | 324 | Ir        |    |    |  |
| NGC 3115 | MCG - 1-26- | Galaxy  | SEX | 8.9  | 11.9 | 7.3'  | 10 05.2 | -07 43 | 279 | E6        |    |    | <b>Spindle Galaxy</b> H I 163;                             |
| NGC 3132 | PK 272+12.  | Pln Neb | VEL | 8.2  | 8.2  | 84"   | 10 07.0 | -40 26 | 399 | 4(2)      |    | 16 | <b>Eight-Burst Nebula</b> ; actual central star is 15.8 ma |
| NGC 3147 | UGC 5532    | Galaxy  | DRA | 10.6 | 13.3 | 4.3'  | 10 16.9 | +73 24 | 8   | Sbc       |    |    | H I 79;vBN;many filam. narrow arms in lens                 |
| NGC 3166 | UGC 5516    | Galaxy  | SEX | 10.4 | 12.9 | 4.8'  | 10 13.8 | +03 26 | 234 | SBO-a     |    |    | H I 3;brightest in group                                   |
| NGC 3169 | UGC 5525    | Galaxy  | SEX | 10.2 | 12.8 | 4.2'  | 10 14.2 | +03 28 | 234 | Sa        |    |    | H I 4;eF corona vis to approx 8X6;P w NGC 3166             |
| NGC 3184 | UGC 5557    | Galaxy  | UMA | 9.8  | 13.9 | 7.6'  | 10 18.3 | +41 25 | 72  | SBc       |    |    | svBN;smooth lens w spiral pattern of dark markings         |
| NGC 3190 | UGC 5558    | Galaxy  | LEO | 11.1 | 13.1 | 4'    | 10 18.1 | +21 50 | 144 | Sa        |    |    | H II 44;bright in grp;disturbed edge-on spiral;P w 3'      |
| NGC 3193 | UGC 5582    | Galaxy  | LEO | 10.9 | 13.1 | 2.9'  | 10 18.4 | +21 54 | 144 | E0        |    |    | H II 45;NGC 3189-90 group;vB center in smooth ne           |
| NGC 3198 | UGC 5572    | Galaxy  | UMA | 10.3 | 13.8 | 8.1'  | 10 19.9 | +45 33 | 72  | SBc Rin   |    |    | H I 199;svBN in bar partly obscured on one side            |
| NGC 3201 | Dunlop 445  | Glob CL | VEL | 6.8  | -    | 18.2' | 10 17.6 | -46 25 | 399 | X         |    |    | * mags 13...; loose structured globular                    |
| NGC 3226 | UGC 5617    | Galaxy  | LEO | 11.4 | 13.8 | 2.5'  | 10 23.4 | +19 54 | 144 | Elliptica |    |    | H II 28;P w NGC 3227 at 2.3' sf;UGC 5617                   |
| NGC 3227 | UGC 5620    | Galaxy  | LEO | 10.3 | 13.4 | 6.6'  | 10 23.5 | +19 52 | 144 | SBa       |    |    | P w NGC 3226;vF env surr system;50' E of Gam Le            |

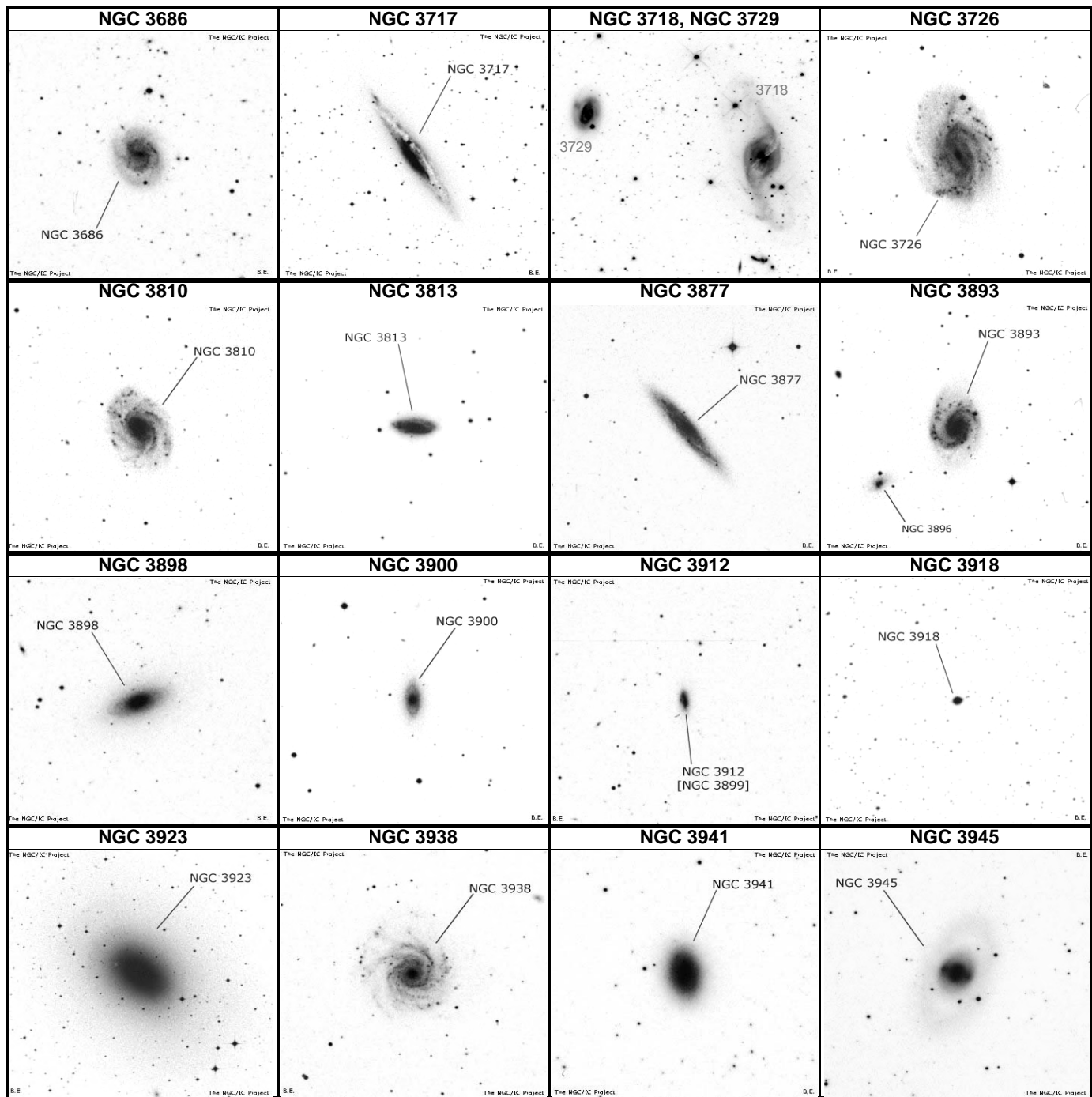


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES   |
|----------|------------|---------|-----|------|------|------|---------|--------|-----|-----------|----|----|---|
| NGC 3242 | PK 261+32. | Pln Neb | HYA | 8.6  | 5.4  | 40"  | 10 24.8 | -18 39 | 325 | 4(3b)     |    | 12 | <b>Ghost of Jupiter</b> ; H IV 2                                |
| NGC 3245 | UGC 5863   | Galaxy  | LMI | 10.8 | 12.6 | 3.5' | 10 27.3 | +28 30 | 105 | SO        |    |    | H I 86  |
| NGC 3277 | UGC 5731   | Galaxy  | LMI | 11.7 | 12.9 | 2.1' | 10 32.9 | +28 31 | 105 | Sab       |    |    | H II 359  |
| NGC 3294 | UGC 5753   | Galaxy  | LMI | 11.8 | 13.7 | 3.4' | 10 36.3 | +37 19 | 105 | Sc        |    |    | H I 164   |
| NGC 3310 | UGC 5786   | Galaxy  | UMA | 10.8 | 12.8 | 2.8' | 10 38.8 | +53 30 | 46  | SBbc/P    |    |    | H IV 60; UGC 5786   |
| NGC 3344 | UGC 5840   | Galaxy  | LMI | 9.9  | 13.9 | 7.1' | 10 43.5 | +24 55 | 145 | SBbc RI   |    |    | H I 81  |
| NGC 3359 | UGC 5873   | Galaxy  | UMA | 10.6 | 14.2 | 7.5' | 10 46.6 | +63 13 | 24  | SBc       |    |    | H V 52  |
| NGC 3372 | Dunlop 309 | Brn Neb | CAR | 3    | -    | 120" | 10 45.1 | -59 52 | 427 | E         |    |    | <b>Keyhole Nebula</b> & nova-like var <b>Eta Car</b> ; drk lane |
| NGC 3377 | UGC 5899   | Galaxy  | LEO | 10.4 | 13.4 | 4.3' | 10 47.7 | +13 59 | 190 | Elliptica |    |    | H II 99; Leo group  |
| NGC 3384 | NGC 3371   | Galaxy  | LEO | 9.9  | 12.6 | 5.4' | 10 48.3 | +12 38 | 190 | E7        |    |    | Leo group; in triple group w NGC 3379 and NGC 33                |
| NGC 3395 | UGC 5931   | Galaxy  | LMI | 12.1 | 12.9 | 1.7' | 10 49.8 | +32 59 | 105 | SBc       |    |    | H I 116; P w NGC 3396; contact disrupted; brightest d           |
| NGC 3412 | UGC 5952   | Galaxy  | LEO | 10.5 | 12.6 | 3.7' | 10 50.9 | +13 25 | 190 | SBO       |    |    | H I 27; Leo group   |
| NGC 3414 | UGC 5959   | Galaxy  | LMI | 11   | 13.3 | 3.6' | 10 51.3 | +27 58 | 145 | SBO       |    |    | H II 362; P w NGC 3418 at 8'2"; UGC 5959                        |
| NGC 3432 | UGC 5986   | Galaxy  | LMI | 11.3 | 13.6 | 6.6' | 10 52.5 | +36 37 | 105 | SB        |    |    | H I 172; P w UGC 5983; mag 17; 1.2'X1 '                         |
| NGC 3486 | UGC 6079   | Galaxy  | LMI | 10.5 | 14.3 | 6.8' | 11 00.4 | +28 59 | 106 | SBc       |    |    | H I 87  |
| NGC 3489 | UGC 6082   | Galaxy  | LEO | 10.3 | 12.3 | 3.6' | 11 00.3 | +13 54 | 191 | SBO-a     |    |    | H II 101; Leo group   |



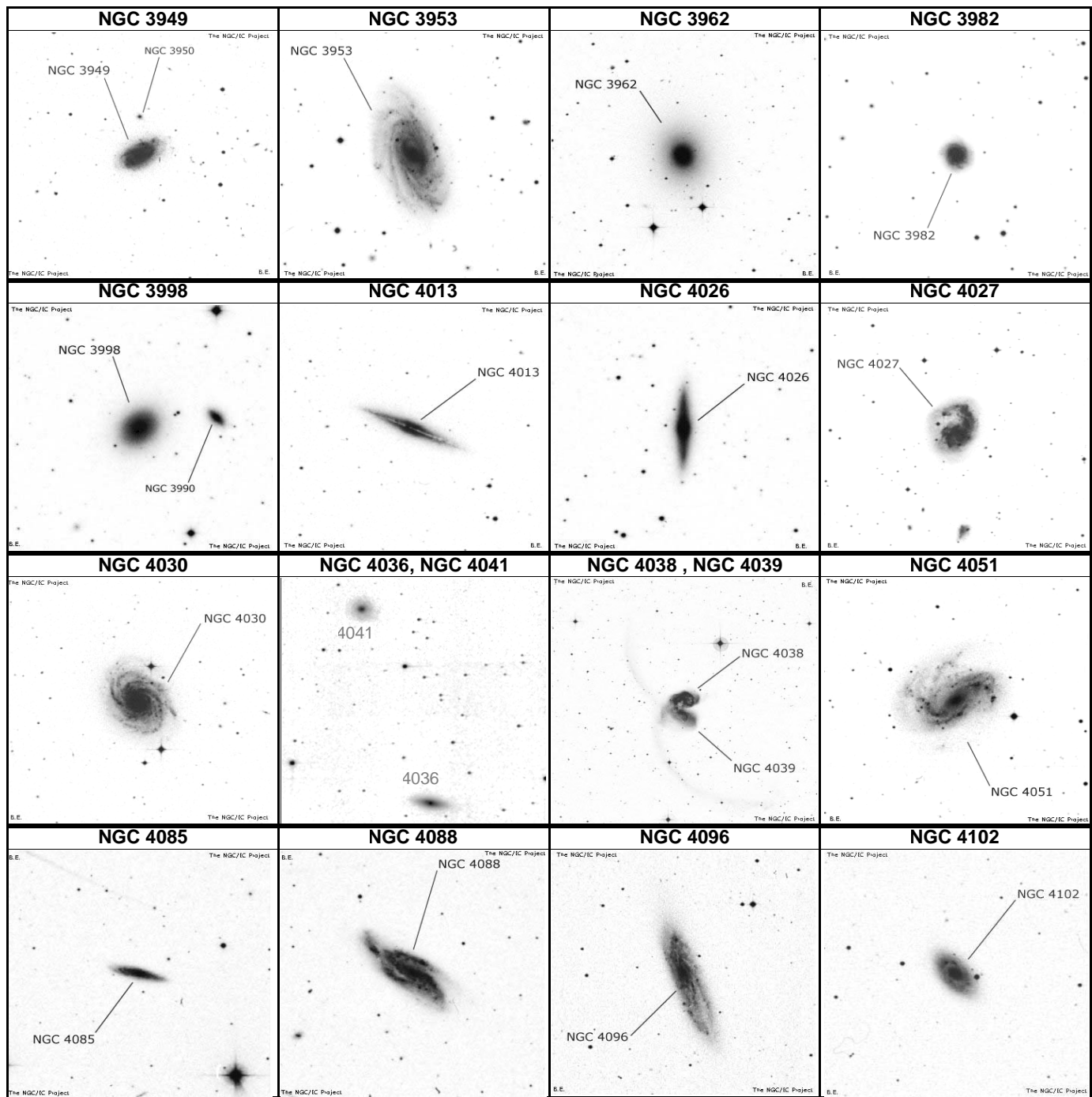


| NAME     | OTHER      | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs | SAC NOTES   |
|----------|------------|--------|-----|------|------|-------|---------|--------|-----|-----------|-----|----|---|
| NGC 3504 | UGC 8118   | Galaxy | LMI | 11   | 12.8 | 2.7'  | 11 03.2 | +27 58 | 146 | SBab R    |     |    | P w NGC 3512 at 12 ' ; PA72; comp 4 ' ; PA55; 0.4'x0.4' |
| NGC 3521 | UGC 6150   | Galaxy | LEO | 9    | 13.2 | 11.2' | 11 05.8 | -00 02 | 236 | SBbc      |     |    | H I 13  |
| NGC 3532 | OCL 838    | Opn CL | CAR | 3    | -    | 50'   | 11 05.2 | -58 44 | 427 | II 1 m    | 150 | 7  | Fine object   |
| NGC 3593 | UGC 6272   | Galaxy | LEO | 10.9 | 13.3 | 4.9'  | 11 14.6 | +12 49 | 191 | Sa        |     |    | H I 29; in NGC 3607 group; BN w L bulge and dk lan      |
| NGC 3607 | UGC 6297   | Galaxy | LEO | 9.9  | 12.5 | 4.6'  | 11 16.9 | +18 03 | 146 | E-SO      |     |    | H II 50; brightest in group; P w NGC 3608 at 6.2'; PA   |
| NGC 3608 | UGC 8298   | Galaxy | LEO | 10.8 | 13   | 3.5'  | 11 17.0 | +18 09 | 146 | Elliptica |     |    | H II 51; NGC 3607 group; comp 5.9'; PA251; 0.8'x0.3'    |
| NGC 3610 | UGC 6319   | Galaxy | UMA | 10.8 | 12.8 | 2.5'  | 11 18.4 | +58 47 | 46  | Elliptica |     |    | H I 270; comp 3.7'; PA232; 0.25'x0.25'                  |
| NGC 3613 | UGC 6323   | Galaxy | UMA | 10.9 | 13   | 3.6'  | 11 18.6 | +58 00 | 46  | Elliptica |     |    | H I 271; P w NGC 3619 at 15.7' PA158                    |
| NGC 3619 | UGC 6330   | Galaxy | UMA | 11.5 | 13.4 | 3.5'  | 11 19.4 | +57 45 | 46  | Sa        |     |    | H I 244; P w NGC 3613 @ 15'                             |
| NGC 3621 | ESO 377-37 | Galaxy | HYA | 9.7  | 14.4 | 12.4' | 11 18.3 | -32 49 | 367 | SBcd      |     |    | H I 241   |
| NGC 3626 | NGC 3632   | Galaxy | LEO | 11   | 12.6 | 3.2'  | 11 20.1 | +18 21 | 146 | Sa        |     |    | Indense part of clust; nearest comp 2' PA73 .5'x0.4'    |
| NGC 3628 | UGC 8350   | Galaxy | LEO | 9.5  | 13.4 | 13.1' | 11 20.3 | +13 35 | 191 | Sb        |     |    | H V 8; <b>Leo's Trio</b> part; disturbed , dust line    |
| NGC 3631 | UGC 8360   | Galaxy | UMA | 10.4 | 13.7 | 5'    | 11 21.0 | +53 10 | 46  | Sc        |     |    | H I 226; SN 1964a; UGC 6360; Arp 27                     |
| NGC 3640 | UGC 6368   | Galaxy | LEO | 10.4 | 13.2 | 4.5'  | 11 21.1 | +03 14 | 236 | Elliptica |     |    | H II 33; P w NGC 3641 at 2.5'; PA170                    |
| NGC 3655 | UGC 6396   | Galaxy | LEO | 11.6 | 12   | 1.5'  | 11 22.9 | +16 35 | 191 | Sc        |     |    | H I 5   |
| NGC 3665 | UGC 6426   | Galaxy | UMA | 10.8 | 12.4 | 3.5'  | 11 24.7 | +38 46 | 106 | SO        |     |    | H I 219; P w NGC 3658                                   |
| NGC 3675 | UGC 8439   | Galaxy | UMA | 10.2 | 13.2 | 6.2'  | 11 26.1 | +43 35 | 73  | Sb        |     |    | H I 194; in field of 56 UMA                             |

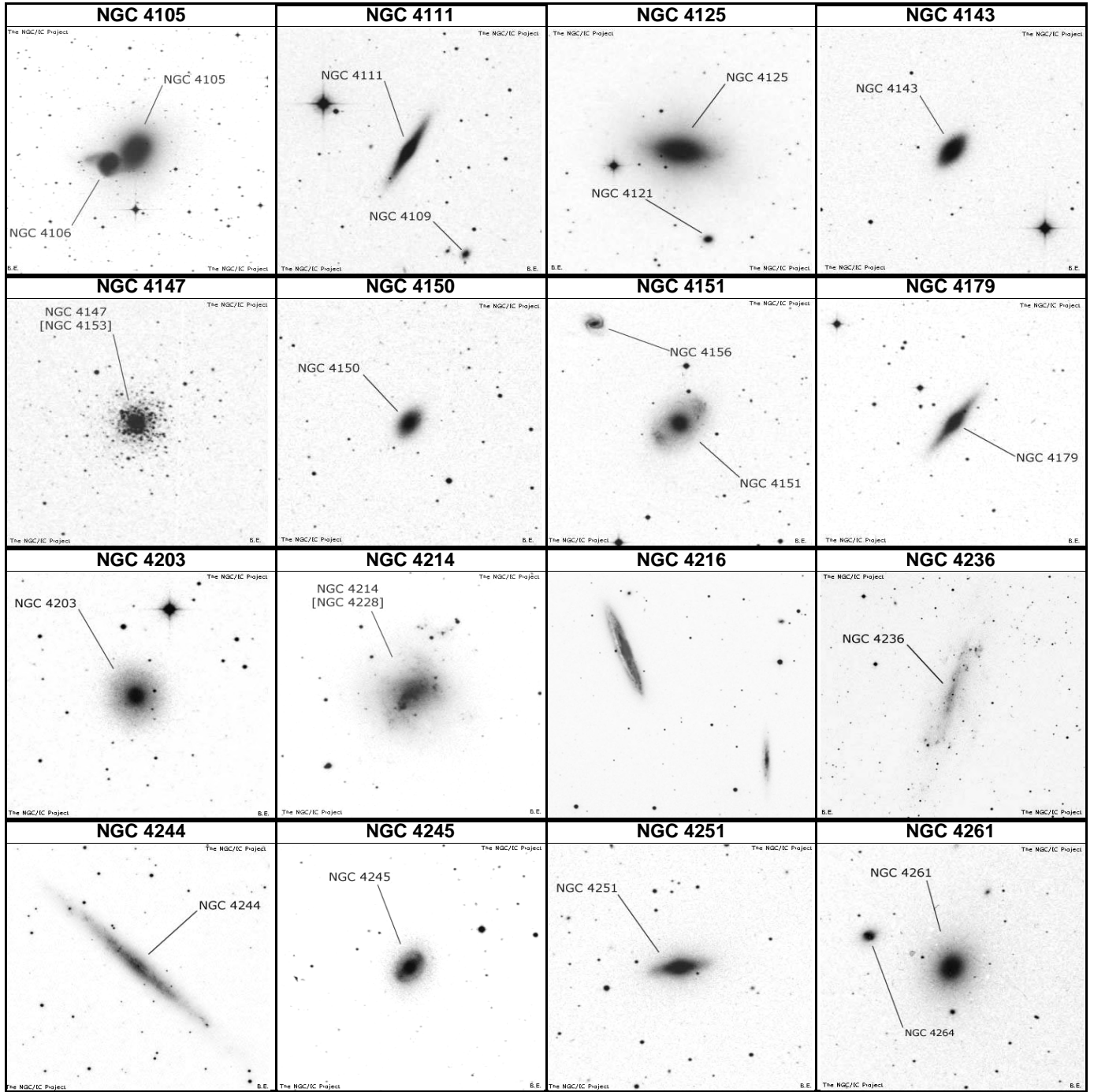


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES   |
|----------|------------|---------|-----|------|------|------|---------|--------|-----|-----------|----|----|---|
| NGC 3686 | UGC 8480   | Galaxy  | LEO | 11.3 | 13.4 | 3.1' | 11 27.7 | +17 13 | 146 | SBbc      |    |    | H II 160=H III 28                                 |
| NGC 3717 | ESO 439-15 | Galaxy  | HYA | 11.2 | 13.1 | 6.2' | 11 31.5 | -30 19 | 367 | Sb        |    |    | Nearly edge-on                                    |
| NGC 3718 | UGC 8524   | Galaxy  | UMA | 10.8 | 14.4 | 8.2' | 11 32.6 | +53 04 | 47  | SBap      |    |    | P w NGC 3729 at 11.5'ENE;cent dust lane spri arms |
| NGC 3726 | UGC 8537   | Galaxy  | UMA | 10.4 | 13.8 | 6'   | 11 33.3 | +47 02 | 73  | SBc Rin   |    |    | H II 730;well defined spiral pattern              |
| NGC 3729 | UGC 8547   | Galaxy  | UMA | 11.4 | 13.1 | 2.9' | 11 33.8 | +53 08 | 47  | SB/P      |    |    | H I 222;In field w NGC 3718                       |
| NGC 3810 | UGC 8844   | Galaxy  | LEO | 10.8 | 13.4 | 4.1' | 11 41.0 | +11 28 | 192 | Sc        |    |    | H I 21  |
| NGC 3813 | UGC 8851   | Galaxy  | UMA | 11.6 | 12.5 | 2'   | 11 41.3 | +36 33 | 107 | Sb        |    |    | H I 94  |
| NGC 3877 | UGC 8745   | Galaxy  | UMA | 11   | 13   | 5.3' | 11 46.1 | +47 30 | 74  | Sc        |    |    | H I 201;edge on spiral;16' south from Chi UMa     |
| NGC 3893 | UGC 8778   | Galaxy  | UMA | 10.5 | 13   | 4.5' | 11 48.6 | +48 43 | 74  | SBc       |    |    | H II 738;P w NGC 3896 at 3.9';PA125               |
| NGC 3898 | UGC 8787   | Galaxy  | UMA | 10.7 | 13.2 | 3.8' | 11 49.3 | +56 05 | 47  | Sab       |    |    | H I 228;comp 5 ' ;PA60;0.7'x0.12';NGC 3888 15' so |
| NGC 3900 | UGC 8788   | Galaxy  | LEO | 11.4 | 13   | 3.5' | 11 49.2 | +27 01 | 147 | Sa Ring   |    |    | H I 82  |
| NGC 3912 | NGC 3899   | Galaxy  | LEO | 12.4 | 12.6 | 1.5' | 11 50.1 | +26 29 | 147 | SBb       |    |    | H II 342  |
| NGC 3918 | PK 294+4.1 | Pln Neb | CEN | 8.4  | 5.7  | 12"  | 11 50.3 | -57 11 | 428 | 2b        |    | 16 | Blue Planetary                                    |
| NGC 3923 | ESO 440-17 | Galaxy  | HYA | 9.8  | 13.2 | 6.6' | 11 51.0 | -28 48 | 368 | Elliptica |    |    | H I 259   |
| NGC 3938 | UGC 8856   | Galaxy  | UMA | 10.4 | 13.8 | 5.1' | 11 52.8 | +44 07 | 74  | Sc        |    |    | H I 203;Fine face on spiral                       |
| NGC 3941 | UGC 8857   | Galaxy  | UMA | 10.3 | 12.5 | 3.5' | 11 52.9 | +36 59 | 107 | SBO       |    |    | H I 173   |
| NGC 3945 | UGC 8860   | Galaxy  | UMA | 10.9 | 13.9 | 6.4' | 11 53.2 | +60 40 | 47  | SBO-a f   |    |    | H I 251   |



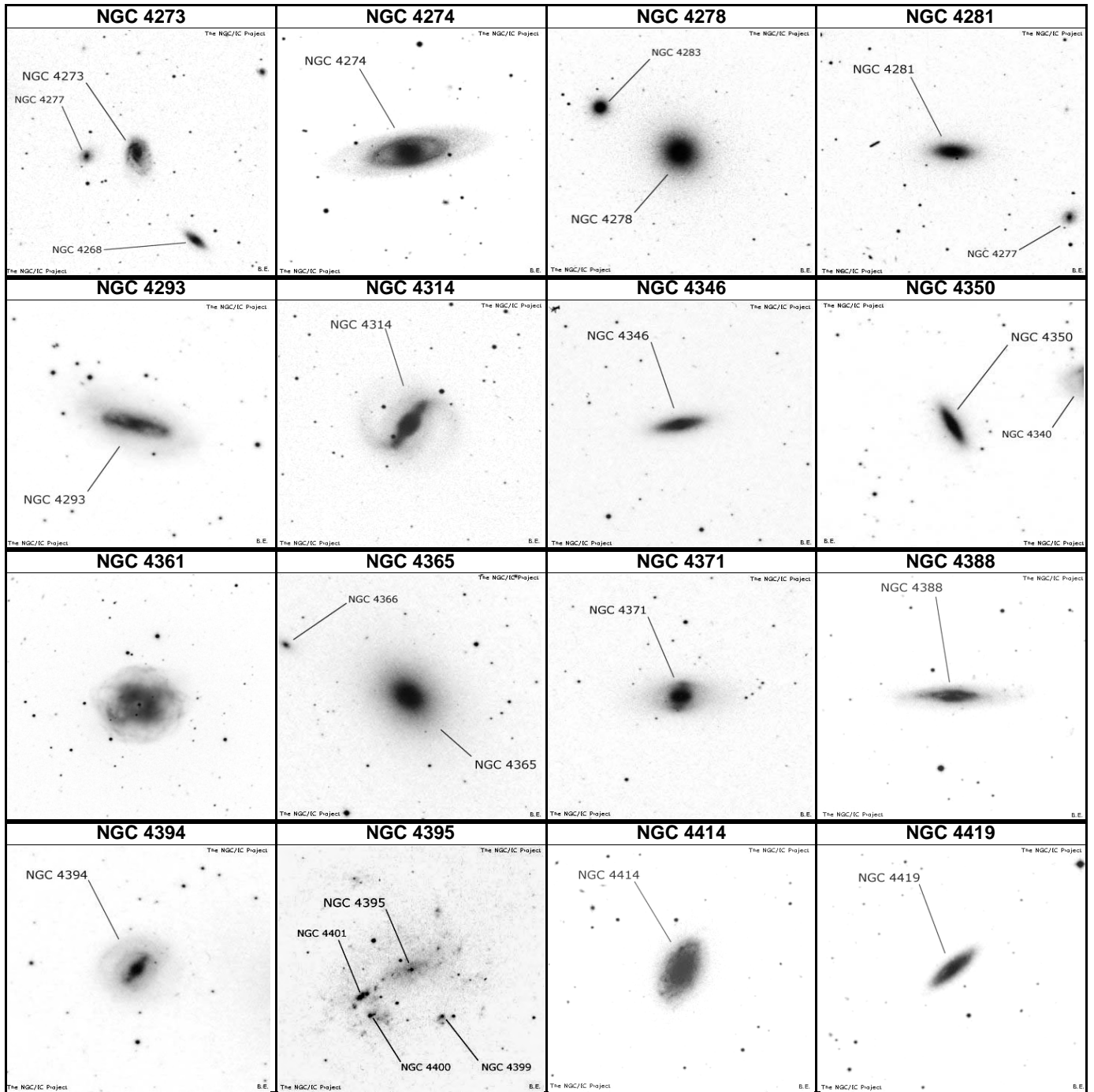


| NAME     | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES   |
|----------|-------------|--------|-----|------|------|------|---------|--------|-----|-----------|----|----|---|
| NGC 3949 | UGC 8889    | Galaxy | UMA | 11.1 | 12.6 | 2.9' | 11 53.7 | +47 52 | 74  | Sbc       |    |    | H I 202; comp 4.4'; PA273; 0.3'x0.1'                            |
| NGC 3953 | UGC 8870    | Galaxy | UMA | 10.1 | 13.4 | 6.9' | 11 53.8 | +52 19 | 47  | SBbc      |    |    | H V 45; comps 3.9'; PA190; 0.3'x0.1'; 4.6'; PA156; 0.4'         |
| NGC 3962 | MCG - 2-30- | Galaxy | CRT | 10.7 | 12.6 | 3.4' | 11 54.7 | -13 59 | 282 | Elliptica |    |    | H I 67  |
| NGC 3982 | UGC 8918    | Galaxy | UMA | 11   | 12.5 | 2.3' | 11 56.5 | +55 07 | 47  | SBb       |    |    | H IV 62   |
| NGC 3998 | UGC 8946    | Galaxy | UMA | 10.7 | 12.5 | 2.7' | 11 57.9 | +55 27 | 47  | SO        |    |    | H I 229; comp 4.7'; PA145; 0.3'x0.3'                            |
| NGC 4013 | UGC 8963    | Galaxy | UMA | 11.2 | 12.9 | 4.8' | 11 58.5 | +43 57 | 74  | Sb        |    |    | H II 733; edge on   |
| NGC 4026 | UGC 8985    | Galaxy | UMA | 10.8 | 12.7 | 4.7' | 11 59.4 | +50 58 | 47  | SO        |    |    | H I 223; edge on lens shape                                     |
| NGC 4027 | ESO 572-37  | Galaxy | CRV | 11.1 | 13.2 | 3.3' | 11 59.5 | -19 16 | 327 | SBd       |    |    | H II 296  |
| NGC 4030 | UGC 8993    | Galaxy | VIR | 10.6 | 13.2 | 4.2' | 12 00.4 | -01 06 | 238 | Sbc       |    |    | H I 121; fine nearly face on spiral                             |
| NGC 4036 | UGC 7005    | Galaxy | UMA | 10.7 | 12.7 | 4'   | 12 01.5 | +61 54 | 25  | E6        |    |    | H I 253; NGC 4041 @ 15'; spindle shape                          |
| NGC 4038 | ESO 572-47  | Galaxy | CRV | 10.3 | 13.1 | 3.4' | 12 01.9 | -18 52 | 328 | Sp        |    |    | <b>Antennae</b> H IV 28; <b>Ringtail Galaxy</b> ; two filaments |
| NGC 4039 | ESO 572-48  | Galaxy | CRV | 10.6 | 12.1 | 3.3' | 12 01.9 | -18 53 | 328 | SB        |    |    | <b>Antennae</b> H II 282  |
| NGC 4041 | UGC 7014    | Galaxy | UMA | 11.3 | 13.2 | 2.7' | 12 02.2 | +62 08 | 25  | Sbc       |    |    | H I 252   |
| NGC 4051 | UGC 7030    | Galaxy | UMA | 10.2 | 13.3 | 5.3' | 12 03.2 | +44 32 | 74  | SBbc      |    |    | H IV 56; thick spiral arms                                      |
| NGC 4085 | UGC 7075    | Galaxy | UMA | 12.4 | 13.1 | 2.5' | 12 05.4 | +50 21 | 47  | SBc       |    |    | H I 224; P w NGC 4088; UGC 7075; Ho 326b                        |
| NGC 4088 | UGC 7081    | Galaxy | UMA | 10.6 | 13.2 | 5.6' | 12 05.6 | +50 32 | 47  | SBbc      |    |    | P w 4085 11' to south; distorted spir arms; UGC 708             |
| NGC 4096 | UGC 7090    | Galaxy | UMA | 10.9 | 13.4 | 6.5' | 12 06.0 | +47 29 | 74  | SBc       |    |    | H I 207; nearly edge on   |
| NGC 4102 | UGC 7096    | Galaxy | UMA | 11.2 | 12.8 | 3.1' | 12 06.4 | +52 43 | 47  | SBb Rir   |    |    | H I 225   |

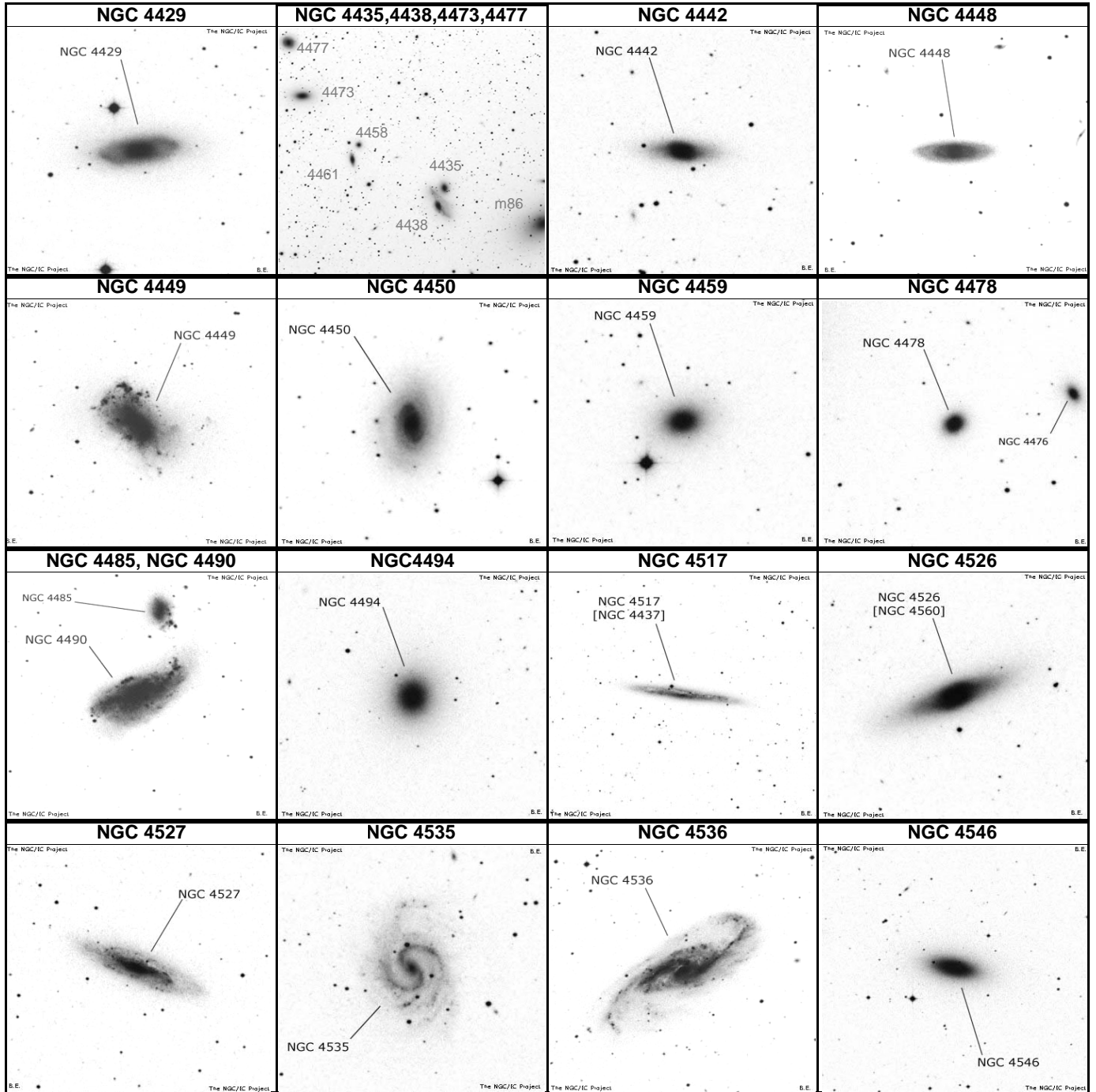


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES  |
|----------|------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|----|--|
| NGC 4105 | ESO 440-54 | Galaxy  | HYA | 10.6 | 12.5 | 2.8'  | 12 08.7 | -29 48 | 368 | Elliptica |    |    | H II 865; interacting P w NGC 4106                   |
| NGC 4111 | UGC 7103   | Galaxy  | CVN | 10.7 | 12.2 | 4.6'  | 12 07.0 | +43 04 | 74  | Sa        |    |    | H I 195; NGC 4109 @ 4.8'; UGC 7103; Ho 333a          |
| NGC 4125 | UGC 7118   | Galaxy  | DRA | 9.7  | 12.9 | 6'    | 12 08.1 | +65 10 | 25  | Elliptica |    |    |  |
| NGC 4143 | UGC 7142   | Galaxy  | CVN | 10.6 | 11.8 | 2.9'  | 12 09.6 | +42 32 | 74  | SBO       |    |    | H IV 54  |
| NGC 4147 | NGC 4153   | Glob CL | COM | 10.3 | -    | 4'    | 12 10.1 | +18 33 | 148 | VI        |    |    | H I 19; Stars F                                      |
| NGC 4150 | UGC 7165   | Galaxy  | COM | 11.6 | 13   | 2.3'  | 12 10.6 | +30 24 | 107 | SO        |    |    | H I 73   |
| NGC 4151 | UGC 7186   | Galaxy  | CVN | 10.8 | 14.2 | 6.8'  | 12 10.5 | +39 24 | 74  | SBab R    |    |    | P w NGC 4145; NGC 4156 @ 5.2'; Ho 345c @ 8.8'        |
| NGC 4179 | UGC 7214   | Galaxy  | VIR | 11   | 12.5 | 4.2'  | 12 12.9 | +01 18 | 238 | SO        |    |    | H I 9; edge on spindle shape                         |
| NGC 4203 | UGC 7256   | Galaxy  | COM | 10.9 | 13.3 | 3.5'  | 12 15.1 | +33 12 | 107 | E-SO B:   |    |    | H I 175  |
| NGC 4214 | NGC 4228   | Galaxy  | CVN | 9.8  | 14   | 8.4'  | 12 15.6 | +36 20 | 107 | Ir        |    |    | H I 95   |
| NGC 4216 | UGC 7284   | Galaxy  | VIR | 10   | 12.8 | 7.8'  | 12 15.9 | +13 09 | 193 | SBb       |    |    | H I 35; UGC 7284; edge on streak; two other in field |
| NGC 4236 | UGC 7308   | Galaxy  | DRA | 9.6  | 15   | 22.6' | 12 18.7 | +69 28 | 25  | SBd       |    |    | H V 51; P w Ho 357b @ 9'; L; F spiral structure      |
| NGC 4244 | UGC 7322   | Galaxy  | CVN | 10.4 | 14   | 15.9' | 12 17.5 | +37 48 | 107 | Sc        |    |    | H V 41   |
| NGC 4245 | UGC 7328   | Galaxy  | COM | 11.4 | 13.3 | 3.3'  | 12 17.6 | +29 36 | 107 | SBO-a F   |    |    | H I 74   |
| NGC 4251 | UGC 7338   | Galaxy  | COM | 10.7 | 12.4 | 3.6'  | 12 18.1 | +28 10 | 107 | SBO Rir   |    |    | H I 89; lens shape                                   |
| NGC 4261 | UGC 7360   | Galaxy  | VIR | 10.4 | 13.3 | 3.8'  | 12 19.4 | +05 49 | 193 | E2        |    |    | NGC 4264 @ 3.4'; NGC 4257 @ 7.1'; UGC 7360; 3C2      |



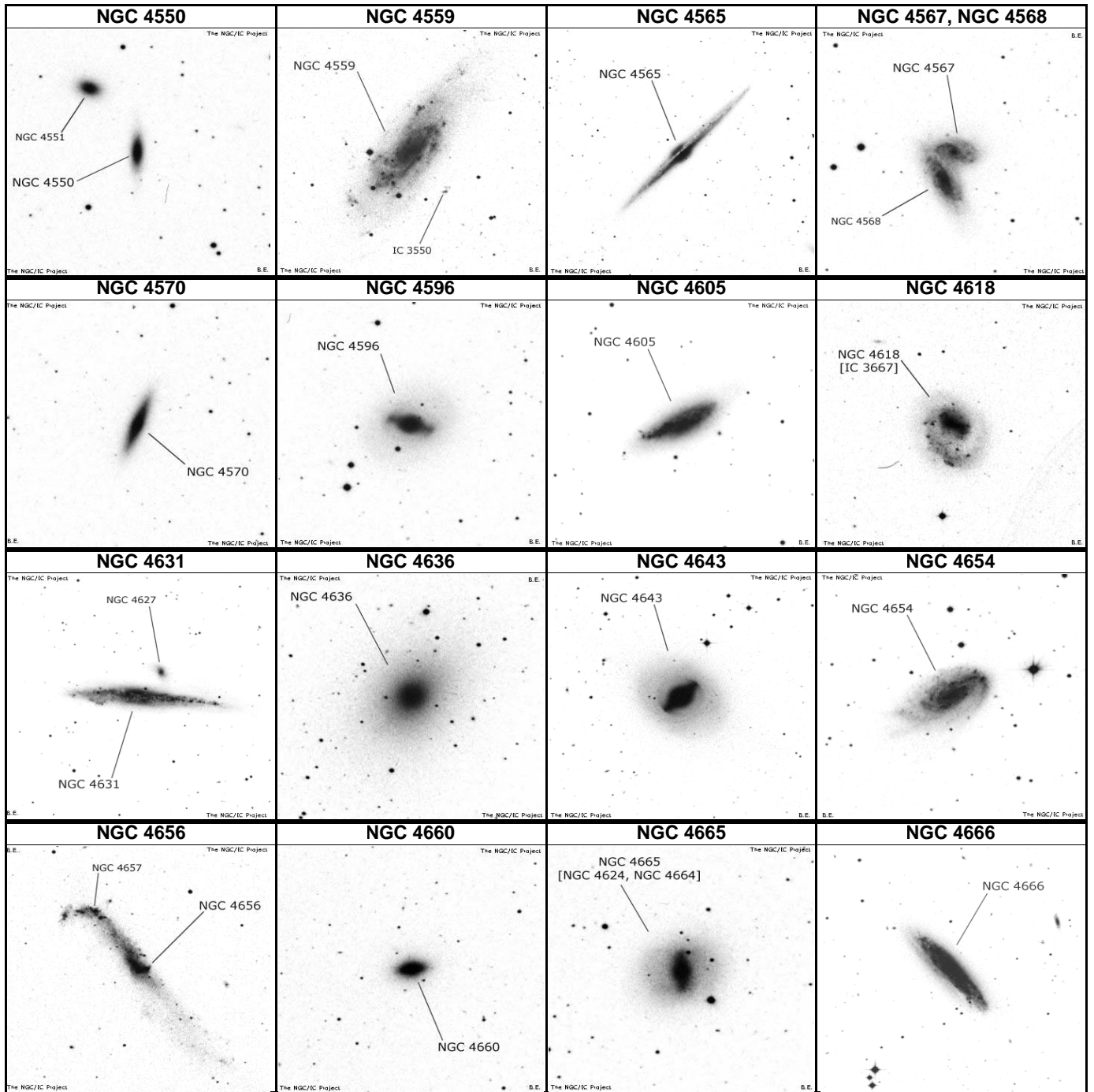


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES                                       |
|----------|------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|----|---|
| NGC 4273 | UGC 7380   | Galaxy  | VIR | 11.9 | 13.1 | 2.3'  | 12 19.9 | +05 21 | 238 | SBc       |    |    | H II 569; SN 1936a; NGC 4277 @ 2 '              |
| NGC 4274 | UGC 7377   | Galaxy  | COM | 10.4 | 13.3 | 6.8'  | 12 19.8 | +29 37 | 107 | SBab R    |    |    | H I 75; Saturn-like inner ring w F outer halo   |
| NGC 4278 | UGC 7386   | Galaxy  | COM | 10.2 | 13.1 | 4'    | 12 20.1 | +29 17 | 108 | Elliptica |    |    | Triple chain w NGC 4283 @ 3.6'; NGC 4286 @ 8.8' |
| NGC 4281 | UGC 7389   | Galaxy  | VIR | 11.3 | 12.8 | 3'    | 12 20.4 | +05 23 | 238 | Sa        |    |    | H II 573  |
| NGC 4293 | UGC 7405   | Galaxy  | COM | 10.4 | 13.1 | 5.5'  | 12 21.2 | +18 23 | 148 | SBO-a     |    |    | H V 5; Spiral pattern dim; heavy dust lanes     |
| NGC 4314 | UGC 7443   | Galaxy  | COM | 10.6 | 13.4 | 3.9'  | 12 22.5 | +29 54 | 108 | SBa       |    |    | H I 76  |
| NGC 4346 | UGC 7483   | Galaxy  | CVN | 11.1 | 12.6 | 3.2'  | 12 23.5 | +47 00 | 74  | SBO       |    |    | H I 210   |
| NGC 4350 | UGC 7473   | Galaxy  | COM | 11   | 12.5 | 2.9'  | 12 24.0 | +16 42 | 193 | SO        |    |    | H II 86; NGC 4340 @ 5.6'; lenticular            |
| NGC 4361 | ESO 573-PN | Pln Neb | CRV | 10.9 | 11.1 | 80"   | 12 24.5 | -18 47 | 328 | 3a(2)     |    | 13 | H I 65; PK294+43.1                              |
| NGC 4365 | UGC 7488   | Galaxy  | VIR | 9.6  | 13.4 | 6.5'  | 12 24.5 | +07 19 | 193 | Elliptica |    |    | H I 30; NGC 4370 @ 10 '                         |
| NGC 4371 | UGC 7493   | Galaxy  | VIR | 10.8 | 13.1 | 4'    | 12 24.9 | +11 42 | 193 | SBO-a     |    |    | H I 22  |
| NGC 4388 | UGC 7520   | Galaxy  | VIR | 11   | 13   | 5.6'  | 12 25.8 | +12 40 | 193 | Sb        |    |    | H II 168; edge on lens shape; 16' SE from M 84  |
| NGC 4394 | UGC 7523   | Galaxy  | COM | 10.9 | 13.4 | 3.4'  | 12 25.9 | +18 13 | 148 | SBab      |    |    | H II 55; P w NGC 4382 @ 7.8'                    |
| NGC 4395 | UGC 7524   | Galaxy  | CVN | 10.2 | 15.4 | 12.3' | 12 25.8 | +33 33 | 108 | SB Ring   |    |    | H V 29 , several NGC nebulae inside             |
| NGC 4414 | UGC 7539   | Galaxy  | COM | 10.1 | 12.1 | 3.6'  | 12 26.5 | +31 13 | 108 | Sc        |    |    | H I 77  |
| NGC 4419 | UGC 7551   | Galaxy  | COM | 11.2 | 12.4 | 3.3'  | 12 26.9 | +15 03 | 193 | SBa       |    |    | H II 113  |

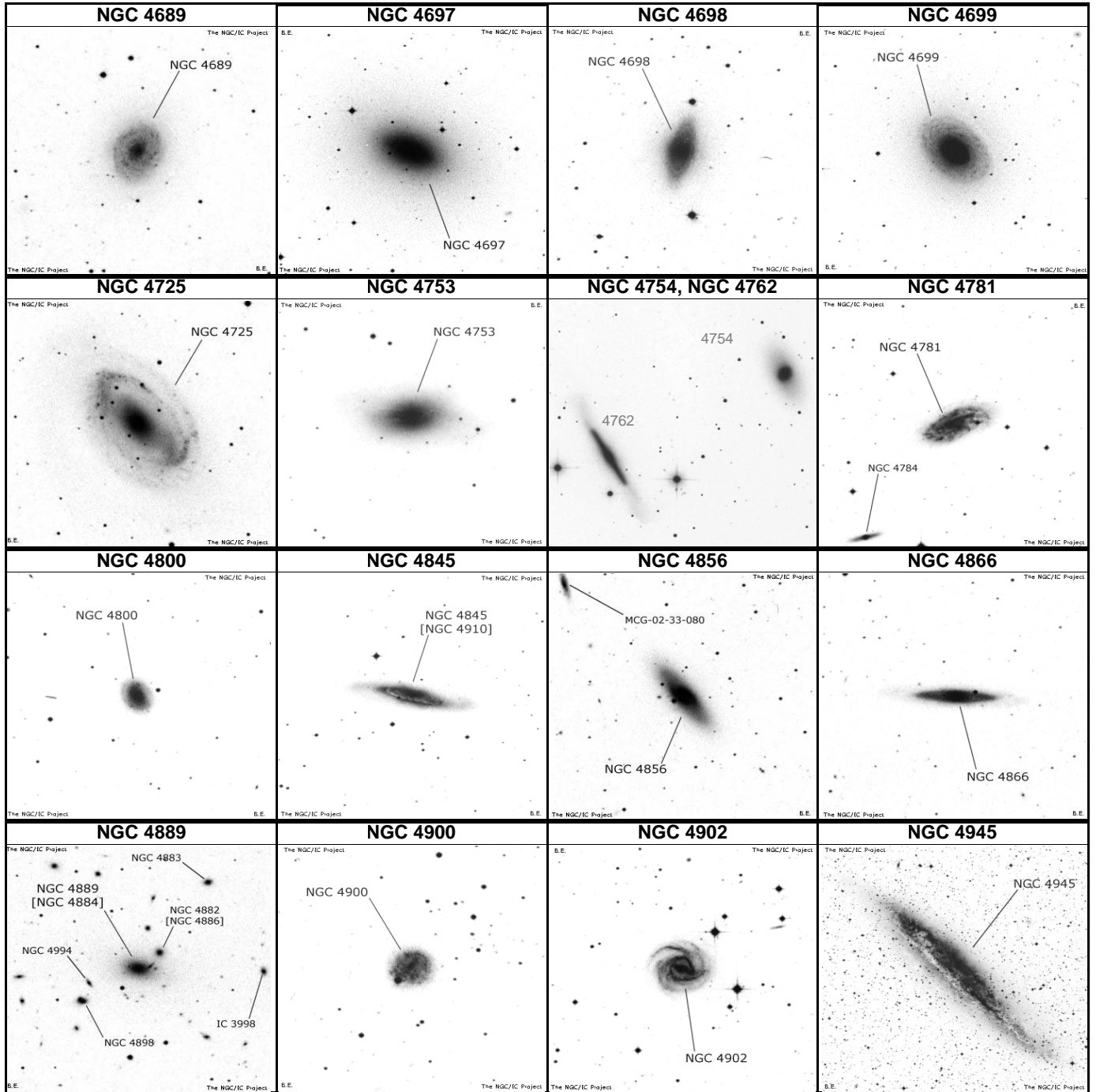


| NAME     | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES   |
|----------|-------------|--------|-----|------|------|-------|---------|--------|-----|-----------|----|----|---|
| NGC 4429 | UGC 7588    | Galaxy | VIR | 10   | 12.8 | 5.8'  | 12 27.4 | +11 06 | 193 | Sa        |    |    | H II 65; oval w large outer ring                    |
| NGC 4435 | UGC 7575    | Galaxy | VIR | 10.8 | 12.5 | 3'    | 12 27.7 | +13 05 | 193 | SBO       |    |    | Markarian's chain; NGC 4438 @ 4.3' SSE              |
| NGC 4438 | UGC 7574    | Galaxy | VIR | 10.2 | 13.6 | 8.5'  | 12 27.8 | +13 00 | 193 | Sa        |    |    | Markarian's chain; NGC 4435 @ 4.4'; long filament   |
| NGC 4442 | UGC 7583    | Galaxy | VIR | 10.4 | 12.6 | 4.5'  | 12 28.1 | +09 48 | 193 | SBO       |    |    | H II 156  |
| NGC 4448 | UGC 7591    | Galaxy | COM | 11.1 | 12.8 | 3.6'  | 12 28.3 | +28 37 | 108 | SBab R    |    |    | H I 91  |
| NGC 4449 | UGC 7592    | Galaxy | CVN | 9.6  | 13   | 6.2'  | 12 28.2 | +44 06 | 75  | Ir        |    |    | H I 213   |
| NGC 4450 | UGC 7594    | Galaxy | COM | 10.1 | 13.2 | 5.4'  | 12 28.5 | +17 05 | 148 | Sab       |    |    | H II 56   |
| NGC 4459 | UGC 7614    | Galaxy | COM | 10.4 | 12.7 | 4'    | 12 29.0 | +13 59 | 193 | Sa        |    |    | H I 161; comp @ 2.2'; NGC 4468 @ 8.5'; NGC 4474 @   |
| NGC 4473 | UGC 7631    | Galaxy | COM | 10.2 | 12.8 | 4.2'  | 12 29.8 | +13 26 | 193 | Elliptica |    |    | Markarian's chain                                   |
| NGC 4477 | UGC 7638    | Galaxy | COM | 10.4 | 13.1 | 3.7'  | 12 30.0 | +13 38 | 193 | SBO       |    |    | Markarian's chain; NGC 4479 @ 5.3'                  |
| NGC 4478 | UGC 7645    | Galaxy | VIR | 11.4 | 12.7 | 1.8'  | 12 30.3 | +12 20 | 193 | E1        |    |    | H II 124; NGC 4476 @ 4.5'; NGC 4486 @ 8.6'          |
| NGC 4485 | UGC 7648    | Galaxy | CVN | 11.9 | 13.2 | 2.4'  | 12 30.5 | +41 42 | 75  | Ir        |    |    | H I 197; disrupted; P w NGC 4490 @ 3.5'             |
| NGC 4490 | UGC 7651    | Galaxy | CVN | 9.8  | 12.9 | 6.4'  | 12 30.6 | +41 39 | 75  | SBcd      |    |    | H I 198; disrupted; P w NGC 4485 @ 3.5'             |
| NGC 4494 | UGC 7662    | Galaxy | COM | 9.8  | 12.9 | 4.5'  | 12 31.4 | +25 46 | 148 | Elliptica |    |    | H I 83  |
| NGC 4517 | NGC 4437    | Galaxy | VIR | 10.4 | 13.3 | 10.2' | 12 32.8 | +00 07 | 239 | Sc        |    |    | 4517A @ 17 "; long narrow streak w dust patches     |
| NGC 4526 | NGC 4560    | Galaxy | VIR | 9.7  | 12.7 | 7'    | 12 34.0 | +07 42 | 194 | SBO       |    |    | H I 31; lenticular; between two 7th mag stars       |
| NGC 4527 | UGC 7721    | Galaxy | VIR | 10.5 | 13.1 | 5.9'  | 12 34.1 | +02 39 | 239 | SBbc      |    |    | H II 37; SN 1915a; NGC 4536 @ 29                    |
| NGC 4535 | UGC 7727    | Galaxy | VIR | 10   | 13.7 | 6.9'  | 12 34.3 | +08 12 | 194 | SBc       |    |    | H II 500; Ho 420b @ 5 "; S-shaped spiral            |
| NGC 4536 | UGC 7732    | Galaxy | VIR | 10.6 | 13.9 | 7.1'  | 12 34.4 | +02 11 | 239 | SBbc      |    |    | NGC 4533 @ 8.2'; high tilt spiral w long curvd arms |
| NGC 4546 | MCG - 1-32- | Galaxy | VIR | 10.3 | 11.9 | 3.3'  | 12 35.5 | -03 48 | 239 | E-SO B;   |    |    | H I 160   |



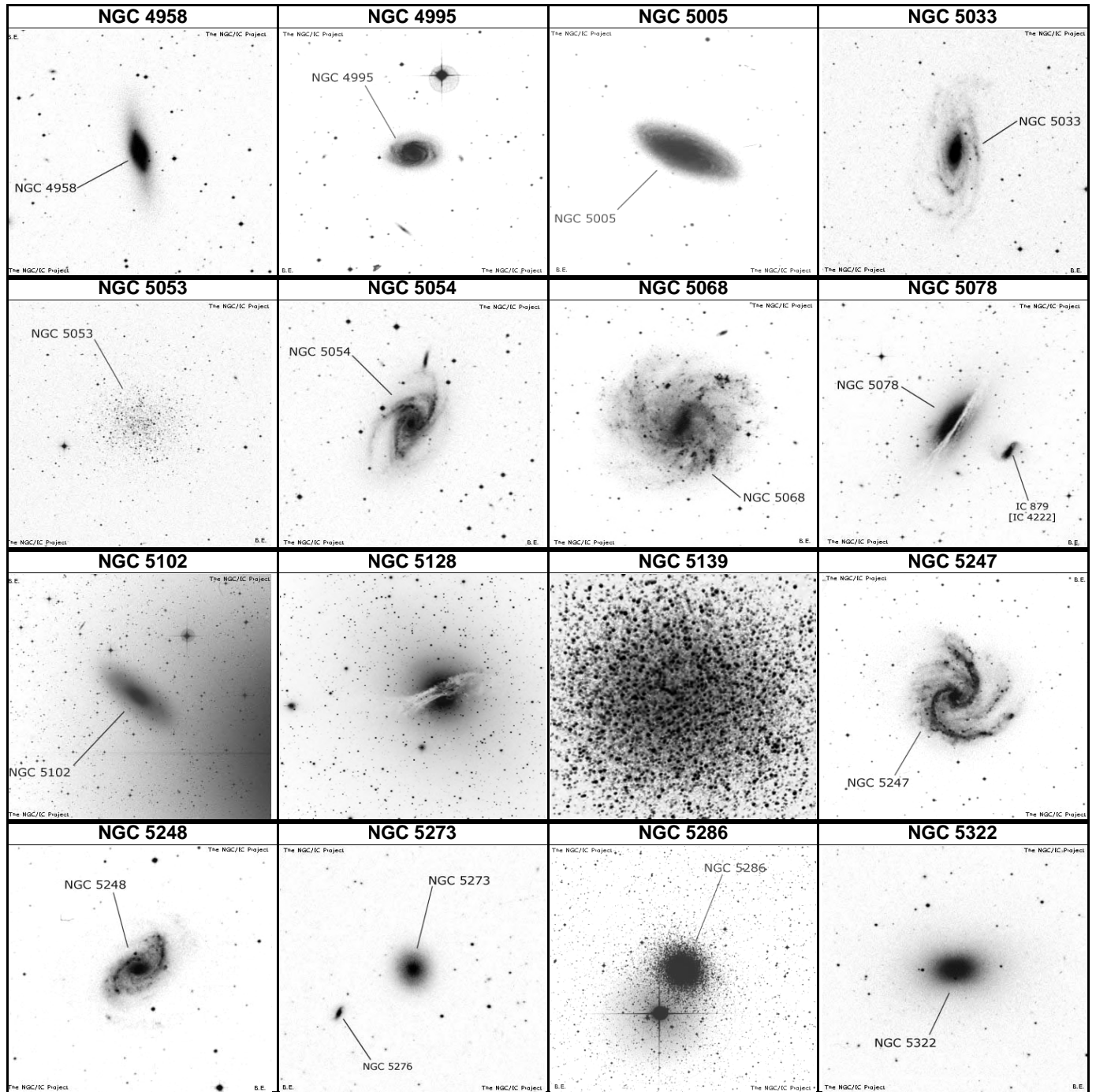


| NAME     | OTHER     | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES  |
|----------|-----------|--------|-----|------|------|-------|---------|--------|-----|-----------|----|----|--|
| NGC 4550 | UGC 7757  | Galaxy | VIR | 11.7 | 12.8 | 3.3'  | 12 35.5 | +12 13 | 194 | SBO       |    |    | H I 36; NGC 4551 @ 3 '                                   |
| NGC 4559 | UGC 7786  | Galaxy | COM | 10   | 14   | 11'   | 12 36.0 | +27 58 | 149 | SBc       |    |    | H I 92; SN 1941a; multi arm spiral                       |
| NGC 4565 | UGC 7772  | Galaxy | COM | 9.6  | 13.3 | 14.9' | 12 36.3 | +25 59 | 149 | Sb        |    |    | <b>Needle</b> ; NGC 4562 @ 13.4'; classic edge-on galaxy |
| NGC 4567 | UGC 7777  | Galaxy | VIR | 11.3 | 13.1 | 3.1'  | 12 36.5 | +11 15 | 194 | Sbc       |    |    | <b>Siamese Twins</b> H IV 8; NGC 4568 @ 1.2              |
| NGC 4568 | UGC 7778  | Galaxy | VIR | 10.8 | 13.1 | 4.6'  | 12 36.6 | +11 14 | 194 | Sbc       |    |    | <b>Siamese Twins</b> ; NGC 4567 @ 1.2'; overlaps 4567;   |
| NGC 4570 | UGC 7785  | Galaxy | VIR | 10.9 | 12.4 | 3.7'  | 12 36.9 | +07 15 | 194 | SO        |    |    | H I 32; lens shaped; in field of R VIR                   |
| NGC 4596 | UGC 7828  | Galaxy | VIR | 10.4 | 13   | 4'    | 12 39.9 | +10 11 | 194 | SBO-a     |    |    | H I 24; NGC 4608 @ 19 '; disc w projecting ansae         |
| NGC 4605 | UGC 7831  | Galaxy | UMA | 10.3 | 12.9 | 5.9'  | 12 40.0 | +61 36 | 26  | SBc/P     |    |    | H I 254  |
| NGC 4618 | IC 3667   | Galaxy | CVN | 10.8 | 13.5 | 4.2'  | 12 41.6 | +41 09 | 75  | SB        |    |    | H I 178; P w NGC 4625 @ 8.3'                             |
| NGC 4631 | UGC 7885  | Galaxy | CVN | 9.2  | 13.1 | 15.2' | 12 42.1 | +32 32 | 108 | SBcd      |    |    | H V 42; P w NGC 4627 @ 2.5' , edge on                    |
| NGC 4636 | NGC 4624? | Galaxy | VIR | 9.5  | 13.1 | 5.9'  | 12 42.8 | +02 41 | 239 | Elliptica |    |    | H II 38  |
| NGC 4643 | UGC 7895  | Galaxy | VIR | 10.8 | 12.7 | 3.1'  | 12 43.3 | +01 59 | 239 | SBO-a     |    |    | H I 10; Saturn-like central mass w projecting ansae      |
| NGC 4654 | IC 3708   | Galaxy | VIR | 10.5 | 13.2 | 5'    | 12 43.9 | +13 08 | 194 | SBc Rin   |    |    | H II 126   |
| NGC 4656 | UGC 7907  | Galaxy | CVN | 10.5 | 14.5 | 15.3' | 12 44.0 | +32 10 | 108 | SB        |    |    | H I 176; NGC 4657 superimposed                           |
| NGC 4660 | UGC 7914  | Galaxy | VIR | 11.2 | 12.6 | 2.1'  | 12 44.5 | +11 11 | 194 | E5        |    |    | H II 71; comp 5.5'; 25' SSE from M60                     |
| NGC 4665 | NGC 4624  | Galaxy | VIR | 10.5 | 13.1 | 3.5'  | 12 45.1 | +03 03 | 239 | SBO-a     |    |    | H I 142  |
| NGC 4666 | UGC 7928  | Galaxy | VIR | 10.7 | 12.5 | 4.5'  | 12 45.1 | -00 28 | 239 | SBc       |    |    | H I 15; NGC 4668 @ 7.3'; NGC 4653 @ 20 ' , edge o        |

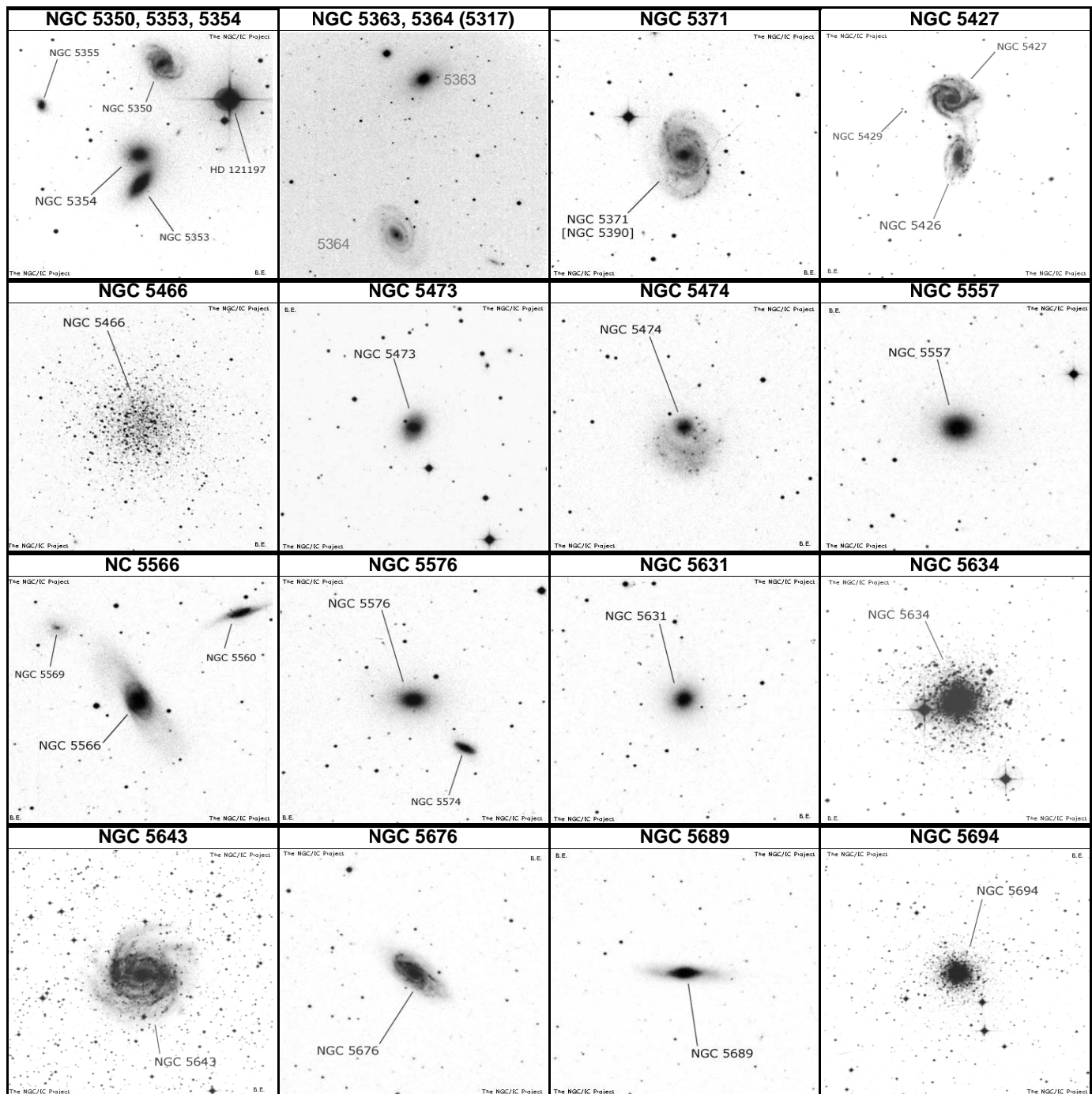


| NAME     | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES   |
|----------|-------------|--------|-----|------|------|-------|---------|--------|-----|-----------|----|----|---|
| NGC 4689 | UGC 7965    | Galaxy | COM | 10.9 | 13.7 | 4.7'  | 12 47.8 | +13 46 | 194 | Sbc       |    |    | H II 128  |
| NGC 4697 | MCG - 1-33- | Galaxy | VIR | 9.2  | 13.1 | 6.2'  | 12 48.6 | -05 48 | 284 | Elliptica |    |    | H I 39  |
| NGC 4698 | UGC 7970    | Galaxy | VIR | 10.6 | 12.9 | 4'    | 12 48.4 | +08 29 | 194 | Sab       |    |    | H I 8   |
| NGC 4699 | MCG - 1-33- | Galaxy | VIR | 9.5  | 11.9 | 3.8'  | 12 48.0 | -08 40 | 284 | SBb       |    |    | H I 129   |
| NGC 4725 | UGC 7989    | Galaxy | COM | 9.4  | 14   | 10.4' | 12 50.4 | +25 30 | 149 | SBab R    |    |    | H I 84;P w NGC 4712 @ 12 '                          |
| NGC 4753 | UGC 8009    | Galaxy | VIR | 9.9  | 12.9 | 5.1'  | 12 52.4 | -01 12 | 239 | SO        |    |    | H I 16;SN 1965i                                     |
| NGC 4754 | UGC 8010    | Galaxy | VIR | 10.6 | 13.1 | 4.4'  | 12 52.3 | +11 19 | 194 | SBO       |    |    | H I 25;P w NGC 4762 11' to NW                       |
| NGC 4762 | UGC 8016    | Galaxy | VIR | 10.3 | 13   | 8.6'  | 12 52.9 | +11 14 | 194 | SBO       |    |    | H II 75;NGC 4754 @ 10.5';thick streak w tufts at en |
| NGC 4781 | MCG - 2-33- | Galaxy | VIR | 11.1 | 12.8 | 3.4'  | 12 54.4 | -10 32 | 284 | SBcd      |    |    | H I 134;Coarse spiral                               |
| NGC 4800 | UGC 8035    | Galaxy | CVN | 11.5 | 12   | 1.6'  | 12 54.6 | +46 32 | 75  | Sb        |    |    | H I 211   |
| NGC 4845 | UGC 8078    | Galaxy | VIR | 11.2 | 13.1 | 4.9'  | 12 58.0 | +01 35 | 239 | Sab       |    |    | H II 536;edge on w dust lane                        |
| NGC 4856 | MCG - 2-33- | Galaxy | VIR | 10.5 | 12.1 | 3.9'  | 12 58.4 | -15 03 | 284 | SBO-a     |    |    | H I 68  |
| NGC 4866 | UGC 8102    | Galaxy | VIR | 11.2 | 13.4 | 6.4'  | 12 59.5 | +14 10 | 194 | Sa        |    |    | H I 162;UGC 8091 @ 11.8';lens shaped                |
| NGC 4889 | NGC 4884    | Galaxy | COM | 11.5 | 13.3 | 2.8'  | 13 00.1 | +27 59 | 149 | Elliptica |    |    | B in Coma cluster;NGC 4872 @ 0.8' sp; 4886 @ 1.     |
| NGC 4900 | UGC 8116    | Galaxy | VIR | 11.4 | 12.9 | 2.2'  | 13 00.7 | +02 30 | 239 | SBc       |    |    | H I 143   |
| NGC 4902 | MCG - 2-33- | Galaxy | VIR | 10.9 | 13.1 | 2.9'  | 13 01.0 | -14 31 | 284 | SBb       |    |    | H I 69;Theta shaped center;triskelion arm pattern   |
| NGC 4945 | Dunlop 411  | Galaxy | CEN | 8.6  | 13.1 | 19.8' | 13 05.4 | -49 28 | 402 | SBc       |    |    | Nearly edge-on                                      |



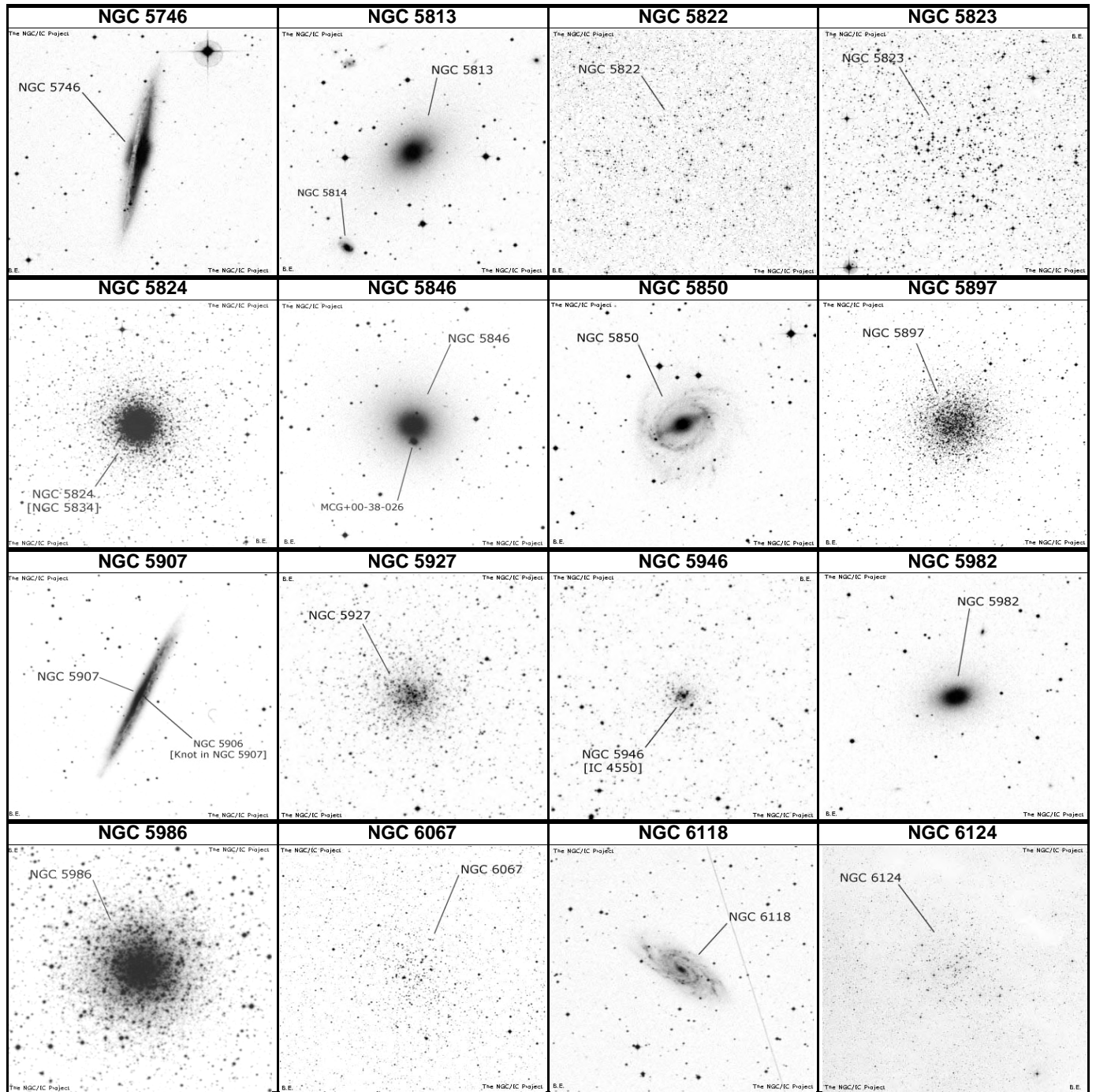


| NAME     | OTHER           | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class | ns | bs | SAC NOTES  |
|----------|-----------------|---------|-----|------|------|-------|---------|--------|-----|-------|----|----|--|
| NGC 4958 | MCG - 1-33-     | Galaxy  | VIR | 10.7 | 12.3 | 3.9'  | 13 05.8 | -08 01 | 285 | SBO   |    |    | H I 130; Lenticular                                    |
| NGC 4995 | MCG - 1-34-     | Galaxy  | VIR | 11.1 | 12.5 | 2.4'  | 13 09.7 | -07 50 | 285 | SBb   |    |    | H I 42; Dense spiral                                   |
| NGC 5005 | UGC 8256        | Galaxy  | CVN | 9.8  | 12.7 | 5.8'  | 13 10.9 | +37 03 | 109 | SBbc  |    |    | H I 96; P w NGC 5033; eBN in B lens; sev knotty arms   |
| NGC 5033 | UGC 8307        | Galaxy  | CVN | 10.2 | 14.4 | 9.8'  | 13 13.5 | +36 36 | 109 | Sc    |    |    | P w NGC 5005; svBN in B bulge w spir patt of dk lan    |
| NGC 5053 | GCL 23          | Glob CL | COM | 9.8  | -    | 8.9'  | 13 16.5 | +17 42 | 150 | XI    |    |    | H VI 7; Low surf brightness; 1 deg sf M 53             |
| NGC 5054 | MCG - 3-34-     | Galaxy  | VIR | 10.9 | 13.7 | 5.1'  | 13 17.0 | -16 38 | 285 | Sbc   |    |    | H II 513; Three branch spiral                          |
| NGC 5068 | ESO 576-29      | Galaxy  | VIR | 10   | 14   | 7.3'  | 13 18.9 | -21 02 | 330 | SBc   |    |    | H II 312; Coarse spiral; NGC 5087 in field             |
| NGC 5078 | ESO 508-48      | Galaxy  | HYA | 11   | 13   | 19.5' | 13 19.8 | -27 25 | 330 | Sa    |    |    | H II 566; Dust lane; Nearly edge-on                    |
| NGC 5102 | ESO 382-50      | Galaxy  | CEN | 9.6  | 13   | 8.6'  | 13 22.0 | -36 38 | 370 | E-SO  |    |    | 17' nf Iota CEN  |
| NGC 5128 | Dunlop 482      | Galaxy  | CEN | 6.8  | 13.5 | 27.6' | 13 25.5 | -43 01 | 403 | SO    |    |    | <b>Centaurus A</b> , Dark central band; radio source   |
| NGC 5139 | <b>Omeg Cen</b> | Glob CL | CEN | 3.9  | -    | 36.3' | 13 26.8 | -47 29 | 403 | VIII  |    |    | Stars mags 11 ...; finest globular; magnificent object |
| NGC 5247 | ESO 577-14      | Galaxy  | VIR | 10   | 13.4 | 5.4'  | 13 38.0 | -17 53 | 331 | SBbc  |    |    | H II 297; Fine S-shaped double arm spiral              |
| NGC 5248 | UGC 8616        | Galaxy  | BOO | 10.3 | 13.8 | 5.9'  | 13 37.5 | +08 53 | 196 | SBbc  |    |    | H I 34; eBN in vB lens w many dk lanes                 |
| NGC 5273 | UGC 8675        | Galaxy  | CVN | 11.6 | 13.6 | 2.7'  | 13 42.1 | +35 39 | 110 | SO    |    |    | H I 98; P w NGC 5276; diff Nuc w 2 weak dark patches   |
| NGC 5286 | Dunlop 388      | Glob CL | CEN | 7.4  | -    | 9.1'  | 13 46.4 | -51 22 | 430 | V     |    |    | close to a bright star                                 |
| NGC 5322 | UGC 8745        | Galaxy  | UMA | 10.2 | 13.6 | 8'    | 13 49.2 | +60 11 | 49  | E2    |    |    | H I 256; B diff. N; smooth neb                         |

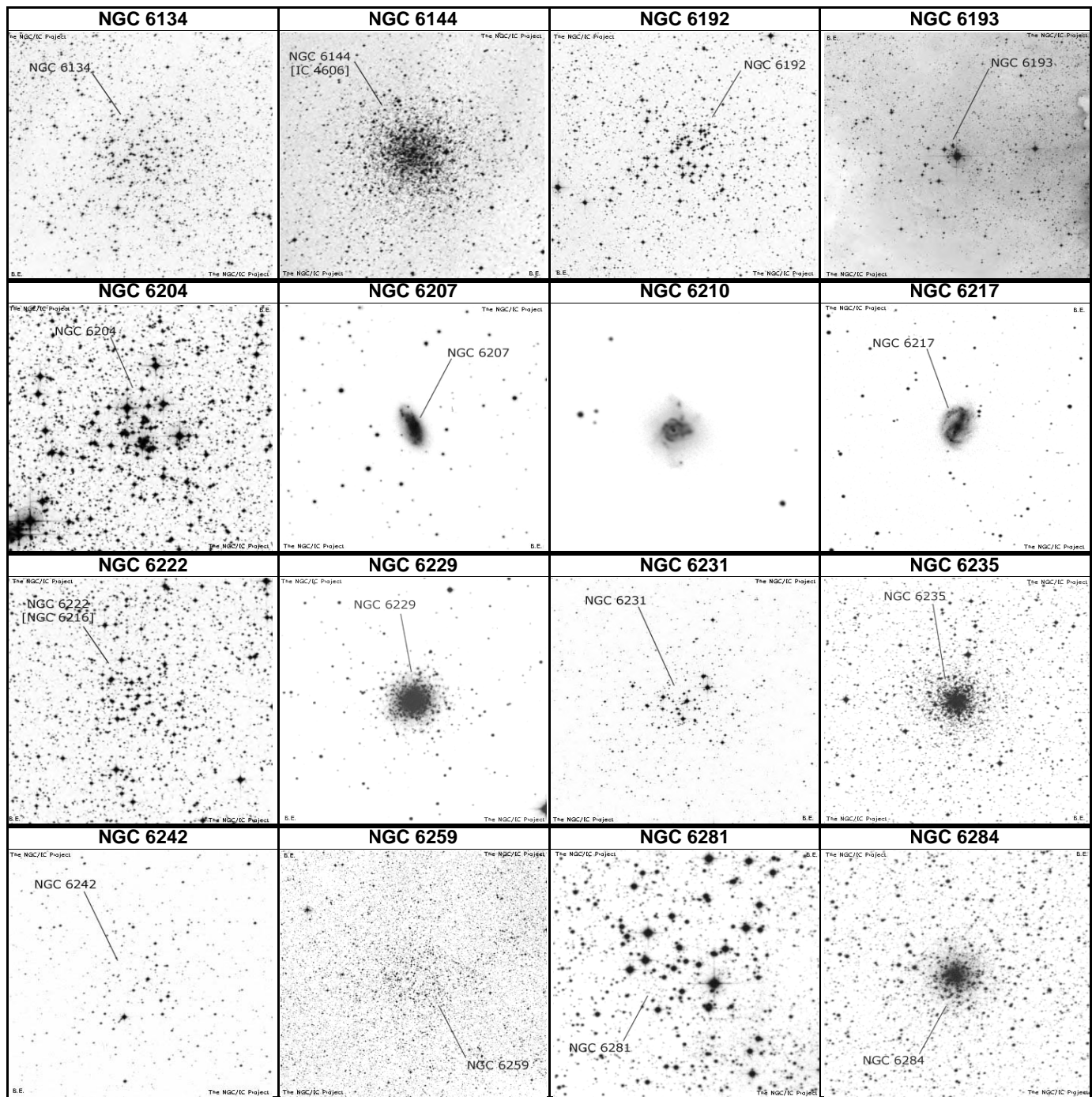


| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class  | ns | bs | SAC NOTES  |
|----------|-------------|---------|-----|------|------|------|---------|--------|-----|--------|----|----|--|
| NGC 5350 | UGC 8810    | Galaxy  | CVN | 11.3 | 13.3 | 3.2' | 13 53.4 | +40 22 | 76  | SBbc   |    |    | H II 713; NGC 5353 at 5'; vsvBN in B bar; 2 knotty arm |
| NGC 5353 | UGC 8813    | Galaxy  | CVN | 11   | 11.8 | 2.8' | 13 53.4 | +40 17 | 76  | SO     |    |    | P w NGC 5354 at 1.3' n; vsBN; lens: diamond shaped     |
| NGC 5354 | UGC 8814    | Galaxy  | CVN | 11.4 | 11.9 | 2.2' | 13 53.4 | +40 18 | 76  | SO     |    |    | H II 715; similar to N 1316; P w NGC 5353 contact      |
| NGC 5363 | UGC 8847    | Galaxy  | VIR | 10.1 | 12.5 | 4.8' | 13 58.1 | +05 15 | 241 | Sa     |    |    | H I 6; P w NGC 5364 at 14.5' 2 B dif N in contact      |
| NGC 5364 | NGC 5317    | Galaxy  | VIR | 10.5 | 14.1 | 6.1' | 13 58.2 | +05 01 | 241 | SBc/P  |    |    | H II 534; sBN in smooth cent w dk matter               |
| NGC 5371 | NGC 5390    | Galaxy  | CVN | 10.6 | 13.4 | 4.2' | 13 55.7 | +40 28 | 76  | SBbc   |    |    | vsB diff N; weak bar; sev knotty filam reg arms        |
| NGC 5427 | MCG - 1-36- | Galaxy  | VIR | 11.4 | 13.3 | 2.9' | 14 03.4 | -06 02 | 286 | SBc    |    |    | H II 310; Face on spiral; P w NGC 5426 @ 2.8' south    |
| NGC 5466 | GCL 27      | Glob CL | BOO | 9.1  | -    | 9.2' | 14 05.5 | +28 32 | 110 | XII    |    |    | H VI 9   |
| NGC 5473 | UGC 9011    | Galaxy  | UMA | 11.4 | 12.8 | 2.2' | 14 04.7 | +54 54 | 49  | E2     |    |    | H I 231; svBN; sh. bar; F lens; in field of M 101      |
| NGC 5474 | UGC 9013    | Galaxy  | UMA | 10.8 | 13.9 | 5'   | 14 05.0 | +53 40 | 49  | Sc     |    |    | low surf. bright; smooth part res cent w vsFN; asym    |
| NGC 5557 | UGC 9161    | Galaxy  | BOO | 11   | 12.6 | 2.4' | 14 18.4 | +36 30 | 110 | E1     |    |    | H I 99; BN; no struct                                  |
| NGC 5566 | UGC 9175    | Galaxy  | VIR | 10.6 | 13.3 | 6.6' | 14 20.3 | +03 56 | 242 | SBab R |    |    | H I 144; double galaxy                                 |
| NGC 5576 | UGC 9183    | Galaxy  | VIR | 11   | 13.2 | 3'   | 14 21.1 | +03 16 | 242 | E2     |    |    | triple group w NGC 5574 at 2.9' and NGC 5577 at 1      |
| NGC 5631 | UGC 9281    | Galaxy  | UMA | 11.5 | 12.5 | 2'   | 14 28.6 | +58 35 | 49  | SO     |    |    | vsB diff N w F dk crescent on one side;                |
| NGC 5634 | GCL 28      | Glob CL | VIR | 9.5  | -    | 4.9' | 14 29.6 | -05 59 | 287 | IV     |    |    | H I 70; 11 mag star on E edge                          |
| NGC 5643 | ESO 272-18  | Galaxy  | LUP | 10   | 13   | 4.7' | 14 32.7 | -44 11 | 404 | SBc    |    |    |  |
| NGC 5676 | UGC 9386    | Galaxy  | BOO | 11.2 | 13.2 | 3.9' | 14 32.8 | +49 27 | 77  | Sbc    |    |    | H I 189; N 5660 at 30' IC 1029 at 26'; Many B knotty   |
| NGC 5689 | UGC 9399    | Galaxy  | BOO | 11.9 | 13   | 3.3' | 14 35.5 | +48 44 | 77  | SBO-a  |    |    | H I 188; diff Nucl in B bulge w strong dk lane on one  |
| NGC 5694 | GCL 29      | Glob CL | HYA | 10.2 | -    | 3.6' | 14 38.6 | -26 32 | 332 | VII    |    |    | H II 196; Rich w eF stars; distant globular            |



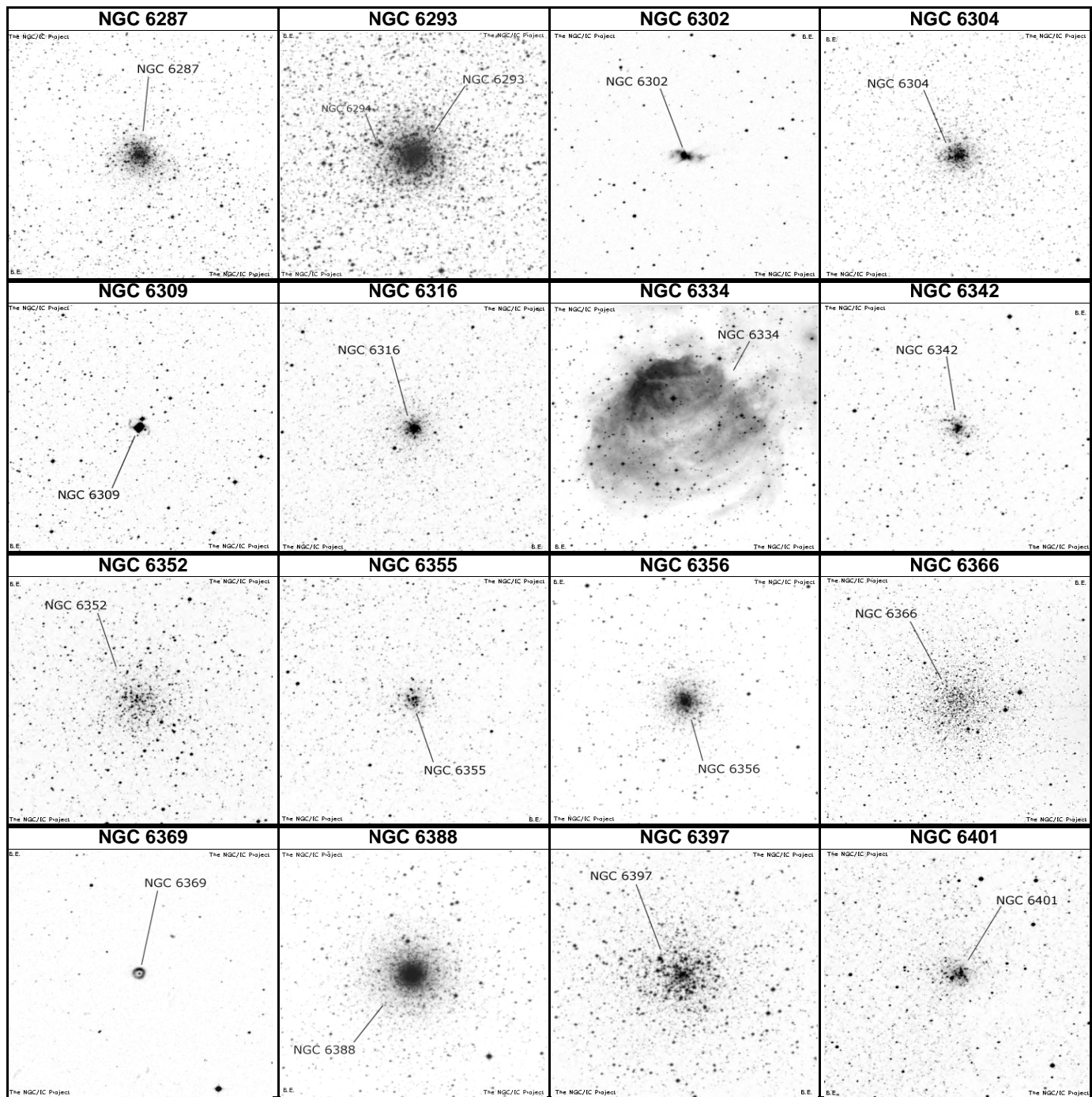


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns  | bs | SAC NOTES  |
|----------|------------|---------|-----|------|------|-------|---------|--------|-----|---------|-----|----|--|
| NGC 5746 | UGC 9499   | Galaxy  | VIR | 10.3 | 12.6 | 6.9'  | 14 44.9 | +01 57 | 243 | SBb     |     |    | H I 126;vsBN in B cent.bulge;NGC 5740 at 18';edge  |
| NGC 5813 | UGC 9655   | Galaxy  | VIR | 10.5 | 13.2 | 4'    | 15 01.2 | +01 42 | 243 | E1      |     |    | In NGC 5846 group;P w NGC 5814 at 5';NGC 8506      |
| NGC 5822 | OCL 937    | Opn CL  | LUP | 6.5  | -    | 40'   | 15 04.4 | -54 24 | 431 | II 1 r  | 150 | 10 |  |
| NGC 5823 | OCL 936    | Opn CL  | CIR | 7.9  | -    | 10'   | 15 05.5 | -55 36 | 431 | III 2 m | 100 | 10 |  |
| NGC 5824 | NGC 5834   | Glob CL | LUP | 9.1  | -    | 6.2'  | 15 04.0 | -33 04 | 373 | I       |     |    |  |
| NGC 5846 | UGC 9708   | Galaxy  | VIR | 10   | 13   | 4'    | 15 06.5 | +01 36 | 243 | E0      |     |    | Brightest in group; NGC 5846A at 1';NGC 5850 near  |
| NGC 5850 | UGC 9715   | Galaxy  | VIR | 10.8 | 13.6 | 4.5'  | 15 07.1 | +01 33 | 243 | SBab    |     |    | H II 543;In NGC 5846 group,vBN w bar               |
| NGC 5897 | GCL 33     | Glob CL | LIB | 8.4  | -    | 8.7'  | 15 17.4 | -21 01 | 334 | XI      |     |    | H VI 19  |
| NGC 5907 | NGC 5906   | Galaxy  | DRA | 10.3 | 13.3 | 11.8' | 15 15.9 | +56 20 | 50  | Sc      |     |    | vs bulge nearly hidden by strong dk lane; SN 1940a |
| NGC 5927 | GCL 35     | Glob CL | LUP | 8    | -    | 12'   | 15 28.0 | -50 40 | 431 | VIII    |     |    |  |
| NGC 5946 | IC 4550    | Glob CL | NOR | 8.4  | -    | 7.1'  | 15 35.5 | -50 40 | 432 | IX      |     |    |  |
| NGC 5982 | UGC 9981   | Galaxy  | DRA | 11.1 | 12.9 | 3'    | 15 38.7 | +59 21 | 51  | E3p     |     |    | H II 764;vBN;NGC 5985 at 6.2';PA290                |
| NGC 5986 | Dunlop 552 | Glob CL | LUP | 7.6  | -    | 9.8'  | 15 46.1 | -37 47 | 374 | VII     |     |    |  |
| NGC 6067 | OCL 953    | Opn CL  | NOR | 5.6  | -    | 13'   | 16 13.2 | -54 13 | 432 | I 2 r   | 100 | 8  | Fine field   |
| NGC 6118 | UGC 10350  | Galaxy  | SER | 11.7 | 13.9 | 4.7'  | 16 21.8 | -02 17 | 246 | Sc      |     |    | H II 402;Low surface brightness                    |
| NGC 6124 | Dunlop 514 | Opn CL  | SCO | 5.8  | -    | 29'   | 16 25.3 | -40 39 | 407 | II 3 m  | 100 | 9  |  |



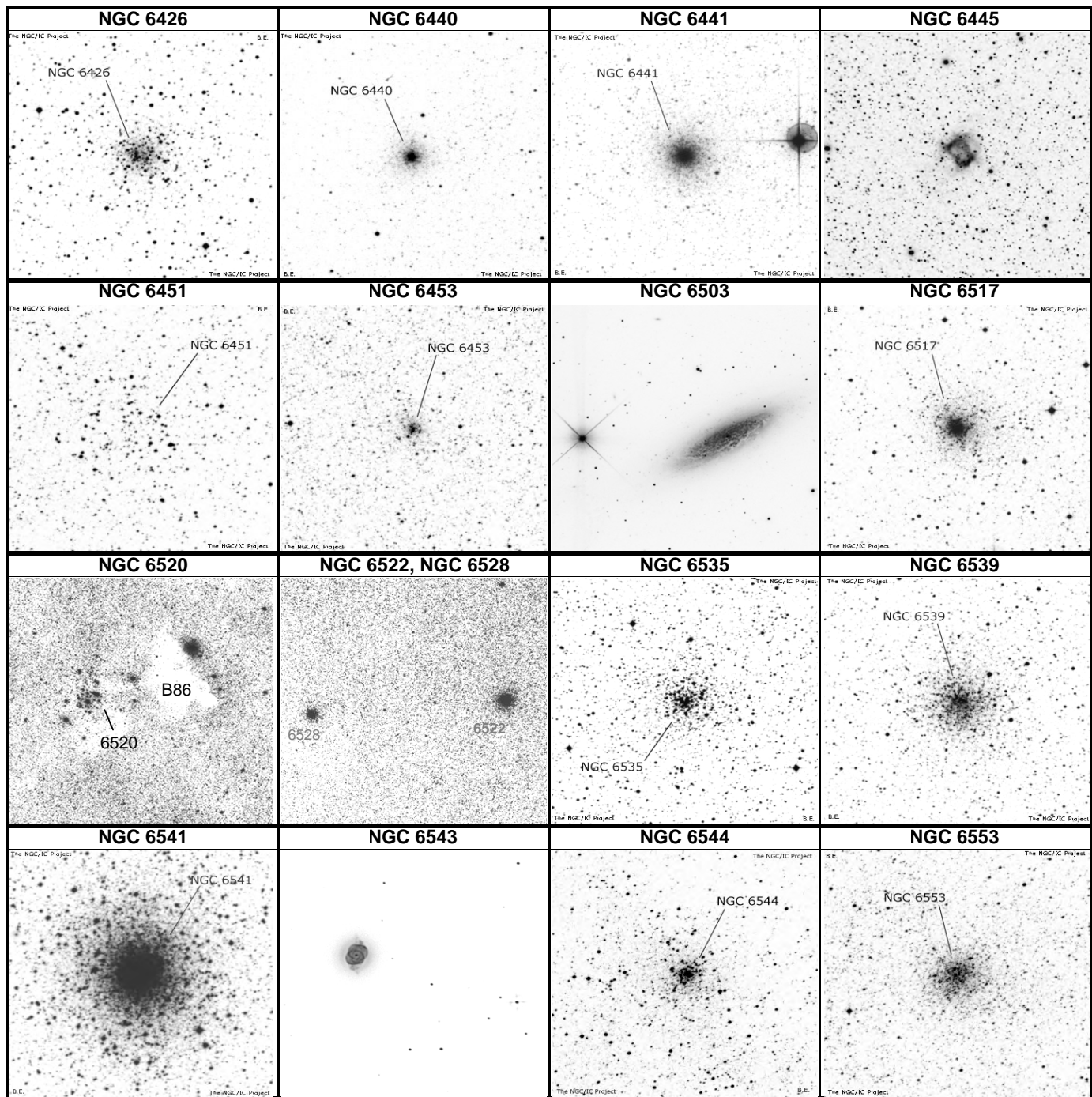
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|----------|------------|---------|-----|------|------|------|---------|--------|-----|----------|-----|----|---|
| NGC 6134 | OCL 988    | Opn CL  | NOR | 7.2  | -    | 7'   | 16 27.8 | -49 09 | 407 | II 3 m   |     | 9  |   |
| NGC 6144 | GCL 42     | Glob CL | SCO | 9.1  | -    | 6.2' | 16 27.2 | -26 01 | 336 | XI       |     |    | H VI 10   |
| NGC 6192 | OCL 988    | Opn CL  | SCO | 8.5  | -    | 9'   | 16 40.4 | -43 22 | 407 | I 2 p    | 60  | 11 |   |
| NGC 6193 | OCL 975    | Opn CL  | ARA | 5.2  | -    | 15'  | 16 41.3 | -48 48 | 407 | II 3 p n | 14  | 6  | In Ara OB1;30* mags 6...                            |
| NGC 6204 | OCL 982    | Opn CL  | ARA | 8.2  | -    | 5'   | 16 46.2 | -47 01 | 407 | I 2 p    | 45  | 10 | In Ara OB2  |
| NGC 6207 | UGC 10521  | Galaxy  | HER | 11.6 | 12.9 | 3'   | 16 43.1 | +36 50 | 114 | Sc       |     |    | H II 701;No def nucleus;B * nr center;30' NE from M |
| NGC 6210 | PK 43+37.1 | Pln Neb | HER | 9.7  | 5.9  | 20"  | 16 44.5 | +23 48 | 156 | 2(3b)    |     | 13 |   |
| NGC 6217 | UGC 10470  | Galaxy  | UMI | 11.2 | 13.2 | 3.3' | 16 32.6 | +78 12 | 11  | SBbc R   |     |    | H I 280;Narrow filaments;Arp 185;UGC 10470          |
| NGC 6222 | NGC 6216   | Opn CL  | SCO | 10   | -    | 4'   | 16 49.4 | -44 44 | 407 |          |     |    |   |
| NGC 6229 | GCL 47     | Glob CL | HER | 9.4  | -    | 3.8' | 16 47.0 | +47 32 | 80  | IV       |     |    | H IV 50;Wm.   |
| NGC 6231 | Dunlop 520 | Opn CL  | SCO | 2.6  | -    | 15'  | 16 54.2 | -41 49 | 407 | I 3 r n  | 93  | 5  | <b>Table of Scorpis</b>                             |
| NGC 6235 | GCL 48     | Glob CL | OPH | 8.9  | -    | 1.9' | 16 53.4 | -22 11 | 337 | X        |     |    | H II 584  |
| NGC 6242 | OCL 1001   | Opn CL  | SCO | 6.4  | -    | 9'   | 16 55.6 | -39 28 | 407 | I 3 m    |     | 7  |   |
| NGC 6259 | OCL 996    | Opn CL  | SCO | 8    | -    | 10'  | 17 00.8 | -44 39 | 407 | III 2 m  | 120 | 12 |   |
| NGC 6281 | OCL 1003   | Opn CL  | SCO | 5.4  | -    | 200' | 17 04.7 | -37 59 | 378 | II 2 p n |     | 8  |   |
| NGC 6284 | GCL 53     | Glob CL | OPH | 9    | -    | 2.7' | 17 04.5 | -24 46 | 337 | IX       |     |    | H VI 11   |





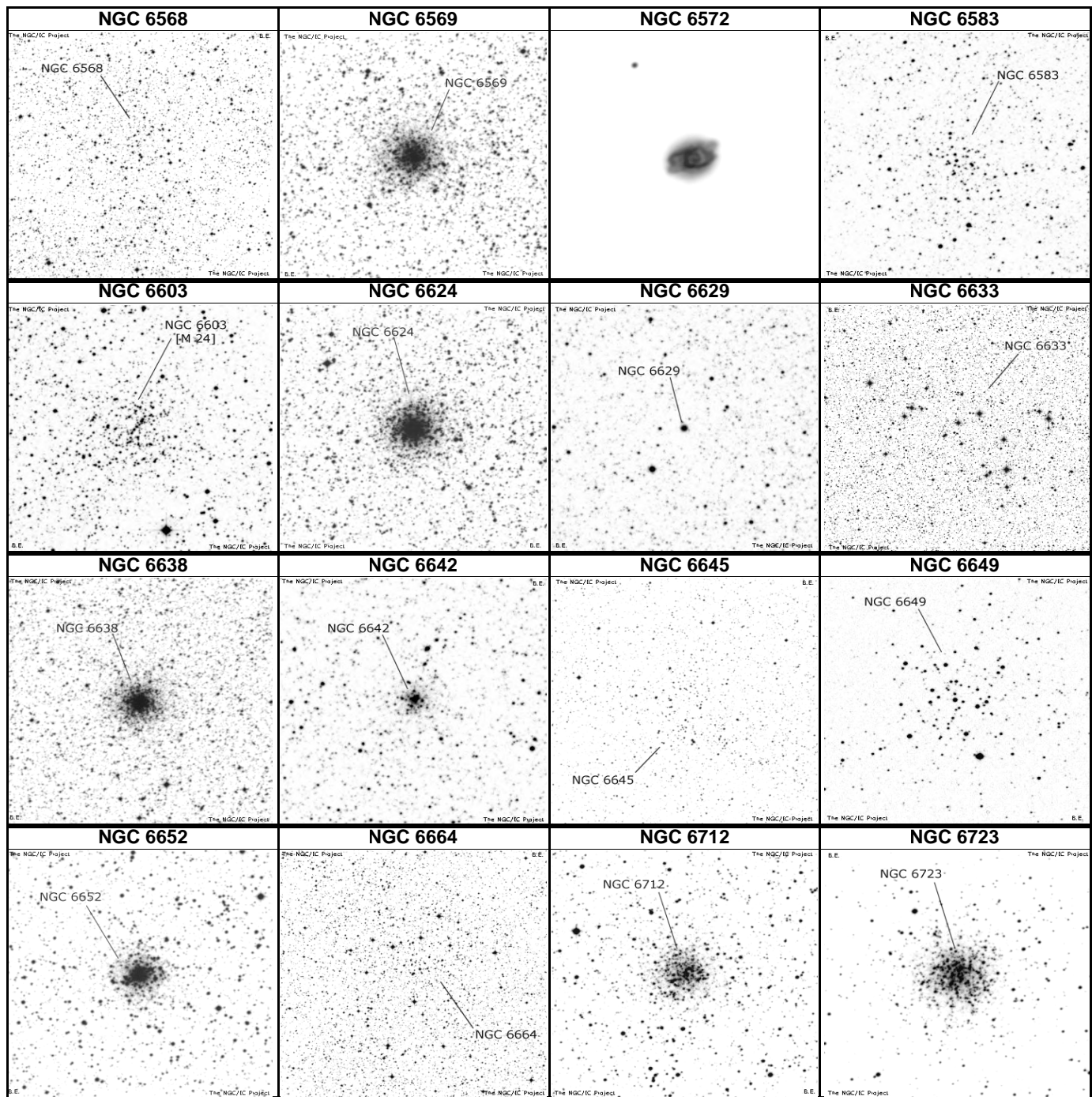
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|----------|------------|---------|-----|------|------|-------|---------|--------|-----|-------|----|----|---|
| NGC 6287 | GCL 54     | Glob CL | OPH | 9.2  | -    | 2.7'  | 17 05.2 | -22 42 | 337 | VII   |    |    | H II 195  |
| NGC 6293 | GCL 55     | Glob CL | OPH | 8.2  | -    | 3.5'  | 17 10.2 | -26 35 | 337 | IV    |    |    | H VI 12   |
| NGC 6302 | PK 349+1.1 | Pln Neb | SCO | 12.8 | 9    | 72"   | 17 13.7 | -37 06 | 376 | 6     |    | 17 | Bug or Bipolar Nebula; flattened figure 8 shape |
| NGC 6304 | GCL 56     | Glob CL | OPH | 8.4  | -    | 3.8'  | 17 14.5 | -29 28 | 376 | VI    |    |    | H I 147   |
| NGC 6309 | PK 9+14.1  | Pln Neb | OPH | 11.6 | 8.6  | 20"   | 17 14.1 | -12 55 | 292 | 3b(6) |    | 16 | Box Nebula                                      |
| NGC 6316 | GCL 57     | Glob CL | OPH | 8.1  | -    | 4.9'  | 17 16.6 | -28 08 | 376 | III   |    |    | H I 45  |
| NGC 6334 | ESO 392-EN | Brn Neb | SCO | -    | -    | 120"  | 17 20.8 | -36 06 | 376 | E     |    |    | Bear's Claw nebula                              |
| NGC 6342 | GCL 61     | Glob CL | OPH | 9.5  | -    | 3'    | 17 21.2 | -19 35 | 338 | IV    |    |    | H I 149   |
| NGC 6352 | Dunlop 417 | Glob CL | ARA | 7.8  | -    | 7.1'  | 17 25.5 | -48 25 | 408 | XI    |    | 12 | globular ESO 228-SC003                          |
| NGC 6355 | GCL 63     | Glob CL | OPH | 8.6  | -    | 6.1'  | 17 24.0 | -26 21 | 338 |       |    |    | H I 46  |
| NGC 6356 | GCL 62     | Glob CL | OPH | 8.2  | -    | 3.5'  | 17 23.6 | -17 49 | 338 | II    |    |    | H I 48  |
| NGC 6366 | GCL 65     | Glob CL | OPH | 9.5  | -    | 5.8'  | 17 27.7 | -05 05 | 248 | XI    |    |    |   |
| NGC 6369 | PK 2+5.1;H | Pln Neb | OPH | 11   | 10.5 | 30"   | 17 29.3 | -23 46 | 338 | 4(2)  |    | 15 | Little Ghost Nebula                             |
| NGC 6388 | GCL 70     | Glob CL | SCO | 6.8  | -    | 8.7'  | 17 36.3 | -44 44 | 408 | III   |    |    |   |
| NGC 6397 | Lac III-11 | Glob CL | ARA | 5.3  | -    | 25.7' | 17 40.7 | -53 40 | 434 | IX    |    | 10 | Poss nearest glob                               |
| NGC 6401 | GCL 73     | Glob CL | OPH | 7.4  | -    | 1'    | 17 38.6 | -23 55 | 338 | IX    |    |    | H I 44  |





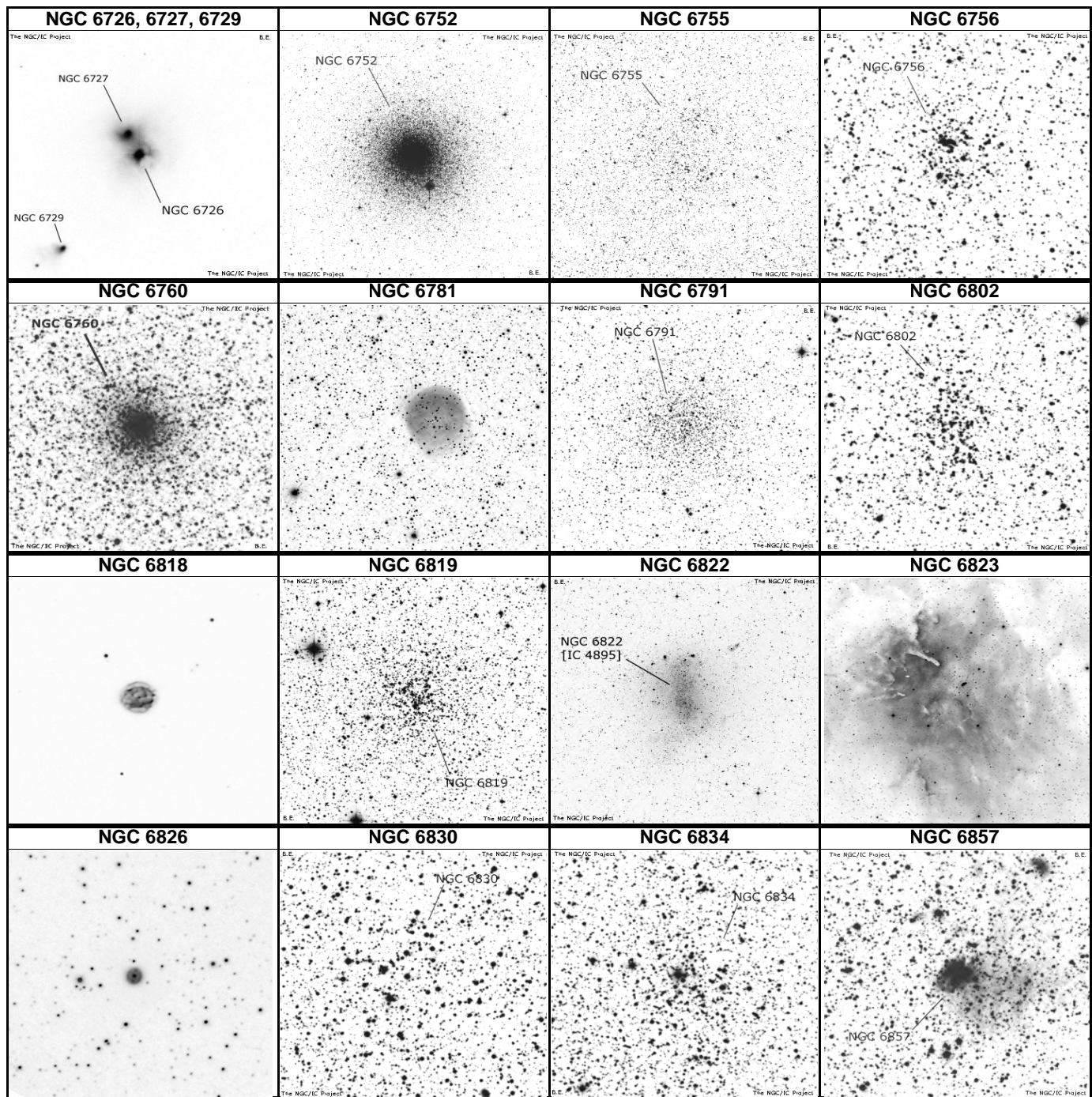
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|----------|------------|---------|-----|------|------|-------|---------|--------|-----|----------|----|----|--|
| NGC 6426 | GCL 78     | Glob CL | OPH | 10.9 | -    | 3.2'  | 17 44.9 | +03 10 | 248 | IX       |    |    | H II 587   |
| NGC 6440 | GCL 77     | Glob CL | SGR | 9.3  | -    | 1.7'  | 17 48.9 | -20 22 | 338 | V        |    |    | H I 150;* eF   |
| NGC 6441 | GCL 78     | Glob CL | SCO | 7.4  | -    | 7.8'  | 17 50.2 | -37 03 | 377 | III      |    |    |  |
| NGC 6445 | PK 8+3.1;H | Pln Neb | SGR | 13   | 9.6  | 35"   | 17 49.3 | -20 01 | 338 | 3b(3)    | 19 |    | <b>Little Gem , crescent nebula</b>                    |
| NGC 6451 | OCL 1035   | Opn CL  | SCO | 8.2  | -    | 8'    | 17 50.7 | -30 13 | 377 | II 1 p n | 80 | 12 | <b>Tom Thumb</b> cluster H VI 13;Dark lane down center |
| NGC 6453 | GCL 79     | Glob CL | SCO | 10.2 | -    | 3.5'  | 17 50.9 | -34 36 | 377 | IV       |    |    | on edge on <b>M7</b>                                   |
| NGC 6503 | UGC 11012  | Galaxy  | DRA | 10.2 | 13.1 | 7'    | 17 49.5 | +70 09 | 30  | Sc       |    |    |  |
| NGC 6517 | GCL 81     | Glob CL | OPH | 10.3 | -    | 1'    | 18 01.8 | -08 58 | 294 | IV       |    |    | H II 199   |
| NGC 6520 | OCL 10     | Opn CL  | SGR | 7.6  | -    | 6'    | 18 03.4 | -27 53 | 339 | I 2 m n  | 60 | 9  | H VII 7;Dark neb B86 on W edge                         |
| NGC 6522 | GCL 82     | Glob CL | SGR | 9.9  | -    | 5.6'  | 18 03.6 | -30 02 | 377 | VI       |    |    | H I 49   |
| NGC 6528 | GCL 84     | Glob CL | SGR | 9.5  | -    | 3.7'  | 18 04.8 | -30 03 | 377 | V        |    |    | H II 200;* mags 16...;Gamma Sgr in field               |
| NGC 6535 | GCL 83     | Glob CL | SER | 9.3  | -    | 1.3'  | 18 03.8 | -00 18 | 249 | XI       |    |    |  |
| NGC 6539 | GCL 85     | Glob CL | SER | 8.9  | -    | 2.5'  | 18 04.8 | -07 35 | 294 | X        |    |    | In heavily obscured area                               |
| NGC 6541 | Dunlop 473 | Glob CL | CRA | 6.3  | -    | 13.1' | 18 08.0 | -43 42 | 409 | III      |    |    | Stars mags 13...                                       |
| NGC 6543 | PK 96+29.1 | Pln Neb | DRA | 8.3  | 5    | 22"   | 17 58.6 | +66 38 | 30  | 3a(2)    | 11 |    | <b>Cat's Eye Nebula</b> ;H IV 37;PK96+29.1             |
| NGC 6544 | GCL 87     | Glob CL | SGR | 7.5  | -    | 8.4'  | 18 07.3 | -25 00 | 339 | IX       |    |    | H II 197   |
| NGC 6553 | GCL 88     | Glob CL | SGR | 8.3  | -    | 3.2'  | 18 09.3 | -25 54 | 339 | XI       |    |    | H IV 12;* mags 20...                                   |





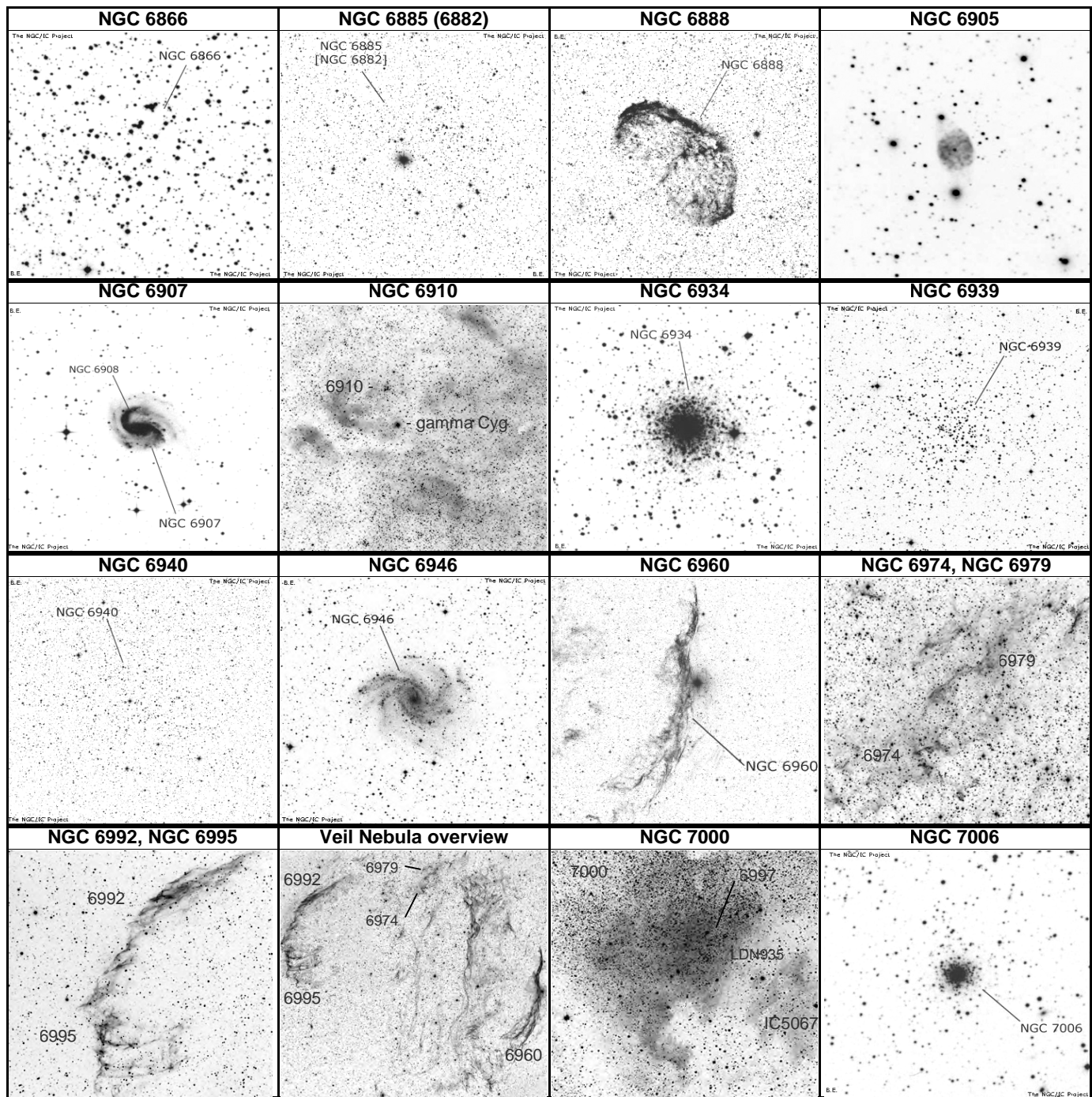
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|----------|----------------|---------|-----|------|------|------|---------|--------|-----|---------|-----|----|---|
| NGC 6568 | OCL 28         | Opn CL  | SGR | 8.6  | -    | 13'  | 18 12.8 | -21 35 | 339 | III 1 m | 50  |    | H VII 30                                    |
| NGC 6569 | GCL 91         | Glob CL | SGR | 8.4  | -    | 5.8' | 18 13.6 | -31 50 | 377 | VIII    |     |    | H II 201; D* Burnham 1353 in field          |
| NGC 6572 | PK 34+11.1     | Pln Neb | OPH | 8    | 4.3  | 15"  | 18 12.1 | +06 51 | 204 | 2a      |     | 12 |   |
| NGC 6583 | OCL 27         | Opn CL  | SGR | 10   | -    | 2.8' | 18 15.8 | -22 08 | 339 | II 1 m  | 35  |    | H VII 31                                    |
| NGC 6603 |                | Opn CL  | SGR | 11.1 | -    | 5'   | 18 18.4 | -18 24 | 339 | I 1 r n | 100 | 14 | Within star cloud <b>Messier 24</b>         |
| NGC 6624 | GCL 93         | Glob CL | SGR | 7.6  | -    | 5.9' | 18 23.7 | -30 22 | 378 | VI      |     |    | H I 50                                      |
| NGC 6629 | PK 9-5.1; H II | Pln Neb | SGR | 10.5 | 8.2  | 16"  | 18 25.7 | -23 12 | 340 | 2a      |     | 13 |   |
| NGC 6633 | OCL 90         | Opn CL  | OPH | 4.6  | -    | 27'  | 18 27.3 | +06 31 | 205 | III 2 m | 30  | 8  | H VIII 72                                   |
| NGC 6638 | GCL 95         | Glob CL | SGR | 9.2  | -    | 2.2' | 18 30.9 | -25 30 | 340 | VI      |     |    | H I 51                                      |
| NGC 6642 | GCL 97         | Glob CL | SGR | 8.8  | -    | 0.8' | 18 31.9 | -23 29 | 340 | IV      |     |    | H II 205; * mags 15....                     |
| NGC 6645 | OCL 48         | Opn CL  | SGR | 8.5  | -    | 10'  | 18 32.0 | -18 53 | 295 | III 1 m | 40  | 12 | H VI 23                                     |
| NGC 6649 | OCL 66         | Opn CL  | SCT | 8.9  | -    | 6'   | 18 33.5 | -10 24 | 295 | II 2 m  | 50  | 12 | With Cepheid V367 Sct & D* Struve 2325      |
| NGC 6652 | GCL 98         | Glob CL | SGR | 8.5  | -    | 3.5' | 18 35.8 | -32 59 | 378 | VI      |     |    |   |
| NGC 6664 | OCL 68         | Opn CL  | SCT | 7.8  | -    | 16'  | 18 36.6 | -07 49 | 295 | III 2 m | 50  | 10 | H VIII 12; Contains Cepheid variable EV Sct |
| NGC 6712 | GCL 103        | Glob CL | SCT | 8.2  | -    | 4.3' | 18 53.1 | -08 42 | 295 | IX      |     |    | H I 47                                      |
| NGC 6723 | Dunlop 573     | Glob CL | SGR | 6.8  | -    | 11'  | 18 59.6 | -36 38 | 378 | VII     |     |    |   |





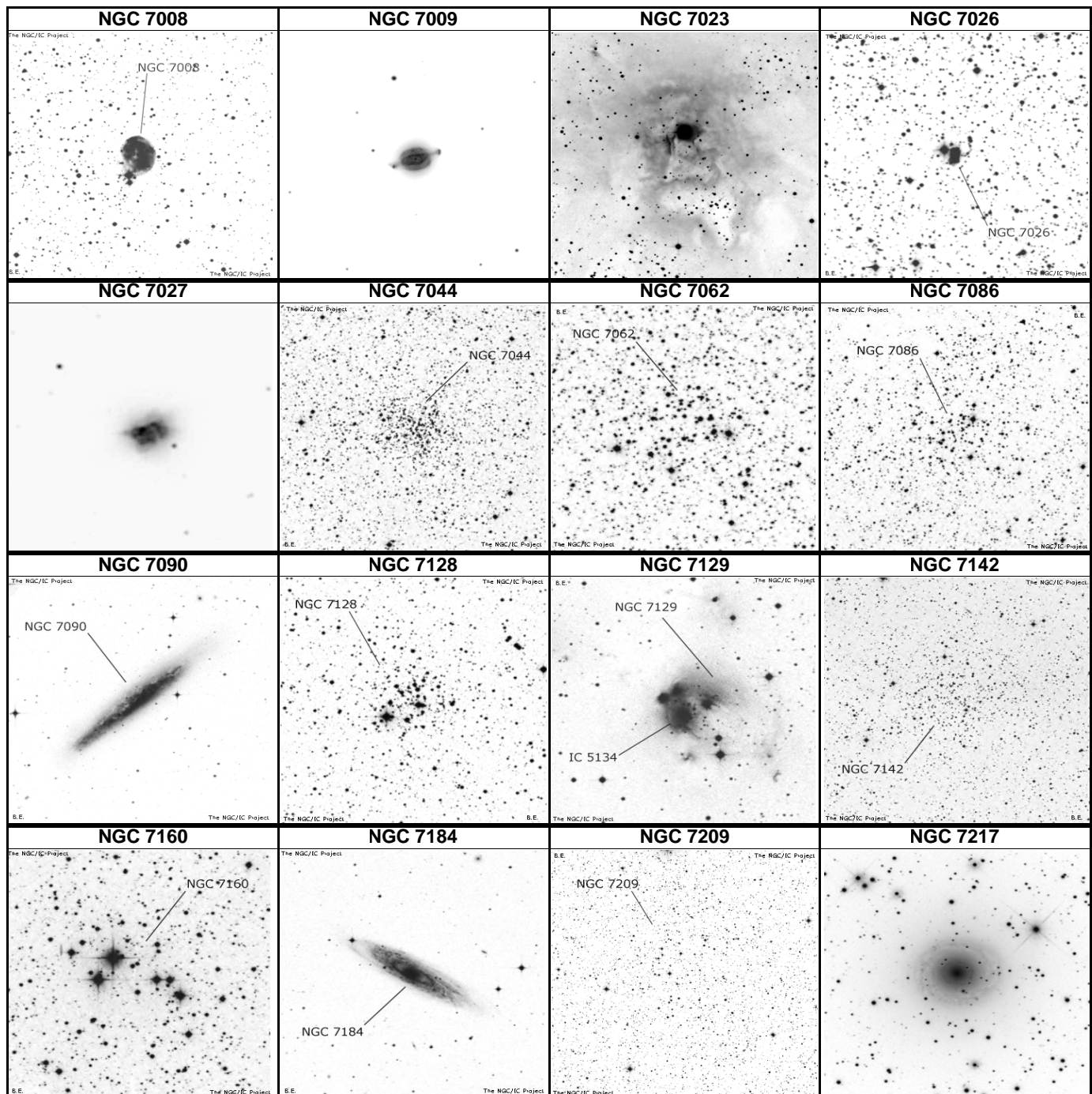
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|----------|------------|---------|-----|------|------|-------|---------|--------|-----|---------|-----|----|---|
| NGC 6726 | ESO 386-N1 | Br1 Neb | CRA | -    | -    | 2'    | 19 01.7 | -36 53 | 379 | E       |     |    | Complex neb region w var* TY & R CrA invl                 |
| NGC 6727 | ESO 386-N1 | Br1 Neb | CRA | -    | -    | 80'   | 19 01.7 | -36 53 | 379 | R       |     |    | P w NGC 6726-9  |
| NGC 6729 | ESO 386-N* | Br1 Neb | CRA | -    | -    | 25'   | 19 01.9 | -36 57 | 379 | E+R     |     |    | P w NGC 6726-7  |
| NGC 6752 | Dunlop 295 | Glob CL | PAV | 5.4  | -    | 20.4' | 19 10.9 | -59 59 | 435 | VI      |     |    | Fine cluster  |
| NGC 6755 | OCL 96     | Opn CL  | AQL | 7.5  | -    | 15'   | 19 07.8 | +04 16 | 251 | IV 2 m  | 100 | 10 | H VII 19  |
| NGC 6756 | OCL 99     | Opn CL  | AQL | 10.6 | -    | 4'    | 19 08.7 | +04 42 | 251 | I 2 m   | 40  | 13 | H VII 62  |
| NGC 6760 | GCL 109    | Glob CL | AQL | 9.1  | -    | 2.4'  | 19 11.2 | +01 02 | 251 | IX      |     |    |   |
| NGC 6781 | PK 41-2.1  | Pln Neb | AQL | 11.8 | 12.8 | 111"  | 19 18.5 | +06 32 | 206 | 3b(3)   |     | 17 | H III 743;PK41-2.1;opposite dark lane from Altair         |
| NGC 6791 | OCL 142    | Opn CL  | LYR | 9.5  | -    | 16'   | 19 20.7 | +37 51 | 118 | II 3 r  | 300 | 13 | very rich   |
| NGC 6802 | OCL 114    | Opn CL  | VUL | 8.8  | -    | 3.2'  | 19 30.6 | +20 16 | 162 | III 1 m | 50  | 13 | H VI 14;Bar shaped along N-S                              |
| NGC 6818 | PK 25-17.1 | Pln Neb | SGR | 10   | 7    | 22"   | 19 44.0 | -14 09 | 297 | 4       |     | 15 | <b>Little Gem</b> Nebula;PK25-17.1                        |
| NGC 6819 | OCL 155    | Opn CL  | CYG | 7.3  | -    | 5'    | 19 41.3 | +40 11 | 84  | I 1 r   |     | 12 | 150 stars mags 11-16                                      |
| NGC 6822 | IC 4895    | Galaxy  | SGR | 8.8  | 14.5 | 15.4' | 19 44.9 | -14 48 | 297 | Ir+     |     |    | <b>Barnard's Galaxy</b> ;IC 1308 =HII reg; in Local Group |
| NGC 6823 | OCL 124    | Opn CL  | VUL | 7.1  | -    | 12'   | 19 43.2 | +23 18 | 162 | I 3 p n | 30  | 9  | H VII 18;In Vul OB1 w nebula NGC 6820;30 * mags           |
| NGC 6826 | PK 83+12.1 | Pln Neb | CYG | 8.8  | 6.9  | 27"   | 19 44.8 | +50 32 | 55  | 3a(2)   |     | 11 | <b>Blinking Planetary</b> ;H IV 73;PK83+12.1              |
| NGC 6830 | OCL 125    | Opn CL  | VUL | 7.9  | -    | 12'   | 19 51.0 | +23 06 | 162 | II 2 p  | 20  | 10 | H VII 9   |
| NGC 6834 | OCL 134    | Opn CL  | CYG | 7.8  | -    | 5'    | 19 52.2 | +29 24 | 119 | II 2 m  | 50  | 10 | H VIII 16   |
| NGC 6857 | Sh2-100    | Br1 Neb | CYG | 11.4 | -    | 0.8'  | 20 02.8 | +33 31 | 119 | E       |     | 14 | oval; not planetary, Sharpless 2-100 is brightcore        |





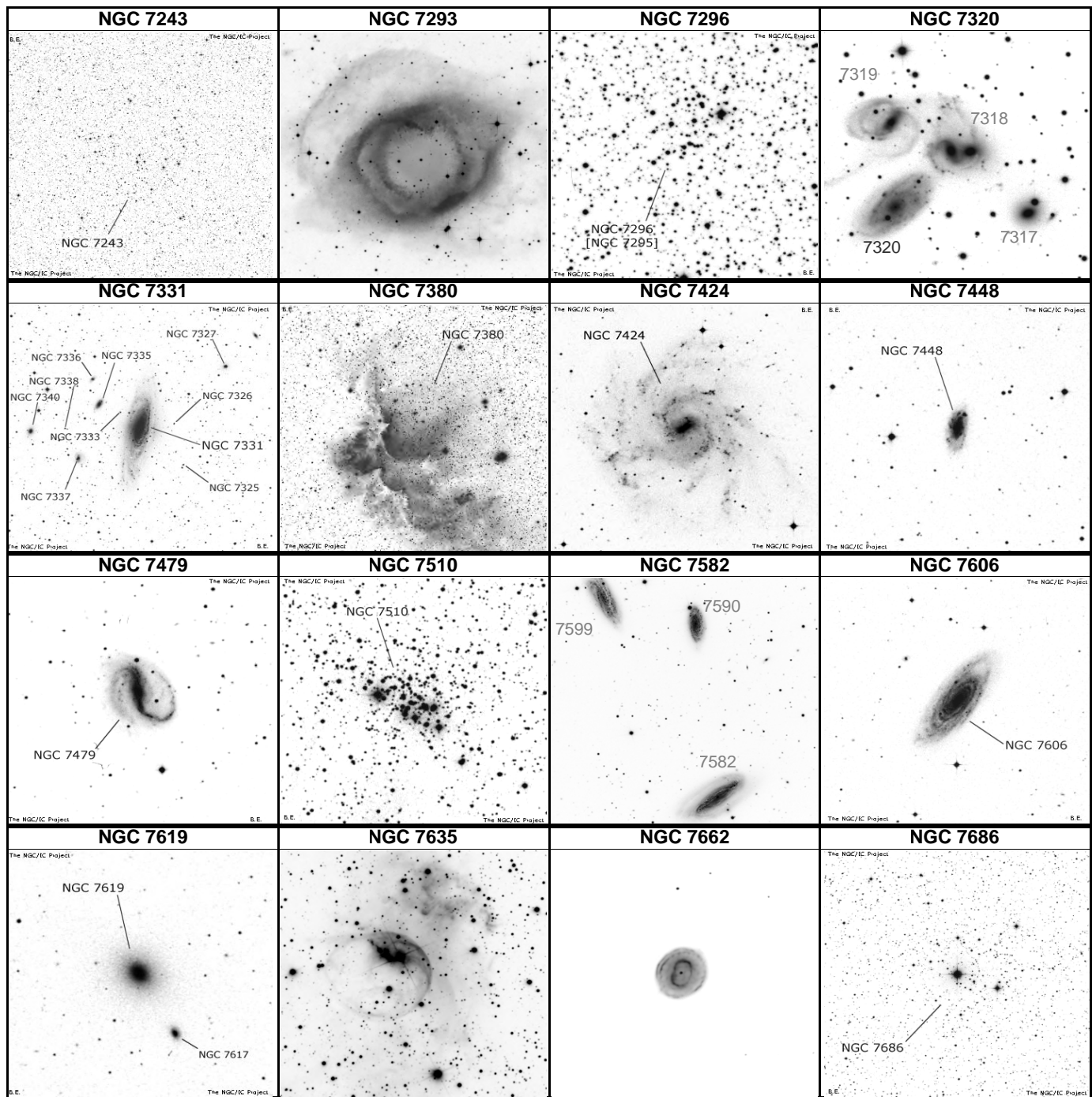
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|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|---------|----|----|---|
| NGC 6866 | OCL 183     | Opn CL  | CYG | 7.6  | -    | 7'    | 20 03.9 | +44 10 | 84  | II 2 m  | 80 | 11 | H VII 59;50* mags 10...                               |
| NGC 6882 |             | Aster   | VUL | 8.1  | -    | 18'   | 20 11.9 | +26 40 | 163 | II 2 p  |    | 10 | H VIII 22;Near cluster NGC 6885                       |
| NGC 6885 | OCL 152     | Opn CL  | VUL | 8.1  | -    | 7'    | 20 11.9 | +26 29 | 163 | III 2 p | 30 | 6  | H VIII 20;With 20 Vul                                 |
| NGC 6888 | LBN 203     | Brn Neb | CYG | 10   | -    | 20'   | 20 12.8 | +38 19 | 119 | E       |    |    | <b>Crescent Neb</b> ;Wolf-Rayet * invl                |
| NGC 6905 | PK 61-9.1;H | Pln Neb | DEL | 12   | 10   | 44"   | 20 22.4 | +20 06 | 163 | 3(3)    |    | 14 | <b>Blue Flash Nebula</b>                              |
| NGC 6907 | ESO 528- 3  | Galaxy  | CAP | 11.2 | 13.4 | 3.4'  | 20 25.1 | -24 49 | 343 | SBbc    |    |    | H III 141;S shaped spiral                             |
| NGC 6910 | OCL 181     | Opn CL  | CYG | 7.4  | -    | 8'    | 20 23.2 | +40 47 | 84  | I 2 p n | 50 | 10 | H VIII 56; <b>In Gamma Cyg nebula</b> and Cyg OB9     |
| NGC 6934 | GCL 117     | Glob CL | DEL | 8.9  | -    | 7'    | 20 34.2 | +07 24 | 209 | VIII    |    |    | H I 103;*10m 2' west                                  |
| NGC 6939 | OCL 217     | Opn CL  | CEP | 7.8  | -    | 8'    | 20 31.5 | +60 40 | 56  | I 1 m   | 80 | 12 | H VI 42;Gal N6946 38' SE                              |
| NGC 6940 | OCL 141     | Opn CL  | VUL | 6.3  | -    | 31'   | 20 34.4 | +28 17 | 120 | III 2 m | 60 | 9  | H VII 8;100 * mags 9...                               |
| NGC 6946 | UGC 11597   | Galaxy  | CEP | 8.8  | 13.8 | 11.2' | 20 34.9 | +60 09 | 56  | SBc     |    |    | H IV 76;One of nearest spirals                        |
| NGC 6960 | LBN 191     | SN Rem  | CYG | 7    | -    | 210'  | 20 45.7 | +30 43 | 120 |         |    |    | <b>Veil Nebula</b> western part;* 52 CYG invl         |
| NGC 6974 | SG 3.202    | SN Rem  | CYG | -    | -    |       | 20 51.1 | +31 50 | 120 |         |    |    | <b>part of Veil</b>                                   |
| NGC 6979 |             | Brn Neb | CYG | -    | -    | 3'    | 20 51.0 | +32 08 | 120 | E       |    |    | H II 206; <b>Portion of Veil Neb</b> between two arcs |
| NGC 6992 | CED 182B    | SN Rem  | CYG | 7    | -    | 60'   | 20 56.4 | +31 43 | 120 | R       |    |    | <b>Veil Nebula</b> eastern part                       |
| NGC 6995 | CED 182C    | SN Rem  | CYG | 7    | -    | 12'   | 20 57.1 | +31 13 | 120 | R       |    |    | <b>part of veil</b>                                   |
| NGC 7000 | LBN 373     | Brn Neb | CYG | 4    | -    | 120'  | 21 01.8 | +44 12 | 85  | E       |    |    | <b>North America nebula</b> ;CI NGC 6997 invl         |
| NGC 7006 | GCL 118     | Glob CL | DEL | 10.6 | -    | 2.8'  | 21 01.5 | +16 11 | 209 | I       |    |    | H I 52;Stars eF;very remote globular                  |



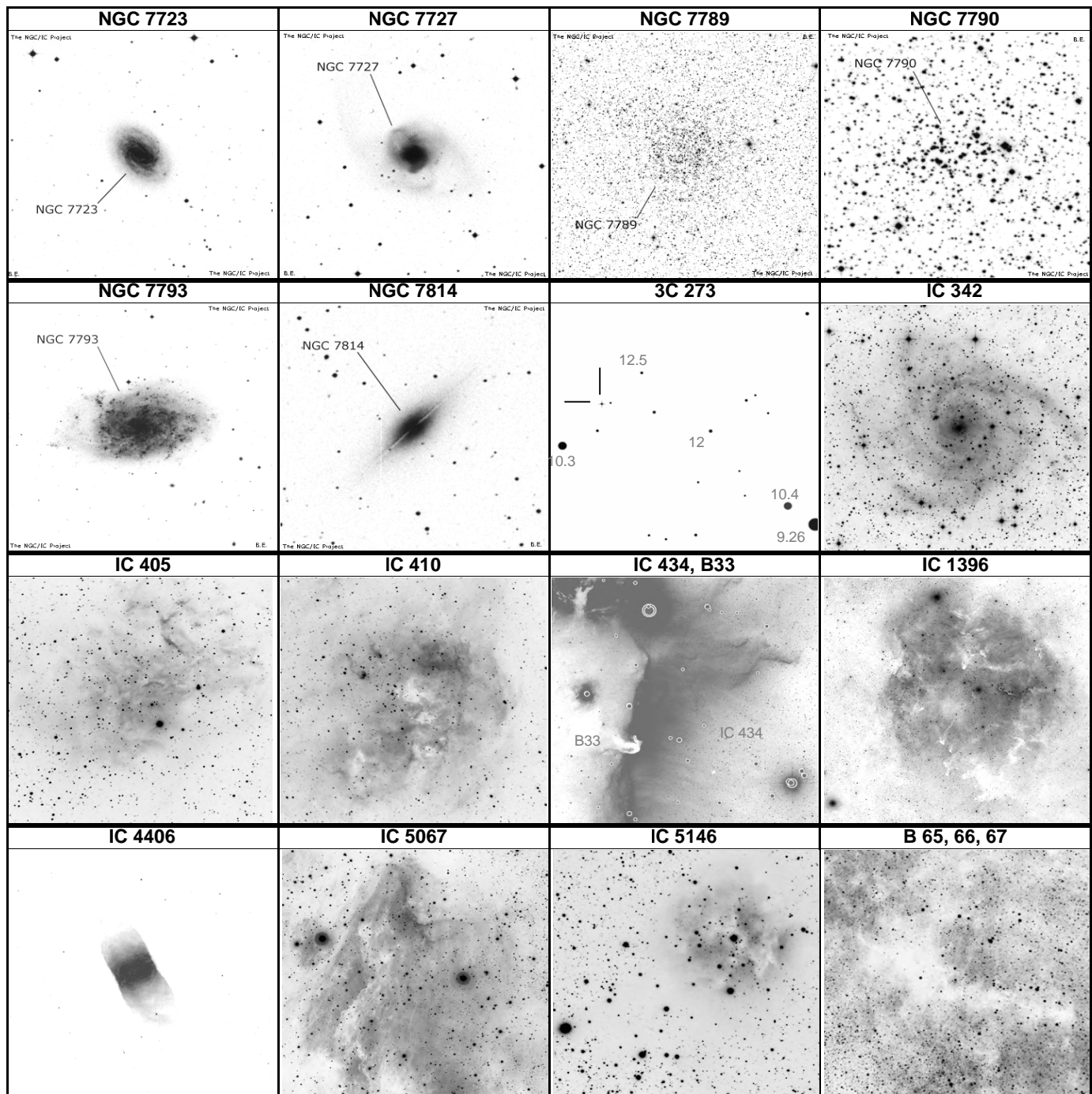


| NAME     | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class    | ns  | bs | SAC NOTES   |
|----------|------------|---------|-----|------|------|------|---------|--------|-----|----------|-----|----|---|
| NGC 7008 | PK 93+5.2  | Pln Neb | CYG | 12   | 11.8 | 86"  | 21 00.5 | +54 33 | 56  | 3        |     | 14 | H I 192   |
| NGC 7009 | PK 37-34.1 | Pln Neb | AQR | 8.3  | 6.2  | 28"  | 21 04.2 | -11 22 | 300 | 4(6)     |     | 13 | <b>Saturn Nebula</b> ; H IV 1; bright blue-green disk |
| NGC 7023 | OCL 235    | CL+Neb  | CEP | 7.1  | -    | 5'   | 21 00.5 | +68 10 | 33  | E+*      |     |    | H IV 74; Complex structure w Br and dark filaments    |
| NGC 7026 | PK 89+0.1  | Pln Neb | CYG | 12   | 8.5  | 25"  | 21 06.3 | +47 51 | 85  | 3a       |     | 14 | double at high power                                  |
| NGC 7027 | PK 84-3.1  | Pln Neb | CYG | 9.6  | -    | 18"  | 21 07.0 | +42 14 | 85  | 3a       |     | 17 | bizarre spectrum                                      |
| NGC 7044 | OCL 198    | Opn CL  | CYG | 12   | -    | 6'   | 21 12.9 | +42 29 | 86  | II 2 R   |     | 15 | H VI 24   |
| NGC 7062 | OCL 205    | Opn CL  | CYG | 8.3  | -    | 7'   | 21 23.5 | +46 23 | 86  | III 1 p  | 30  | 10 | H VII 51  |
| NGC 7086 | OCL 214    | Opn CL  | CYG | 8.4  | -    | 9'   | 21 30.5 | +51 36 | 57  | II 2 m   | 50  | 10 | H VI 32   |
| NGC 7090 | ESO 188-12 | Galaxy  | IND | 10.7 | 13   | 7.3' | 21 36.5 | -54 33 | 438 | SBc      |     |    |   |
| NGC 7128 | OCL 218    | Opn CL  | CYG | 9.7  | -    | 3.1' | 21 44.0 | +53 43 | 57  | II 3 m   | 35  | 12 | H VII 40  |
| NGC 7129 | OCL 240    | CL+Neb  | CEP | 11.5 | -    | 2.7' | 21 43.0 | +66 07 | 33  | IV 2 p n | 10  | 12 | H IV 75; Sev F * invl                                 |
| NGC 7142 | OCL 241    | Opn CL  | CEP | 9.3  | -    | 4.3' | 21 45.2 | +65 46 | 33  | II 2 r   | 100 | 12 | H VII 66  |
| NGC 7160 | OCL 238    | Opn CL  | CEP | 6.1  | -    | 7'   | 21 53.7 | +62 36 | 33  | II 3 p   | 12  | 7  | H VIII 67; In Cep OB2                                 |
| NGC 7184 | ESO 601- 9 | Galaxy  | AQR | 10.9 | 13.1 | 5.9' | 22 02.7 | -20 49 | 346 | SBc Rin  |     |    | H II 1; With Saturn-like inner ring                   |
| NGC 7209 | OCL 215    | Opn CL  | LAC | 7.7  | -    | 25'  | 22 05.1 | +46 29 | 87  | III 1 p  | 25  | 9  | H VII 53  |
| NGC 7217 | UGC 11914  | Galaxy  | PEG | 10.1 | 12.7 | 4'   | 22 07.9 | +31 22 | 122 | Sb       |     |    | H II 207; vB diff Nuc .35'X0.27' many knotty arms     |





| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs | SAC NOTES   |
|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|----|---|
| NGC 7243 | OCL 221     | Opn CL  | LAC | 6.4  | -    | 21'   | 22 15.1 | +49 54 | 87  | IV 2 p    | 40 | 9  | H VIII 75; Incl Struve 2890 D*                    |
| NGC 7293 | PK 36-57.1  | Pln Neb | AQR | 6.3  | 13.6 | 960"  | 22 29.6 | -20 50 | 347 | 4(3)      |    | 14 | Helix Nebula; low surf brightness                 |
| NGC 7296 | OCL 228     | Opn CL  | LAC | 9.7  | -    | 4'    | 22 28.2 | +52 17 | 57  | III 2 p   | 20 | 10 | H VII 41  |
| NGC 7320 | UGC 12101   | Galaxy  | PEG | 12.6 | 13.5 | 2.3'  | 22 38.1 | +33 57 | 123 | Scd       |    |    | Brigheest in Stephan's Quintet                    |
| NGC 7331 | UGC 12113   | Galaxy  | PEG | 9.5  | 13.3 | 10.2' | 22 37.1 | +34 25 | 123 | SBc       |    |    | Brightest in group of F obj; sev dark lanes       |
| NGC 7380 | OCL 244     | Opn CL  | CEP | 7.2  | -    | 12'   | 22 47.3 | +58 08 | 58  | III 3 p n | 40 | 9  | H VIII 77; In Cep OB1                             |
| NGC 7424 | ESO 346-19  | Galaxy  | GRU | 10.5 | 15.1 | 10'   | 22 57.3 | -41 04 | 415 | SBc       |    |    | face on   |
| NGC 7448 | UGC 12294   | Galaxy  | PEG | 11.7 | 12.9 | 2.6'  | 23 00.1 | +15 59 | 213 | Sbc       |    |    | H II 251; Brightest in group; UGC 12294; Arp 13   |
| NGC 7479 | UGC 12343   | Galaxy  | PEG | 10.9 | 13.4 | 4'    | 23 04.9 | +12 19 | 213 | SBbc      |    |    | H I 55; excellent barred spiral                   |
| NGC 7510 | OCL 258     | Opn CL  | CEP | 7.9  | -    | 4'    | 23 11.5 | +60 34 | 58  | II 2 m n  | 60 | 10 | H VII 44; L region of F neby to SE                |
| NGC 7582 | ESO 291-18  | Galaxy  | GRU | 10.6 | 13   | 5'    | 23 18.4 | -42 22 | 415 | SBab      |    |    | Group w NGC 7590 & 7599                           |
| NGC 7606 | MCG - 2-59- | Galaxy  | AQR | 10.8 | 13.3 | 4.2'  | 23 19.1 | -08 29 | 304 | Sbc       |    |    | H I 104   |
| NGC 7619 | UGC 12523   | Galaxy  | PEG | 11.1 | 12.9 | 2.8'  | 23 20.2 | +08 12 | 214 | Elliptica |    |    | H II 439; UGC 12523                               |
| NGC 7635 | LBN 549     | Brn Neb | CAS | 11   | -    | 15'   | 23 20.2 | +61 11 | 34  | E         |    |    | Bubble Nebula; H IV 52; L neb ring                |
| NGC 7662 | PK 108-17.1 | Pln Neb | AND | 8.6  | 5.6  | 17"   | 23 25.9 | +42 32 | 88  | 4(3)      |    | 14 | Blue Snowball Nebula; H IV 18; Barnard-cent * var |
| NGC 7686 | OCL 251     | Opn CL  | AND | 5.6  | -    | 15'   | 23 30.1 | +49 08 | 88  | IV 1 p    | 20 | 6  | H VIII 69; 12* mags 8...13                        |



| NAME     | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class    | ns  | bs | SAC NOTES  |
|----------|--------------|---------|-----|------|------|-------|---------|--------|-----|----------|-----|----|--|
| NGC 7723 | MCG - 2-60-  | Galaxy  | AQR | 11.2 | 13.3 | 3.5'  | 23 39.0 | -12 58 | 304 | SBb      |     |    | H I 110  |
| NGC 7727 | MCG - 2-60-  | Galaxy  | AQR | 10.6 | 13.5 | 4.7'  | 23 39.9 | -12 18 | 304 | SBap     |     |    | H I 111; Faint outer arms ext to 5'                        |
| NGC 7789 | OCL 269      | Opn CL  | CAS | 6.7  | -    | 16'   | 23 57.4 | +56 43 | 35  | II 1 r   | 300 | 11 | H VI 30; 1000 members from 11 to 18 mag                    |
| NGC 7790 | OCL 276      | Opn CL  | CAS | 8.5  | -    | 17'   | 23 58.4 | +61 13 | 15  | III 2 p  | 40  | 11 | H VII 56; Contains CE Cas                                  |
| NGC 7793 | ESO 349-12   | Galaxy  | SCL | 9.1  | 13.4 | 9.6'  | 23 57.8 | -32 36 | 350 | Scd      |     |    |  |
| NGC 7814 | UGC 8        | Galaxy  | PEG | 10.6 | 13.2 | 4.7'  | 00 03.2 | +16 09 | 170 | Sab      |     |    | H II 240; Equatorial dust lane; Nearly edge-on             |
| 3C 273   | PGC 41121    | Quasar  | VIR | 13   | -    | 0     | 12 29.1 | +02 03 | 238 |          |     |    | <b>Brightest quasar</b> ; ~2 billion light years, 12.8-13m |
| IC 342   | UGC 2847     | Galaxy  | CAM | 12   | 14.9 | 20.8' | 03 46.8 | +68 06 | 18  | SBc      |     |    | Local Group Member   |
| IC 405   | LBN 795      | Brn Neb | AUR | 10   | -    | 50'   | 05 16.5 | +34 21 | 97  | E        |     |    | <b>Flaming Star nebula</b> ; variable AE Aur in center     |
| IC 410   | NGC 1893     | Brn Neb | AUR | 7.5  | -    | 11'   | 05 22.7 | +33 25 | 97  | E        |     |    | Incl cluster NGC 1893                                      |
| IC 434   | LBN 954      | Brn Neb | ORI | 11   | -    | 90'   | 05 41.0 | -02 27 | 226 | E        |     |    | <b>Contains Horsehead neb</b> (B33)                        |
| B 33     | LDN 1630     | Drk Neb | ORI | --   | --   | 8'    | 05 40.9 | -02 28 | 226 | 4 Ir     |     |    | <b>Horsehead nebula</b> ; part of dark following cloud     |
| IC 1396  | OCL 222      | CL+Neb  | CEP | 3.5  | -    | 89'   | 21 39.1 | +57 30 | 57  | II 3 m n | 50  | 4  | In Cep OB2; Neby is 165'X135'; cluster is Tr 37            |
| IC 4406  | PK 319+15    | Pln Neb | LUP | 11   | 9.1  | 46"   | 14 22.4 | -44 09 | 404 | 4(3)     |     | 17 | Annular; N2-- Stellar ?; pB diffused disk 20"--Hartung     |
| IC 5067  | IC 5070; LBN | Brn Neb | CYG | 8    | -    | 60'   | 20 50.8 | +44 21 | 85  | E        |     |    | <b>Pelican Nebula</b> ; w IC 5067; 56 Cyg invl             |
| IC 5146  | OCL 213      | CL+Neb  | CYG | 10   | -    | 20'   | 21 53.4 | +47 16 | 86  | IV 2 p n | 20  | 10 | <b>Cocoon neb</b> ; at end of dark streamer B168           |
| B 65-67  | LDN 1772-3   | Drk Neb | OPH | --   | --   | 12'   | 17 19.6 | -26 42 | 338 | 6 Ir     |     |    | <b>Pipe nebula</b> (stem); 2 deg south of Theta Oph;       |



## 650 selected DSO List (sorted by constellation - magnitude)

| 650 selected DSO List (sorted by constellation - magnitude) |             |         |     |      |      |       |         |        |     |           |     |      |  |
|---|-------------|---------|-----|------|------|-------|---------|--------|-----|-----------|-----|------|--|
| NAME  | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs   | SAC NOTES  |
| <b>M 31</b>   | NGC 224     | Galaxy  | AND | 3.4  | 13.5 | 189'  | 00 42.7 | +41 16 | 60  | Sb        |     |      | <b>Andromeda Galaxy</b> ;Local Group;nearest spiral              |
| <b>NGC 7686</b>   | OCL 251     | Opn CL  | AND | 5.6  | -    | 15'   | 23 30.1 | +49 08 | 88  | IV 1 p    | 20  | 6.2  | H VIII 69;12* mags 8...13  |
| <b>NGC 752</b>  | OCL 363     | Opn CL  | AND | 5.7  | -    | 50'   | 01 57.7 | +37 40 | 92  | III 1 m   | 60  | 9    | H VII 32;Best in RFT or binocs;lr scattered cl 70* m 8...        |
| <b>M 32</b>   | NGC 221     | Galaxy  | AND | 8.1  | 12.4 | 8.5'  | 00 42.7 | +40 52 | 60  | E2        |     |      | Companion to <b>M31</b> ; Member of Local Group                  |
| <b>M 110</b>  | NGC 205     | Galaxy  | AND | 8.1  | 14   | 19.5' | 00 40.4 | +41 41 | 60  | SA0       |     |      | <b>M31 Companion</b> ;UGC 426; Member Local Group                |
| <b>NGC 7662</b>   | PK 106-17.1 | Pln Neb | AND | 8.6  | 5.6  | 17"   | 23 25.9 | +42 32 | 88  | 4(3)      |     | 14   | <b>Blue Snowball Nebula</b> ;H IV 18;Barnard-cent * variable?    |
| <b>NGC 891</b>  | UGC 1831    | Galaxy  | AND | 9.9  | 13.6 | 13.1' | 02 22.6 | +42 21 | 62  | Sb        |     |      | NGC 1023 group;Lord Rosse drawing shows dark lane                |
| <b>NGC 404</b>  | UGC 718     | Galaxy  | AND | 10.3 | 12.8 | 4.3'  | 01 09.4 | +35 43 | 91  | E0        |     |      | <b>Mirach's ghost</b> H II 224;UGC 718;Beta AND sf 6'            |
| <b>NGC 2997</b>   | ESO 434-35  | Galaxy  | ANT | 9.4  | 13.7 | 9.2'  | 09 45.6 | -31 11 | 365 | SBc       |     |      | H V 50   |
| <b>NGC 6755</b>   | OCL 96      | Opn CL  | AQL | 7.5  | -    | 15'   | 19 07.8 | +04 16 | 251 | IV 2 m    | 100 | 10.2 | H VII 19   |
| <b>NGC 6760</b>   | GCL 109     | Glob CL | AQL | 9.1  | -    | 2.4'  | 19 11.2 | +01 02 | 251 | IX        |     |      |  |
| <b>NGC 6756</b>   | OCL 99      | Opn CL  | AQL | 10.6 | -    | 4'    | 19 08.7 | +04 42 | 251 | I 2 m     | 40  | 13   | H VII 62   |
| <b>NGC 6781</b>   | PK 41-2.1   | Pln Neb | AQL | 11.8 | 12.8 | 111"  | 19 18.5 | +06 32 | 206 | 3b(3)     |     | 16.9 | H III 743;PK41-2.1;opposite dark lane from Altair                |
| <b>NGC 7293</b>   | PK 36-57.1  | Pln Neb | AQR | 6.3  | 13.6 | 960"  | 22 29.6 | -20 50 | 347 | 4(3)      |     | 13.5 | <b>Helix Nebula</b> ;low surf brightness                         |
| <b>M 2</b>  | NGC 7089    | Glob CL | AQR | 6.5  | 11   | 11.7' | 21 33.5 | -00 49 | 255 | II        |     |      | Lord Rosse-Dark area near core;* mags 13...                      |
| <b>NGC 7009</b>   | PK 37-34.1  | Pln Neb | AQR | 8.3  | 6.2  | 28"   | 21 04.2 | -11 22 | 300 | 4(6)      |     | 12.9 | <b>Saturn Nebula</b> ;H IV 1;bright blue-green disk              |
| <b>M 72</b>   | NGC 6981    | Glob CL | AQR | 9.2  | 12   | 5.9'  | 20 53.5 | -12 32 | 299 | IX        |     |      | 3 deg WSW of NGC 7009  |
| <b>M 73</b>   | NGC 6994    | Opn CL  | AQR | 9.7  | -    | 2.8'  | 20 59.0 | -12 38 | 299 | IV 1 p    | 10  | 10   | 4 or 5 10th mag stars; Messier saw neb but there is no.          |
| <b>NGC 7727</b>   | MCG - 2-60- | Galaxy  | AQR | 10.6 | 13.5 | 4.7'  | 23 39.9 | -12 18 | 304 | SBap      |     |      | H I 111;Faint outer arms ext to 5'                               |
| <b>NGC 7606</b>   | MCG - 2-59- | Galaxy  | AQR | 10.8 | 13.3 | 4.2'  | 23 19.1 | -08 29 | 304 | Sbc       |     |      | H I 104  |
| <b>NGC 7184</b>   | ESO 601- 9  | Galaxy  | AQR | 10.9 | 13.1 | 5.9'  | 22 02.7 | -20 49 | 346 | SBc Ring  |     |      | H II 1;With Saturn-like inner ring                               |
| <b>NGC 7723</b>   | MCG - 2-60- | Galaxy  | AQR | 11.2 | 13.3 | 3.5'  | 23 39.0 | -12 58 | 304 | SBb       |     |      | H I 110  |
| <b>NGC 6193</b>   | OCL 975     | Opn CL  | ARA | 5.2  | -    | 15'   | 16 41.3 | -48 46 | 407 | II 3 p n  | 14  | 5.7  | In Ara OB1;30* mags 6...   |
| <b>NGC 6397</b>   | Lac III-11  | Glob CL | ARA | 5.3  | -    | 25.7' | 17 40.7 | -53 40 | 434 | IX        |     | 10   | Poss nearest glob  |
| <b>NGC 6352</b>   | Dunlop 417  | Glob CL | ARA | 7.8  | -    | 7.1'  | 17 25.5 | -48 25 | 408 | XI        |     | 12   | globular ESO 228-SC003   |
| <b>NGC 6204</b>   | OCL 982     | Opn CL  | ARA | 8.2  | -    | 5'    | 16 46.2 | -47 01 | 407 | I 2 p     | 45  | 9.8  | In Ara OB2   |
| <b>NGC 772</b>  | UGC 1466    | Galaxy  | ARI | 10.3 | 13.9 | 7.5'  | 01 59.3 | +19 00 | 129 | Sb        |     |      | H I 112;Several tightly coiled arms br on NW side                |
| <b>NGC 2281</b>   | OCL 446     | Opn CL  | AUR | 5.4  | -    | 15'   | 06 48.3 | +41 05 | 68  | I 3 p     | 30  | 7.3  | H VIII 71  |
| <b>M 37</b>   | NGC 2099    | Opn CL  | AUR | 5.6  | 11   | 24'   | 05 52.3 | +32 33 | 98  | II 1 r    | 150 | 9.2  | Total population 500*;dark area near center                      |
| <b>M 36</b>   | NGC 1960    | Opn CL  | AUR | 6    | 12   | 12'   | 05 36.3 | +34 08 | 97  | II 3 m    | 60  | 8.9  | in Aur OB1;incl Struve 737 10.7"sep                              |
| <b>M 38</b>   | NGC 1912    | Opn CL  | AUR | 6.4  | 12   | 21'   | 05 28.7 | +35 51 | 97  | III 2 m   | 100 | 9.5  | in Aur OB1;Burnham-shaped like Greek letter Pi                   |
| <b>NGC 1857</b>   | Cr 61       | Opn CL  | AUR | 7    | -    | 6'    | 05 20.1 | +39 21 | 66  | II 2 m    | 40  | 7.4  | H VII 33   |
| <b>IC 410</b>   | NGC 1893    | Brn Neb | AUR | 7.5  | -    | 11'   | 05 22.7 | +33 25 | 97  | E         |     |      | Incl cluster NGC 1893  |
| <b>NGC 1664</b>   | OCL 411     | Opn CL  | AUR | 7.6  | -    | 18'   | 04 51.1 | +43 41 | 65  | III 1 p   |     | 10.6 | H VIII 59;40* mags 11...   |
| <b>NGC 1907</b>   | OCL 434     | Opn CL  | AUR | 8.2  | -    | 7'    | 05 28.1 | +35 20 | 97  | II 1 m n  | 30  | 11.3 | H VII 39   |
| <b>IC 405</b>   | LBN 795     | Brn Neb | AUR | 10   | -    | 50'   | 05 16.5 | +34 21 | 97  | E         |     |      | <b>Flaming Star nebula</b> ;variable AE Aur in center            |
| <b>NGC 1931</b>   | OCL 441     | CL+Neb  | AUR | 10.1 | -    | 3'    | 05 31.4 | +34 15 | 97  | I 3 p n;b |     | 11.5 | H I 261;Contains triple ADS 4112                                 |
| <b>NGC 2126</b>   | OCL 418     | Opn CL  | AUR | 10.2 | -    | 6'    | 06 02.5 | +49 52 | 67  | II 1 p    | 40  | 13   | H VIII 68;Scattered 20 * mags 11..14                             |
| <b>NGC 5466</b>   | GCL 27      | Glob CL | BOO | 9.1  | -    | 9.2'  | 14 05.5 | +28 32 | 110 | XII       |     |      | H VI 9   |
| <b>NGC 5248</b>   | UGC 8616    | Galaxy  | BOO | 10.3 | 13.8 | 5.9'  | 13 37.5 | +08 53 | 196 | SBbc      |     |      | H I 34;eBN in vB lens w many dk lanes                            |
| <b>NGC 5557</b>   | UGC 9161    | Galaxy  | BOO | 11   | 12.6 | 2.4'  | 14 18.4 | +36 30 | 110 | E1        |     |      | H I 99;BN;no struct  |
| <b>NGC 5676</b>   | UGC 9366    | Galaxy  | BOO | 11.2 | 13.2 | 3.9'  | 14 32.8 | +49 27 | 77  | Sbc       |     |      | H I 189;N 5660 at 30' IC 1029 at 26';Many B knotty filam         |
| <b>NGC 5689</b>   | UGC 9399    | Galaxy  | BOO | 11.9 | 13   | 3.3'  | 14 35.5 | +48 44 | 77  | SBO-a     |     |      | H I 188;diff Nucl in B bulge w strong dk lane on one side        |
| <b>NGC 1502</b>   | OCL 383     | Opn CL  | CAM | 6.9  | -    | 8'    | 04 07.8 | +62 20 | 18  | II 3 p    | 45  | 6.9  | Incl Stv 484 5"sep PA 130 & Struve 485 18" 6" 11"mul*            |
| <b>NGC 2403</b>   | UGC 3918    | Galaxy  | CAM | 8.5  | 14.4 | 23.4' | 07 36.8 | +65 36 | 21  | SBc       |     |      | in M81 group;many well res irreg arms;broad bar                  |
| <b>NGC 2655</b>   | UGC 4637    | Galaxy  | CAM | 10.1 | 13.2 | 4.9'  | 08 55.6 | +78 13 | 7   | SBO-a     |     |      | large nucleus w asym dk matter;faint outer whirls                |
| <b>NGC 1961</b>   | IC 2133     | Galaxy  | CAM | 11   | 13.7 | 4.5'  | 05 42.1 | +69 23 | 20  | SBbc      |     |      | H III 747;hexagonal;2 branch arms w some knots                   |
| <b>NGC 1501</b>   | PK 144+6.1  | Pln Neb | CAM | 12   | 11.6 | 56"   | 04 07.0 | +60 55 | 39  | 3         |     | 14.4 | H IV 53;PK144+6.1  |
| <b>IC 342</b>   | UGC 2847    | Galaxy  | CAM | 12   | 14.9 | 20.9' | 03 46.8 | +68 06 | 18  | SBc       |     |      | Local Group Member   |
| <b>M 30</b>   | NGC 7099    | Glob CL | CAP | 6.9  | 11   | 8.9'  | 21 40.4 | -23 11 | 346 | V         |     |      | Wm. Herschel saw very elliptical shape                           |
| <b>NGC 6907</b>   | ESO 528- 3  | Galaxy  | CAP | 11.2 | 13.4 | 3.4'  | 20 25.1 | -24 49 | 343 | SBbc      |     |      | H III 141;S shaped spiral  |
| <b>NGC 3372</b>   | Dunlop 309  | Brn Neb | CAR | 3    | -    | 120'  | 10 45.1 | -59 52 | 427 | E         |     |      | <b>Keyhole Nebula</b> & nova-like var <b>Eta Car</b> ; drk lanes |
| <b>NGC 3532</b>   | OCL 839     | Opn CL  | CAR | 3    | -    | 50'   | 11 05.2 | -58 44 | 427 | II 1 m    | 150 | 7.1  | Fine object  |
| <b>NGC 2867</b>   | PK 278-5.1  | Pln Neb | CAR | 9.7  | 6.5  | 12"   | 09 21.4 | -58 19 | 425 | 4         |     | 16   |  |
| <b>NGC 457</b>  | OCL 321     | Opn CL  | CAS | 6.4  | -    | 13'   | 01 19.5 | +58 17 | 36  | I 3 r     | 80  | 8.6  | H VII 42;Phi Cas is not a member; <b>ET Cluster</b>              |
| <b>NGC 129</b>  | OCL 294     | Opn CL  | CAS | 6.5  | -    | 21'   | 00 30.0 | +60 13 | 35  | IV 2 p    | 35  | 8.6  | H VIII 79;Contains DL Cas  |
| <b>NGC 654</b>  | OCL 330     | Opn CL  | CAS | 6.5  | -    | 5'    | 01 44.0 | +61 53 | 16  | II 3 m    | 60  | 7.4  | H VII 46;In Cas OB8?;50* mags 11..14                             |
| <b>NGC 1027</b>   | OCL 357     | Opn CL  | CAS | 6.7  | -    | 20'   | 02 42.6 | +61 36 | 17  | III 2 p n | 40  | 9.3  | H VIII 66;Scattered group 12*                                    |
| <b>NGC 7789</b>   | OCL 269     | Opn CL  | CAS | 6.7  | -    | 16'   | 23 57.4 | +56 43 | 35  | II 1 r    | 300 | 10.7 | H VI 30;1000 members from 11 to 18 mag                           |

## 650 selected DSO List (sorted by constellation - magnitude)

| NAME            | OTHER           | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|-----------------|-----------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|--|
| <b>M 52</b>     | NGC 7654        | Opn CL  | CAS | 6.9  | 12   | 13'   | 23 24.2 | +61 35 | 15  | I 2 r      | 200 | 8.2  | Messier saw neby there is none                           |
| <b>NGC 225</b>  | OCL 305         | Opn CL  | CAS | 7    | -    | 12'   | 00 43.6 | +61 46 | 16  | III 1 p n  | 15  | 9.3  | H VIII 78;W shaped                                       |
| <b>NGC 663</b>  | OCL 333         | Opn CL  | CAS | 7.1  | -    | 16'   | 01 46.0 | +61 15 | 16  | III 2 m    | 80  | 8.4  | H VI 31;In Cas OB8;incl Struve 151 152 & 153             |
| <b>M 103</b>    | NGC 581         | Opn CL  | CAS | 7.4  | 11   | 6'    | 01 33.4 | +60 39 | 37  | III 2 p    | 40  | 10.6 | in Cas OB8;incl Struve 131 6-9m 14"                      |
| <b>NGC 281</b>  | IC 11           | CL+Neb  | CAS | 7.4  | -    | 4'    | 00 53.0 | +56 37 | 36  | E+*        |     | 9    |  |
| <b>NGC 659</b>  | OCL 332         | Opn CL  | CAS | 7.9  | -    | 5'    | 01 44.4 | +60 40 | 37  | III 1 p    | 40  | 10.4 | H VIII 65;30* mags 12...                                 |
| <b>NGC 637</b>  | OCL 329         | Opn CL  | CAS | 8.2  | -    | 3.5'  | 01 43.1 | +64 02 | 16  | I 3 p      | 20  | 10   | H VII 49   |
| <b>NGC 7790</b> | OCL 276         | Opn CL  | CAS | 8.5  | -    | 17'   | 23 58.4 | +61 13 | 15  | III 2 p    | 40  | 10.9 | H VII 56;Contains CE Cas                                 |
| <b>NGC 436</b>  | OCL 320         | Opn CL  | CAS | 8.8  | -    | 6'    | 01 16.0 | +58 49 | 36  | I 3 m      | 30  | 11.1 | H VII 45   |
| <b>NGC 185</b>  | UGC 396         | Galaxy  | CAS | 9.2  | 14.3 | 12.5' | 00 39.0 | +48 20 | 60  | dE0        |     |      | H II 707;Dwarf elliptical; Member Local Group            |
| <b>NGC 381</b>  | OCL 317         | Opn CL  | CAS | 9.3  | -    | 6'    | 01 08.4 | +61 35 | 16  | III 2 p    | 50  | 10   | H VIII 64;In Cas OB1?                                    |
| <b>NGC 147</b>  | UGC 326;D       | Galaxy  | CAS | 9.5  | 14.5 | 13.5' | 00 33.2 | +48 30 | 60  | dE4        |     |      | Dwarf EI;P w NGC 185 at 58';low surface br; Local Grp    |
| <b>NGC 559</b>  | OCL 322         | Opn CL  | CAS | 9.5  | -    | 4.4'  | 01 29.5 | +63 19 | 16  | II 2 m     | 60  | 10.6 | H VII 48   |
| <b>NGC 278</b>  | UGC 528         | Galaxy  | CAS | 10.8 | 12.2 | 2.4'  | 00 52.1 | +47 33 | 60  | SBb        |     |      | Lg B nucl;sev knotty massive arms;B part sharp edge;     |
| <b>NGC 7635</b> | LBN 549         | Brn Neb | CAS | 11   | -    | 15'   | 23 20.2 | +61 11 | 34  | E          |     |      | <b>Bubble Nebula</b> ;H IV 52;L neb ring                 |
| <b>NGC 136</b>  | OCL 295         | Opn CL  | CAS | 11.5 | -    | 1.2'  | 00 31.5 | +61 31 | 15  | II 2 p     | 20  | 13   | H VI 35;30 F*  |
| <b>NGC 5139</b> | <b>Omeg Cen</b> | Glob CL | CEN | 3.9  | -    | 36.3' | 13 26.8 | -47 29 | 403 | VIII       |     |      | Stars mags 11...;finest globular;magnificent object      |
| <b>NGC 5128</b> | Dunlop 482      | Galaxy  | CEN | 6.8  | 13.5 | 27.6' | 13 25.5 | -43 01 | 403 | SO         |     |      | <b>Centaurus A</b> , Dark central band;radio source      |
| <b>NGC 5286</b> | Dunlop 388      | Glob CL | CEN | 7.4  | -    | 9.1'  | 13 46.4 | -51 22 | 430 | V          |     |      | close to a bright star                                   |
| <b>NGC 3918</b> | PK 294+4.1      | Pln Neb | CEN | 8.4  | 5.7  | 12"   | 11 50.3 | -57 11 | 428 | 2b         |     | 15.5 | <b>Blue Planetary</b>                                    |
| <b>NGC 4945</b> | Dunlop 411      | Galaxy  | CEN | 8.6  | 13.1 | 19.8' | 13 05.4 | -49 28 | 402 | SBc        |     |      | Nearly edge-on   |
| <b>NGC 5102</b> | ESO 382-50      | Galaxy  | CEN | 9.6  | 13   | 8.6'  | 13 22.0 | -36 38 | 370 | E-SO       |     |      | 17' nf Iota CEN  |
| <b>IC 1396</b>  | OCL 222         | CL+Neb  | CEP | 3.5  | -    | 89'   | 21 39.1 | +57 30 | 57  | II 3 m n   | 50  | 3.8  | In Cep OB2;Neby is 165'X135';cluster is Tr 37            |
| <b>NGC 7160</b> | OCL 236         | Opn CL  | CEP | 6.1  | -    | 7'    | 21 53.7 | +62 36 | 33  | II 3 p     | 12  | 7    | H VIII 67;In Cep OB2                                     |
| <b>NGC 7023</b> | OCL 235         | CL+Neb  | CEP | 7.1  | -    | 5'    | 21 00.5 | +68 10 | 33  | E+*        |     |      | H IV 74;Complex structure w Br and dark filaments        |
| <b>NGC 7380</b> | OCL 244         | Opn CL  | CEP | 7.2  | -    | 12'   | 22 47.3 | +58 08 | 58  | III 3 p n  | 40  | 8.6  | H VIII 77; In Cep OB1                                    |
| <b>NGC 6939</b> | OCL 217         | Opn CL  | CEP | 7.8  | -    | 8'    | 20 31.5 | +60 40 | 56  | I 1 m      | 80  | 11.9 | H VI 42;Gal N6946 38' SE                                 |
| <b>NGC 7510</b> | OCL 256         | Opn CL  | CEP | 7.9  | -    | 4'    | 23 11.5 | +60 34 | 58  | II 2 m n   | 60  | 9.7  | H VII 44;L region of F neby to SE                        |
| <b>NGC 188</b>  | OCL 309         | Opn CL  | CEP | 8.1  | -    | 14'   | 00 47.5 | +85 14 | 1   | II 2 r     | 20  | 12.1 |  |
| <b>NGC 6946</b> | UGC 11597       | Galaxy  | CEP | 8.8  | 13.8 | 11.2' | 20 34.9 | +60 09 | 56  | SBc        |     |      | H IV 76;One of nearest spirals                           |
| <b>NGC 7142</b> | OCL 241         | Opn CL  | CEP | 9.3  | -    | 4.3'  | 21 45.2 | +65 46 | 33  | II 2 r     | 100 | 12.1 | H VII 66   |
| <b>NGC 40</b>   | PK 120+9.1      | Pln Neb | CEP | 10.7 | 7.3  | 60"   | 00 13.0 | +72 31 | 3   | 3b(3)      |     | 11.5 | H IV 58;PK120+9.1;Lord Rosse saw spiral structure        |
| <b>NGC 2300</b> | UGC 3798        | Galaxy  | CEP | 11   | 12.8 | 3.5'  | 07 32.3 | +85 43 | 1   | E1         |     |      | Pair with NGC 2276 at 6' and IC 1455 at 10'; vsBN        |
| <b>NGC 7129</b> | OCL 240         | CL+Neb  | CEP | 11.5 | -    | 2.7'  | 21 43.0 | +66 07 | 33  | IV 2 p n   | 10  | 11.5 | H IV 75;Sev F * invl                                     |
| <b>M 77</b>     | NGC 1068        | Galaxy  | CET | 8.9  | 12.8 | 7.3'  | 02 42.7 | -00 01 | 220 | Sbp        |     |      | Seyfert;brtst in NGC 1068 grp                            |
| <b>NGC 247</b>  | ESO 540-22      | Galaxy  | CET | 9.1  | 14.4 | 21'   | 00 47.1 | -20 46 | 306 | SBcd       |     |      | H V 20   |
| <b>NGC 936</b>  | UGC 1929        | Galaxy  | CET | 10.1 | 13.2 | 4.3'  | 02 27.6 | -01 09 | 220 | SBO-a      |     |      | H IV 23;Thick central bar;P w NGC 941 12' foll           |
| <b>NGC 720</b>  | MCG - 2- 5- 6   | Galaxy  | CET | 10.2 | 12.8 | 4.4'  | 01 53.0 | -13 44 | 264 | E4         |     |      | H I 105  |
| <b>NGC 908</b>  | ESO 545-11      | Galaxy  | CET | 10.2 | 13   | 6.1'  | 02 23.1 | -21 14 | 309 | SBc        |     |      | H I 153  |
| <b>NGC 157</b>  | MCG - 2- 2- 5   | Galaxy  | CET | 10.4 | 12.9 | 4.1'  | 00 34.8 | -08 24 | 261 | SBbc       |     |      | H II 3   |
| <b>NGC 246</b>  | PK 118-74.1     | Pln Neb | CET | 10.4 | 13.5 | 240"  | 00 47.1 | -11 52 | 261 | 3b         |     | 11.9 | H V 25;PK118-74.1;Galaxy NGC 255 15' NNE                 |
| <b>NGC 584</b>  | IC 1712;H I 1   | Galaxy  | CET | 10.5 | 12.9 | 3.3'  | 01 31.3 | -06 52 | 263 | E4         |     |      |  |
| <b>NGC 1052</b> | MCG - 1- 7- 3   | Galaxy  | CET | 10.5 | 12.5 | 2.8'  | 02 41.1 | -08 15 | 265 | Elliptical |     |      | H I 63   |
| <b>NGC 1055</b> | UGC 2173        | Galaxy  | CET | 10.6 | 13.7 | 7.6'  | 02 41.8 | +00 27 | 220 | SBb        |     |      | H I 1= II 6;Nearly edge-on spiral w equatorial dust lane |
| <b>NGC 210</b>  | MCG - 2- 2- 8   | Galaxy  | CET | 10.9 | 13.8 | 4.6'  | 00 40.6 | -13 52 | 261 | SBb        |     |      | H II 452;F outer arms form encircling ring               |
| <b>NGC 596</b>  | MCG - 1- 5- 5   | Galaxy  | CET | 10.9 | 13   | 2.8'  | 01 32.9 | -07 02 | 263 | E2         |     |      | H II 4   |
| <b>NGC 779</b>  | MCG - 1- 6- 5   | Galaxy  | CET | 11.2 | 12.7 | 4.1'  | 01 59.7 | -05 58 | 264 | SBb        |     |      | H I 101;nearly edge-on spiral                            |
| <b>NGC 1022</b> | MCG - 1- 7- 2   | Galaxy  | CET | 11.3 | 12.9 | 2.6'  | 02 38.5 | -06 41 | 265 | SBa        |     |      | H I 102  |
| <b>NGC 615</b>  | MCG - 1- 5- 5   | Galaxy  | CET | 11.6 | 13.3 | 3.4'  | 01 35.1 | -07 20 | 263 | Sb         |     |      | H II 282   |
| <b>NGC 5823</b> | OCL 936         | Opn CL  | CIR | 7.9  | -    | 10'   | 15 05.5 | -55 36 | 431 | III 2 m    | 100 | 9.7  |  |
| <b>NGC 2362</b> | OCL 633         | Opn CL  | CMA | 4.1  | -    | 8'    | 07 18.7 | -24 57 | 319 | I 3 p n    | 60  | 4.4  | H VII 17;40 * to 13 mag surround Tau Cma;sev pairs       |
| <b>M 41</b>     | NGC 2287        | Opn CL  | CMA | 4.5  | 12   | 38'   | 06 46.0 | -20 45 | 318 | II 3 m     | 80  | 6.9  | 150 members to 13 mag;orange * near center               |
| <b>NGC 2354</b> | OCL 639         | Opn CL  | CMA | 6.5  | -    | 20'   | 07 14.3 | -25 42 | 319 | III 2 m    | 100 | 9.1  | H VII 16   |
| <b>NGC 2360</b> | OCL 589         | Opn CL  | CMA | 7.2  | -    | 13'   | 07 17.7 | -15 38 | 274 | II 2 m     | 80  | 10.4 | H VII 12   |
| <b>NGC 2384</b> | OCL 618         | Opn CL  | CMA | 7.4  | -    | 2.5'  | 07 25.2 | -21 01 | 319 | IV 3 p     | 15  | 8.6  | Near cluster NGC 2383                                    |
| <b>NGC 2383</b> | OCL 616         | Opn CL  | CMA | 8.4  | -    | 6'    | 07 24.7 | -20 57 | 319 | I 3 m      | 40  | 9.8  | Near cluster NGC 2384                                    |
| <b>NGC 2204</b> | OCL 572         | Opn CL  | CMA | 8.6  | -    | 13'   | 06 15.5 | -18 40 | 317 | III 3 m    | 80  | 12.2 | H VII 13;About 20 F *                                    |
| <b>NGC 2207</b> | ESO 556- 8      | Galaxy  | CMA | 10.8 | 13.4 | 4.2'  | 06 16.4 | -21 22 | 317 | SBbc R     |     |      | Double galaxy or interacting pair                        |
| <b>NGC 2359</b> | LBN 1041        | Brn Neb | CMA | -    | -    | 10'   | 07 18.5 | -13 14 | 274 | E          |     | 11   | <b>Duck Neb</b> ;curved filam;cent* Wolf Rayet;UHC helps |
| <b>M 44</b>     | NGC 2632        | Opn CL  | CNC | 3.1  | 13   | 95'   | 08 40.0 | +19 40 | 141 | II 2 m     | 50  | 6.3  | <b>Beehive Cluster</b> ;200 memb to 14 mag               |
| <b>M 67</b>     | NGC 2682        | Opn CL  | CNC | 6.9  | 13   | 30'   | 08 50.8 | +11 49 | 187 | II 2 m     | 200 | 9.7  | 500 memb to 16 mag;Mallas-dark spot near center          |



## 650 selected DSO List (sorted by constellation - magnitude)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| <b>NGC 2775</b> | UGC 4820    | Galaxy  | CNC | 10.1 | 12.9 | 4.5'  | 09 10.3 | +07 02 | 187 | Sab        |    |      | N in B smooth lens;many knotty arms form dk lane               |
| <b>NGC 1851</b> | Dunlop 508  | Glob CL | COL | 7.1  | -    | 11'   | 05 14.1 | -40 03 | 393 | II         |    |      | X-ray source;vRi w F*  |
| <b>NGC 1808</b> | ESO 305- 8  | Galaxy  | COL | 9.9  | 13.3 | 6.3'  | 05 07.7 | -37 31 | 358 | SBa        |    |      | F outer arms , close to ngc1792                                |
| <b>NGC 1792</b> | ESO 305- 6  | Galaxy  | COL | 10.2 | 12.9 | 5.6'  | 05 05.2 | -37 59 | 358 | SBbc       |    |      | close to ngc 1808  |
| <b>M 53</b>     | NGC 5024    | Glob CL | COM | 7.7  | 12   | 14.4' | 13 12.9 | +18 10 | 150 | V          |    |      | 1 deg NE of Alpha Comae Berenices                              |
| <b>M 64</b>     | NGC 4826    | Galaxy  | COM | 8.5  | 12.7 | 10.3' | 12 56.7 | +21 41 | 149 | Sab        |    |      | <b>Blackeye Galaxy</b> ;dark marking near center               |
| <b>M 85</b>     | NGC 4382    | Galaxy  | COM | 9.1  | 12.9 | 7.4'  | 12 25.4 | +18 11 | 148 | Sa         |    |      | SN 1960r;P w NGC 4394 @ 7.8' foll                              |
| <b>M 100</b>    | NGC 4321    | Galaxy  | COM | 9.4  | 13.4 | 7.5'  | 12 22.9 | +15 49 | 193 | SBbc       |    |      | SN 1901-14-59;NGC 4322 @ 5.2';NGC 4328 @ 6.1'                  |
| <b>NGC 4725</b> | UGC 7989    | Galaxy  | COM | 9.4  | 14   | 10.4' | 12 50.4 | +25 30 | 149 | SBab Ri    |    |      | H I 84;P w NGC 4712 @ 12 '                                     |
| <b>M 88</b>     | NGC 4501    | Galaxy  | COM | 9.6  | 13   | 6.8'  | 12 32.0 | +14 25 | 193 | Sbc        |    |      | comp @ 6.9';mult arm spiral                                    |
| <b>NGC 4565</b> | UGC 7772    | Galaxy  | COM | 9.6  | 13.3 | 14.9' | 12 36.3 | +25 59 | 149 | Sb         |    |      | <b>Needle</b> ;NGC 4562 @ 13.4';classic edge-on galaxy         |
| <b>NGC 4494</b> | UGC 7662    | Galaxy  | COM | 9.8  | 12.9 | 4.5'  | 12 31.4 | +25 46 | 148 | Elliptical |    |      | H I 83   |
| <b>NGC 5053</b> | GCL 23      | Glob CL | COM | 9.8  | -    | 8.9'  | 13 16.5 | +17 42 | 150 | XI         |    |      | H VI 7;Low surf brightness;1 deg sf M 53                       |
| <b>M 99</b>     | NGC 4254    | Galaxy  | COM | 9.9  | 13.2 | 5.3'  | 12 18.8 | +14 25 | 193 | Sc         |    |      | SN 1967h;Norton-diff for small scope                           |
| <b>NGC 4559</b> | UGC 7766    | Galaxy  | COM | 10   | 14   | 11'   | 12 36.0 | +27 58 | 149 | SBc        |    |      | H I 92;SN 1941a;multi arm spiral                               |
| <b>M 91</b>     | NGC 4548    | Galaxy  | COM | 10.1 | 13.4 | 5.2'  | 12 35.4 | +14 30 | 194 | SBb        |    |      | NGC 4571 @ 27 ' ;H II 120;F outer arms in S pattn              |
| <b>M 98</b>     | NGC 4192    | Galaxy  | COM | 10.1 | 13.6 | 9.4'  | 12 13.8 | +14 54 | 193 | SBb        |    |      | 6 Comae Berenices is 30' east                                  |
| <b>NGC 4414</b> | UGC 7539    | Galaxy  | COM | 10.1 | 12.1 | 3.6'  | 12 26.5 | +31 13 | 108 | Sc         |    |      | H I 77   |
| <b>NGC 4450</b> | UGC 7594    | Galaxy  | COM | 10.1 | 13.2 | 5.4'  | 12 28.5 | +17 05 | 148 | Sab        |    |      | H II 56  |
| <b>NGC 4278</b> | UGC 7386    | Galaxy  | COM | 10.2 | 13.1 | 4'    | 12 20.1 | +29 17 | 108 | Elliptical |    |      | Triple chain w NGC 4283 @ 3.6';NGC 4286 @ 8.8'                 |
| <b>NGC 4473</b> | UGC 7631    | Galaxy  | COM | 10.2 | 12.8 | 4.2'  | 12 29.8 | +13 26 | 193 | Elliptical |    |      | <b>Markarian's chain</b>                                       |
| <b>NGC 4147</b> | NGC 4153    | Glob CL | COM | 10.3 | -    | 4'    | 12 10.1 | +18 33 | 148 | VI         |    |      | H I 19;Stars F   |
| <b>NGC 4274</b> | UGC 7377    | Galaxy  | COM | 10.4 | 13.3 | 6.8'  | 12 19.8 | +29 37 | 107 | SBab Ri    |    |      | H I 75;Saturn-like inner ring w F outer halo                   |
| <b>NGC 4293</b> | UGC 7405    | Galaxy  | COM | 10.4 | 13.1 | 5.5'  | 12 21.2 | +18 23 | 148 | SBO-a      |    |      | H V 5;Spiral pattern dim;heavy dust lanes                      |
| <b>NGC 4459</b> | UGC 7614    | Galaxy  | COM | 10.4 | 12.7 | 4'    | 12 29.0 | +13 59 | 193 | Sa         |    |      | H I 161;comp @ 2.2';NGC 4468 @ 8.5';NGC 4474 @ 13.             |
| <b>NGC 4477</b> | UGC 7638    | Galaxy  | COM | 10.4 | 13.1 | 3.7'  | 12 30.0 | +13 38 | 193 | SBO        |    |      | <b>Markarian's chain</b> ;NGC 4479 @ 5.3'                      |
| <b>NGC 4314</b> | UGC 7443    | Galaxy  | COM | 10.6 | 13.4 | 3.9'  | 12 22.5 | +29 54 | 108 | SBa        |    |      | H I 76   |
| <b>NGC 4251</b> | UGC 7338    | Galaxy  | COM | 10.7 | 12.4 | 3.6'  | 12 18.1 | +28 10 | 107 | SBO Rin    |    |      | H I 89;lens shape  |
| <b>NGC 4203</b> | UGC 7256    | Galaxy  | COM | 10.9 | 13.3 | 3.5'  | 12 15.1 | +33 12 | 107 | E-SO Ba    |    |      | H I 175  |
| <b>NGC 4394</b> | UGC 7523    | Galaxy  | COM | 10.9 | 13.4 | 3.4'  | 12 25.9 | +18 13 | 148 | SBab       |    |      | H II 55;P w NGC 4382 @ 7.8'                                    |
| <b>NGC 4689</b> | UGC 7965    | Galaxy  | COM | 10.9 | 13.7 | 4.7'  | 12 47.8 | +13 46 | 194 | Sbc        |    |      | H II 128   |
| <b>NGC 4350</b> | UGC 7473    | Galaxy  | COM | 11   | 12.5 | 2.9'  | 12 24.0 | +16 42 | 193 | SO         |    |      | H II 86;NGC 4340 @ 5.6';lenticular                             |
| <b>NGC 4448</b> | UGC 7591    | Galaxy  | COM | 11.1 | 12.8 | 3.6'  | 12 28.3 | +28 37 | 108 | SBab Ri    |    |      | H I 91   |
| <b>NGC 4419</b> | UGC 7551    | Galaxy  | COM | 11.2 | 12.4 | 3.3'  | 12 26.9 | +15 03 | 193 | SBa        |    |      | H II 113   |
| <b>NGC 4245</b> | UGC 7328    | Galaxy  | COM | 11.4 | 13.3 | 3.3'  | 12 17.6 | +29 36 | 107 | SBO-a F    |    |      | H I 74   |
| <b>NGC 4889</b> | NGC 4884    | Galaxy  | COM | 11.5 | 13.3 | 2.8'  | 13 00.1 | +27 59 | 149 | Elliptical |    |      | B in Coma cluster;NGC 4872 @ 0.8' sp; 4886 @ 1.1' np           |
| <b>NGC 4150</b> | UGC 7165    | Galaxy  | COM | 11.6 | 13   | 2.3'  | 12 10.6 | +30 24 | 107 | SO         |    |      | H I 73   |
| <b>NGC 6541</b> | Dunlop 473  | Glob CL | CRA | 6.3  | -    | 13.1' | 18 08.0 | -43 42 | 409 | III        |    |      | Stars mags 13...   |
| <b>NGC 6726</b> | ESO 396-N1  | Brt Neb | CRA | -    | -    | 2'    | 19 01.7 | -36 53 | 379 | E          |    |      | Complex neb region w var* TY & R CrA invl                      |
| <b>NGC 6727</b> | ESO 396-N1  | Brt Neb | CRA | -    | -    | 80'   | 19 01.7 | -36 53 | 379 | R          |    |      | P w NGC 6726-9   |
| <b>NGC 6729</b> | ESO 396-N*  | Brt Neb | CRA | -    | -    | 25'   | 19 01.9 | -36 57 | 379 | E+R        |    |      | P w NGC 6726-7   |
| <b>NGC 3962</b> | MCG - 2-30- | Galaxy  | CRT | 10.7 | 12.6 | 3.4'  | 11 54.7 | -13 59 | 282 | Elliptical |    |      | H I 67   |
| <b>NGC 4038</b> | ESO 572-47  | Galaxy  | CRV | 10.3 | 13.1 | 3.4'  | 12 01.9 | -18 52 | 328 | Sp         |    |      | <b>Antennae</b> H IV 28; <b>Ringtail Galaxy</b> ;two filaments |
| <b>NGC 4039</b> | ESO 572-48  | Galaxy  | CRV | 10.6 | 12.1 | 3.3'  | 12 01.9 | -18 53 | 328 | SB         |    |      | <b>Antennae</b> H II 282                                       |
| <b>NGC 4361</b> | ESO 573-PN  | Pln Neb | CRV | 10.9 | 11.1 | 80"   | 12 24.5 | -18 47 | 328 | 3a(2)      |    | 13.3 | H I 65;PK294+43.1  |
| <b>NGC 4027</b> | ESO 572-37  | Galaxy  | CRV | 11.1 | 13.2 | 3.3'  | 11 59.5 | -19 16 | 327 | SBd        |    |      | H II 296   |
| <b>M 3</b>      | NGC 5272    | Glob CL | CVN | 6.3  | 11   | 18.6' | 13 42.2 | +28 23 | 110 | VI         |    |      | Lord Rosse-sev dark marks within 5' of center                  |
| <b>M 94</b>     | NGC 4736    | Galaxy  | CVN | 8.2  | 13.1 | 12.3' | 12 50.9 | +41 07 | 75  | Sb Ring    |    |      |  |
| <b>M 51</b>     | NGC 5194    | Galaxy  | CVN | 8.4  | 12.9 | 10.8' | 13 29.9 | +47 12 | 76  | Sbc        |    |      | <b>Whirlpool Gal</b> ;inter. pair;classic spiral, inc ngc5195  |
| <b>M 106</b>    | NGC 4258    | Galaxy  | CVN | 8.4  | 13.6 | 17.4' | 12 19.0 | +47 18 | 74  | SBbc       |    |      | H V 43   |
| <b>M 63</b>     | NGC 5055    | Galaxy  | CVN | 8.6  | 13.3 | 12.6' | 13 15.8 | +42 02 | 76  | Sbc        |    |      | <b>Sunflower</b> , vsvB stell. N in B inner lens;many filam    |
| <b>NGC 4631</b> | UGC 7865    | Galaxy  | CVN | 9.2  | 13.1 | 15.2' | 12 42.1 | +32 32 | 108 | SBcd       |    |      | H V 42;P w NGC 4627 @ 2.5' , edge on                           |
| <b>NGC 4449</b> | UGC 7592    | Galaxy  | CVN | 9.6  | 13   | 6.2'  | 12 28.2 | +44 06 | 75  | Ir         |    |      | H I 213  |
| <b>NGC 4214</b> | NGC 4228    | Galaxy  | CVN | 9.8  | 14   | 8.4'  | 12 15.6 | +36 20 | 107 | Ir         |    |      | H I 95   |
| <b>NGC 4490</b> | UGC 7651    | Galaxy  | CVN | 9.8  | 12.9 | 6.4'  | 12 30.6 | +41 39 | 75  | SBcd       |    |      | H I 198;disrupted;P w NGC 4485 @ 3.5'                          |
| <b>NGC 5005</b> | UGC 8256    | Galaxy  | CVN | 9.8  | 12.7 | 5.8'  | 13 10.9 | +37 03 | 109 | SBbc       |    |      | H I 96;P w NGC 5033;eBN in B lens;sev knotty arms              |
| <b>NGC 4395</b> | UGC 7524    | Galaxy  | CVN | 10.2 | 15.4 | 12.3' | 12 25.8 | +33 33 | 108 | SB Ring    |    |      | H V 29 , several NGC nebulae inside                            |
| <b>NGC 5033</b> | UGC 8307    | Galaxy  | CVN | 10.2 | 14.4 | 9.8'  | 13 13.5 | +36 36 | 109 | Sc         |    |      | P w NGC 5005;svBN in B bulge w spir patt of dk lanes           |
| <b>NGC 4244</b> | UGC 7322    | Galaxy  | CVN | 10.4 | 14   | 15.9' | 12 17.5 | +37 48 | 107 | Sc         |    |      | H V 41   |
| <b>NGC 4656</b> | UGC 7907    | Galaxy  | CVN | 10.5 | 14.5 | 15.3' | 12 44.0 | +32 10 | 108 | SB         |    |      | H I 176; NGC 4657 superimposed                                 |
| <b>NGC 4143</b> | UGC 7142    | Galaxy  | CVN | 10.6 | 11.8 | 2.9'  | 12 09.6 | +42 32 | 74  | SBO        |    |      | H IV 54  |

## 650 selected DSO List (sorted by constellation - magnitude)

| NAME     | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|----------|--------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 5371 | NGC 5390     | Galaxy  | CVN | 10.6 | 13.4 | 4.2'  | 13 55.7 | +40 28 | 76  | SBbc       |    |      | vsB diff N;weak bar;sev knotty filam reg arms         |
| NGC 4111 | UGC 7103     | Galaxy  | CVN | 10.7 | 12.2 | 4.6'  | 12 07.0 | +43 04 | 74  | Sa         |    |      | H I 195;NGC 4109 @ 4.8';UGC 7103;Ho 333a              |
| NGC 4151 | UGC 7166     | Galaxy  | CVN | 10.8 | 14.2 | 6.8'  | 12 10.5 | +39 24 | 74  | SBab Ri    |    |      | P w NGC 4145;NGC 4156 @ 5.2';Ho 345c @ 8.8'           |
| NGC 4618 | IC 3667      | Galaxy  | CVN | 10.8 | 13.5 | 4.2'  | 12 41.6 | +41 09 | 75  | SB         |    |      | H I 178;P w NGC 4625 @ 8.3'                           |
| NGC 5353 | UGC 8813     | Galaxy  | CVN | 11   | 11.8 | 2.8'  | 13 53.4 | +40 17 | 76  | SO         |    |      | P w NGC 5354 at 1.3' n;vsBN;lens: diamond shaped      |
| NGC 4346 | UGC 7463     | Galaxy  | CVN | 11.1 | 12.6 | 3.2'  | 12 23.5 | +47 00 | 74  | SBO        |    |      | H I 210   |
| NGC 5350 | UGC 8810     | Galaxy  | CVN | 11.3 | 13.3 | 3.2'  | 13 53.4 | +40 22 | 76  | SBbc       |    |      | H II 713;NGC 5353 at 5';vsvBN in B bar;2 knotty arms  |
| NGC 5354 | UGC 8814     | Galaxy  | CVN | 11.4 | 11.9 | 2.2'  | 13 53.4 | +40 18 | 76  | SO         |    |      | H II 715;similar to N 1316;P w NGC 5353 contact       |
| NGC 4800 | UGC 8035     | Galaxy  | CVN | 11.5 | 12   | 1.6'  | 12 54.6 | +46 32 | 75  | Sb         |    |      | H I 211   |
| NGC 5273 | UGC 8675     | Galaxy  | CVN | 11.6 | 13.6 | 2.7'  | 13 42.1 | +35 39 | 110 | SO         |    |      | H I 98;P w NGC 5276;diff Nuc w 2 weak dark patches    |
| NGC 4485 | UGC 7648     | Galaxy  | CVN | 11.9 | 13.2 | 2.4'  | 12 30.5 | +41 42 | 75  | lr         |    |      | H I 197;disrupted;P w NGC 4490 @ 3.5'                 |
| NGC 7000 | LBN 373      | Brn Neb | CYG | 4    | -    | 120'  | 21 01.8 | +44 12 | 85  | E          |    |      | <b>North America nebula</b> ;CI NGC 6997 invl         |
| M 39     | NGC 7092     | Opn CL  | CYG | 4.6  | 11   | 32'   | 21 32.2 | +48 26 | 86  | III 2 p    | 30 | 6.8  | Large but loose cluster                               |
| M 29     | NGC 6913     | Opn CL  | CYG | 6.6  | 11   | 7'    | 20 23.9 | +38 32 | 120 | III 3 p n  | 50 | 8.6  | About 20 stars mags 8...                              |
| NGC 6960 | LBN 191      | SN Rem  | CYG | 7    | -    | 210'  | 20 45.7 | +30 43 | 120 |            |    |      | <b>Veil Nebula</b> western part;* 52 CYG invl         |
| NGC 6992 | CED 182B     | SN Rem  | CYG | 7    | -    | 60'   | 20 56.4 | +31 43 | 120 | R          |    |      | <b>Veil Nebula</b> eastern part                       |
| NGC 6995 | CED 182C     | SN Rem  | CYG | 7    | -    | 12'   | 20 57.1 | +31 13 | 120 | R          |    |      | part of veil  |
| NGC 6819 | OCL 155      | Opn CL  | CYG | 7.3  | -    | 5'    | 19 41.3 | +40 11 | 84  | I 1 r      |    | 11.5 | 150 stars mags 11-16                                  |
| NGC 6910 | OCL 181      | Opn CL  | CYG | 7.4  | -    | 8'    | 20 23.2 | +40 47 | 84  | I 2 p n    | 50 | 9.6  | H VIII 56; <b>In Gamma Cyg nebula</b> and Cyg OB9     |
| NGC 6866 | OCL 183      | Opn CL  | CYG | 7.6  | -    | 7'    | 20 03.9 | +44 10 | 84  | II 2 m     | 80 | 10.7 | H VII 59;50* mags 10...                               |
| NGC 6834 | OCL 134      | Opn CL  | CYG | 7.8  | -    | 5'    | 19 52.2 | +29 24 | 119 | II 2 m     | 50 | 9.6  | H VIII 16   |
| IC 5067  | IC 5070; LBN | Brn Neb | CYG | 8    | -    | 60'   | 20 50.8 | +44 21 | 85  | E          |    |      | <b>Pelican Nebula</b> ;w IC 5067;56 Cyg invl          |
| NGC 7062 | OCL 205      | Opn CL  | CYG | 8.3  | -    | 7'    | 21 23.5 | +46 23 | 86  | III 1 p    | 30 | 10.1 | H VII 51  |
| NGC 7086 | OCL 214      | Opn CL  | CYG | 8.4  | -    | 9'    | 21 30.5 | +51 36 | 57  | II 2 m     | 50 | 10.2 | H VI 32   |
| NGC 6826 | PK 83+12.1   | Pln Neb | CYG | 8.8  | 6.9  | 27"   | 19 44.8 | +50 32 | 55  | 3a(2)      |    | 10.7 | <b>Blinking Planetary</b> ;H IV 73;PK83+12.1          |
| NGC 7027 | PK 84-3.1    | Pln Neb | CYG | 9.6  | -    | 18"   | 21 07.0 | +42 14 | 85  | 3a         |    | 16.5 | bizarre spectrum                                      |
| NGC 7128 | OCL 218      | Opn CL  | CYG | 9.7  | -    | 3.1'  | 21 44.0 | +53 43 | 57  | II 3 m     | 35 | 11.5 | H VII 40  |
| NGC 6888 | LBN 203      | Brn Neb | CYG | 10   | -    | 20'   | 20 12.8 | +38 19 | 119 | E          |    |      | <b>Crescent Neb</b> ;Wolf-Rayet * invl                |
| IC 5146  | OCL 213      | CL+Neb  | CYG | 10   | -    | 20'   | 21 53.4 | +47 16 | 86  | IV 2 p n   | 20 | 9.6  | <b>Cocoon neb</b> ;at end of dark streamer B168       |
| NGC 6857 | Sh2-100      | Brn Neb | CYG | 11.4 | -    | 0.8'  | 20 02.8 | +33 31 | 119 | E          |    | 14.3 | oval; not planetary; Sharpless 2-100 is brightcore    |
| NGC 7008 | PK 93+5.2    | Pln Neb | CYG | 12   | 11.8 | 86"   | 21 00.5 | +54 33 | 56  | 3          |    | 13.9 | H I 192   |
| NGC 7026 | PK 89+0.1    | Pln Neb | CYG | 12   | 8.5  | 25"   | 21 06.3 | +47 51 | 85  | 3a         |    | 14   | double at high power                                  |
| NGC 7044 | OCL 198      | Opn CL  | CYG | 12   | -    | 6'    | 21 12.9 | +42 29 | 86  | II 2 R     |    | 15   | H VI 24   |
| NGC 6974 | SG 3.202     | SN Rem  | CYG | -    | -    |       | 20 51.1 | +31 50 | 120 |            |    |      | part of Veil  |
| NGC 6979 |              | Brn Neb | CYG | -    | -    | 3'    | 20 51.0 | +32 08 | 120 | E          |    |      | H II 206; <b>Portion of Veil Neb</b> between two arcs |
| NGC 6934 | GCL 117      | Glob CL | DEL | 8.9  | -    | 7'    | 20 34.2 | +07 24 | 209 | VIII       |    |      | H I 103;*10m 2' west                                  |
| NGC 7006 | GCL 119      | Glob CL | DEL | 10.6 | -    | 2.8'  | 21 01.5 | +16 11 | 209 | I          |    |      | H I 52;Stars eF;very remote globular                  |
| NGC 6905 | PK 61-9.1;H  | Pln Neb | DEL | 12   | 10   | 44"   | 20 22.4 | +20 06 | 163 | 3(3)       |    | 14   | <b>Blue Flash Nebula</b>                              |
| NGC 1566 | ESO 157-20   | Galaxy  | DOR | 9.7  | 13.9 | 8.2'  | 04 20.0 | -54 56 | 420 | SBbc       |    |      |   |
| NGC 1672 | ESO 118-43   | Galaxy  | DOR | 9.7  | 13.4 | 6.7'  | 04 45.7 | -59 15 | 421 | SBb        |    |      |   |
| NGC 1549 | ESO 157-16   | Galaxy  | DOR | 9.8  | 13   | 4.4'  | 04 15.8 | -55 36 | 420 | EO         |    |      | P w NGC 1553  |
| NGC 6543 | PK 96+29.1   | Pln Neb | DRA | 8.3  | 5    | 22"   | 17 58.6 | +66 38 | 30  | 3a(2)      |    | 11.3 | <b>Cat's Eye Nebula</b> ;H IV 37;PK96+29.1            |
| NGC 4236 | UGC 7306     | Galaxy  | DRA | 9.6  | 15   | 22.6' | 12 16.7 | +69 28 | 25  | SBd        |    |      | H V 51;P w Ho 357b @ 9';L;F spiral structure          |
| NGC 4125 | UGC 7118     | Galaxy  | DRA | 9.7  | 12.9 | 6'    | 12 08.1 | +65 10 | 25  | Elliptical |    |      |   |
| M 102    | NGC 5866     | Galaxy  | DRA | 9.9  | 12.2 | 6.5'  | 15 06.5 | +55 46 | 50  | Sa         |    |      | vBN w dk lane and ansae;NGC 5867 small E neb;         |
| NGC 6503 | UGC 11012    | Galaxy  | DRA | 10.2 | 13.1 | 7'    | 17 49.5 | +70 09 | 30  | Sc         |    |      |   |
| NGC 5907 | NGC 5906     | Galaxy  | DRA | 10.3 | 13.3 | 11.8' | 15 15.9 | +56 20 | 50  | Sc         |    |      | vs bulge nearly hidden by strong dk lane; SN 1940a    |
| NGC 3147 | UGC 5532     | Galaxy  | DRA | 10.6 | 13.3 | 4.3'  | 10 16.9 | +73 24 | 8   | Sbc        |    |      | H I 79;vBN;manv filam. narrow arms in lens            |
| NGC 5982 | UGC 9961     | Galaxy  | DRA | 11.1 | 12.9 | 3'    | 15 38.7 | +59 21 | 51  | E3p        |    |      | H II 764;vBN;NGC 5985 at 6.2';PA290                   |
| NGC 1291 | NGC 1269     | Galaxy  | ERI | 8.5  | 13.1 | 9.7'  | 03 17.3 | -41 06 | 390 | SBO-a F    |    |      | comp 2,2';PA138;UGC 2666                              |
| NGC 1535 | PK 206-40.1  | Pln Neb | ERI | 9.4  | 7.2  | 20"   | 04 14.3 | -12 44 | 268 | 4(2c)      |    | 12.1 | H IV 26;PK206-40.1                                    |
| NGC 1407 | ESO 548-67   | Galaxy  | ERI | 9.7  | 12.9 | 4.9'  | 03 40.2 | -18 35 | 312 | EO         |    |      | H I 107   |
| NGC 1232 | ESO 547-14   | Galaxy  | ERI | 9.9  | 13.9 | 7.1'  | 03 09.8 | -20 35 | 311 | Sc         |    |      | H II 258;Excellent face-on spiral                     |
| NGC 1532 | ESO 359-27   | Galaxy  | ERI | 9.9  | 13.8 | 11.6' | 04 12.1 | -32 52 | 356 | SBb        |    |      | NGC 1531 np 2';Nearly edge-on                         |
| NGC 1332 | ESO 548-18   | Galaxy  | ERI | 10.3 | 12.2 | 4'    | 03 26.3 | -21 20 | 311 | E7         |    |      | H I 60  |
| NGC 1300 | ESO 547-31   | Galaxy  | ERI | 10.4 | 13.8 | 5.9'  | 03 19.7 | -19 25 | 311 | SBbc       |    |      |   |
| NGC 1084 | MCG - 1- 8-  | Galaxy  | ERI | 10.7 | 12.5 | 3.5'  | 02 46.0 | -07 35 | 265 | Sc         |    |      | H I 64  |
| NGC 1325 | ESO 548- 7   | Galaxy  | ERI | 11.5 | 13.6 | 4.8'  | 03 24.4 | -21 33 | 311 | SBbc       |    |      | H IV 77   |
| NGC 1909 | IC 2118      | Brn Neb | ERI | -    | -    | 180'  | 05 04.5 | -07 16 | 270 | R          |    |      | <b>Witchhead nebula</b> ; Rigel may be illuminator    |
| NGC 1316 | ESO 357-22   | Galaxy  | FOR | 8.5  | 13.4 | 11.2' | 03 22.7 | -37 13 | 355 | SBO        |    |      | Fornax Galaxy Cluster member                          |
| NGC 1360 | PK 220-53.1  | Pln Neb | FOR | 9.4  | 13.7 | 360"  | 03 33.2 | -25 52 | 312 | 3          |    | 11.3 |   |



## 650 selected DSO List (sorted by constellation - magnitude)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|---|
| <b>NGC 1097</b> | ESO 416-20  | Galaxy  | FOR | 9.5  | 13.8 | 9.4'  | 02 46.3 | -30 17 | 354 | SBb        |     |      | H V 48  |
| <b>NGC 1365</b> | ESO 358-17  | Galaxy  | FOR | 9.6  | 14.1 | 11'   | 03 33.6 | -36 08 | 355 | SBb        |     |      | Best example of barred spiral;Fornax Gal Cl member      |
| <b>NGC 1399</b> | ESO 358-45  | Galaxy  | FOR | 9.6  | 13.7 | 6.6'  | 03 38.5 | -35 27 | 355 | E1p        |     |      | <b>Fornax Galaxy Cluster</b> member                     |
| <b>NGC 1398</b> | ESO 482-22  | Galaxy  | FOR | 9.7  | 13.5 | 7.2'  | 03 38.9 | -26 20 | 312 | SBab       |     |      |   |
| <b>NGC 986</b>  | ESO 299- 7  | Galaxy  | FOR | 10.9 | 13.4 | 4'    | 02 33.6 | -39 03 | 389 | SBab       |     |      |   |
| <b>NGC 1374</b> | ESO 358-23  | Galaxy  | FOR | 11.1 | 12.9 | 2.7'  | 03 35.3 | -35 14 | 355 | E0         |     |      | Fornax Galaxy Cluster member                            |
| <b>NGC 1380</b> | ESO 358-33  | Galaxy  | FOR | 12.4 | 12.8 | 2.4'  | 03 36.8 | -34 44 | 355 | SO         |     |      |   |
| <b>M 35</b>     | NGC 2168    | Opn CL  | GEM | 5.1  | 12   | 28'   | 06 08.9 | +24 21 | 137 | III 2 m    | 200 | 8.2  | Lord Rosse counted 300*;Orange * invl;NGC 2158 30' SW   |
| <b>NGC 2129</b> | OCL 467     | Opn CL  | GEM | 6.7  | -    | 7'    | 06 00.7 | +23 19 | 136 | III 3 p    | 40  | 7.4  | H VIII 26   |
| <b>NGC 2395</b> | OCL 502     | Opn CL  | GEM | 8    | -    | 12'   | 07 27.2 | +13 37 | 184 | III 1 p    | 30  | 10   | H VIII 11   |
| <b>NGC 2420</b> | OCL 488     | Opn CL  | GEM | 8.3  | -    | 10'   | 07 38.4 | +21 34 | 139 | I 2 r      | 100 | 11.1 | H VI 1  |
| <b>NGC 2158</b> | OCL 468     | Opn CL  | GEM | 8.6  | -    | 5'    | 06 07.4 | +24 06 | 136 | II 3 r     |     | 12.4 | H VI 17;150 F* on edge of M 35                          |
| <b>NGC 2392</b> | PK 197+17.1 | Pln Neb | GEM | 8.6  | 6.8  | 47"   | 07 29.2 | +20 55 | 139 | 3b(3b)     |     | 10.6 | <b>Clown Face</b> or <b>Eskimo Nebula</b> ;1;sev shells |
| <b>NGC 2266</b> | OCL 471     | Opn CL  | GEM | 9.5  | -    | 7'    | 06 43.3 | +26 58 | 138 | II 2 m     | 50  | 11   | H VI 21   |
| <b>NGC 2355</b> | NGC 2356    | Opn CL  | GEM | 9.7  | -    | 9'    | 07 17.0 | +13 45 | 184 | II 2 p     | 40  | 13   | H VI 6  |
| <b>NGC 2304</b> | OCL 484     | Opn CL  | GEM | 10   | -    | 5'    | 06 55.2 | +17 59 | 138 | II 1 p     | 30  |      | H VI 2  |
| <b>NGC 2371</b> | NGC 2372    | Pln Neb | GEM | 11.2 | 10.5 | 74"   | 07 25.6 | +29 29 | 100 | 3a+6       |     | 14.9 | faint double-lobed planetary;use filter;PK189+19.1      |
| <b>NGC 2372</b> | NGC 2371    | Pln Neb | GEM | 11.2 | 10.5 | 74"   | 07 25.6 | +29 30 | 100 | 3a(4)      |     | 14.8 | faint double-lobed planetary;use filter;PK189+19.1      |
| <b>NGC 7424</b> | ESO 346-19  | Galaxy  | GRU | 10.5 | 15.1 | 10'   | 22 57.3 | -41 04 | 415 | SBc        |     |      | face on   |
| <b>NGC 7582</b> | ESO 291-16  | Galaxy  | GRU | 10.6 | 13   | 5'    | 23 18.4 | -42 22 | 415 | SBab       |     |      | Group w NGC 7590 & 7599                                 |
| <b>M 13</b>     | NGC 6205    | Glob CL | HER | 5.8  | 12   | 23.2' | 16 41.7 | +36 28 | 114 | V          |     |      | <b>Hercules cluster</b> ;Messier said nebula, no stars  |
| <b>M 92</b>     | NGC 6341    | Glob CL | HER | 6.5  | 11   | 11.2' | 17 17.1 | +43 08 | 81  | IV         |     |      | Lord Rosse saw spiral structure                         |
| <b>NGC 6229</b> | GCL 47      | Glob CL | HER | 9.4  | -    | 3.8'  | 16 47.0 | +47 32 | 80  | IV         |     |      | H IV 50;Wm.   |
| <b>NGC 6210</b> | PK 43+37.1  | Pln Neb | HER | 9.7  | 5.9  | 20"   | 16 44.5 | +23 48 | 156 | 2(3b)      |     | 12.5 |   |
| <b>NGC 6207</b> | UGC 10521   | Galaxy  | HER | 11.6 | 12.9 | 3'    | 16 43.1 | +36 50 | 114 | Sc         |     |      | H II 701;No def nucleus;B * nr center;30' NE from M 13  |
| <b>NGC 1261</b> | GCL 5       | Glob CL | HOR | 8.4  | -    | 6.9'  | 03 12.3 | -55 13 | 419 | II         |     |      |   |
| <b>NGC 1433</b> | ESO 249-14  | Galaxy  | HOR | 9.9  | 13.7 | 6.1'  | 03 42.0 | -47 13 | 391 | SBa        |     |      |   |
| <b>M 48</b>     | NGC 2548    | Opn CL  | HYA | 5.8  | 13   | 54'   | 08 13.7 | -05 45 | 275 | I 2 m      | 80  | 8.2  | Messier wrong position by 4 deg in dec;50* 9-13mag;     |
| <b>M 68</b>     | NGC 4590    | Glob CL | HYA | 7.3  | 13   | 9.8'  | 12 39.5 | -26 45 | 329 | X          |     |      |   |
| <b>M 83</b>     | NGC 5236    | Galaxy  | HYA | 7.5  | 12.8 | 13.1' | 13 37.0 | -29 52 | 370 | SBc        |     |      | Fast SupNova producer-4 in 50 yrs                       |
| <b>NGC 3242</b> | PK 261+32.1 | Pln Neb | HYA | 8.6  | 5.4  | 40"   | 10 24.8 | -18 39 | 325 | 4(3b)      |     | 12.3 | <b>Ghost of Jupiter</b> ; H IV 27                       |
| <b>NGC 3621</b> | ESO 377-37  | Galaxy  | HYA | 9.7  | 14.4 | 12.4' | 11 18.3 | -32 49 | 367 | SBcd       |     |      | H I 241   |
| <b>NGC 3923</b> | ESO 440-17  | Galaxy  | HYA | 9.8  | 13.2 | 6.6'  | 11 51.0 | -28 48 | 368 | Elliptical |     |      | H I 259   |
| <b>NGC 3109</b> | ESO 499-36  | Galaxy  | HYA | 9.9  | 14.4 | 19.7' | 10 03.1 | -26 10 | 324 | Ir         |     |      |   |
| <b>NGC 2784</b> | ESO 497-23  | Galaxy  | HYA | 10.2 | 12.8 | 5.7'  | 09 12.3 | -24 10 | 322 | SO         |     |      | H I 59  |
| <b>NGC 5694</b> | GCL 29      | Glob CL | HYA | 10.2 | -    | 3.6'  | 14 39.6 | -26 32 | 332 | VII        |     |      | H II 196;Rich w eF stars;distant globular               |
| <b>NGC 2835</b> | ESO 564-35  | Galaxy  | HYA | 10.5 | 14   | 6.3'  | 09 17.9 | -22 21 | 322 | SBc        |     |      | Fine multi arm spiral                                   |
| <b>NGC 4105</b> | ESO 440-54  | Galaxy  | HYA | 10.6 | 12.5 | 2.8'  | 12 06.7 | -29 46 | 368 | Elliptical |     |      | H II 865;Interacting P w NGC 4106                       |
| <b>NGC 5078</b> | ESO 508-48  | Galaxy  | HYA | 11   | 13   | 19.5' | 13 19.8 | -27 25 | 330 | Sa         |     |      | H II 566;Dust lane;Nearly edge-on                       |
| <b>NGC 3717</b> | ESO 439-15  | Galaxy  | HYA | 11.2 | 13.1 | 6.2'  | 11 31.5 | -30 19 | 367 | Sb         |     |      | Nearly edge-on  |
| <b>NGC 2811</b> | MCG - 3-24- | Galaxy  | HYA | 11.3 | 12   | 2.2'  | 09 16.2 | -16 19 | 277 | SBa        |     |      | H II 502  |
| <b>NGC 7090</b> | ESO 188-12  | Galaxy  | IND | 10.7 | 13   | 7.3'  | 21 36.5 | -54 33 | 438 | SBc        |     |      |   |
| <b>NGC 7243</b> | OCL 221     | Opn CL  | LAC | 6.4  | -    | 21'   | 22 15.1 | +49 54 | 87  | IV 2 p     | 40  | 8.5  | H VIII 75;Incl Struve 2890 D*                           |
| <b>NGC 7209</b> | OCL 215     | Opn CL  | LAC | 7.7  | -    | 25'   | 22 05.1 | +46 29 | 87  | III 1 p    | 25  | 9    | H VII 53  |
| <b>NGC 7296</b> | OCL 228     | Opn CL  | LAC | 9.7  | -    | 4'    | 22 28.2 | +52 17 | 57  | III 2 p    | 20  | 10   | H VII 41  |
| <b>M 66</b>     | NGC 3627    | Galaxy  | LEO | 8.9  | 12.7 | 9.1'  | 11 20.2 | +13 00 | 191 | SBb        |     |      | brightest in group;M 65 & NGC 3628 in field             |
| <b>NGC 2903</b> | UGC 5079    | Galaxy  | LEO | 9    | 13.6 | 12'   | 09 32.2 | +21 30 | 143 | SBbc       |     |      | H I 56;short B nucleus bar;fine multi arm spiral        |
| <b>NGC 3521</b> | UGC 6150    | Galaxy  | LEO | 9    | 13.2 | 11.2' | 11 05.8 | -00 02 | 236 | SBbc       |     |      | H I 13  |
| <b>M 65</b>     | NGC 3623    | Galaxy  | LEO | 9.3  | 12.8 | 9'    | 11 18.9 | +13 05 | 191 | SBa        |     |      | M66 subgroup , part of <b>leo's trio</b>                |
| <b>M 96</b>     | NGC 3368    | Galaxy  | LEO | 9.3  | 13.1 | 7.8'  | 10 46.8 | +11 49 | 190 | SBab Ri    |     |      | comp @ 3.8';PA 205                                      |
| <b>M 105</b>    | NGC 3379    | Galaxy  | LEO | 9.3  | 12.8 | 5.3'  | 10 47.8 | +12 35 | 190 | E1         |     |      | P w NGC 3384 @ 7.2';NGC 3389 @ 10 ' ;Leo Group          |
| <b>NGC 3628</b> | UGC 6350    | Galaxy  | LEO | 9.5  | 13.4 | 13.1' | 11 20.3 | +13 35 | 191 | Sb         |     |      | H V 8; <b>Leo's Trio</b> part;disturbed , dust line     |
| <b>M 95</b>     | NGC 3351    | Galaxy  | LEO | 9.7  | 13.5 | 7.3'  | 10 44.0 | +11 42 | 190 | SBb        |     |      | Leo group   |
| <b>NGC 3384</b> | NGC 3371    | Galaxy  | LEO | 9.9  | 12.6 | 5.4'  | 10 48.3 | +12 38 | 190 | E7         |     |      | Leo group;in triple group w NGC 3379 and NGC 3389       |
| <b>NGC 3607</b> | UGC 6297    | Galaxy  | LEO | 9.9  | 12.5 | 4.6'  | 11 16.9 | +18 03 | 146 | E-SO       |     |      | H II 50;brightest in group;P w NGC 3608 at 6.2';PA10    |
| <b>NGC 3227</b> | UGC 5620    | Galaxy  | LEO | 10.3 | 13.4 | 6.6'  | 10 23.5 | +19 52 | 144 | SBa        |     |      | P w NGC 3226;vF env surr system;50' E of Gam Leo        |
| <b>NGC 3489</b> | UGC 6082    | Galaxy  | LEO | 10.3 | 12.3 | 3.6'  | 11 00.3 | +13 54 | 191 | SBO-a      |     |      | H II 101;Leo group                                      |
| <b>NGC 3377</b> | UGC 5899    | Galaxy  | LEO | 10.4 | 13.4 | 4.3'  | 10 47.7 | +13 59 | 190 | Elliptical |     |      | H II 99;Leo group                                       |
| <b>NGC 3640</b> | UGC 6368    | Galaxy  | LEO | 10.4 | 13.2 | 4.5'  | 11 21.1 | +03 14 | 236 | Elliptical |     |      | H II 33;P w NGC 3641 at 2.5';PA170                      |
| <b>NGC 3412</b> | UGC 5952    | Galaxy  | LEO | 10.5 | 12.6 | 3.7'  | 10 50.9 | +13 25 | 190 | SBO        |     |      | H I 27;Leo group  |
| <b>NGC 3608</b> | UGC 6299    | Galaxy  | LEO | 10.8 | 13   | 3.5'  | 11 17.0 | +18 09 | 146 | Elliptical |     |      | H II 51;NGC 3607 group;comp 5.9';PA251;0.8'X0.3'        |

## 650 selected DSO List (sorted by constellation - magnitude)

| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|---|
| NGC 3810 | UGC 6644    | Galaxy  | LEO | 10.8 | 13.4 | 4.1'  | 11 41.0 | +11 28 | 192 | Sc         |     |      | H I 21  |
| NGC 3193 | UGC 5562    | Galaxy  | LEO | 10.9 | 13.1 | 2.9'  | 10 18.4 | +21 54 | 144 | E0         |     |      | H II 45;NGC 3189-90 group;vB center in smooth nebula    |
| NGC 3593 | UGC 6272    | Galaxy  | LEO | 10.9 | 13.3 | 4.9'  | 11 14.6 | +12 49 | 191 | Sa         |     |      | H I 29;in NGC 3607 group;BN w L bulge and dk lane       |
| NGC 3626 | NGC 3632    | Galaxy  | LEO | 11   | 12.6 | 3.2'  | 11 20.1 | +18 21 | 146 | Sa         |     |      | Indense part of clust;nearest comp 2' PA73 .5'X0.4'     |
| NGC 3190 | UGC 5559    | Galaxy  | LEO | 11.1 | 13.1 | 4'    | 10 18.1 | +21 50 | 144 | Sa         |     |      | H II 44;bright in grp;disturbed edge-on spiral;P w 3187 |
| NGC 2964 | UGC 5183    | Galaxy  | LEO | 11.3 | 12.8 | 3'    | 09 42.9 | +31 51 | 104 | SBbc Rii   |     |      | H I 114;vfaint bar;2 mn. knotty arms; Mrk 404 in disc   |
| NGC 3686 | UGC 6460    | Galaxy  | LEO | 11.3 | 13.4 | 3.1'  | 11 27.7 | +17 13 | 146 | SBbc       |     |      | H II 160=H III 28                                       |
| NGC 3226 | UGC 5617    | Galaxy  | LEO | 11.4 | 13.8 | 2.5'  | 10 23.4 | +19 54 | 144 | Elliptical |     |      | H II 28;P w NGC 3227 at 2.3' sf;UGC 5617                |
| NGC 3900 | UGC 6786    | Galaxy  | LEO | 11.4 | 13   | 3.5'  | 11 49.2 | +27 01 | 147 | Sa Ring    |     |      | H I 82  |
| NGC 3655 | UGC 6396    | Galaxy  | LEO | 11.6 | 12   | 1.5'  | 11 22.9 | +16 35 | 191 | Sc         |     |      | H I 5   |
| NGC 3912 | NGC 3899    | Galaxy  | LEO | 12.4 | 12.6 | 1.5'  | 11 50.1 | +26 29 | 147 | SBb        |     |      | H II 342  |
| M 79     | NGC 1904    | Glob CL | LEP | 7.7  | 12   | 7.8'  | 05 24.2 | -24 31 | 315 | V          |     |      | Stars vF  |
| NGC 1964 | ESO 554-10  | Galaxy  | LEP | 10.8 | 13.4 | 5.5'  | 05 33.4 | -21 57 | 315 | SBb        |     |      | H IV 21   |
| NGC 5897 | GCL 33      | Glob CL | LIB | 8.4  | -    | 8.7'  | 15 17.4 | -21 01 | 334 | XI         |     |      | H VI 19   |
| NGC 3344 | UGC 5840    | Galaxy  | LMI | 9.9  | 13.9 | 7.1'  | 10 43.5 | +24 55 | 145 | SBbc Rii   |     |      | H I 81  |
| NGC 3486 | UGC 6079    | Galaxy  | LMI | 10.5 | 14.3 | 6.8'  | 11 00.4 | +28 59 | 106 | SBc        |     |      | H I 87  |
| NGC 3245 | UGC 5663    | Galaxy  | LMI | 10.8 | 12.6 | 3.5'  | 10 27.3 | +28 30 | 105 | SO         |     |      | H I 86  |
| NGC 2859 | UGC 5001    | Galaxy  | LMI | 10.9 | 13.8 | 4'    | 09 24.3 | +34 31 | 103 | SBO-a F    |     |      | H I 137;bright nucleus in diff. bar w diff. blobs       |
| NGC 3414 | UGC 5959    | Galaxy  | LMI | 11   | 13.3 | 3.6'  | 10 51.3 | +27 58 | 145 | SBO        |     |      | H II 362;P w NGC 3418 at 8'2;UGC 5959                   |
| NGC 3504 | UGC 6118    | Galaxy  | LMI | 11   | 12.8 | 2.7'  | 11 03.2 | +27 58 | 146 | SBab Rii   |     |      | P w NGC 3512 at 12 ' ;PA72;comp 4 ' ;PA55;0.4'X0.1'     |
| NGC 3432 | UGC 5986    | Galaxy  | LMI | 11.3 | 13.6 | 6.6'  | 10 52.5 | +36 37 | 105 | SB         |     |      | H I 172;P w UGC 5983;maq 17:1.2'X1 '                    |
| NGC 3277 | UGC 5731    | Galaxy  | LMI | 11.7 | 12.9 | 2.1'  | 10 32.9 | +28 31 | 105 | Sab        |     |      | H II 359  |
| NGC 3294 | UGC 5753    | Galaxy  | LMI | 11.8 | 13.7 | 3.4'  | 10 36.3 | +37 19 | 105 | Sc         |     |      | H I 164   |
| NGC 3395 | UGC 5931    | Galaxy  | LMI | 12.1 | 12.9 | 1.7'  | 10 49.8 | +32 59 | 105 | SBc        |     |      | H I 116;P w NGC 3396;contact disrupted;brightest of 7   |
| NGC 5822 | OCL 937     | Opn CL  | LUP | 6.5  | -    | 40'   | 15 04.4 | -54 24 | 431 | II 1 r     | 150 | 10   |   |
| NGC 5986 | Dunlop 552  | Glob CL | LUP | 7.6  | -    | 9.8'  | 15 46.1 | -37 47 | 374 | VII        |     |      |   |
| NGC 5927 | GCL 35      | Glob CL | LUP | 8    | -    | 12'   | 15 28.0 | -50 40 | 431 | VIII       |     |      |   |
| NGC 5824 | NGC 5834    | Glob CL | LUP | 9.1  | -    | 6.2'  | 15 04.0 | -33 04 | 373 | I          |     |      |   |
| NGC 5643 | ESO 272-16  | Galaxy  | LUP | 10   | 13   | 4.7'  | 14 32.7 | -44 11 | 404 | SBc        |     |      |   |
| IC 4406  | PK 319+15.1 | Pln Neb | LUP | 11   | 9.1  | 46"   | 14 22.4 | -44 09 | 404 | 4(3)       |     | 17.4 | Annular;N2-- Stellar ?;pB diffused disk 20"--Hartung    |
| NGC 2683 | UGC 4641    | Galaxy  | LYN | 9.8  | 12.9 | 8.8'  | 08 52.7 | +33 25 | 102 | Sb         |     |      | peanut-shaped bulge;many filam; arm w dk lanes 1 side   |
| NGC 2419 | GCL 12      | Glob CL | LYN | 10.4 | -    | 6.2'  | 07 38.1 | +38 53 | 100 | II         |     |      | H I 218;Most distant globular;Brightest * 17 mag        |
| NGC 2782 | UGC 4862    | Galaxy  | LYN | 11.6 | 13.9 | 3.7'  | 09 14.1 | +40 07 | 71  | SBa        |     |      | broad bar w strong dk. lane;asym smooth arms dk lane    |
| M 56     | NGC 6779    | Glob CL | LYR | 8.3  | 12   | 5'    | 19 16.6 | +30 11 | 118 | X          |     |      | Stars 11...   |
| M 57     | NGC 6720    | Pln Neb | LYR | 9.4  | 9.3  | 86"   | 18 53.6 | +33 02 | 117 | 4(3)       |     | 15.8 | Ring Nebula;central* var 14 to 16 mag;PK63+13.1         |
| NGC 6791 | OCL 142     | Opn CL  | LYR | 9.5  | -    | 16'   | 19 20.7 | +37 51 | 118 | II 3 r     | 300 | 13   | very rich   |
| NGC 2232 | OCL 545     | Opn CL  | MON | 3.9  | -    | 30'   | 06 28.0 | -04 51 | 227 | IV 3 p     | 20  | 5    | H VIII 25   |
| NGC 2264 | OCL 495     | CL+Neb  | MON | 3.9  | -    | 20'   | 06 41.0 | +09 54 | 183 | III 3 m n  | 40  | 5    | Christmas Tree Cluster; Near Cone nebula                |
| NGC 2239 | NGC 2244    | Opn CL  | MON | 4.8  | -    | 24'   | 06 31.9 | +04 57 | 227 | II 3 p n   | 40  |      | H VII 2;In Rosette nebula                               |
| NGC 2237 | OCL 511     | CL+Neb  | MON | 5.5  | -    | 80'   | 06 30.9 | +05 03 | 227 | E          |     |      | Rosette nebula  |
| M 50     | NGC 2323    | Opn CL  | MON | 5.9  | 12   | 16'   | 07 02.5 | -08 23 | 273 | II 3 m     | 80  | 7.8  | About 100 stars mags 9...14                             |
| NGC 2238 | LBN 948     | Brn Neb | MON | 6    | -    | 80'   | 06 30.7 | +05 01 | 227 | E          |     |      | Rosette nebula  |
| NGC 2301 | OCL 540     | Opn CL  | MON | 6    | -    | 12'   | 06 51.8 | +00 28 | 228 | I 3 m      | 80  | 8    | H VI 27;60* 8...;blue&gold D* near center               |
| NGC 2343 | OCL 565     | Opn CL  | MON | 6.7  | -    | 7'    | 07 08.1 | -10 37 | 273 | III 3 p n  | 20  | 8.4  | H VIII 33   |
| NGC 2353 | OCL 567     | Opn CL  | MON | 7.1  | -    | 20'   | 07 14.5 | -10 16 | 274 | II 2 p     | 30  | 9.2  | H VIII 34;In Cma OB1                                    |
| NGC 2335 | OCL 562     | Opn CL  | MON | 7.2  | -    | 12'   | 07 06.8 | -10 02 | 273 | III 3 m n  | 35  | 9.5  | H VIII 32;In Cma OB1                                    |
| NGC 2251 | OCL 499     | Opn CL  | MON | 7.3  | -    | 10'   | 06 34.6 | +08 22 | 182 | IV 2 p     | 30  | 9.1  | H VIII 3  |
| NGC 2286 | OCL 548     | Opn CL  | MON | 7.5  | -    | 15'   | 06 47.7 | -03 09 | 228 | IV 3 m     | 50  | 9.7  | H VIII 31   |
| NGC 2506 | OCL 593     | Opn CL  | MON | 7.6  | -    | 7'    | 08 00.0 | -10 46 | 275 | I 2 r      | 150 | 10.8 | H VI 37   |
| NGC 2215 | OCL 550     | Opn CL  | MON | 8.4  | -    | 11'   | 06 20.8 | -07 17 | 272 | II 2 p     | 40  | 10.5 | H VII 20  |
| NGC 2324 | OCL 542     | Opn CL  | MON | 8.4  | -    | 8'    | 07 04.1 | +01 03 | 228 | II 2 r     | 70  | 10.4 | H VII 38  |
| NGC 2311 | OCL 553     | Opn CL  | MON | 9.6  | -    | 7'    | 06 57.8 | -04 37 | 228 | III 2 p    | 50  | 12   | H VIII 60   |
| NGC 2346 | PK 215+3.1  | Pln Neb | MON | 12.5 | 11.5 | 60"   | 07 09.4 | -00 48 | 228 | 3b(6)      |     | 11.3 | H IV 65;PK215+3.1; cent* V651 Mon a variable star       |
| NGC 2185 | LBN 997     | Brn Neb | MON | -    | -    | 2'    | 06 11.0 | -06 14 | 272 | R          |     |      | H IV 20   |
| NGC 2245 | LBN 904     | Brn Neb | MON | -    | -    | 2'    | 06 32.7 | +10 09 | 182 | R          |     |      | H IV 3  |
| NGC 2261 | LBN 920     | Brn Neb | MON | -    | -    | 2'    | 06 39.2 | +08 45 | 182 | E+R        |     |      | Hubble's variable nebula (fan-shape);R Mon invl         |
| NGC 6067 | OCL 953     | Opn CL  | NOR | 5.6  | -    | 13'   | 16 13.2 | -54 13 | 432 | I 2 r      | 100 | 8.3  | Fine field  |
| NGC 6134 | OCL 968     | Opn CL  | NOR | 7.2  | -    | 7'    | 16 27.8 | -49 09 | 407 | II 3 m     |     | 9.3  |   |
| NGC 5946 | IC 4550     | Glob CL | NOR | 8.4  | -    | 7.1'  | 15 35.5 | -50 40 | 432 | IX         |     |      |   |
| NGC 6633 | OCL 90      | Opn CL  | OPH | 4.6  | -    | 27'   | 18 27.3 | +06 31 | 205 | III 2 m    | 30  | 7.6  | H VIII 72   |
| M 12     | NGC 6218    | Glob CL | OPH | 6.1  | 12   | 14.5' | 16 47.2 | -01 57 | 246 | IX         |     |      | Somewhat loose structure                                |



## 650 selected DSO List (sorted by constellation - magnitude)

| NAME            | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|-----------------|--------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|--|
| <b>M 62</b>     | NGC 6266     | Glob CL | OPH | 6.4  | 11   | 14.1' | 17 01.2 | -30 07 | 376 | IV         |     |      | Asymmetrical   |
| <b>M 10</b>     | NGC 6254     | Glob CL | OPH | 6.6  | 12   | 12.2' | 16 57.1 | -04 06 | 247 | VII        |     |      | Lord Rosse reported dark lane in cluster                   |
| <b>M 19</b>     | NGC 6273     | Glob CL | OPH | 6.8  | 11   | 5.3'  | 17 02.6 | -26 16 | 337 | VIII       |     |      | One of the most oblate globulars                           |
| <b>NGC 6401</b> | GCL 73       | Glob CL | OPH | 7.4  | -    | 1'    | 17 38.6 | -23 55 | 338 | IX         |     |      | H I 44   |
| <b>M 14</b>     | NGC 6402     | Glob CL | OPH | 7.6  | 12   | 6.7'  | 17 37.6 | -03 15 | 248 | VIII       |     |      | Many vF stars 14...  |
| <b>M 107</b>    | NGC 6171     | Glob CL | OPH | 7.8  | 12   | 3.3'  | 16 32.5 | -13 03 | 291 | X          |     |      | H VI 40  |
| <b>M 9</b>      | NGC 6333     | Glob CL | OPH | 7.9  | 11   | 5.5'  | 17 19.2 | -18 31 | 337 | VIII       |     |      | Dark neb B64 prominent to west                             |
| <b>NGC 6572</b> | PK 34+11.1   | Pln Neb | OPH | 8    | 4.3  | 15"   | 18 12.1 | +06 51 | 204 | 2a         |     | 12   |  |
| <b>NGC 6316</b> | GCL 57       | Glob CL | OPH | 8.1  | -    | 4.9'  | 17 16.6 | -28 08 | 376 | III        |     |      | H I 45   |
| <b>NGC 6293</b> | GCL 55       | Glob CL | OPH | 8.2  | -    | 3.5'  | 17 10.2 | -26 35 | 337 | IV         |     |      | H VI 12  |
| <b>NGC 6356</b> | GCL 62       | Glob CL | OPH | 8.2  | -    | 3.5'  | 17 23.6 | -17 49 | 338 | II         |     |      | H I 48   |
| <b>NGC 6304</b> | GCL 56       | Glob CL | OPH | 8.4  | -    | 3.8'  | 17 14.5 | -29 28 | 376 | VI         |     |      | H I 147  |
| <b>NGC 6355</b> | GCL 63       | Glob CL | OPH | 8.6  | -    | 6.1'  | 17 24.0 | -26 21 | 338 |            |     |      | H I 46   |
| <b>NGC 6235</b> | GCL 48       | Glob CL | OPH | 8.9  | -    | 1.9'  | 16 53.4 | -22 11 | 337 | X          |     |      | H II 584   |
| <b>NGC 6284</b> | GCL 53       | Glob CL | OPH | 9    | -    | 2.7'  | 17 04.5 | -24 46 | 337 | IX         |     |      | H VI 11  |
| <b>NGC 6287</b> | GCL 54       | Glob CL | OPH | 9.2  | -    | 2.7'  | 17 05.2 | -22 42 | 337 | VII        |     |      | H II 195   |
| <b>NGC 6342</b> | GCL 61       | Glob CL | OPH | 9.5  | -    | 3'    | 17 21.2 | -19 35 | 338 | IV         |     |      | H I 149  |
| <b>NGC 6366</b> | GCL 65       | Glob CL | OPH | 9.5  | -    | 5.8'  | 17 27.7 | -05 05 | 248 | XI         |     |      |  |
| <b>NGC 6517</b> | GCL 81       | Glob CL | OPH | 10.3 | -    | 1'    | 18 01.8 | -08 58 | 294 | IV         |     |      | H II 199   |
| <b>NGC 6426</b> | GCL 76       | Glob CL | OPH | 10.9 | -    | 3.2'  | 17 44.9 | +03 10 | 248 | IX         |     |      | H II 587   |
| <b>NGC 6369</b> | PK 2+5.1;H I | Pln Neb | OPH | 11   | 10.5 | 30"   | 17 29.3 | -23 46 | 338 | 4(2)       |     | 15.1 | <b>Little Ghost Nebula</b>                                 |
| <b>NGC 6309</b> | PK 9+14.1    | Pln Neb | OPH | 11.6 | 8.6  | 20"   | 17 14.1 | -12 55 | 292 | 3b(6)      |     | 16.3 | <b>Box Nebula</b>  |
| <b>B 65-67</b>  | LDN 1772-3;  | Drk Neb | OPH | --   | --   | 12'   | 17 19.6 | -26 42 | 338 | 6 lr       |     |      | <b>Pipe nebula</b> (stem); 2 deg south of Theta Oph;       |
| <b>NGC 1980</b> | OCL 529      | CL+Neb  | ORI | 2.5  | -    | 14'   | 05 35.4 | -05 55 | 270 | III 3 m n: |     |      | H V 31   |
| <b>M 42</b>     | NGC 1976     | CL+Neb  | ORI | 4    | 11   | 90'   | 05 35.3 | -05 23 | 225 | E+R        |     |      | <b>Orion neb</b> Trapezium* 6.7-7.7m;>50 var* invl         |
| <b>NGC 2169</b> | OCL 481      | Opn CL  | ORI | 5.9  | -    | 7'    | 06 08.4 | +13 58 | 182 | I 3 p n    | 30  | 6.9  | H VIII 24;In nebula Ced 78                                 |
| <b>NGC 2175</b> | OCL 476      | CL+Neb  | ORI | 6.8  | -    | 18'   | 06 09.6 | +20 29 | 137 | IV 3 p n   | 60  | 7.6  | In Gem OB1?  |
| <b>M 43</b>     | NGC 1982     | Brn Neb | ORI | 7    | 13   | 20'   | 05 35.5 | -05 16 | 225 | E          |     |      | H III 1 ?;detached <b>part of Orion Nebula</b>             |
| <b>NGC 1973</b> | CED 55B      | Brn Neb | ORI | 7    | -    | 5'    | 05 35.1 | -04 44 | 225 | E          |     |      |  |
| <b>M 78</b>     | NGC 2068     | Brn Neb | ORI | 8    | 12   | 8'    | 05 46.8 | +00 05 | 226 | E          |     |      | Comet shaped;2 10mag * invl; 53" sep                       |
| <b>NGC 2194</b> | OCL 495      | Opn CL  | ORI | 8.5  | -    | 10'   | 06 13.8 | +12 48 | 182 | III 1 r    | 80  | 12.1 | H VI 5;faint;rich;look for 2169 nearby                     |
| <b>NGC 2186</b> | OCL 498      | Opn CL  | ORI | 8.7  | -    | 4'    | 06 12.1 | +05 28 | 227 | II 2 p     | 30  | 9.8  | H VII 25   |
| <b>IC 434</b>   | LBN 954      | Brn Neb | ORI | 11   | -    | 90'   | 05 41.0 | -02 27 | 226 | E          |     |      | <b>Contains Horsehead neb</b> (B33)                        |
| <b>NGC 2022</b> | PK 196-10.1  | Pln Neb | ORI | 11.7 | 9.2  | 28"   | 05 42.1 | +09 05 | 181 | 4(2)       |     | 15.8 | small;faint and distinct w annular form;PK196-10.1         |
| <b>NGC 1788</b> | LBN 916      | Brn Neb | ORI | -    | -    | 5'    | 05 06.9 | -03 20 | 225 | R          |     |      | H V 32; possible reflection nebula                         |
| <b>NGC 1999</b> | LBN 979      | Brn Neb | ORI | -    | -    | 2'    | 05 36.4 | -06 43 | 271 | E+R        |     |      | H IV 33  |
| <b>NGC 2024</b> | CED 55P      | Brn Neb | ORI | -    | -    | 30'   | 05 41.7 | -01 51 | 226 | E          |     |      | <b>Tank Track Neb; flame</b> , masked by Zeta Ori          |
| <b>B 33</b>     | LDN 1630     | Drk Neb | ORI | --   | --   | 6'    | 05 40.9 | -02 28 | 226 | 4 lr       |     |      | <b>Horsehead nebula</b> ;part of dark following cloud      |
| <b>NGC 6752</b> | Dunlop 295   | Glob CL | PAV | 5.4  | -    | 20.4' | 19 10.9 | -59 59 | 435 | VI         |     |      | Fine cluster   |
| <b>M 15</b>     | NGC 7078     | Glob CL | PEG | 6.4  | 11   | 12.3' | 21 30.0 | +12 10 | 210 | IV         |     |      | Stars mags 13...   |
| <b>NGC 7331</b> | UGC 12113    | Galaxy  | PEG | 9.5  | 13.3 | 10.2' | 22 37.1 | +34 25 | 123 | SBC        |     |      | Brightest in group of F obj;sev dark lanes                 |
| <b>NGC 7217</b> | UGC 11914    | Galaxy  | PEG | 10.1 | 12.7 | 4'    | 22 07.9 | +31 22 | 122 | Sb         |     |      | H II 207;vB diff Nuc .35'X0.27'many knotty arms            |
| <b>NGC 7814</b> | UGC 8        | Galaxy  | PEG | 10.6 | 13.2 | 4.7'  | 00 03.2 | +16 09 | 170 | Sab        |     |      | H II 240;Equatorial dust lane;Nearly edge-on               |
| <b>NGC 7479</b> | UGC 12343    | Galaxy  | PEG | 10.9 | 13.4 | 4'    | 23 04.9 | +12 19 | 213 | SBbc       |     |      | H I 55;excellent barred spiral                             |
| <b>NGC 7619</b> | UGC 12523    | Galaxy  | PEG | 11.1 | 12.9 | 2.8'  | 23 20.2 | +08 12 | 214 | Elliptical |     |      | H II 439;UGC 12523   |
| <b>NGC 7448</b> | UGC 12294    | Galaxy  | PEG | 11.7 | 12.9 | 2.6'  | 23 00.1 | +15 59 | 213 | Sbc        |     |      | H II 251;Brightest in group;UGC 12294;Arp 13               |
| <b>NGC 7320</b> | UGC 12101    | Galaxy  | PEG | 12.6 | 13.5 | 2.3'  | 22 36.1 | +33 57 | 123 | Scd        |     |      | Brighest in <b>Stephan's Quintet</b>                       |
| <b>NGC 1499</b> | LBN 756      | Brn Neb | PER | 5    | -    | 160'  | 04 03.2 | +36 22 | 95  | E          |     |      | <b>California Nebula</b> ;0.6 deg from Xi Per              |
| <b>M 34</b>     | NGC 1039     | Opn CL  | PER | 5.2  | -    | 35'   | 02 42.1 | +42 47 | 62  | II 3 m     | 100 | 7.3  | At least 80 true members;sev D* incl h1123 & O Stv 44      |
| <b>NGC 869</b>  | OCL 350      | Opn CL  | PER | 5.3  | -    | 30'   | 02 19.1 | +57 08 | 37  | I 3 r      | 200 | 6.6  | <b>h Per</b> ; H VI 33;in Per OB1;Double Cluster w NGC 884 |
| <b>NGC 884</b>  | OCL 353      | Opn CL  | PER | 6.1  | -    | 30'   | 02 22.5 | +57 09 | 37  | I 3 r      | 150 | 8.1  | H VI 34;chi Per;in Per OB1;Double Cluster w NGC 869        |
| <b>NGC 1545</b> | OCL 399      | Opn CL  | PER | 6.2  | -    | 18'   | 04 20.9 | +50 15 | 39  | II 2 p     | 20  | 7.1  | H VIII 85  |
| <b>NGC 1528</b> | OCL 397      | Opn CL  | PER | 6.4  | -    | 24'   | 04 15.3 | +51 13 | 39  | II 2 m     | 40  | 8.8  | H VII 61;80 * mag 8...;1 deg NNW from b1 PER               |
| <b>NGC 1444</b> | OCL 394      | Opn CL  | PER | 6.6  | -    | 4'    | 03 49.4 | +52 40 | 39  | IV 1 p     | 37  | 6.8  | H VIII 80;In Cam OB1?                                      |
| <b>NGC 1342</b> | OCL 401      | Opn CL  | PER | 6.7  | -    | 14'   | 03 31.7 | +37 22 | 94  | III 3 p    | 40  | 8.8  | H VIII 88  |
| <b>NGC 1245</b> | OCL 389      | Opn CL  | PER | 8.4  | -    | 10'   | 03 14.7 | +47 14 | 63  | III 1 r    | 200 | 11.2 | H VI 25  |
| <b>NGC 1513</b> | OCL 398      | Opn CL  | PER | 8.4  | -    | 9'    | 04 09.9 | +49 31 | 64  | II 1 m     | 50  | 11.2 | H VII 60   |
| <b>NGC 1023</b> | UGC 2154     | Galaxy  | PER | 9.4  | 12.8 | 8.1'  | 02 40.4 | +39 04 | 62  | E7p        |     |      | brtst in grp;more neb 10' E;lens shp F tuft on E tip       |
| <b>M 76</b>     | NGC 650/1    | Pln Neb | PER | 10.1 | 10.4 | 163"  | 01 42.3 | +51 35 | 37  | 3(6)       |     | 17.6 | <b>Little Dumbbell</b> or <b>Cork Nebula</b> ;PK130-10.1   |
| <b>NGC 1275</b> | 3C84;UGC 2   | Galaxy  | PER | 11.9 | 13.1 | 2.3'  | 03 19.8 | +41 31 | 63  | SO         |     |      | Seyfert;brtst in Persus Cl;center obj in dense galxy cl    |
| <b>NGC 1491</b> | LBN 704      | Brn Neb | PER | -    | -    | 6'    | 04 03.2 | +51 19 | 39  | E          |     |      | H I 258  |

## 650 selected DSO List (sorted by constellation - magnitude)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class        | ns  | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|--------------|-----|------|---|
| <b>M 74</b>     | NGC 628     | Galaxy  | PSC | 9.4  | 14.2 | 10'   | 01 36.7 | +15 47 | 173 | Sc           |     |      | Fine face on spiral   |
| <b>NGC 488</b>  | UGC 907     | Galaxy  | PSC | 10.3 | 13.4 | 5.4'  | 01 21.8 | +05 15 | 218 | Sb Ring      |     |      | delicate spiral pattern   |
| <b>NGC 524</b>  | UGC 968     | Galaxy  | PSC | 10.3 | 12.3 | 3.2'  | 01 24.8 | +09 32 | 173 | Sa           |     |      | H I 151   |
| <b>M 47</b>     | NGC 2422    | Opn CL  | PUP | 4.4  | 11   | 30'   | 07 36.6 | -14 29 | 274 | III 2 m      | 30  | 5.7  | H VIII 38;Messier gave poor postion;Stv 1121,1120 invl          |
| <b>NGC 2477</b> | OCL 720     | Opn CL  | PUP | 5.8  | -    | 27'   | 07 52.2 | -38 32 | 362 | I 2 r : b    | 200 | 12   | <b>300</b> * to 12 mag;Shapley--richest of OPNCL                |
| <b>M 46</b>     | NGC 2437    | Opn CL  | PUP | 6.1  | 13   | 27'   | 07 41.8 | -14 49 | 274 | III 2 m      | 100 | 8.7  | PLNNB NGC 2438 on N edge;150 * 10-13 mag                        |
| <b>M 93</b>     | NGC 2447    | Opn CL  | PUP | 6.2  | 12   | 22'   | 07 44.5 | -23 51 | 320 | IV 1 p       | 80  | 8.2  | 63 members to 13 mag;wedge shaped center                        |
| <b>NGC 2527</b> | NGC 2520    | Opn CL  | PUP | 6.5  | -    | 22'   | 08 05.0 | -28 09 | 362 | III 1 p      | 40  | 8.6  | H VIII 30   |
| <b>NGC 2539</b> | OCL 611     | Opn CL  | PUP | 6.5  | -    | 22'   | 08 10.6 | -12 49 | 275 | II 1 m       | 50  | 9.1  | Rich cluster;near M46 and M47;D* 19 Pup in field                |
| <b>NGC 2423</b> | OCL 592     | Opn CL  | PUP | 6.7  | -    | 19'   | 07 37.1 | -13 52 | 274 | IV 2 m       | 40  | 9    | H VII 28  |
| <b>NGC 2439</b> | OCL 688     | Opn CL  | PUP | 6.9  | -    | 10'   | 07 40.8 | -31 42 | 362 | II 3 m       | 80  | 8.9  |   |
| <b>NGC 2571</b> | OCL 701     | Opn CL  | PUP | 7    | -    | 13'   | 08 18.9 | -29 45 | 362 | IV 1 p       | 30  | 8.8  | H VI 39   |
| <b>NGC 2467</b> | OCL 668     | CL+Neb  | PUP | 7.1  | -    | 15'   | 07 52.5 | -26 26 | 320 | I 3 m n : b  | 50  |      | Scattered stars 8..12 w vF haze of neb;in PUP OB1               |
| <b>NGC 2482</b> | OCL 653     | Opn CL  | PUP | 7.3  | -    | 12'   | 07 55.2 | -24 15 | 320 | III 1 m      | 40  | 10   | H VII 10  |
| <b>NGC 2567</b> | OCL 708     | Opn CL  | PUP | 7.4  | -    | 10'   | 08 18.5 | -30 39 | 362 | III 2 m      | 40  | 10.1 | H VII 64  |
| <b>NGC 2489</b> | OCL 690     | Opn CL  | PUP | 7.9  | -    | 8'    | 07 56.3 | -30 04 | 362 | II 2 m       | 45  | 11.1 | H VII 23  |
| <b>NGC 2421</b> | OCL 626     | Opn CL  | PUP | 8.3  | -    | 10'   | 07 36.2 | -20 37 | 319 | I 2 m        | 70  | 10.4 | H VII 67  |
| <b>NGC 2509</b> | OCL 630     | Opn CL  | PUP | 9.3  | -    | 8'    | 08 00.8 | -19 03 | 320 | II 1 p       | 70  |      | H VIII 1  |
| <b>NGC 2479</b> | OCL 623     | Opn CL  | PUP | 9.6  | -    | 7'    | 07 55.1 | -17 42 | 320 | III 1 m      | 45  |      | H VII 58  |
| <b>NGC 2438</b> | PK 231+4.2  | Pln Neb | PUP | 11   | 11.7 | 65"   | 07 41.8 | -14 44 | 274 | 4(2)         |     | 17.5 | H IV 39;PK231+4.2 , <b>inside M46</b>                           |
| <b>NGC 2440</b> | PK 234+2.1  | Pln Neb | PUP | 11.5 | 6.4  | 54"   | 07 41.9 | -18 13 | 319 | 5(3)         |     | 17.5 | almost starlike;irregular at high power;PK234+2.1               |
| <b>NGC 2627</b> | OCL 714     | Opn CL  | PYX | 8.4  | -    | 11'   | 08 37.2 | -29 57 | 363 | III 2 m      | 60  | 11   | H VII 63  |
| <b>NGC 2613</b> | ESO 495-18  | Galaxy  | PYX | 10.3 | 12.9 | 7.1'  | 08 33.4 | -22 58 | 321 | Sb           |     |      | 1.2 deg W from D* Burnham 208;Nearly edge-on                    |
| <b>NGC 253</b>  | ESO 474-29  | Galaxy  | SCL | 7.2  | 12.7 | 26.4' | 00 47.6 | -25 18 | 306 | SBc          |     |      | <b>sculptor galaxy</b> , arms more defined by dust              |
| <b>NGC 55</b>   | Dunlop 507  | Galaxy  | SCL | 7.9  | 13.4 | 31.2' | 00 14.9 | -39 11 | 386 | SBp          |     |      | Sculptor Galaxy Group   |
| <b>NGC 288</b>  | ESO 474-SC  | Glob CL | SCL | 8.1  | -    | 13.8' | 00 52.8 | -26 35 | 307 | X            |     |      | H VI 20;loose structured globular                               |
| <b>NGC 300</b>  | ESO 295-20  | Galaxy  | SCL | 8.1  | 14.3 | 19.3' | 00 54.9 | -37 41 | 351 | Scd          |     |      | Large S-shaped;loose structured spiral                          |
| <b>NGC 7793</b> | ESO 349-12  | Galaxy  | SCL | 9.1  | 13.4 | 9.6'  | 23 57.8 | -32 36 | 350 | Scd          |     |      |   |
| <b>NGC 613</b>  | ESO 413-11  | Galaxy  | SCL | 10.1 | 13.3 | 5.2'  | 01 34.3 | -29 25 | 352 | SBbc         |     |      | H I 281   |
| <b>NGC 6231</b> | Dunlop 520  | Opn CL  | SCO | 2.6  | -    | 15'   | 16 54.2 | -41 49 | 407 | I 3 r n      | 93  | 4.7  | <b>Table of Scorpius</b>  |
| <b>M 7</b>      | NGC 6475    | Opn CL  | SCO | 3.3  | 12   | 80'   | 17 53.9 | -34 48 | 377 | II 2 r       | 80  | 5.6  | 80 members to 10th mag; <b>Ptolemy's cluster</b>                |
| <b>M 6</b>      | NGC 6405    | Opn CL  | SCO | 4.2  | 10   | 20'   | 17 40.3 | -32 15 | 377 | III 2 p      | 80  | 6.2  | <b>Butterfly cluster</b> ;51 members to 10.5 mag incl var* BM 5 |
| <b>M 4</b>      | NGC 6121    | Glob CL | SCO | 5.4  | 12   | 26.3' | 16 23.6 | -26 32 | 336 | IX           |     |      | Look for central bar structure                                  |
| <b>NGC 6281</b> | OCL 1003    | Opn CL  | SCO | 5.4  | -    | 200'  | 17 04.7 | -37 59 | 376 | II 2 p n     |     | 7.9  |   |
| <b>NGC 6124</b> | Dunlop 514  | Opn CL  | SCO | 5.8  | -    | 29'   | 16 25.3 | -40 39 | 407 | II 3 m       | 100 | 8.7  |   |
| <b>NGC 6242</b> | OCL 1001    | Opn CL  | SCO | 6.4  | -    | 9'    | 16 55.6 | -39 28 | 407 | I 3 m        |     | 7.3  |   |
| <b>NGC 6388</b> | GCL 70      | Glob CL | SCO | 6.8  | -    | 8.7'  | 17 36.3 | -44 44 | 408 | III          |     |      |   |
| <b>M 80</b>     | NGC 6093    | Glob CL | SCO | 7.3  | 11   | 5.1'  | 16 17.0 | -22 59 | 336 | II           |     |      | Extremely rich and compressed                                   |
| <b>NGC 6441</b> | GCL 78      | Glob CL | SCO | 7.4  | -    | 7.8'  | 17 50.2 | -37 03 | 377 | III          |     |      |   |
| <b>NGC 6259</b> | OCL 996     | Opn CL  | SCO | 8    | -    | 10'   | 17 00.8 | -44 39 | 407 | III 2 m      | 120 | 11.6 |   |
| <b>NGC 6451</b> | OCL 1035    | Opn CL  | SCO | 8.2  | -    | 8'    | 17 50.7 | -30 13 | 377 | II 1 p n     | 80  | 12   | <b>Tom Thumb</b> cluster H VI 13;Dark lane down center;         |
| <b>NGC 6192</b> | OCL 988     | Opn CL  | SCO | 8.5  | -    | 9'    | 16 40.4 | -43 22 | 407 | I 2 p        | 60  | 11   |   |
| <b>NGC 6144</b> | GCL 42      | Glob CL | SCO | 9.1  | -    | 6.2'  | 16 27.2 | -26 01 | 336 | XI           |     |      | H VI 10   |
| <b>NGC 6222</b> | NGC 6216    | Opn CL  | SCO | 10   | -    | 4'    | 16 49.4 | -44 44 | 407 |              |     |      |   |
| <b>NGC 6453</b> | GCL 79      | Glob CL | SCO | 10.2 | -    | 3.5'  | 17 50.9 | -34 36 | 377 | IV           |     |      | on edge on <b>M7</b>  |
| <b>NGC 6302</b> | PK 349+1.1  | Pln Neb | SCO | 12.8 | 9    | 72"   | 17 13.7 | -37 06 | 376 | 6            |     | 16.6 | <b>Bug or Bipolar Nebula</b> ;flattened figure 8 shape          |
| <b>NGC 6334</b> | ESO 392-EN  | Brn Neb | SCO | -    | -    | 120'  | 17 20.8 | -36 06 | 376 | E            |     |      | <b>Bear's Claw nebula</b>                                       |
| <b>M 11</b>     | NGC 6705    | Opn CL  | SCT | 5.8  | 9    | 14'   | 18 51.1 | -06 16 | 295 | I 2 r        | 500 | 8    | 500 stars to 14th mag; <b>Wild duck cluster</b>                 |
| <b>NGC 6664</b> | OCL 68      | Opn CL  | SCT | 7.8  | -    | 16'   | 18 36.6 | -07 49 | 295 | III 2 m      | 50  | 10.1 | H VIII 12;Contains Cepheid variable EV Sct                      |
| <b>M 26</b>     | NGC 6694    | Opn CL  | SCT | 8    | 12   | 15'   | 18 45.2 | -09 24 | 295 | I 1 m        | 30  | 10.3 | Finderscope will show why Messier included it;70*,14 m          |
| <b>NGC 6712</b> | GCL 103     | Glob CL | SCT | 8.2  | -    | 4.3'  | 18 53.1 | -08 42 | 295 | IX           |     |      | H I 47  |
| <b>NGC 6649</b> | OCL 66      | Opn CL  | SCT | 8.9  | -    | 6'    | 18 33.5 | -10 24 | 295 | II 2 m       | 50  | 11.6 | With Cepheid V367 Sct & D* Struve 2325                          |
| <b>M 5</b>      | NGC 5904    | Glob CL | SER | 5.7  | 11   | 19.9' | 15 18.6 | +02 05 | 244 | V            |     |      | st mags 11...;superb cluster                                    |
| <b>M 16</b>     | NGC 6611    | CL+Neb  | SER | 6    | 12   | 7'    | 18 18.8 | -13 47 | 294 | II 3 m n : a | 60  | 11   | <b>Star Queen</b> or <b>Eagle Nebula</b> ;stars mags 8...       |
| <b>NGC 6539</b> | GCL 85      | Glob CL | SER | 8.9  | -    | 2.5'  | 18 04.8 | -07 35 | 294 | X            |     |      | In heavily obscured area  |
| <b>NGC 6535</b> | GCL 83      | Glob CL | SER | 9.3  | -    | 1.3'  | 18 03.8 | -00 18 | 249 | XI           |     |      |   |
| <b>NGC 6118</b> | UGC 10350   | Galaxy  | SER | 11.7 | 13.9 | 4.7'  | 16 21.8 | -02 17 | 246 | Sc           |     |      | H II 402;Low surface brightness                                 |
| <b>NGC 3115</b> | MCG - 1-26- | Galaxy  | SEX | 8.9  | 11.9 | 7.3'  | 10 05.2 | -07 43 | 279 | E6           |     |      | <b>Spindle Galaxy</b> H I 163;                                  |
| <b>NGC 3169</b> | UGC 5525    | Galaxy  | SEX | 10.2 | 12.8 | 4.2'  | 10 14.2 | +03 28 | 234 | Sa           |     |      | H I 4;eF corona vis to approx 8X6;P w NGC 3166                  |
| <b>NGC 3166</b> | UGC 5516    | Galaxy  | SEX | 10.4 | 12.9 | 4.8'  | 10 13.8 | +03 26 | 234 | SBO-a        |     |      | H I 3;brightest in group  |
| <b>NGC 2974</b> | MCG 0-25-   | Galaxy  | SEX | 10.9 | 13   | 3.4'  | 09 42.6 | -03 42 | 233 | Sa           |     |      | H I 61;bright nucleus;10m * @ 0.7'                              |



## 650 selected DSO List (sorted by constellation - magnitude)

| NAME            | OTHER          | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs   | SAC NOTES  |
|-----------------|----------------|---------|-----|------|------|-------|---------|--------|-----|-----------|-----|------|--|
| <b>M 71</b>     | NGC 6838       | Glob CL | SGE | 8.3  | 12   | 6.1'  | 19 53.8 | +18 47 | 162 |           |     |      | Arrowhead shape; stars have few metals                                 |
| <b>M 24</b>     | IC 4715        | Opn CL  | SGR | 3.1  | 4.3  | 95'   | 18 26.6 | -18 23 | 339 |           |     |      | <b>Small Sagittarius Star Cloud</b> ; dark neb , 6603 invl             |
| <b>M 25</b>     | IC 4725        | Opn CL  | SGR | 4.6  | 12   | 29'   | 18 31.8 | -19 07 | 340 | I 2 p     | 30  | 6.7  | Contains U Sgr; Stars mags 6...10                                      |
| <b>M 8</b>      | NGC 6523       | CL+Neb  | SGR | 5    | 13   | 45'   | 18 03.7 | -24 23 | 339 | E         |     |      | <b>Lagoon Nebula</b> ; NGC 6530 invl; dark lane crosses                |
| <b>M 22</b>     | NGC 6656       | Glob CL | SGR | 5.2  | 11   | 24'   | 18 36.4 | -23 54 | 340 | VII       |     |      | Stars mags 11...; one of finest globs                                  |
| <b>M 23</b>     | NGC 6494       | Opn CL  | SGR | 5.5  | 13   | 27'   | 17 57.1 | -18 59 | 339 | III 1 m   | 150 | 9.2  | 100 members to 13th mag  |
| <b>M 21</b>     | NGC 6531       | Opn CL  | SGR | 5.9  | 11   | 13'   | 18 04.2 | -22 29 | 339 | I 3 m     | 70  | 7.3  | In Sgr OB1; 36 members to 12th mag                                     |
| <b>M 17</b>     | NGC 6618       | CL+Neb  | SGR | 6    | 13   | 11'   | 18 20.8 | -16 11 | 294 | III 3 m n | 40  | 9.3  | <b>Omega nebula</b> ; <b>Swan Nebula</b> ; many F outer loops; use fil |
| <b>M 20</b>     | NGC 6514       | CL+Neb  | SGR | 6.3  | 13   | 28'   | 18 02.7 | -22 58 | 339 | E+*       | 67  | 6    | <b>Trifid nebula</b> ; sev dark lanes; H IV 41 & V 10; D* HN 40 in     |
| <b>M 55</b>     | NGC 6809       | Glob CL | SGR | 6.3  | 13   | 19'   | 19 40.0 | -30 58 | 379 | XI        |     |      | * mags 15...   |
| <b>NGC 6723</b> | Dunlop 573     | Glob CL | SGR | 6.8  | -    | 11'   | 18 59.6 | -36 38 | 378 | VII       |     |      |  |
| <b>M 18</b>     | NGC 6613       | Opn CL  | SGR | 6.9  | 12   | 9'    | 18 19.9 | -17 08 | 339 | II 3 p n  | 20  | 8.6  | 12 * mag 9-10; 1 deg S of M17  |
| <b>M 28</b>     | NGC 6626       | Glob CL | SGR | 6.9  | 11   | 15'   | 18 24.5 | -24 52 | 340 | IV        |     |      | 45' NW from Lambda Sgr; * mags 14...                                   |
| <b>NGC 6544</b> | GCL 87         | Glob CL | SGR | 7.5  | -    | 8.4'  | 18 07.3 | -25 00 | 339 | IX        |     |      | H II 197   |
| <b>NGC 6520</b> | OCL 10         | Opn CL  | SGR | 7.6  | -    | 6'    | 18 03.4 | -27 53 | 339 | I 2 m n   | 60  | 9    | H VII 7; Dark neb B86 on W edge  |
| <b>NGC 6624</b> | GCL 93         | Glob CL | SGR | 7.6  | -    | 5.9'  | 18 23.7 | -30 22 | 378 | VI        |     |      | H I 50   |
| <b>M 54</b>     | NGC 6715       | Glob CL | SGR | 7.7  | 11   | 9.1'  | 18 55.1 | -30 29 | 378 | III       |     |      | * mags 15...   |
| <b>M 69</b>     | NGC 6637       | Glob CL | SGR | 7.7  | 11   | 7.1'  | 18 31.4 | -32 21 | 378 | V         |     |      |  |
| <b>M 70</b>     | NGC 6681       | Glob CL | SGR | 7.8  | 11   | 7.8'  | 18 43.2 | -32 18 | 378 | V         |     |      | Curved arc of stars to NE; * mags 14...                                |
| <b>NGC 6553</b> | GCL 88         | Glob CL | SGR | 8.3  | -    | 3.2'  | 18 09.3 | -25 54 | 339 | XI        |     |      | H IV 12; * mags 20...  |
| <b>NGC 6569</b> | GCL 91         | Glob CL | SGR | 8.4  | -    | 5.8'  | 18 13.6 | -31 50 | 377 | VIII      |     |      | H II 201; D* Burnham 1353 in field                                     |
| <b>NGC 6645</b> | OCL 48         | Opn CL  | SGR | 8.5  | -    | 10'   | 18 32.0 | -16 53 | 295 | III 1 m   | 40  | 12   | H VI 23  |
| <b>NGC 6652</b> | GCL 98         | Glob CL | SGR | 8.5  | -    | 3.5'  | 18 35.8 | -32 59 | 378 | VI        |     |      |  |
| <b>M 75</b>     | NGC 6864       | Glob CL | SGR | 8.6  | 11   | 6'    | 20 06.1 | -21 55 | 343 | I         |     |      | * mags 17...   |
| <b>NGC 6568</b> | OCL 28         | Opn CL  | SGR | 8.6  | -    | 13'   | 18 12.8 | -21 35 | 339 | III 1 m   | 50  |      | H VII 30   |
| <b>NGC 6642</b> | GCL 97         | Glob CL | SGR | 8.8  | -    | 0.8'  | 18 31.9 | -23 29 | 340 | IV        |     |      | H II 205; * mags 15....  |
| <b>NGC 6822</b> | IC 4895        | Galaxy  | SGR | 8.8  | 14.5 | 15.4' | 19 44.9 | -14 48 | 297 | Ir+       |     |      | <b>Barnard's Galaxy</b> ; IC 1308 = HII req; in Local Group            |
| <b>NGC 6638</b> | GCL 95         | Glob CL | SGR | 9.2  | -    | 2.2'  | 18 30.9 | -25 30 | 340 | VI        |     |      | H I 51   |
| <b>NGC 6440</b> | GCL 77         | Glob CL | SGR | 9.3  | -    | 1.7'  | 17 48.9 | -20 22 | 338 | V         |     |      | H I 150; * eF  |
| <b>NGC 6528</b> | GCL 84         | Glob CL | SGR | 9.5  | -    | 3.7'  | 18 04.8 | -30 03 | 377 | V         |     |      | H II 200; * mags 16...; Gamma Sgr in field                             |
| <b>NGC 6522</b> | GCL 82         | Glob CL | SGR | 9.9  | -    | 5.6'  | 18 03.6 | -30 02 | 377 | VI        |     |      | H I 49   |
| <b>NGC 6583</b> | OCL 27         | Opn CL  | SGR | 10   | -    | 2.8'  | 18 15.8 | -22 08 | 339 | II 1 m    | 35  |      | H VII 31   |
| <b>NGC 6818</b> | PK 25-17.1     | Pln Neb | SGR | 10   | 7    | 22"   | 19 44.0 | -14 09 | 297 | 4         |     | 15   | <b>Little Gem Nebula</b> ; PK25-17.1                                   |
| <b>NGC 6629</b> | PK 9-5.1; H II | Pln Neb | SGR | 10.5 | 8.2  | 16"   | 18 25.7 | -23 12 | 340 | 2a        |     | 12.9 |  |
| <b>NGC 6603</b> |                | Opn CL  | SGR | 11.1 | -    | 5'    | 18 18.4 | -18 24 | 339 | I 1 r n   | 100 | 14   | Within star cloud <b>Messier 24</b>                                    |
| <b>NGC 6445</b> | PK 8+3.1; H II | Pln Neb | SGR | 13   | 9.6  | 35"   | 17 49.3 | -20 01 | 338 | 3b(3)     |     | 19   | <b>Little Gem , crescent nebula</b>                                    |
| <b>B 86</b>     | LDN 93         | Drk Neb | SGR | --   | --   | 4'    | 18 02.7 | -27 50 | 339 | 5 Ir G    |     |      | <b>Ink Spot Neb , On Sgr star cloud</b> (see <b>M24</b> img)           |
| <b>M 45</b>     | Mel 22         | CL+Neb  | TAU | 1.2  | 11   | 100'  | 03 47.0 | +24 07 | 132 | I 3 r n   | 100 | 2.9  | <b>Pleiades</b> ; nebs NGC 1432 and 1435 involved                      |
| <b>NGC 1647</b> | OCL 457        | Opn CL  | TAU | 6.4  | -    | 45'   | 04 45.9 | +19 06 | 134 | II 2 m    | 200 | 8.6  | H VIII 8   |
| <b>NGC 1817</b> | OCL 463        | Opn CL  | TAU | 7.7  | -    | 16'   | 05 12.4 | +16 41 | 180 | III 1 m   | 60  | 11.2 | H VII 4; 50 * mags 10 to 14  |
| <b>M 1</b>      | NGC 1952       | SN Rem  | TAU | 8.4  | 11   | 8'    | 05 34.5 | +22 01 | 135 |           |     |      | <b>Crab Nebula</b> ; filaments; pulsar 16m; 3C144                      |
| <b>NGC 1514</b> | PK 165-15.1    | Pln Neb | TAU | 10.8 | 12.6 | 120"  | 04 09.3 | +30 47 | 95  | 3(2)      |     | 9.5  | H IV 69; PK165-15.1  |
| <b>M 33</b>     | NGC 598        | Galaxy  | TRI | 5.7  | 14.2 | 68.7' | 01 33.9 | +30 39 | 91  | Sc        |     |      | <b>Pinwheel Galaxy</b> ; Local Group; H V 17                           |
| <b>NGC 925</b>  | UGC 1913       | Galaxy  | TRI | 10.1 | 14.4 | 10.9' | 02 27.3 | +33 35 | 93  | SBcd      |     |      | H III 177; NGC 1023 group; coarse spiral                               |
| <b>NGC 672</b>  | UGC 1256       | Galaxy  | TRI | 10.9 | 13.9 | 7.5'  | 01 47.9 | +27 26 | 128 | SBc       |     |      | H I 157; Brightest in group; coarse spiral . P w IC1727                |
| <b>M 81</b>     | NGC 3031       | Galaxy  | UMA | 6.9  | 13.2 | 24.9' | 09 55.6 | +69 04 | 23  | Sb        |     |      | brightest in group; fine spiral  |
| <b>M 101</b>    | NGC 5457       | Galaxy  | UMA | 7.9  | 14.9 | 28.5' | 14 03.2 | +54 21 | 49  | SBc       |     |      | P w NGC 5474; SN 1909; spir galax w one heavy arm;                     |
| <b>M 82</b>     | NGC 3034       | Galaxy  | UMA | 8.4  | 12.5 | 10.5' | 09 55.9 | +69 41 | 23  | Sd        |     |      | M81 group; eruptive; H IV 79   |
| <b>M 40</b>     | Winnecke 4     | 2 Stars | UMA | 9    | -    |       | 12 21.9 | +58 06 | 47  |           |     |      | D* 9 & 9.3 mag 50" sep; No nebulae                                     |
| <b>NGC 2841</b> | UGC 4966       | Galaxy  | UMA | 9.2  | 12.7 | 7.7'  | 09 22.0 | +50 59 | 44  | Sb        |     |      | H I 205; fine spiral w symmetrical whorls                              |
| <b>M 109</b>    | NGC 3992       | Galaxy  | UMA | 9.8  | 13.6 | 7.5'  | 11 57.6 | +53 22 | 47  | SBbc      |     |      | H IV 61; theta struc barred sp; Gamma UMa 40' NW                       |
| <b>NGC 3184</b> | UGC 5557       | Galaxy  | UMA | 9.8  | 13.9 | 7.6'  | 10 18.3 | +41 25 | 72  | SBc       |     |      | svBN; smooth lens w spiral pattern of dark markings                    |
| <b>NGC 2768</b> | UGC 4821       | Galaxy  | UMA | 9.9  | 13.7 | 8.2'  | 09 11.6 | +60 02 | 44  | E5        |     |      | vsvB center; smooth neb in lens and external envelope                  |
| <b>NGC 3077</b> | UGC 5398       | Galaxy  | UMA | 9.9  | 13.1 | 5.2'  | 10 03.3 | +68 44 | 23  | Sd        |     |      | m81 group; dust streamers tending to radial direction                  |
| <b>M 108</b>    | NGC 3556       | Galaxy  | UMA | 10   | 13.1 | 8.6'  | 11 11.5 | +55 40 | 46  | SBc       |     |      | H V 46; M 97 is 48' SE; nearly edge-on                                 |
| <b>NGC 3953</b> | UGC 6870       | Galaxy  | UMA | 10.1 | 13.4 | 6.9'  | 11 53.8 | +52 19 | 47  | SBbc      |     |      | H V 45; comps 3.9'; PA190; 0.3' X 0.1'; 4.6'; PA156; 0.4' X 0.4'       |
| <b>NGC 2976</b> | UGC 5221       | Galaxy  | UMA | 10.2 | 13   | 6.2'  | 09 47.2 | +67 55 | 23  | Scp       |     |      | B main body; chaotic inner w many dk lane; F outer disc                |
| <b>NGC 3675</b> | UGC 6439       | Galaxy  | UMA | 10.2 | 13.2 | 6.2'  | 11 26.1 | +43 35 | 73  | Sb        |     |      | H I 194; in field of 56 UMa  |
| <b>NGC 4051</b> | UGC 7030       | Galaxy  | UMA | 10.2 | 13.3 | 5.3'  | 12 03.2 | +44 32 | 74  | SBbc      |     |      | H IV 56; thick spiral arms   |
| <b>NGC 5322</b> | UGC 8745       | Galaxy  | UMA | 10.2 | 13.6 | 6'    | 13 49.2 | +60 11 | 49  | E2        |     |      | H I 256; B diff. N; smooth neb   |
| <b>NGC 2681</b> | UGC 4645       | Galaxy  | UMA | 10.3 | 12.8 | 3.7'  | 08 53.5 | +51 19 | 44  | SBO-a     |     |      | H I 242; Compact center and distinct spiral arms                       |

## 650 selected DSO List (sorted by constellation - magnitude)

| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| NGC 3198 | UGC 5572    | Galaxy  | UMA | 10.3 | 13.8 | 8.1'  | 10 19.9 | +45 33 | 72  | SBc Ring   |    |      | H I 199;svBN in bar partly obscured on one side          |
| NGC 3941 | UGC 6857    | Galaxy  | UMA | 10.3 | 12.5 | 3.5'  | 11 52.9 | +36 59 | 107 | SBO        |    |      | H I 173  |
| NGC 4605 | UGC 7831    | Galaxy  | UMA | 10.3 | 12.9 | 5.9'  | 12 40.0 | +61 36 | 26  | SBc/P      |    |      | H I 254  |
| NGC 2985 | UGC 5253    | Galaxy  | UMA | 10.4 | 13.3 | 4.6'  | 09 50.4 | +72 17 | 23  | Sb         |    |      | diff BN;many poor res knotty arms; P w NGC 3027          |
| NGC 3631 | UGC 6360    | Galaxy  | UMA | 10.4 | 13.7 | 5'    | 11 21.0 | +53 10 | 46  | Sc         |    |      | H I 226;SN 1964a;UGC 6360;Arp 27                         |
| NGC 3726 | UGC 6537    | Galaxy  | UMA | 10.4 | 13.8 | 6'    | 11 33.3 | +47 02 | 73  | SBc Ring   |    |      | H II 730;well defined spiral pattern                     |
| NGC 3938 | UGC 6856    | Galaxy  | UMA | 10.4 | 13.8 | 5.1'  | 11 52.8 | +44 07 | 74  | Sc         |    |      | H I 203;Fine face on spiral                              |
| NGC 3893 | UGC 6778    | Galaxy  | UMA | 10.5 | 13   | 4.5'  | 11 48.6 | +48 43 | 74  | SBc        |    |      | H II 738;P w NGC 3896 at 3.9';PA125                      |
| NGC 3359 | UGC 5873    | Galaxy  | UMA | 10.6 | 14.2 | 7.5'  | 10 46.6 | +63 13 | 24  | SBc        |    |      | H V 52   |
| NGC 4088 | UGC 7081    | Galaxy  | UMA | 10.6 | 13.2 | 5.6'  | 12 05.6 | +50 32 | 47  | SBbc       |    |      | P w 4085 11' to south;distorted spir arms;UGC 7081       |
| NGC 3898 | UGC 6787    | Galaxy  | UMA | 10.7 | 13.2 | 3.8'  | 11 49.3 | +56 05 | 47  | Sab        |    |      | H I 228;comp 5 ' ;PA60;0.7'X0.12';NGC 3888 15' south     |
| NGC 3998 | UGC 6946    | Galaxy  | UMA | 10.7 | 12.5 | 2.7'  | 11 57.9 | +55 27 | 47  | SO         |    |      | H I 229;comp 4.7';PA145;0.3'X0.3'                        |
| NGC 4036 | UGC 7005    | Galaxy  | UMA | 10.7 | 12.7 | 4'    | 12 01.5 | +61 54 | 25  | E6         |    |      | H I 253;NGC 4041 @ 15';spindle shape                     |
| NGC 2787 | UGC 4914    | Galaxy  | UMA | 10.8 | 12.6 | 3.1'  | 09 19.3 | +69 12 | 23  | SBO-a      |    |      | H I 216;B nucl in B inner lens;strong narrow bar w blobs |
| NGC 3310 | UGC 5786    | Galaxy  | UMA | 10.8 | 12.8 | 2.8'  | 10 38.8 | +53 30 | 46  | SBbc/P     |    |      | H IV 60;UGC 5786   |
| NGC 3610 | UGC 6319    | Galaxy  | UMA | 10.8 | 12.8 | 2.5'  | 11 18.4 | +58 47 | 46  | Elliptical |    |      | H I 270;comp 3.7';PA232;0.25'X0.25'                      |
| NGC 3665 | UGC 6426    | Galaxy  | UMA | 10.8 | 12.4 | 3.5'  | 11 24.7 | +38 46 | 106 | SO         |    |      | H I 219;P w NGC 3658                                     |
| NGC 3718 | UGC 6524    | Galaxy  | UMA | 10.8 | 14.4 | 8.2'  | 11 32.6 | +53 04 | 47  | SBap       |    |      | P w NGC 3729 at 11.5'ENE;cent dust lane sprl arms        |
| NGC 4026 | UGC 6985    | Galaxy  | UMA | 10.8 | 12.7 | 4.7'  | 11 59.4 | +50 58 | 47  | SO         |    |      | H I 223;edge on lens shape                               |
| NGC 5474 | UGC 9013    | Galaxy  | UMA | 10.8 | 13.9 | 5'    | 14 05.0 | +53 40 | 49  | Sc         |    |      | low surf. bright;smooth part res cent w vsFN;asym        |
| NGC 2950 | UGC 5176    | Galaxy  | UMA | 10.9 | 12.5 | 2.7'  | 09 42.6 | +58 51 | 45  | SBO Ring   |    |      | H IV 68  |
| NGC 3079 | UGC 5387    | Galaxy  | UMA | 10.9 | 13.4 | 8.1'  | 10 02.0 | +55 41 | 45  | SBc        |    |      | H V 47;brightest of 3;comp 6.5 nf;0.9'X0.4';mag 14.6     |
| NGC 3613 | UGC 6323    | Galaxy  | UMA | 10.9 | 13   | 3.6'  | 11 18.6 | +58 00 | 46  | Elliptical |    |      | H I 271;P w NGC 3619 at 15.7' PA158                      |
| NGC 3945 | UGC 6860    | Galaxy  | UMA | 10.9 | 13.9 | 6.4'  | 11 53.2 | +60 40 | 47  | SBO-a F    |    |      | H I 251  |
| NGC 4096 | UGC 7090    | Galaxy  | UMA | 10.9 | 13.4 | 6.5'  | 12 06.0 | +47 29 | 74  | SBc        |    |      | H I 207;nearly edge on                                   |
| M 97     | NGC 3587    | Pln Neb | UMA | 11   | 12.1 | 202"  | 11 14.8 | +55 01 | 46  | 3a         |    | 14   | Owl Nebula;PK148+57.1                                    |
| NGC 3877 | UGC 6745    | Galaxy  | UMA | 11   | 13   | 5.3'  | 11 46.1 | +47 30 | 74  | Sc         |    |      | H I 201;edge on spiral;16' south from Chi UMa            |
| NGC 3982 | UGC 6918    | Galaxy  | UMA | 11   | 12.5 | 2.3'  | 11 56.5 | +55 07 | 47  | SBb        |    |      | H IV 62  |
| NGC 3949 | UGC 6869    | Galaxy  | UMA | 11.1 | 12.6 | 2.9'  | 11 53.7 | +47 52 | 74  | Sbc        |    |      | H I 202;comp 4.4';PA273;0.3'X0.1'                        |
| NGC 4013 | UGC 6963    | Galaxy  | UMA | 11.2 | 12.9 | 4.8'  | 11 58.5 | +43 57 | 74  | Sb         |    |      | H II 733;edge on   |
| NGC 4102 | UGC 7096    | Galaxy  | UMA | 11.2 | 12.8 | 3.1'  | 12 06.4 | +52 43 | 47  | SBb Ring   |    |      | H I 225  |
| NGC 4041 | UGC 7014    | Galaxy  | UMA | 11.3 | 13.2 | 2.7'  | 12 02.2 | +62 08 | 25  | Sbc        |    |      | H I 252  |
| NGC 2742 | NGC 2816    | Galaxy  | UMA | 11.4 | 13   | 3'    | 09 07.6 | +60 29 | 44  | Sc         |    |      | H I 249;bright nucleus;several filamentary knotty arms   |
| NGC 3729 | UGC 6547    | Galaxy  | UMA | 11.4 | 13.1 | 2.9'  | 11 33.8 | +53 08 | 47  | SB/P       |    |      | H I 222;In field w NGC 3718                              |
| NGC 5473 | UGC 9011    | Galaxy  | UMA | 11.4 | 12.8 | 2.2'  | 14 04.7 | +54 54 | 49  | E2         |    |      | H I 231;svBN;sh. bar;F lens;in field of M 101            |
| NGC 3619 | UGC 6330    | Galaxy  | UMA | 11.5 | 13.4 | 3.5'  | 11 19.4 | +57 45 | 46  | Sa         |    |      | H I 244;P w NGC 3613 @ 15'                               |
| NGC 5631 | UGC 9261    | Galaxy  | UMA | 11.5 | 12.5 | 2'    | 14 26.6 | +56 35 | 49  | SO         |    |      | vB diff N w F dk crescent on one side;                   |
| NGC 3813 | UGC 6651    | Galaxy  | UMA | 11.6 | 12.5 | 2'    | 11 41.3 | +36 33 | 107 | Sb         |    |      | H I 94   |
| NGC 4085 | UGC 7075    | Galaxy  | UMA | 12.4 | 13.1 | 2.5'  | 12 05.4 | +50 21 | 47  | SBc        |    |      | H I 224;P w NGC 4088;UGC 7075;Ho 326b                    |
| NGC 6217 | UGC 10470   | Galaxy  | UMI | 11.2 | 13.2 | 3.3'  | 16 32.6 | +78 12 | 11  | SBbc Ring  |    |      | H I 280;Narrow filaments;Arp 185;UGC 10470               |
| NGC 2547 | OCL 753     | Opn CL  | VEL | 4.7  | -    | 20'   | 08 10.2 | -49 12 | 396 | II 2 p n   | 80 | 6.5  |  |
| NGC 3201 | Dunlop 445  | Glob CL | VEL | 6.8  | -    | 18.2' | 10 17.6 | -46 25 | 399 | X          |    |      | * mags 13...; loose structured globular                  |
| NGC 3132 | PK 272+12.1 | Pln Neb | VEL | 8.2  | 8.2  | 84"   | 10 07.0 | -40 26 | 399 | 4(2)       |    | 15.8 | Eight-Burst Nebula; actual central star is 15.8 mag      |
| M 104    | NGC 4594    | Galaxy  | VIR | 8    | 11.6 | 8.6'  | 12 40.0 | -11 37 | 284 | Sab        |    |      | Sombrero Galaxy; H I 43;dark equatorial lane;            |
| M 49     | NGC 4472    | Galaxy  | VIR | 8.4  | 13.2 | 9.8'  | 12 29.8 | +08 00 | 193 | E4         |    |      | NGC 4467 @ 4.2';NGC 4470 @ 10.5';NGC 4465 @ 5.8'         |
| M 87     | NGC 4486    | Galaxy  | VIR | 8.6  | 13   | 8.7'  | 12 30.8 | +12 23 | 193 | E1p        |    |      | B in Virgo cluster;NGC 4486A @ 7.5' ssf;                 |
| M 60     | NGC 4649    | Galaxy  | VIR | 8.8  | 12.9 | 7.6'  | 12 43.7 | +11 33 | 194 | E1         |    |      | NGC 4647 @ 2.5'  |
| M 86     | NGC 4406    | Galaxy  | VIR | 8.9  | 13.2 | 9.8'  | 12 26.2 | +12 57 | 193 | E3         |    |      | Markarian's chain;                                       |
| M 84     | NGC 4374    | Galaxy  | VIR | 9.1  | 13   | 6.7'  | 12 25.1 | +12 53 | 193 | E1         |    |      | Markarian's chain:center of Virgo cluster                |
| NGC 4697 | MCG - 1-33- | Galaxy  | VIR | 9.2  | 13.1 | 6.2'  | 12 48.6 | -05 48 | 284 | Elliptical |    |      | H I 39   |
| M 90     | NGC 4569    | Galaxy  | VIR | 9.5  | 13.4 | 9.9'  | 12 36.8 | +13 10 | 194 | SBab       |    |      | IC 3583 @ 6 ' ;vseBN in B diff bar w much dark matter    |
| NGC 4636 | NGC 4624?   | Galaxy  | VIR | 9.5  | 13.1 | 5.9'  | 12 42.8 | +02 41 | 239 | Elliptical |    |      | H II 38  |
| NGC 4699 | MCG - 1-33- | Galaxy  | VIR | 9.5  | 11.9 | 3.8'  | 12 49.0 | -08 40 | 284 | SBb        |    |      | H I 129  |
| NGC 5634 | GCL 28      | Glob CL | VIR | 9.5  | -    | 4.9'  | 14 29.6 | -05 59 | 287 | IV         |    |      | H I 70;11 mag star on E edge                             |
| M 59     | NGC 4621    | Galaxy  | VIR | 9.6  | 12.9 | 5.3'  | 12 42.0 | +11 39 | 194 | E3         |    |      | B diff N;smooth arms                                     |
| M 61     | NGC 4303    | Galaxy  | VIR | 9.6  | 13.4 | 6.5'  | 12 21.9 | +04 28 | 238 | SBbc Ring  |    |      | SN 1926;1961;1964;NGC 4301 @ 10 ' ;H I 139;L face-on     |
| NGC 4365 | UGC 7488    | Galaxy  | VIR | 9.6  | 13.4 | 6.5'  | 12 24.5 | +07 19 | 193 | Elliptical |    |      | H I 30;NGC 4370 @ 10 '                                   |
| M 58     | NGC 4579    | Galaxy  | VIR | 9.7  | 13.1 | 6'    | 12 37.7 | +11 49 | 194 | SBb        |    |      | fine compact spiral                                      |
| NGC 4526 | NGC 4560    | Galaxy  | VIR | 9.7  | 12.7 | 7'    | 12 34.0 | +07 42 | 194 | SBO        |    |      | H I 31;lenticular;between two 7th mag stars              |
| M 89     | NGC 4552    | Galaxy  | VIR | 9.8  | 13.2 | 5.3'  | 12 35.7 | +12 33 | 194 | EO         |    |      |  |
| NGC 4753 | UGC 8009    | Galaxy  | VIR | 9.9  | 12.9 | 5.1'  | 12 52.4 | -01 12 | 239 | SO         |    |      | H I 16;SN 1965i  |



## 650 selected DSO List (sorted by constellation - magnitude)

| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES   |
|----------|-------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|------|---|
| NGC 4216 | UGC 7284    | Galaxy  | VIR | 10   | 12.8 | 7.8'  | 12 15.9 | +13 09 | 193 | SBb       |    |      | H I 35;UGC 7284;edge on streak;two other in field     |
| NGC 4429 | UGC 7568    | Galaxy  | VIR | 10   | 12.8 | 5.8'  | 12 27.4 | +11 06 | 193 | Sa        |    |      | H II 65;oval w large outer ring                       |
| NGC 4535 | UGC 7727    | Galaxy  | VIR | 10   | 13.7 | 6.9'  | 12 34.3 | +08 12 | 194 | SBc       |    |      | H II 500;Ho 420b @ 5 ' ;S-shaped spiral               |
| NGC 5068 | ESO 576-29  | Galaxy  | VIR | 10   | 14   | 7.3'  | 13 18.9 | -21 02 | 330 | SBc       |    |      | H II 312;Coarse spiral;NGC 5087 in field              |
| NGC 5247 | ESO 577-14  | Galaxy  | VIR | 10   | 13.4 | 5.4'  | 13 38.0 | -17 53 | 331 | SBbc      |    |      | H II 297;Fine S-shaped double arm spiral              |
| NGC 5846 | UGC 9706    | Galaxy  | VIR | 10   | 13   | 4'    | 15 06.5 | +01 36 | 243 | E0        |    |      | Brightest in group; NGC 5846A at 1';NGC 5850 near     |
| NGC 5363 | UGC 8847    | Galaxy  | VIR | 10.1 | 12.5 | 4.6'  | 13 56.1 | +05 15 | 241 | Sa        |    |      | H I 6;P w NGC 5364 at 14.5' 2 B dif N in contact      |
| NGC 4438 | UGC 7574    | Galaxy  | VIR | 10.2 | 13.6 | 8.5'  | 12 27.8 | +13 00 | 193 | Sa        |    |      | Markarian's chain;NGC 4435 @ 4.4';long filaments      |
| NGC 4546 | MCG - 1-32- | Galaxy  | VIR | 10.3 | 11.9 | 3.3'  | 12 35.5 | -03 48 | 239 | E-SO Ba   |    |      | H I 160   |
| NGC 4762 | UGC 8016    | Galaxy  | VIR | 10.3 | 13   | 8.6'  | 12 52.9 | +11 14 | 194 | SBO       |    |      | H II 75;NGC 4754 @ 10.5';thick streak w tufts at ends |
| NGC 5746 | UGC 9499    | Galaxy  | VIR | 10.3 | 12.6 | 6.9'  | 14 44.9 | +01 57 | 243 | SBb       |    |      | H I 126;vsBN in B cent.bulge;NGC 5740 at 18';edge on  |
| NGC 4261 | UGC 7360    | Galaxy  | VIR | 10.4 | 13.3 | 3.8'  | 12 19.4 | +05 49 | 193 | E2        |    |      | NGC 4264 @ 3.4';NGC 4257 @ 7.1';UGC 7360;3C270        |
| NGC 4442 | UGC 7583    | Galaxy  | VIR | 10.4 | 12.6 | 4.5'  | 12 28.1 | +09 48 | 193 | SBO       |    |      | H II 156  |
| NGC 4517 | NGC 4437    | Galaxy  | VIR | 10.4 | 13.3 | 10.2' | 12 32.8 | +00 07 | 239 | Sc        |    |      | 4517A @ 17 ' ;long narrow streak w dust patches       |
| NGC 4596 | UGC 7828    | Galaxy  | VIR | 10.4 | 13   | 4'    | 12 39.9 | +10 11 | 194 | SBO-a     |    |      | H I 24;NGC 4608 @ 19 ' ;disc w projecting ansae       |
| NGC 4527 | UGC 7721    | Galaxy  | VIR | 10.5 | 13.1 | 5.9'  | 12 34.1 | +02 39 | 239 | SBbc      |    |      | H II 37;SN 1915a;NGC 4536 @ 29                        |
| NGC 4654 | IC 3708     | Galaxy  | VIR | 10.5 | 13.2 | 5'    | 12 43.9 | +13 08 | 194 | SBc Ring  |    |      | H II 126  |
| NGC 4665 | NGC 4624    | Galaxy  | VIR | 10.5 | 13.1 | 3.5'  | 12 45.1 | +03 03 | 239 | SBO-a     |    |      | H I 142   |
| NGC 4856 | MCG - 2-33- | Galaxy  | VIR | 10.5 | 12.1 | 3.9'  | 12 59.4 | -15 03 | 284 | SBO-a     |    |      | H I 68  |
| NGC 5364 | NGC 5317    | Galaxy  | VIR | 10.5 | 14.1 | 6.1'  | 13 56.2 | +05 01 | 241 | SBc/P     |    |      | H II 534;sBN in smooth cent w dk matter               |
| NGC 5813 | UGC 9655    | Galaxy  | VIR | 10.5 | 13.2 | 4'    | 15 01.2 | +01 42 | 243 | E1        |    |      | In NGC 5846 group;P w NGC 5814 at 5';NGC 8506. 21'    |
| NGC 4030 | UGC 6993    | Galaxy  | VIR | 10.6 | 13.2 | 4.2'  | 12 00.4 | -01 06 | 238 | Sbc       |    |      | H I 121;fine nearly face on spiral                    |
| NGC 4536 | UGC 7732    | Galaxy  | VIR | 10.6 | 13.9 | 7.1'  | 12 34.4 | +02 11 | 239 | SBbc      |    |      | NGC 4533 @ 8.2';high tilt spiral w long curvd arms    |
| NGC 4698 | UGC 7970    | Galaxy  | VIR | 10.6 | 12.9 | 4'    | 12 48.4 | +08 29 | 194 | Sab       |    |      | H I 8   |
| NGC 4754 | UGC 8010    | Galaxy  | VIR | 10.6 | 13.1 | 4.4'  | 12 52.3 | +11 19 | 194 | SBO       |    |      | H I 25;P w NGC 4762 11' to NW                         |
| NGC 5566 | UGC 9175    | Galaxy  | VIR | 10.6 | 13.3 | 6.6'  | 14 20.3 | +03 56 | 242 | SBab Ring |    |      | H I 144;double galaxy                                 |
| NGC 4666 | UGC 7926    | Galaxy  | VIR | 10.7 | 12.5 | 4.5'  | 12 45.1 | -00 28 | 239 | SBc       |    |      | H I 15;NGC 4668 @ 7.3';NGC 4653 @ 20 ' ;edge on       |
| NGC 4958 | MCG - 1-33- | Galaxy  | VIR | 10.7 | 12.3 | 3.9'  | 13 05.8 | -08 01 | 285 | SBO       |    |      | H I 130;Lenticular                                    |
| NGC 4371 | UGC 7493    | Galaxy  | VIR | 10.8 | 13.1 | 4'    | 12 24.9 | +11 42 | 193 | SBO-a F   |    |      | H I 22  |
| NGC 4435 | UGC 7575    | Galaxy  | VIR | 10.8 | 12.5 | 3'    | 12 27.7 | +13 05 | 193 | SBO       |    |      | Markarian's chain;NGC 4438 @ 4.3' SSE                 |
| NGC 4568 | UGC 7776    | Galaxy  | VIR | 10.8 | 13.1 | 4.6'  | 12 36.6 | +11 14 | 194 | Sbc       |    |      | Siamese Twins;;NGC 4567 @ 1.2';overlaps 4567;         |
| NGC 4643 | UGC 7895    | Galaxy  | VIR | 10.8 | 12.7 | 3.1'  | 12 43.3 | +01 59 | 239 | SBO-a     |    |      | H I 10;Saturn-like central mass w projecting ansae    |
| NGC 5850 | UGC 9715    | Galaxy  | VIR | 10.8 | 13.6 | 4.5'  | 15 07.1 | +01 33 | 243 | SBab      |    |      | H II 543;In NGC 5846 group;vBN w bar                  |
| NGC 4570 | UGC 7785    | Galaxy  | VIR | 10.9 | 12.4 | 3.7'  | 12 36.9 | +07 15 | 194 | SO        |    |      | H I 32;lens shaped;in field of R VIR                  |
| NGC 4902 | MCG - 2-33- | Galaxy  | VIR | 10.9 | 13.1 | 2.9'  | 13 01.0 | -14 31 | 284 | SBb       |    |      | H I 69;Theta shaped center;triskelion arm pattern     |
| NGC 5054 | MCG - 3-34- | Galaxy  | VIR | 10.9 | 13.7 | 5.1'  | 13 17.0 | -16 38 | 285 | Sbc       |    |      | H II 513;Three branch spiral                          |
| NGC 4179 | UGC 7214    | Galaxy  | VIR | 11   | 12.5 | 4.2'  | 12 12.9 | +01 18 | 238 | SO        |    |      | H I 9;edge on spindle shape                           |
| NGC 4388 | UGC 7520    | Galaxy  | VIR | 11   | 13   | 5.6'  | 12 25.8 | +12 40 | 193 | Sb        |    |      | H II 168;edge on lens shape;16' SE from M 84          |
| NGC 5576 | UGC 9183    | Galaxy  | VIR | 11   | 13.2 | 3'    | 14 21.1 | +03 16 | 242 | E2        |    |      | triple group w NGC 5574 at 2.9' and NGC 5577 at 10.3' |
| NGC 4781 | MCG - 2-33- | Galaxy  | VIR | 11.1 | 12.8 | 3.4'  | 12 54.4 | -10 32 | 284 | SBcd      |    |      | H I 134;Coarse spiral                                 |
| NGC 4995 | MCG - 1-34- | Galaxy  | VIR | 11.1 | 12.5 | 2.4'  | 13 09.7 | -07 50 | 285 | SBb       |    |      | H I 42;Dense spiral                                   |
| NGC 4660 | UGC 7914    | Galaxy  | VIR | 11.2 | 12.6 | 2.1'  | 12 44.5 | +11 11 | 194 | E5        |    |      | H II 71;comp 5.5';25' SSE from M60                    |
| NGC 4845 | UGC 8078    | Galaxy  | VIR | 11.2 | 13.1 | 4.9'  | 12 58.0 | +01 35 | 239 | Sab       |    |      | H II 536;edge on w dust lane                          |
| NGC 4866 | UGC 8102    | Galaxy  | VIR | 11.2 | 13.4 | 6.4'  | 12 59.5 | +14 10 | 194 | Sa        |    |      | H I 162;UGC 8091 @ 11.8';lens shaped                  |
| NGC 4281 | UGC 7389    | Galaxy  | VIR | 11.3 | 12.8 | 3'    | 12 20.4 | +05 23 | 238 | Sa        |    |      | H II 573  |
| NGC 4567 | UGC 7777    | Galaxy  | VIR | 11.3 | 13.1 | 3.1'  | 12 36.5 | +11 15 | 194 | Sbc       |    |      | Siamese Twins H IV 8;NGC 4568 @ 1.2                   |
| NGC 4478 | UGC 7645    | Galaxy  | VIR | 11.4 | 12.7 | 1.8'  | 12 30.3 | +12 20 | 193 | E1        |    |      | H II 124;NGC 4476 @ 4.5';NGC 4486 @ 8.6'              |
| NGC 4900 | UGC 8116    | Galaxy  | VIR | 11.4 | 12.9 | 2.2'  | 13 00.7 | +02 30 | 239 | SBc       |    |      | H I 143   |
| NGC 5427 | MCG - 1-36- | Galaxy  | VIR | 11.4 | 13.3 | 2.9'  | 14 03.4 | -06 02 | 286 | SBc       |    |      | H II 310;Face on spiral;P w NGC 5426 @ 2.8' south     |
| NGC 4550 | UGC 7757    | Galaxy  | VIR | 11.7 | 12.8 | 3.3'  | 12 35.5 | +12 13 | 194 | SBO       |    |      | H I 36;NGC 4551 @ 3 '                                 |
| NGC 4273 | UGC 7380    | Galaxy  | VIR | 11.9 | 13.1 | 2.3'  | 12 19.9 | +05 21 | 238 | SBc       |    |      | H II 569;SN 1936a;NGC 4277 @ 2 '                      |
| 3C 273   | PGC 41121   | Quasar  | VIR | 13   | -    | 0     | 12 29.1 | +02 03 | 238 |           |    |      | Brightest quasar; ~2 billion light years, 12.8-13m    |
| NGC 6940 | OCL 141     | Opn CL  | VUL | 6.3  | -    | 31'   | 20 34.4 | +28 17 | 120 | III 2 m   | 60 | 9.3  | H VII 8;100 * mags 9...                               |
| NGC 6823 | OCL 124     | Opn CL  | VUL | 7.1  | -    | 12'   | 19 43.2 | +23 18 | 162 | I 3 p n   | 30 | 8.8  | H VII 18;In Vul OB1 w nebula NGC 6820;30 * mags 11..1 |
| M 27     | NGC 6853    | Pln Neb | VUL | 7.3  | 11.2 | 480"  | 19 59.6 | +22 43 | 162 | 3(2)      |    | 14.1 | dumbbell neb. PK60-3.1;Lord Rosse drew 18* invl       |
| NGC 6830 | OCL 125     | Opn CL  | VUL | 7.9  | -    | 12'   | 19 51.0 | +23 06 | 162 | II 2 p    | 20 | 9.9  | H VII 9   |
| NGC 6885 | OCL 152     | Opn CL  | VUL | 8.1  | -    | 7'    | 20 11.9 | +26 29 | 163 | III 2 p   | 30 | 6    | also ngc 6882 , H VIII 20;With 20 Vul                 |
| NGC 6802 | OCL 114     | Opn CL  | VUL | 8.8  | -    | 3.2'  | 19 30.6 | +20 16 | 162 | III 1 m   | 50 | 12.9 | H VI 14;Bar shaped elong N-S                          |

## 7000 DSO List (sorted by name)

| 7000 DSO List (sorted by name) - from SAC 7.7 database |            |         |     |     |      |       |         |        |     |           |     |      |      |  |
|--|------------|---------|-----|-----|------|-------|---------|--------|-----|-----------|-----|------|------|--|
| NAME   | OTHER      | TYPE    | CON | MAG | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs   | Dist | SAC NOTES  |
| M 1  | NGC 1952   | SN Rem  | TAU | 8.4 | 11   | 8'    | 05 34.5 | +22 01 | 135 |           |     |      | 6.3k | <b>Crab Nebula</b> ; filaments;pulsar 16m;3C144                    |
| M 2  | NGC 7089   | Glob CL | AQR | 6.5 | 11   | 11.7' | 21 33.5 | -00 49 | 255 | II        |     |      | 36k  | Lord Rosse-Dark area near core;* mags 13...                        |
| M 3  | NGC 5272   | Glob CL | CVN | 6.3 | 11   | 18.6' | 13 42.2 | +28 23 | 110 | VI        |     |      | 31k  | Lord Rosse-sev dark marks within 5' of center                      |
| M 4  | NGC 6121   | Glob CL | SCO | 5.4 | 12   | 26.3' | 16 23.6 | -26 32 | 336 | IX        |     |      | 7k   | Look for central bar structure                                     |
| M 5  | NGC 5904   | Glob CL | SER | 5.7 | 11   | 19.9' | 15 18.6 | +02 05 | 244 | V         |     |      | 23k  | st mags 11...;superb cluster                                       |
| M 6  | NGC 6405   | Opn CL  | SCO | 4.2 | 10   | 20'   | 17 40.3 | -32 15 | 377 | III 2 p   | 80  | 6.2  | 2k   | <b>Butterfly cluster</b> ;51 members to 10.5 mag incl var* BM      |
| M 7  | NGC 6475   | Opn CL  | SCO | 3.3 | 12   | 80'   | 17 53.9 | -34 48 | 377 | II 2 r    | 80  | 5.6  | 1k   | 80 members to 10th mag; <b>Ptolemy's cluster</b>                   |
| M 8  | NGC 6523   | CL+Neb  | SGR | 5   | 13   | 45'   | 18 03.7 | -24 23 | 339 | E         |     |      | 6.5k | <b>Lagoon Nebula</b> ;NGC 6530 invl;dark lane crosses              |
| M 9  | NGC 6333   | Glob CL | OPH | 7.9 | 11   | 5.5'  | 17 19.2 | -18 31 | 337 | VIII      |     |      | 26k  | Dark neb B64 prominent to west                                     |
| M 10   | NGC 6254   | Glob CL | OPH | 6.6 | 12   | 12.2' | 16 57.1 | -04 06 | 247 | VII       |     |      | 13k  | Lord Rosse reported dark lane in cluster                           |
| M 11   | NGC 6705   | Opn CL  | SCT | 5.8 | 9    | 14'   | 18 51.1 | -06 16 | 295 | I 2 r     | 500 | 8    | 6k   | 500 stars to 14th mag; <b>Wild duck cluster</b>                    |
| M 12   | NGC 6218   | Glob CL | OPH | 6.1 | 12   | 14.5' | 16 47.2 | -01 57 | 246 | IX        |     |      | 18k  | Somewhat loose structure   |
| M 13   | NGC 6205   | Glob CL | HER | 5.8 | 12   | 23.2' | 16 41.7 | +36 28 | 114 | V         |     |      | 22k  | <b>Hercules cluster</b> ;Messier said nebula, no stars             |
| M 14   | NGC 6402   | Glob CL | OPH | 7.6 | 12   | 6.7'  | 17 37.6 | -03 15 | 248 | VIII      |     |      | 27k  | Many vF stars 14...  |
| M 15   | NGC 7078   | Glob CL | PEG | 6.4 | 11   | 12.3' | 21 30.0 | +12 10 | 210 | IV        |     |      | 33k  | Stars mags 13...   |
| M 16   | NGC 6611   | CL+Neb  | SER | 6   | 12   | 7'    | 18 18.8 | -13 47 | 294 | II 3 m n  | 60  | 11   | 7k   | <b>Star Queen</b> or <b>Eagle Nebula</b> ;stars mags 8...          |
| M 17   | NGC 6618   | CL+Neb  | SGR | 6   | 13   | 11'   | 18 20.8 | -16 11 | 294 | III 3 m n | 40  | 9.3  | 5k   | <b>Omega nebula</b> ; <b>Swan Nebula</b> ;many F outer loops;use f |
| M 18   | NGC 6613   | Opn CL  | SGR | 6.9 | 12   | 9'    | 18 19.9 | -17 08 | 339 | II 3 p n  | 20  | 8.6  | 6k   | 12 * mag 9-10; 1 deg S of <b>M17</b>                               |
| M 19   | NGC 6273   | Glob CL | OPH | 6.8 | 11   | 5.3'  | 17 02.6 | -26 16 | 337 | VIII      |     |      | 27k  | One of the most oblate globulars                                   |
| M 20   | NGC 6514   | CL+Neb  | SGR | 6.3 | 13   | 28'   | 18 02.7 | -22 58 | 339 | E+*       | 67  | 6    | 2.2k | <b>Trifid nebula</b> ;sev dark lanes;H IV 41 & V 10;D* HN 40 i     |
| M 21   | NGC 6531   | Opn CL  | SGR | 5.9 | 11   | 13'   | 18 04.2 | -22 29 | 339 | I 3 m     | 70  | 7.3  | 3k   | In Sgr OB1;36 members to 12th mag                                  |
| M 22   | NGC 6656   | Glob CL | SGR | 5.2 | 11   | 24'   | 18 36.4 | -23 54 | 340 | VII       |     |      | 10k  | Stars mags 11...;one of finest globs                               |
| M 23   | NGC 6494   | Opn CL  | SGR | 5.5 | 13   | 27'   | 17 57.1 | -18 59 | 339 | III 1 m   | 150 | 9.2  | 4.5k | 100 members to 13th mag  |
| M 24   | IC 4715    | Opn CL  | SGR | 3.1 | 4.3  | 95'   | 18 26.6 | -18 23 | 339 |           |     |      | 10k  | <b>Small Sagittarius Star Cloud</b> ; dark neb , 6603 invl         |
| M 25   | IC 4725    | Opn CL  | SGR | 4.6 | 12   | 29'   | 18 31.8 | -19 07 | 340 | I 2 p     | 30  | 6.7  | 3k   | Contains U Sgr;Stars mags 6...10                                   |
| M 26   | NGC 6694   | Opn CL  | SCT | 8   | 12   | 15'   | 18 45.2 | -09 24 | 295 | I 1 m     | 30  | 10.3 | 5k   | Finderscope will show why Messier included it;70*,14 m             |
| M 27   | NGC 6853   | Pln Neb | VUL | 7.3 | 11.2 | 480"  | 19 59.6 | +22 43 | 162 | 3(2)      |     | 14.1 | 1.3k | <b>dumbbell neb.</b> PK60-3.1;Lord Rosse drew 18* invl             |
| M 28   | NGC 6626   | Glob CL | SGR | 6.9 | 11   | 15'   | 18 24.5 | -24 52 | 340 | IV        |     |      | 18k  | 45' NW from Lambda Sgr;* mags 14...                                |
| M 29   | NGC 6913   | Opn CL  | CYG | 6.6 | 11   | 7'    | 20 23.9 | +38 32 | 120 | III 3 p n | 50  | 8.6  | 7.2k | About 20 stars mags 8...   |
| M 30   | NGC 7099   | Glob CL | CAP | 6.9 | 11   | 8.9'  | 21 40.4 | -23 11 | 346 | V         |     |      | 25k  | Wm. Herschel saw very elliptical shape                             |
| M 31   | NGC 224    | Galaxy  | AND | 3.4 | 13.5 | 189'  | 00 42.7 | +41 16 | 60  | Sb        |     |      | 2.6m | <b>Andromeda Galaxy</b> ;Local Group;nearest spiral                |
| M 32   | NGC 221    | Galaxy  | AND | 8.1 | 12.4 | 8.5'  | 00 42.7 | +40 52 | 60  | E2        |     |      | 2.6m | Companion to <b>M31</b> ; Member of Local Group                    |
| M 33   | NGC 598    | Galaxy  | TRI | 5.7 | 14.2 | 68.7' | 01 33.9 | +30 39 | 91  | Sc        |     |      | 3m   | <b>Pinwheel Galaxy</b> ;Local Group;H V 17                         |
| M 34   | NGC 1039   | Opn CL  | PER | 5.2 | -    | 35'   | 02 42.1 | +42 47 | 62  | II 3 m    | 100 | 7.3  | 1.4k | At least 80 true members;sev D* incl h1123 & O Stv 44              |
| M 35   | NGC 2168   | Opn CL  | GEM | 5.1 | 12   | 28'   | 06 08.9 | +24 21 | 137 | III 2 m   | 200 | 8.2  | 2.8k | Lord Rosse counted 300*;Orange * invl;NGC 2158 30' S               |
| M 36   | NGC 1960   | Opn CL  | AUR | 6   | 12   | 12'   | 05 36.3 | +34 08 | 97  | II 3 m    | 60  | 8.9  | 4.1k | in Aur OB1;incl Struve 737 10.7"sep                                |
| M 37   | NGC 2099   | Opn CL  | AUR | 5.6 | 11   | 24'   | 05 52.3 | +32 33 | 98  | II 1 r    | 150 | 9.2  | 4.6k | Total population 500*;dark area near center                        |
| M 38   | NGC 1912   | Opn CL  | AUR | 6.4 | 12   | 21'   | 05 28.7 | +35 51 | 97  | III 2 m   | 100 | 9.5  | 4.2k | in Aur OB1;Burnham-shaped like Greek letter Pi                     |
| M 39   | NGC 7092   | Opn CL  | CYG | 4.6 | 11   | 32'   | 21 32.2 | +48 26 | 86  | III 2 p   | 30  | 6.8  | 0.3k | Large but loose cluster  |
| M 40   | Winnecke 4 | 2 Stars | UMA | 9   | -    |       | 12 21.9 | +58 06 | 47  |           |     |      |      | D* 9 & 9.3 mag 50" sep; No nebulae                                 |
| M 41   | NGC 2287   | Opn CL  | CMA | 4.5 | 12   | 38'   | 06 46.0 | -20 45 | 318 | II 3 m    | 80  | 6.9  | 2.4k | 150 members to 13 mag;orange * near center                         |
| M 42   | NGC 1976   | CL+Neb  | ORI | 4   | 11   | 90'   | 05 35.3 | -05 23 | 225 | E+R       |     |      | 1.6k | <b>Orion neb</b> Trapezium* 6.7-7.7m;>50 var* invl                 |
| M 43   | NGC 1982   | Brn Neb | ORI | 7   | 13   | 20'   | 05 35.5 | -05 16 | 225 | E         |     |      | 1.6k | H III 1 ?;detached <b>part of Orion Nebula</b>                     |
| M 44   | NGC 2632   | Opn CL  | CNC | 3.1 | 13   | 95'   | 08 40.0 | +19 40 | 141 | II 2 m    | 50  | 6.3  | 0.5k | <b>Beehive Cluster</b> ;200 memb to 14 mag                         |
| M 45   | Mel 22     | CL+Neb  | TAU | 1.2 | 11   | 100'  | 03 47.0 | +24 07 | 132 | I 3 r n   | 100 | 2.9  | 0.4k | <b>Pleiades</b> ;nebys NGC 1432 and 1435 involved                  |
| M 46   | NGC 2437   | Opn CL  | PUP | 6.1 | 13   | 27'   | 07 41.8 | -14 49 | 274 | III 2 m   | 100 | 8.7  | 5.4k | PLNNB NGC 2438 on N edge;150 * 10-13 mag                           |
| M 47   | NGC 2422   | Opn CL  | PUP | 4.4 | 11   | 30'   | 07 36.6 | -14 29 | 274 | III 2 m   | 30  | 5.7  | 1.6k | H VIII 38;Messier gave poor postion;Stv 1121,1120 invl             |
| M 48   | NGC 2548   | Opn CL  | HYA | 5.8 | 13   | 54'   | 08 13.7 | -05 45 | 275 | I 2 m     | 80  | 8.2  | 1.5k | Messier wrong position by 4 deg in dec;50* 9-13mag;                |
| M 49   | NGC 4472   | Galaxy  | VIR | 8.4 | 13.2 | 9.8'  | 12 29.8 | +08 00 | 193 | E4        |     |      | 60m  | NGC 4467 @ 4.2';NGC 4470 @ 10.5';NGC 4465 @ 5.8'                   |
| M 50   | NGC 2323   | Opn CL  | MON | 5.9 | 12   | 16'   | 07 02.5 | -08 23 | 273 | II 3 m    | 80  | 7.8  | 3k   | About 100 stars mags 9...14  |
| M 51   | NGC 5194   | Galaxy  | CVN | 8.4 | 12.9 | 10.8' | 13 29.9 | +47 12 | 76  | Sbc       |     |      | 37m  | <b>Whirlpool Gal</b> ;inter. pair;classic spiral, inc ngc5195      |
| M 52   | NGC 7654   | Opn CL  | CAS | 6.9 | 12   | 13'   | 23 24.2 | +61 35 | 15  | I 2 r     | 200 | 8.2  | 7k   | Messier saw neby there is none                                     |
| M 53   | NGC 5024   | Glob CL | COM | 7.7 | 12   | 14.4' | 13 12.9 | +18 10 | 150 | V         |     |      | 56k  | 1 deg NE of Alpha Comae Berenices                                  |
| M 54   | NGC 6715   | Glob CL | SGR | 7.7 | 11   | 9.1'  | 18 55.1 | -30 29 | 378 | III       |     |      | 83k  | * mags 15...   |



7000 DSO List (sorted by name)

| NAME         | OTHER    | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns  | bs   | Dist | SAC NOTES   |
|--------------|----------|---------|-----|------|------|-------|---------|--------|-----|---------|-----|------|------|---|
| <b>M 55</b>  | NGC 6809 | Glob CL | SGR | 6.3  | 13   | 19'   | 19 40.0 | -30 58 | 379 | XI      |     |      | 17k  | * mags 15...  |
| <b>M 56</b>  | NGC 6779 | Glob CL | LYR | 8.3  | 12   | 5'    | 19 16.6 | +30 11 | 118 | X       |     |      | 32k  | Stars 11...   |
| <b>M 57</b>  | NGC 6720 | Pln Neb | LYR | 9.4  | 9.3  | 86"   | 18 53.6 | +33 02 | 117 | 4(3)    |     | 15.8 | 2.3k | <b>Ring Nebula</b> ;central* var 14 to 16 mag;PK63+13.1     |
| <b>M 58</b>  | NGC 4579 | Galaxy  | VIR | 9.7  | 13.1 | 6'    | 12 37.7 | +11 49 | 194 | SBb     |     |      | 60m  | fine compact spiral   |
| <b>M 59</b>  | NGC 4621 | Galaxy  | VIR | 9.6  | 12.9 | 5.3'  | 12 42.0 | +11 39 | 194 | E3      |     |      | 60m  | B diff N;smooth arms  |
| <b>M 60</b>  | NGC 4649 | Galaxy  | VIR | 8.8  | 12.9 | 7.6'  | 12 43.7 | +11 33 | 194 | E1      |     |      | 60m  | NGC 4647 @ 2.5'   |
| <b>M 61</b>  | NGC 4303 | Galaxy  | VIR | 9.6  | 13.4 | 6.5'  | 12 21.9 | +04 28 | 238 | SBbc Ri |     |      | 60m  | SN 1926;1961;1964;NGC 4301 @ 10 ' ;H I 139;L face-o         |
| <b>M 62</b>  | NGC 6266 | Glob CL | OPH | 6.4  | 11   | 14.1' | 17 01.2 | -30 07 | 376 | IV      |     |      | 22k  | Asymmetrical  |
| <b>M 63</b>  | NGC 5055 | Galaxy  | CVN | 8.6  | 13.3 | 12.6' | 13 15.8 | +42 02 | 76  | Sbc     |     |      | 37m  | <b>Sunflower</b> , vsvB stell. N in B inner lens;many filam |
| <b>M 64</b>  | NGC 4826 | Galaxy  | COM | 8.5  | 12.7 | 10.3' | 12 56.7 | +21 41 | 149 | Sab     |     |      | 12m  | <b>Blackeye Galaxy</b> ;dark marking near center            |
| <b>M 65</b>  | NGC 3623 | Galaxy  | LEO | 9.3  | 12.8 | 9'    | 11 18.9 | +13 05 | 191 | SBa     |     |      | 35m  | <b>M66</b> subgroup , part of <b>leo's trio</b>             |
| <b>M 66</b>  | NGC 3627 | Galaxy  | LEO | 8.9  | 12.7 | 9.1'  | 11 20.2 | +13 00 | 191 | SBb     |     |      | 35m  | <b>Leo's Trio</b> ; <b>M 65</b> & NGC 3628 in field         |
| <b>M 67</b>  | NGC 2682 | Opn CL  | CNC | 6.9  | 13   | 30'   | 08 50.8 | +11 49 | 187 | II 2 m  | 200 | 9.7  | 2.3k | 500 memb to 16 mag;Mallas-dark spot near center             |
| <b>M 68</b>  | NGC 4590 | Glob CL | HYA | 7.3  | 13   | 9.8'  | 12 39.5 | -26 45 | 329 | X       |     |      | 32k  |   |
| <b>M 69</b>  | NGC 6637 | Glob CL | SGR | 7.7  | 11   | 7.1'  | 18 31.4 | -32 21 | 378 | V       |     |      | 25k  |   |
| <b>M 70</b>  | NGC 6681 | Glob CL | SGR | 7.8  | 11   | 7.8'  | 18 43.2 | -32 18 | 378 | V       |     |      | 28k  | Curved arc of stars to NE;* mags 14...                      |
| <b>M 71</b>  | NGC 6838 | Glob CL | SGE | 8.3  | 12   | 6.1'  | 19 53.8 | +18 47 | 162 |         |     |      | 12k  | Arrowhead shape; stars have few metals                      |
| <b>M 72</b>  | NGC 6981 | Glob CL | AQR | 9.2  | 12   | 5.9'  | 20 53.5 | -12 32 | 299 | IX      |     |      | 53k  | 3 deg WSW of NGC 7009                                       |
| <b>M 73</b>  | NGC 6994 | Opn CL  | AQR | 9.7  | -    | 2.8'  | 20 59.0 | -12 38 | 299 | IV 1 p  | 4   | 10   |      | 4 or 5 10th mag stars; Messier saw neb but there is no.     |
| <b>M 74</b>  | NGC 628  | Galaxy  | PSC | 9.4  | 14.2 | 10'   | 01 36.7 | +15 47 | 173 | Sc      |     |      | 35m  | Fine face on spiral   |
| <b>M 75</b>  | NGC 6864 | Glob CL | SGR | 8.6  | 11   | 6'    | 20 06.1 | -21 55 | 343 | I       |     |      | 58k  | * mags 17...  |
| <b>M 76</b>  | NGC 650/ | Pln Neb | PER | 10.1 | 10.4 | 163"  | 01 42.3 | +51 35 | 37  | 3(6)    |     | 17.6 | 3.4k | <b>Little Dumbbell</b> or <b>Cork Nebula</b> ;PK130-10.1    |
| <b>M 77</b>  | NGC 1068 | Galaxy  | CET | 8.9  | 12.8 | 7.3'  | 02 42.7 | -00 01 | 220 | Sbp     |     |      | 60m  | Seyfert;brtst in NGC 1068 grp                               |
| <b>M 78</b>  | NGC 2068 | Brn Neb | ORI | 8    | 12   | 8'    | 05 46.8 | +00 05 | 226 | E       |     |      | 1.6k | Comet shaped;2 10mag * invl; 53" sep                        |
| <b>M 79</b>  | NGC 1904 | Glob CL | LEP | 7.7  | 12   | 7.8'  | 05 24.2 | -24 31 | 315 | V       |     |      | 40k  | Stars vF  |
| <b>M 80</b>  | NGC 6093 | Glob CL | SCO | 7.3  | 11   | 5.1'  | 16 17.0 | -22 59 | 336 | II      |     |      | 27k  | Extremely rich and compressed                               |
| <b>M 81</b>  | NGC 3031 | Galaxy  | UMA | 6.9  | 13.2 | 24.9' | 09 55.6 | +69 04 | 23  | Sb      |     |      | 11m  | brightest in group;fine spiral                              |
| <b>M 82</b>  | NGC 3034 | Galaxy  | UMA | 8.4  | 12.5 | 10.5' | 09 55.9 | +69 41 | 23  | Sd      |     |      | 11m  | <b>M81 group</b> ;eruptive;H IV 79, Cigar Galaxy            |
| <b>M 83</b>  | NGC 5236 | Galaxy  | HYA | 7.5  | 12.8 | 13.1' | 13 37.0 | -29 52 | 370 | SBc     |     |      | 10m  | Fast SupNova producer-4 in 50 yrs                           |
| <b>M 84</b>  | NGC 4374 | Galaxy  | VIR | 9.1  | 13   | 6.7'  | 12 25.1 | +12 53 | 193 | E1      |     |      | 60m  | <b>Markarian's chain</b> ;center of <b>Virgo cluster</b>    |
| <b>M 85</b>  | NGC 4382 | Galaxy  | COM | 9.1  | 12.9 | 7.4'  | 12 25.4 | +18 11 | 148 | Sa      |     |      | 60m  | SN 1960r;P w NGC 4394 @ 7.8' foll                           |
| <b>M 86</b>  | NGC 4406 | Galaxy  | VIR | 8.9  | 13.2 | 9.8'  | 12 26.2 | +12 57 | 193 | E3      |     |      | 60m  | <b>Markarian's chain</b> ;                                  |
| <b>M 87</b>  | NGC 4486 | Galaxy  | VIR | 8.6  | 13   | 8.7'  | 12 30.8 | +12 23 | 193 | E1p     |     |      | 60m  | <b>B in Virgo cluster</b> ;NGC 4486A @ 7.5' ssf;            |
| <b>M 88</b>  | NGC 4501 | Galaxy  | COM | 9.6  | 13   | 6.8'  | 12 32.0 | +14 25 | 193 | Sbc     |     |      | 60m  | comp @ 6.9';mult arm spiral                                 |
| <b>M 89</b>  | NGC 4552 | Galaxy  | VIR | 9.8  | 13.2 | 5.3'  | 12 35.7 | +12 33 | 194 | EO      |     |      | 60m  |   |
| <b>M 90</b>  | NGC 4569 | Galaxy  | VIR | 9.5  | 13.4 | 9.9'  | 12 36.8 | +13 10 | 194 | SBab    |     |      | 60m  | IC 3583 @ 6 ' ;vseBN in B diff bar w much dark matter       |
| <b>M 91</b>  | NGC 4548 | Galaxy  | COM | 10.1 | 13.4 | 5.2'  | 12 35.4 | +14 30 | 194 | SBb     |     |      | 60m  | NGC 4571 @ 27 ' ;H II 120;F outer arms in S pattn           |
| <b>M 92</b>  | NGC 6341 | Glob CL | HER | 6.5  | 11   | 11.2' | 17 17.1 | +43 08 | 81  | IV      |     |      | 26k  | Lord Rosse saw spiral structure                             |
| <b>M 93</b>  | NGC 2447 | Opn CL  | PUP | 6.2  | 12   | 22'   | 07 44.5 | -23 51 | 320 | IV 1 p  | 80  | 8.2  | 4.5k | 63 members to 13 mag;wedge shaped center                    |
| <b>M 94</b>  | NGC 4736 | Galaxy  | CVN | 8.2  | 13.1 | 12.3' | 12 50.9 | +41 07 | 75  | Sb Ring |     |      | 15m  |   |
| <b>M 95</b>  | NGC 3351 | Galaxy  | LEO | 9.7  | 13.5 | 7.3'  | 10 44.0 | +11 42 | 190 | SBb     |     |      | 38m  | Leo group   |
| <b>M 96</b>  | NGC 3368 | Galaxy  | LEO | 9.3  | 13.1 | 7.8'  | 10 46.8 | +11 49 | 190 | SBab Ri |     |      | 38m  | comp @ 3.8';PA 205  |
| <b>M 97</b>  | NGC 3587 | Pln Neb | UMA | 11   | 12.1 | 202"  | 11 14.8 | +55 01 | 46  | 3a      |     | 14   | 2.6k | <b>Owl Nebula</b> ;PK148+57.1                               |
| <b>M 98</b>  | NGC 4192 | Galaxy  | COM | 10.1 | 13.6 | 9.4'  | 12 13.8 | +14 54 | 193 | SBb     |     |      | 60m  | 6 Comae Berenices is 30' east                               |
| <b>M 99</b>  | NGC 4254 | Galaxy  | COM | 9.9  | 13.2 | 5.3'  | 12 18.8 | +14 25 | 193 | Sc      |     |      | 60m  | SN 1967h;Norton-diff for small scope                        |
| <b>M 100</b> | NGC 4321 | Galaxy  | COM | 9.4  | 13.4 | 7.5'  | 12 22.9 | +15 49 | 193 | SBbc    |     |      | 60m  | SN 1901-14-59;NGC 4322 @ 5.2';NGC 4328 @ 6.1'               |
| <b>M 101</b> | NGC 5457 | Galaxy  | UMA | 7.9  | 14.9 | 28.5' | 14 03.2 | +54 21 | 49  | SBc     |     |      | 24m  | P w NGC 5474;SN 1909;spir galax w one heavy arm;            |
| <b>M 102</b> | NGC5866? | Galaxy  | DRA | 9.9  | 12.2 | 6.5'  | 15 06.5 | +55 46 | 50  | Sa      |     |      |      | vBN w dk lane and ansae;NGC 5867 small E neb;               |
| <b>M 103</b> | NGC 581  | Opn CL  | CAS | 7.4  | 11   | 6'    | 01 33.4 | +60 39 | 37  | III 2 p | 40  | 10.6 | 8k   | in Cas OB8;incl Struve 131 6-9m 14"                         |
| <b>M 104</b> | NGC 4594 | Galaxy  | VIR | 8    | 11.6 | 8.6'  | 12 40.0 | -11 37 | 284 | Sab     |     |      | 50m  | <b>Sombrero Galaxy</b> ; H I 43;dark equatorial lane;       |
| <b>M 105</b> | NGC 3379 | Galaxy  | LEO | 9.3  | 12.8 | 5.3'  | 10 47.8 | +12 35 | 190 | E1      |     |      | 38m  | P w NGC 3384 @ 7.2';NGC 3389 @ 10 ' ;Leo Group              |
| <b>M 106</b> | NGC 4258 | Galaxy  | CVN | 8.4  | 13.6 | 17.4' | 12 19.0 | +47 18 | 74  | SBbc    |     |      | 25m  | H V 43  |
| <b>M 107</b> | NGC 6171 | Glob CL | OPH | 7.8  | 12   | 3.3'  | 16 32.5 | -13 03 | 291 | X       |     |      | 20k  | H VI 40   |
| <b>M 108</b> | NGC 3556 | Galaxy  | UMA | 10   | 13.1 | 8.6'  | 11 11.5 | +55 40 | 46  | SBc     |     |      | 45m  | H V 46; <b>M 97</b> is 48' SE;nearly edge-on                |
| <b>M 109</b> | NGC 3992 | Galaxy  | UMA | 9.8  | 13.6 | 7.5'  | 11 57.6 | +53 22 | 47  | SBbc    |     |      | 55m  | H IV 61;theta struc barred sp;Gamma UMa 40' NW              |
| <b>M 110</b> | NGC 205  | Galaxy  | AND | 8.1  | 14   | 19.5' | 00 40.4 | +41 41 | 60  | SA0     |     |      | 2.6m | <b>M31 Companion</b> ;UGC 426; Member Local Group           |

## 7000 DSO List (sorted by name)

| NAME          | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns   | bs | SAC NOTES  |
|---------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|------|----|--|
| NGC 1         | UGC 57      | Galaxy  | PEG | 12.9 | 13.5 | 1.7'  | 00 07.3 | +27 43 | 125 | Sb         |      |    |  |
| NGC 3         | UGC 58      | Galaxy  | PSC | 13.3 | 12.8 | 1.1'  | 00 07.3 | +08 18 | 170 | SO         |      |    | comp @ 4.8';PA 24;0.6'x0.2'                              |
| NGC 5         | UGC 62      | Galaxy  | AND | 13.3 | 13.2 | 1.2'  | 00 07.8 | +35 22 | 89  | Elliptical |      |    | compact  |
| NGC 6         | NGC 20      | Galaxy  | AND | 13   | -    |       | 00 09.5 | +33 19 | 89  | E-SO       |      |    |  |
| NGC 7         | ESO 409-22  | Galaxy  | SCL | 13.9 | 14   | 2.2'  | 00 08.3 | -29 55 | 350 | SBc        |      |    |  |
| NGC 9         | UGC 78      | Galaxy  | PEG | 13.6 | 13.3 | 1.1'  | 00 08.9 | +23 49 | 125 | Sbp        |      |    | Peculiar;disturbed;B main body 0.45x0.25                 |
| NGC 10        | ESO 349-32  | Galaxy  | SCL | 12.5 | 13.5 | 2.4'  | 00 08.6 | -33 52 | 350 | SBbc       |      |    |  |
| NGC 11        | UGC 73      | Galaxy  | AND | 13.7 | 12.5 | 1.5'  | 00 08.7 | +37 27 | 89  | Sa         |      |    |  |
| NGC 12        | UGC 74      | Galaxy  | PSC | 13.1 | 14   | 1.6'  | 00 08.7 | +04 37 | 215 | SBbc       |      |    | H III 868;UGC 74   |
| NGC 13        | UGC 77      | Galaxy  | AND | 13.2 | 13.5 | 2.3'  | 00 08.8 | +33 26 | 89  | Sab        |      |    | H III 866;UGC 77   |
| NGC 14        | UGC 75      | Galaxy  | PEG | 12.1 | 13.9 | 2.8'  | 00 08.8 | +15 49 | 170 | Irp+       |      |    | H II 591;UGC 75;Arp 235                                  |
| NGC 15        | UGC 82      | Galaxy  | PEG | 13.8 | 13.1 | 1'    | 00 09.0 | +21 37 | 125 | Sa         |      |    |  |
| NGC 16        | UGC 80      | Galaxy  | PEG | 12   | 12.4 | 1.8'  | 00 09.1 | +27 44 | 125 | E3         |      |    | H IV 15;comp@ 3.3';PA 347;0.4x0.3;vF interacting pair    |
| NGC 17        | NGC 34      | Galaxy  | CET | 13.8 | -    | 2.1'  | 00 11.1 | -12 07 | 260 | S          |      |    |  |
| NGC 20        | NGC 6       | Galaxy  | AND | 13   | 13.8 | 1.7'  | 00 09.5 | +33 19 | 89  | E-SO       |      |    | comp@ 3.8' PA122 0.5x0.2;B * 0.3' n                      |
| NGC 21        | NGC 29      | Galaxy  | AND | 12.7 | 12.6 | 1.5'  | 00 10.8 | +33 21 | 89  | SBbc       |      |    |  |
| NGC 22        | UGC 80      | Galaxy  | PEG | 13.6 | 14.3 | 1.7'  | 00 09.8 | +27 50 | 125 | Sb         |      |    | comp@ 3.3' PA 347 0.4X0.25                               |
| NGC 23        | UGC 89      | Galaxy  | PEG | 12   | 13   | 2.5'  | 00 09.9 | +25 55 | 125 | SBa        |      |    | H III 147;UGC 89   |
| NGC 24        | ESO 472-16  | Galaxy  | SCL | 11.6 | 13.7 | 6.1'  | 00 09.9 | -24 58 | 305 | Sc         |      |    | H III 461;A2;Nearly edge-on                              |
| NGC 25        | ESO 149-19  | Galaxy  | PHE | 13   | 13   | 1.4'  | 00 10.0 | -57 01 | 416 | E-SO Ba    |      |    |  |
| NGC 26        | UGC 94      | Galaxy  | PEG | 12.7 | 13.6 | 2.1'  | 00 10.4 | +25 50 | 125 | Sab Ring   |      |    |  |
| NGC 27        | UGC 96      | Galaxy  | AND | 13.4 | 12.8 | 1.2'  | 00 10.5 | +29 00 | 89  | Sb         |      |    |  |
| NGC 28        | AM 0007-57  | Galaxy  | PHE | 13.6 | 13.1 | 0.6'  | 00 10.4 | -56 59 | 416 | Pec        |      |    |  |
| NGC 29        | NGC 21      | Galaxy  | AND | 12.7 | 12.9 | 1.5'  | 00 10.8 | +33 21 | 89  | SBbc       |      |    | H II 853;UGC 100   |
| NGC 34        | NGC 17      | Galaxy  | CET | 13.8 | -    | 2.1'  | 00 11.1 | -12 07 | 260 | S          |      |    |  |
| NGC 35        | MCG - 2- 1- | Galaxy  | CET | 14   | -    | 0.7'  | 00 11.2 | -12 01 | 260 | Sb         |      |    |  |
| NGC 36        | UGC 106     | Galaxy  | PSC | 13.1 | 14.2 | 2.2'  | 00 11.4 | +06 23 | 170 | SBb        |      |    | H III 456;p of 2;interaction;bridge? to comp 1 ' PA 83   |
| NGC 37        | ESO 149-22  | Galaxy  | PHE | 13.7 | 13.2 | 1.1'  | 00 11.4 | -56 57 | 416 | SBO        |      |    |  |
| NGC 38        | MCG - 1- 1- | Galaxy  | PSC | 13.5 | -    | 1.4'  | 00 11.8 | -05 35 | 260 | Sa         |      |    |  |
| NGC 39        | UGC 114     | Galaxy  | AND | 13.5 | 13.6 | 1.1'  | 00 12.3 | +31 04 | 89  | Sc         |      |    | H III 861  |
| <b>NGC 40</b> | PK 120+9.1  | Pln Neb | CEP | 10.7 | 7.3  | 60"   | 00 13.0 | +72 31 | 3   | 3b(3)      | 11.5 |    | H IV 58;PK120+9.1;Lord Rosse saw spiral structure        |
| NGC 41        | MCG 4- 1-   | Galaxy  | PEG | 13.6 | 12.6 | 0.8'  | 00 12.8 | +22 01 | 125 | Sc         |      |    |  |
| NGC 42        | UGC 118     | Galaxy  | PEG | 13.8 | 13.1 | 1.1'  | 00 12.9 | +22 06 | 125 | E-SO       |      |    | p of 2;P w comp at 1 ' ;PA 77;0.9x0.8;dwarf              |
| NGC 43        | UGC 120     | Galaxy  | AND | 12.6 | 13.4 | 1.6'  | 00 13.0 | +30 55 | 89  | SBO        |      |    |  |
| NGC 45        | A 4         | Galaxy  | CET | 10.6 | 14.7 | 7.6'  | 00 14.1 | -23 11 | 305 | SBd        |      |    | Loose struct;Spiral pattern dim                          |
| NGC 47        | NGC 58      | Galaxy  | CET | 13.8 | -    | 2.3'  | 00 14.5 | -07 10 | 260 | SBbc       |      |    |  |
| NGC 48        | UGC 133     | Galaxy  | AND | 13.6 | 13.7 | 1.6'  | 00 14.0 | +48 14 | 59  | SBbc       |      |    |  |
| NGC 49        | UGC 136     | Galaxy  | AND | 13.7 | 13.7 | 1.1'  | 00 14.4 | +48 15 | 59  | SO         |      |    | NGC 51 group;in group of 6;NGC 51 the brightest          |
| NGC 50        | MCG - 1- 1- | Galaxy  | CET | 12.4 | -    | 2.4'  | 00 14.7 | -07 21 | 260 | E-SO       |      |    |  |
| NGC 51        | UGC 138     | Galaxy  | AND | 13.1 | 13.2 | 1.7'  | 00 14.6 | +48 15 | 59  | S0 Pec     |      |    | brightest in group of 6 including NGC 49 and NGC 48      |
| NGC 52        | UGC 140     | Galaxy  | PEG | 13.3 | 13.1 | 2.2'  | 00 14.7 | +18 35 | 125 | Sc         |      |    | H III 183;nf of 2;disturbed;UGC 122 superimp 0.9' sf ctr |
| <b>NGC 55</b> | Dunlop 507  | Galaxy  | SCL | 7.9  | 13.4 | 31.2' | 00 14.9 | -39 11 | 386 | SBp        |      |    | Sculptor Galaxy Group                                    |
| NGC 57        | UGC 145     | Galaxy  | PSC | 11.6 | 13.2 | 2.2'  | 00 15.5 | +17 20 | 125 | Elliptical |      |    | H II 241=H II 243  |
| NGC 58        | NGC 47      | Galaxy  | CET | 13.8 | -    | 2.3'  | 00 14.5 | -07 10 | 260 | SBbc       |      |    |  |
| NGC 59        | ESO 539- 4  | Galaxy  | CET | 12.4 | 13.6 | 2.6'  | 00 15.4 | -21 27 | 305 | E-SO       |      |    |  |
| NGC 63        | UGC 167     | Galaxy  | PSC | 11.6 | 12.2 | 1.7'  | 00 17.8 | +11 27 | 171 | S pec      |      |    |  |
| NGC 64        | MCG - 1- 1- | Galaxy  | CET | 14   | -    | 1.6'  | 00 17.5 | -06 50 | 261 | SBbc       |      |    |  |
| NGC 66        | ESO 473-10  | Galaxy  | CET | 13.4 | 13   | 1.2'  | 00 19.1 | -22 56 | 306 | SB Ring    |      |    |  |
| NGC 68        | UGC 170     | Galaxy  | AND | 12.9 | 14.2 | 1.2'  | 00 18.3 | +30 04 | 89  | E-SO       |      |    | H V 16;In compact group                                  |
| NGC 70        | UGC 174;IC  | Galaxy  | AND | 13.5 | 13.9 | 1.6'  | 00 18.4 | +30 05 | 89  | Sbc        |      |    | In compact group w NGC 68 and 71                         |
| NGC 71        | UGC 173;V   | Galaxy  | AND | 13.2 | 13.4 | 1.5'  | 00 18.4 | +30 04 | 89  | S0 Pec     |      |    | In compact group   |
| NGC 72        | UGC 176;V   | Galaxy  | AND | 13.5 | 13.3 | 1.1'  | 00 18.5 | +30 02 | 89  | SBab       |      |    | In compact group   |
| NGC 73        | MCG - 3- 1- | Galaxy  | CET | 13.6 | -    | 1.7'  | 00 18.6 | -15 19 | 261 | Sbc        |      |    |  |
| NGC 75        | UGC 182     | Galaxy  | PSC | 13.2 | 13.9 | 1.5'  | 00 19.4 | +06 27 | 171 | SO         |      |    |  |
| NGC 76        | UGC 185     | Galaxy  | AND | 13   | 12.7 | 1'    | 00 19.6 | +29 56 | 89  | Compac     |      |    | compact;complex nucl region                              |
| NGC 78A       | NGC 78-1    | Galaxy  | PSC | 13.7 | 13.3 | 1.1'  | 00 20.4 | +00 50 | 216 | SBO-a      |      |    | compact  |
| NGC 78B       | NGC 78-2    | Galaxy  | PSC | 13.5 | 12.3 | 0.7'  | 00 20.5 | +00 50 | 216 | SO         |      |    | Compact  |
| NGC 80        | UGC 203     | Galaxy  | AND | 12.1 | 13.2 | 2.2'  | 00 21.2 | +22 21 | 126 | E-SO       |      |    | Brightest in group                                       |
| NGC 82        |             | Star    | AND | 14   | -    |       | 00 21.3 | +22 28 | 126 |            |      |    |  |
| NGC 83        | UGC 206     | Galaxy  | AND | 12.5 | 13.4 | 1.3'  | 00 21.4 | +22 26 | 126 | E0         |      |    | NGC 80 group   |
| NGC 89        | ESO 194-11  | Galaxy  | PHE | 13.5 | 13   | 1.2'  | 00 21.4 | -48 40 | 386 | SBO-a      |      |    |  |
| NGC 91        |             | Star    | AND | 13.7 | 14   |       | 00 21.9 | +22 22 | 126 |            |      |    | Distorted;NGC 80 group                                   |
| NGC 92        | ESO 194-12  | Galaxy  | PHE | 13.1 | 13.6 | 1.9'  | 00 21.5 | -48 38 | 386 | Sa         |      |    |  |
| NGC 93        | UGC 209     | Galaxy  | AND | 13.3 | 12.9 | 1.4'  | 00 22.1 | +22 25 | 126 | Sb         |      |    | Part of NGC 80 group                                     |



## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|-----|------|---|
| NGC 95         | UGC 214     | Galaxy | PSC | 12.5 | 13.2 | 2.1'  | 00 22.2 | +10 29 | 171 | SBc Ring   |     |      | H II 257;asym uneven arms;UGC 214;Arp 65              |
| NGC 97         | UGC 216     | Galaxy | AND | 12.3 | 13   | 1.5'  | 00 22.5 | +29 45 | 90  | Elliptical |     |      | Compact   |
| NGC 98         | ESO 242- 5  | Galaxy | PHE | 13.4 | -    | 1.6'  | 00 22.8 | -45 16 | 386 | SBbc       |     |      |   |
| NGC 99         | UGC 230     | Galaxy | PSC | 13.6 | 14.1 | 1.4'  | 00 24.0 | +15 46 | 171 | Scp        |     |      | Disturbed   |
| NGC 100        | UGC 231     | Galaxy | PSC | 13.3 | 14.6 | 5.7'  | 00 24.0 | +16 29 | 171 | Sc         |     |      |   |
| NGC 101        | ESO 350-14  | Galaxy | SCL | 12.8 | 14.3 | 2.1'  | 00 23.9 | -32 32 | 351 | SBc        |     |      |   |
| NGC 102        | MCG - 2- 2- | Galaxy | CET | 14   | -    | 1'    | 00 24.6 | -13 57 | 261 | SBO-a      |     |      |   |
| NGC 103        | OCL 291     | Opn CL | CAS | 9.8  | -    | 5'    | 00 25.3 | +61 19 | 15  | II 2 p     | 30  | 12.3 | In Cas OB4  |
| NGC 105        | UGC 241     | Galaxy | PSC | 13.2 | 12.8 | 1.1'  | 00 25.3 | +12 53 | 171 | Sab        |     |      | s of 2;compact  |
| NGC 108        | UGC 246     | Galaxy | AND | 12.1 | 13.3 | 2'    | 00 26.0 | +29 13 | 90  | SBO-a      |     |      | H III 148   |
| NGC 109        | UGC 251     | Galaxy | AND | 13.7 | 13.8 | 1.1'  | 00 26.2 | +21 48 | 126 | SBa        |     |      | f or 2  |
| NGC 110        | OCL 300     | Opn CL | CAS | -    | -    | 19'   | 00 27.4 | +71 24 | 15  | IV 1 p     | 100 | 9.7  |   |
| NGC 112        | UGC 255     | Galaxy | AND | 13.5 | 12.7 | 1'    | 00 26.8 | +31 42 | 90  | Sc         |     |      |   |
| NGC 113        | MCG - 1- 2- | Galaxy | CET | 13.5 | -    | 1.4'  | 00 26.9 | -02 30 | 216 | E-SO       |     |      |   |
| NGC 114        | UGC 259     | Galaxy | CET | 13.7 | 13   | 0.8'  | 00 27.0 | -01 47 | 216 | SBO        |     |      |   |
| NGC 115        | ESO 350-17  | Galaxy | SCL | 12.9 | 13.4 | 1.9'  | 00 26.8 | -33 41 | 351 | SBbc       |     |      |   |
| NGC 118        | UGC 264     | Galaxy | CET | 14   | 12.8 | 0.7'  | 00 27.3 | -01 47 | 216 | Compac     |     |      | Compact   |
| NGC 119        | ESO 150- 8  | Galaxy | PHE | 13.1 | 13   | 1'    | 00 27.0 | -56 59 | 416 | E-SO       |     |      |   |
| NGC 120        | UGC 267     | Galaxy | CET | 13.4 | 13.3 | 1.5'  | 00 27.5 | -01 31 | 216 | SBO        |     |      |   |
| NGC 124        | UGC 271     | Galaxy | CET | 13   | 13   | 1.4'  | 00 27.9 | -01 49 | 216 | Sc         |     |      |   |
| NGC 125        | UGC 286     | Galaxy | PSC | 12.1 | 13   | 1.8'  | 00 28.8 | +02 50 | 216 | Sa Ring    |     |      | H III 869;NGC 128 Group;UGC 268                       |
| NGC 128        | UGC 292     | Galaxy | PSC | 11.8 | 12.7 | 2.8'  | 00 29.2 | +02 52 | 216 | SO Pec     |     |      | H II 854;Br group w NGC 127;130;;rect. central mass   |
| <b>NGC 129</b> | OCL 294     | Opn CL | CAS | 6.5  | -    | 21'   | 00 30.0 | +60 13 | 35  | IV 2 p     | 35  | 8.6  | H VIII 79;Contains DL Cas                             |
| NGC 131        | ESO 350-21  | Galaxy | SCL | 13.2 | 13.1 | 1.8'  | 00 29.6 | -33 16 | 351 | SBb        |     |      |   |
| NGC 132        | UGC 301     | Galaxy | CET | 12.6 | 13.6 | 1.9'  | 00 30.2 | +02 06 | 216 | SBbc       |     |      | H II 855;UGC 301                                      |
| NGC 133        | OCL 296     | Opn CL | CAS | 9.4  | -    | 7'    | 00 31.3 | +63 21 | 15  | IV 1 p     | 5   |      |   |
| NGC 134        | ESO 350-23  | Galaxy | SCL | 10.4 | 13.3 | 8.4'  | 00 30.4 | -33 15 | 351 | SBbc       |     |      | Nearly edge-on  |
| <b>NGC 136</b> | OCL 295     | Opn CL | CAS | 11.5 | -    | 1.2'  | 00 31.5 | +61 31 | 15  | II 2 p     | 20  | 13   | H VI 35;30 F*   |
| NGC 137        | UGC 309     | Galaxy | PSC | 12.8 | 13.2 | 1.3'  | 00 31.0 | +10 12 | 171 | SO         |     |      | H II 471  |
| NGC 138        | UGC 308     | Galaxy | PSC | 13.6 | 13.1 | 1.3'  | 00 31.0 | +05 10 | 216 | Sa         |     |      | brightest in sub-group                                |
| NGC 140        | UGC 311     | Galaxy | AND | 13.2 | 13.8 | 1.5'  | 00 31.3 | +30 47 | 90  | SBc Ring   |     |      |   |
| NGC 142        | ESO 473-21  | Galaxy | CET | 13.8 | 13.1 | 1.1'  | 00 31.1 | -22 37 | 306 | SBb        |     |      |   |
| NGC 144        | ESO 473-23  | Galaxy | CET | 13.7 | 13   | 0.8'  | 00 31.3 | -22 39 | 306 | Sc         |     |      |   |
| NGC 145        | Arp 19      | Galaxy | CET | 12.7 | 13.5 | 1.8'  | 00 31.8 | -05 09 | 216 | SBd        |     |      |   |
| NGC 146        | OCL 299     | Opn CL | CAS | 9.1  | -    | 7'    | 00 32.9 | +63 19 | 15  | IV 3 p     | 20  | 11.6 |   |
| <b>NGC 147</b> | UGC 326;D   | Galaxy | CAS | 9.5  | 14.5 | 13.5' | 00 33.2 | +48 30 | 60  | dE4        |     |      | Dwarf EI;P w NGC 185 at 58';low surface br; Local Grp |
| NGC 148        | ESO 410-20  | Galaxy | SCL | 12.2 | 12.6 | 2'    | 00 34.3 | -31 47 | 351 | Sa         |     |      | Spindle shape   |
| NGC 149        | UGC 332     | Galaxy | AND | 13.7 | 13.5 | 1.2'  | 00 33.8 | +30 43 | 90  | SO         |     |      | Compact   |
| NGC 150        | A 7         | Galaxy | SCL | 11.4 | 13.4 | 3.9'  | 00 34.3 | -27 48 | 306 | SBb        |     |      |   |
| NGC 151        | NGC 153     | Galaxy | CET | 11.6 | 13.4 | 3.8'  | 00 34.0 | -09 42 | 261 | SBbc       |     |      | H II 478  |
| NGC 153        | NGC 151     | Galaxy | CET | 11.6 | -    | 3.8'  | 00 34.0 | -09 42 | 261 | SBbc       |     |      |   |
| NGC 154        | MCG - 2- 2- | Galaxy | CET | 14   | -    | 1.1'  | 00 34.3 | -12 39 | 261 | Elliptical |     |      | H III 467   |
| NGC 155        | MCG - 2- 2- | Galaxy | CET | 13.5 | -    | 1.7'  | 00 34.7 | -10 46 | 261 | SO         |     |      |   |
| <b>NGC 157</b> | MCG - 2- 2- | Galaxy | CET | 10.4 | 12.9 | 4.1'  | 00 34.8 | -08 24 | 261 | SBbc       |     |      | H II 3  |
| NGC 159        | ESO 150-11  | Galaxy | PHE | 13.8 | 13.1 | 1.4'  | 00 34.6 | -55 47 | 417 | SBO-a      |     |      |   |
| NGC 160        | UGC 356     | Galaxy | AND | 12.6 | 14.3 | 2.9'  | 00 36.1 | +23 57 | 126 | Sa Ring    |     |      | H III 476;UGC 356                                     |
| NGC 163        | MCG - 2- 2- | Galaxy | CET | 12.7 | 13.4 | 1.6'  | 00 36.0 | -10 07 | 261 | E0         |     |      | H III 954   |
| NGC 165        | MCG - 2- 2- | Galaxy | CET | 13.1 | 13.7 | 1.6'  | 00 36.5 | -10 06 | 261 | SBbc       |     |      |   |
| NGC 167        | ESO 473-29  | Galaxy | CET | 13.6 | 13.1 | 1'    | 00 35.4 | -23 23 | 306 | SBc        |     |      |   |
| NGC 168        | ESO 474- 4  | Galaxy | CET | 13.8 | 12.3 | 1.2'  | 00 36.6 | -22 36 | 306 | Sa         |     |      |   |
| NGC 169        | UGC 365;A   | Galaxy | AND | 13.2 | -    | 1.8'  | 00 36.9 | +23 59 | 126 | Sb         |     |      | Contact P w IC 1559                                   |
| NGC 171        | NGC 175     | Galaxy | CET | 12.9 | -    | 2.1'  | 00 37.4 | -19 56 | 306 | SBab       |     |      | H III 223?  |
| NGC 172        | ESO 474- 5  | Galaxy | CET | 13.4 | 12.9 | 2'    | 00 37.2 | -22 35 | 306 | SBbc       |     |      |   |
| NGC 173        | UGC 369     | Galaxy | CET | 13   | 15.1 | 3.2'  | 00 37.2 | +01 57 | 216 | Sc         |     |      | H III 871;UGC 369                                     |
| NGC 174        | ESO 411- 1  | Galaxy | SCL | 12.8 | 12.4 | 1.4'  | 00 37.0 | -29 29 | 351 | SBO-a      |     |      |   |
| NGC 175        | NGC 171     | Galaxy | CET | 12.2 | 13.5 | 2.1'  | 00 37.4 | -19 56 | 306 | SBab       |     |      | Theta structure                                       |
| NGC 177        | ESO 474- 6  | Galaxy | CET | 13.2 | 13.2 | 2.2'  | 00 37.6 | -22 33 | 306 | Sab Ring   |     |      |   |
| NGC 178        | IC 39       | Galaxy | CET | 12.6 | 13.2 | 2.1'  | 00 39.1 | -14 10 | 261 | SB/P       |     |      |   |
| NGC 179        | ESO 540- 7  | Galaxy | CET | 13.3 | 12.8 | 0.9'  | 00 37.8 | -17 51 | 306 | E-SO       |     |      |   |
| NGC 180        | UGC 380     | Galaxy | PSC | 12.9 | 14.4 | 2.4'  | 00 38.0 | +08 38 | 171 | SBbc       |     |      | H III 876;2 thin inner arms;mult arms in outer disk   |
| NGC 182        | UGC 382     | Galaxy | PSC | 12.4 | 13.6 | 1.9'  | 00 38.2 | +02 44 | 216 | SBa        |     |      | H III 870;Brightest in group;UGC 382                  |
| NGC 183        | UGC 387     | Galaxy | AND | 12.7 | 14.1 | 2.1'  | 00 38.5 | +29 31 | 90  | Elliptical |     |      |   |
| <b>NGC 185</b> | UGC 396     | Galaxy | CAS | 9.2  | 14.3 | 12.5' | 00 39.0 | +48 20 | 60  | dE0        |     |      | H II 707;Dwarf elliptical; Member Local Group         |
| NGC 186        | UGC 390     | Galaxy | PSC | 13.4 | 13.4 | 1.4'  | 00 38.4 | +03 10 | 216 | SBO-a      |     |      | In NGC 182 group                                      |

7000 DSO List (sorted by name)

| NAME           | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|----------------|--------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| NGC 187        | MCG - 3- 2-  | Galaxy  | CET | 13.3 | -    | 1.3'  | 00 39.5 | -14 39 | 261 | Sc         |    |      |  |
| <b>NGC 188</b> | OCL 309      | Opn CL  | CEP | 8.1  | -    | 14'   | 00 47.5 | +85 14 | 1   | II 2 r     | 20 | 12.1 |  |
| NGC 189        | OCL 301      | Opn CL  | CAS | 8.8  | -    | 3.7'  | 00 39.6 | +61 05 | 16  | III 2 p    | 15 | 10.9 |  |
| NGC 192        | UGC 401      | Galaxy  | CET | 12.6 | 13.1 | 1.9'  | 00 39.2 | +00 52 | 216 | SBa        |    |      | H III 872;Brightest of 4;UGC 401                     |
| NGC 193        | UGC 408      | Galaxy  | PSC | 12.2 | 12.7 | 1.4'  | 00 39.3 | +03 20 | 216 | S(B)0      |    |      | H III 595;Compact;In NGC 182 group;UGC 408           |
| NGC 194        | UGC 407      | Galaxy  | PSC | 12.2 | 13   | 1.6'  | 00 39.3 | +03 02 | 216 | E1         |    |      | H II 856;Compact;In NGC 182 group;UGC 407            |
| NGC 196        | UGC 405      | Galaxy  | CET | 14   | -    | 1.3'  | 00 39.3 | +00 55 | 216 | SBO        |    |      | H II 860;NGC 192 group;contact P w NGC 197           |
| NGC 198        | UGC 414      | Galaxy  | PSC | 13.1 | 13.4 | 1.1'  | 00 39.4 | +02 48 | 216 | Sc         |    |      | H II 857;NGC 182 group;Several tightly wound arms;   |
| NGC 199        | UGC 415      | Galaxy  | PSC | 13.6 | 13.4 | 1.2'  | 00 39.6 | +03 08 | 216 | SO         |    |      | In NGC 182 group                                     |
| NGC 200        | UGC 420      | Galaxy  | PSC | 12.6 | 13.1 | 1.7'  | 00 39.6 | +02 53 | 216 | SBbc       |    |      | H II 858;In NGC 182 group;UGC 420                    |
| NGC 201        | UGC 419      | Galaxy  | CET | 12.9 | 13.8 | 1.8'  | 00 39.6 | +00 52 | 216 | SBc        |    |      | H III 873;NGC 192 group;UGC 419                      |
| NGC 203        | NGC 211      | Galaxy  | PSC | 14   | 12.3 | 0.9'  | 00 39.7 | +03 27 | 216 | SO         |    |      |  |
| NGC 204        | UGC 423      | Galaxy  | PSC | 12.9 | 13.1 | 1.2'  | 00 39.7 | +03 18 | 216 | SO         |    |      | Compact;In NGC 182 group                             |
| NGC 206        |              | C+N+G   | AND | 12.8 | -    | 1.8'  | 00 40.5 | +40 44 | 60  | Pec        |    |      | A star cloud in the south end of Andromeda Galaxy    |
| NGC 209        | ESO 540- 8   | Galaxy  | CET | 12.9 | 13.3 | 1.3'  | 00 39.1 | -18 37 | 306 | E-SO       |    |      |  |
| <b>NGC 210</b> | MCG - 2- 2-  | Galaxy  | CET | 10.9 | 13.8 | 4.6'  | 00 40.6 | -13 52 | 261 | SBb        |    |      | H II 452;F outer arms form encircling ring           |
| NGC 212        | ESO 150-18   | Galaxy  | PHE | 13.4 | 13.6 | 1.3'  | 00 40.2 | -56 09 | 417 | E-SO       |    |      |  |
| NGC 213        | UGC 436      | Galaxy  | PSC | 13.3 | 14.1 | 1.7'  | 00 41.2 | +16 28 | 171 | SBa        |    |      | H III 200;UGC 436                                    |
| NGC 214        | UGC 438      | Galaxy  | AND | 12.3 | 13.1 | 1.9'  | 00 41.5 | +25 30 | 126 | SBc        |    |      | H II 209;UGC 438                                     |
| NGC 215        | ESO 150-19   | Galaxy  | PHE | 13.1 | 12.9 | 1.1'  | 00 40.8 | -56 13 | 417 | E-SO       |    |      |  |
| NGC 216        | ESO 540-15   | Galaxy  | CET | 13.2 | 13.5 | 2'    | 00 41.5 | -21 03 | 306 | SO         |    |      | H III 244  |
| NGC 217        | MCG - 2- 2-  | Galaxy  | CET | 13.5 | -    | 2.7'  | 00 41.6 | -10 01 | 261 | Sa         |    |      | H II 480   |
| NGC 218        | UGC 440      | Galaxy  | AND | 14   | 14.1 | 1.1'  | 00 41.7 | +36 22 | 90  | S pec      |    |      |  |
| NGC 223        | IC 44        | Galaxy  | CET | 13.2 | 13.1 | 1.3'  | 00 42.3 | +00 51 | 216 | SOa/Pec    |    |      | Peculiar   |
| <b>NGC 225</b> | OCL 305      | Opn CL  | CAS | 7    | -    | 12'   | 00 43.6 | +61 46 | 16  | III 1 p n  | 15 | 9.3  | H VIII 78;W shaped                                   |
| NGC 226        | UGC 459      | Galaxy  | AND | 13.3 | 13   | 0.9'  | 00 42.9 | +32 35 | 90  | Pec        |    |      |  |
| NGC 227        | UGC 456      | Galaxy  | CET | 12.1 | 12.8 | 1.5'  | 00 42.6 | -01 32 | 216 | E2         |    |      | H II 444;UGC 456                                     |
| NGC 228        | UGC 458      | Galaxy  | AND | 13.7 | 13.8 | 1.2'  | 00 42.9 | +23 30 | 126 | SBab R     |    |      | 2nd of 3   |
| NGC 232        | ESO 474-15   | Galaxy  | CET | 13.5 | 13   | 0.9'  | 00 42.8 | -23 34 | 306 | SBa        |    |      |  |
| NGC 233        | UGC 464      | Galaxy  | AND | 12.4 | 13.4 | 1.7'  | 00 43.6 | +30 35 | 90  | Elliptical |    |      | H III 149  |
| NGC 234        | UGC 463      | Galaxy  | PSC | 12.5 | 13.4 | 1.6'  | 00 43.5 | +14 21 | 171 | SBc        |    |      | H II 245   |
| NGC 235A       | ESO 474-16   | Galaxy  | CET | 14   | -    | 1.3'  | 00 42.9 | -23 33 | 306 | SO         |    |      |  |
| NGC 236        | UGC 462      | Galaxy  | PSC | 13.5 | 13.5 | 1.2'  | 00 43.5 | +02 57 | 216 | Sc         |    |      | brightest of 3                                       |
| NGC 237        | UGC 461      | Galaxy  | CET | 13   | 13.3 | 1.6'  | 00 43.5 | -00 08 | 216 | SBc        |    |      |  |
| NGC 238        | ESO 194-31   | Galaxy  | PHE | 13.2 | -    | 2'    | 00 43.4 | -50 11 | 417 | SB Ring    |    |      |  |
| NGC 240        | UGC 473      | Galaxy  | PSC | 13.5 | 13.3 | 1'    | 00 45.0 | +06 07 | 171 | Sa Ring    |    |      | eF outer disk  |
| NGC 243        | MCG 5- 2-    | Galaxy  | AND | 13.6 | 12.5 | 0.9'  | 00 46.0 | +29 58 | 90  | S pec      |    |      |  |
| NGC 244        | MCG - 3- 3-  | Galaxy  | CET | 13.7 | -    | 1.2'  | 00 45.8 | -15 36 | 261 | SO Pec     |    |      | H III 485;A10  |
| NGC 245        | UGC 476      | Galaxy  | CET | 12.2 | 12.6 | 1.3'  | 00 46.1 | -01 43 | 216 | Sb         |    |      | H II 445;Peculiar;UGC 476;Mrk 555                    |
| <b>NGC 246</b> | PK 118-74.1  | Pln Neb | CET | 10.4 | 13.5 | 240"  | 00 47.1 | -11 52 | 261 | 3b         |    | 11.9 | H V 25;PK118-74.1;Galaxy NGC 255 15' NNE             |
| <b>NGC 247</b> | ESO 540-22   | Galaxy  | CET | 9.1  | 14.4 | 21'   | 00 47.1 | -20 46 | 306 | SBcd       |    |      | H V 20   |
| NGC 250        | UGC 487      | Galaxy  | PSC | 13.6 | 13.1 | 1.1'  | 00 47.3 | +07 55 | 171 | Sa         |    |      |  |
| NGC 251        | UGC 490      | Galaxy  | PSC | 13.2 | 14.7 | 2.4'  | 00 47.9 | +19 36 | 126 | Sc         |    |      | H III 204;amorph disc;UGC 490                        |
| NGC 252        | UGC 491      | Galaxy  | AND | 12.4 | 12.8 | 1.4'  | 00 48.0 | +27 37 | 126 | Sa Ring    |    |      | H II 609;Brightest in group;UGC 491                  |
| <b>NGC 253</b> | ESO 474-29   | Galaxy  | SCL | 7.2  | 12.7 | 26.4' | 00 47.6 | -25 18 | 306 | SBc        |    |      | sculptor galaxy , arms more defined by dust          |
| NGC 254        | ESO 411-15   | Galaxy  | SCL | 11.7 | 13   | 2.6'  | 00 47.5 | -31 25 | 351 | SBO-a R    |    |      | vF outer arms  |
| NGC 255        | MCG - 2- 3-  | Galaxy  | CET | 11.9 | 13.9 | 3.1'  | 00 47.8 | -11 28 | 261 | SBbc       |    |      | H II 472   |
| NGC 257        | UGC 493      | Galaxy  | PSC | 12.6 | 13.4 | 1.9'  | 00 48.0 | +08 18 | 171 | Sc         |    |      | H II 863;UGC 493                                     |
| NGC 259        | MCG - 1- 3-  | Galaxy  | CET | 13.3 | -    | 2.9'  | 00 48.1 | -02 47 | 217 | Sbc        |    |      | H II 703=H II 621                                    |
| NGC 260        | UGC 497      | Galaxy  | AND | 13.5 | 13.2 | 0.8'  | 00 48.6 | +27 41 | 127 | Scp        |    |      | NGC 252 group  |
| NGC 262        | UGC 499;M    | Galaxy  | AND | 13.1 | 13.1 | 1.4'  | 00 48.8 | +31 57 | 90  | Sa         |    |      |  |
| NGC 263        | MCG - 2- 3-  | Galaxy  | CET | 14   | -    | 0.7'  | 00 48.8 | -13 06 | 262 | Sbc        |    |      |  |
| NGC 264        | ESO 295- 6   | Galaxy  | SCL | 13.4 | 12   | 1.1'  | 00 48.3 | -38 14 | 351 | SO         |    |      |  |
| NGC 266        | UGC 508      | Galaxy  | PSC | 11.6 | 13.8 | 2.9'  | 00 49.8 | +32 17 | 90  | SBab       |    |      | H III 153;UGC 508                                    |
| NGC 268        | MCG - 1- 3-  | Galaxy  | CET | 13.1 | 13.6 | 1.6'  | 00 50.2 | -05 12 | 217 | SBbc       |    |      | H III 463  |
| NGC 270        | MCG - 2- 3-  | Galaxy  | CET | 12.9 | -    | 1.8'  | 00 50.5 | -08 39 | 262 | Sa         |    |      | H III 955  |
| NGC 271        | UGC 519      | Galaxy  | CET | 12   | 13.3 | 2.2'  | 00 50.7 | -01 55 | 217 | SBab       |    |      | H II 446;UGC 519                                     |
| NGC 272        | OCL 312      | Opn CL  | AND | 8.5  | -    |       | 00 51.4 | +35 49 | 90  | IV 1 p     | 8  | 9    |  |
| NGC 273        | MCG - 1- 3-  | Galaxy  | CET | 12.9 | 13.2 | 2.1'  | 00 50.8 | -06 53 | 262 | SO         |    |      | H III 430  |
| NGC 274        | MCG - 1- 3-  | Galaxy  | CET | 11.8 | 12.6 | 1.9'  | 00 51.0 | -07 03 | 262 | E1         |    |      | H III 429;V V 81;Arp 140                             |
| NGC 275        | VV 81;Arp 14 | Galaxy  | CET | 12.5 | 12.9 | 1.5'  | 00 51.1 | -07 04 | 262 | Sbp        |    |      |  |
| NGC 277        | MCG - 2- 3-  | Galaxy  | CET | 13.4 | -    | 1.4'  | 00 51.3 | -08 36 | 262 | E-SO       |    |      |  |
| <b>NGC 278</b> | UGC 528      | Galaxy  | CAS | 10.8 | 12.2 | 2.4'  | 00 52.1 | +47 33 | 60  | SBb        |    |      | Lg B nucl;sev knotty massive arms;B part sharp edge; |
| NGC 279        | UGC 532      | Galaxy  | CET | 12.7 | 13.3 | 1.6'  | 00 52.1 | -02 13 | 217 | Sa         |    |      | H III 439;UGC 532;Mrk 558                            |



## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|----|--|
| NGC 280        | UGC 534     | Galaxy  | AND | 13.2 | 13.8 | 1.7'  | 00 52.5 | +24 21 | 127 | SB Ring    |    |    | H III 477;distorted;asym ecc nucl region;UGC 534 |
| <b>NGC 281</b> | IC 11       | CL+Neb  | CAS | 7.4  | -    | 4'    | 00 53.0 | +56 37 | 36  | E+*        |    | 9  |  |
| <b>NGC 288</b> | ESO 474-SQ  | Glob CL | SCL | 8.1  | -    | 13.8' | 00 52.8 | -26 35 | 307 | X          |    |    | H VI 20;loose structured globular                |
| NGC 289        | ESO 411-25  | Galaxy  | SCL | 11   | 14   | 5.4'  | 00 52.7 | -31 12 | 351 | SBbc       |    |    |  |
| NGC 295        | UGC 562     | Galaxy  | PSC | 12.6 | 13.2 | 2.2'  | 00 55.1 | +31 33 | 90  | SBb        |    |    |  |
| NGC 298        | MCG - 1- 3- | Galaxy  | CET | 13.5 | -    | 1.7'  | 00 55.0 | -07 20 | 262 | Sc         |    |    |  |
| <b>NGC 300</b> | ESO 295-20  | Galaxy  | SCL | 8.1  | 14.3 | 19.3' | 00 54.9 | -37 41 | 351 | Scd        |    |    | Large S-shaped;loose structured spiral           |
| NGC 304        | UGC 573     | Galaxy  | AND | 13   | 12.6 | 1.1'  | 00 56.1 | +24 08 | 127 | S pec      |    |    | eruptive ?;sff of 2                              |
| NGC 307        | UGC 584     | Galaxy  | CET | 12.8 | 12.8 | 1.6'  | 00 56.5 | -01 46 | 217 | SO         |    |    |  |
| NGC 308        |             | Star    | CET | 14   | -    |       | 00 56.6 | -01 47 | 217 |            |    |    |  |
| NGC 309        | MCG - 2- 3- | Galaxy  | CET | 11.9 | 14   | 3'    | 00 56.7 | -09 55 | 262 | SBc Ring   |    |    | Fine spiral                                      |
| NGC 311        | UGC 592     | Galaxy  | PSC | 13   | 13.1 | 1.5'  | 00 57.5 | +30 17 | 90  | SO         |    |    |  |
| NGC 312        | ESO 151- 6  | Galaxy  | PHE | 13.4 | -    | 1.4'  | 00 56.3 | -52 47 | 417 | E          |    |    |  |
| NGC 314        | ESO 411-32  | Galaxy  | SCL | 13.2 | 12.7 | 0.9'  | 00 56.9 | -31 58 | 351 | SBO-a R    |    |    |  |
| NGC 315        | UGC 597     | Galaxy  | PSC | 11.2 | 13.2 | 3'    | 00 57.8 | +30 21 | 90  | E-SO       |    |    | H II 210;UGC 597                                 |
| NGC 317B       | NGC 317-2   | Galaxy  | AND | 13.9 | -    | 1.1'  | 00 57.7 | +43 47 | 60  | SBbc       |    |    |  |
| NGC 319        | ESO 243-13  | Galaxy  | PHE | 13.3 | 13   | 1'    | 00 57.0 | -43 50 | 387 | SB Ring    |    |    |  |
| NGC 320        | ESO 541- 3  | Galaxy  | CET | 13.5 | 12.4 | 0.8'  | 00 58.8 | -20 50 | 307 | SBO-a R    |    |    |  |
| NGC 322        | ESO 243-15  | Galaxy  | PHE | 13.3 | 12.7 | 1.1'  | 00 57.2 | -43 44 | 387 | SO         |    |    | Galaxy w interacting comp@ 0.2'                  |
| NGC 323        | ESO 151- 9  | Galaxy  | PHE | 13.6 | -    | 1'    | 00 56.7 | -52 59 | 417 | E          |    |    |  |
| NGC 324        | ESO 295-25  | Galaxy  | PHE | 12.9 | 12.3 | 1.4'  | 00 57.2 | -40 58 | 387 | Sa         |    |    |  |
| NGC 326        | UGC 601;4   | Galaxy  | PSC | 13.2 | 14   | 1.5'  | 00 58.4 | +26 52 | 127 | E4p        |    |    |  |
| NGC 327        | MCG - 1- 3- | Galaxy  | CET | 13.4 | 13.3 | 1.5'  | 00 57.9 | -05 08 | 217 | Sbc        |    |    |  |
| NGC 329        | MCG - 1- 3- | Galaxy  | CET | 13.3 | 13.1 | 1.5'  | 00 58.0 | -05 04 | 217 | Sb         |    |    |  |
| NGC 334        | ESO 351-26  | Galaxy  | SCL | 13.8 | 13.3 | 1.2'  | 00 58.8 | -35 07 | 351 | SBb        |    |    |  |
| NGC 336        | ESO 541- 2  | Galaxy  | CET | 12   | -    | 0.7'  | 00 58.0 | -18 23 | 307 | S pec      |    |    |  |
| NGC 337        | MCG - 1- 3- | Galaxy  | CET | 11.6 | 13.3 | 3'    | 00 59.8 | -07 35 | 262 | SBcd       |    |    | H II 433;Coarse spiral pattern                   |
| NGC 337A       | MCG - 1- 3- | Galaxy  | CET | 12.2 | 15.6 | 6.1'  | 01 01.6 | -07 35 | 262 | SBd        |    |    |  |
| NGC 338        | UGC 624     | Galaxy  | PSC | 12.8 | 12.8 | 1.8'  | 01 00.6 | +30 40 | 91  | Sab        |    |    |  |
| NGC 340        | MCG - 1- 3- | Galaxy  | CET | 14   | -    | 0.9'  | 01 00.6 | -06 52 | 262 | Sb         |    |    |  |
| NGC 341        | NGC 341A    | Galaxy  | CET | 13.7 | -    | 1.2'  | 01 00.8 | -09 11 | 262 | SB Ring    |    |    |  |
| NGC 341A       | NGC 341     | Galaxy  | CET | 13   | -    | 1.2'  | 01 00.8 | -09 11 | 262 | SB Ring    |    |    |  |
| NGC 343        |             | Star    | CET | 14   | -    |       | 00 58.4 | -23 14 | 307 |            |    |    |  |
| NGC 345        | MCG - 1- 3- | Galaxy  | CET | 13.5 | -    | 1.2'  | 01 01.4 | -06 53 | 262 | Sa         |    |    |  |
| NGC 349        | MCG - 1- 3- | Galaxy  | CET | 13.5 | -    | 1.2'  | 01 01.8 | -06 48 | 262 | E-SO       |    |    |  |
| NGC 351        | UGC 639     | Galaxy  | CET | 13.2 | 13.1 | 1.5'  | 01 02.0 | -01 56 | 217 | SBO-a      |    |    |  |
| NGC 352        | MCG - 1- 3- | Galaxy  | CET | 12.6 | 13.3 | 2.4'  | 01 02.2 | -04 15 | 217 | SBbc       |    |    | H III 191  |
| NGC 353        | UGC 641     | Galaxy  | CET | 13.6 | 12.9 | 1.3'  | 01 02.4 | -01 57 | 217 | SBab       |    |    |  |
| NGC 354        | UGC 645;M   | Galaxy  | PSC | 13.4 | 12.1 | 0.8'  | 01 03.3 | +22 21 | 127 | SB/P       |    |    | Peculiar   |
| NGC 356        | MCG - 1- 3- | Galaxy  | CET | 13.5 | -    | 1.5'  | 01 03.1 | -06 59 | 262 | Sbc        |    |    |  |
| NGC 357        | MCG - 1- 3- | Galaxy  | CET | 12   | 13.4 | 2.5'  | 01 03.4 | -06 20 | 262 | SBO-a      |    |    | H II 434   |
| NGC 359        | UGC 662     | Galaxy  | CET | 13.3 | 13.6 | 1.5'  | 01 04.3 | -00 46 | 217 | E-SO       |    |    |  |
| NGC 364        | UGC 666     | Galaxy  | CET | 13.1 | 13.6 | 1.4'  | 01 04.7 | -00 48 | 217 | SO         |    |    |  |
| NGC 365        | ESO 352- 1  | Galaxy  | SCL | 13.5 | 12.8 | 1'    | 01 04.3 | -35 07 | 352 | SBbc       |    |    |  |
| NGC 366        | OCL 316     | Opn CL  | CAS | 12   | -    | 3'    | 01 06.4 | +62 14 | 16  | II 3 p     | 30 | 10 |  |
| NGC 368        | ESO 243-23  | Galaxy  | PHE | 13.6 | 12.7 | 0.7'  | 01 04.4 | -43 17 | 387 | SBO-a      |    |    |  |
| NGC 369        | ESO 541-17  | Galaxy  | CET | 13.8 | 13.3 | 1'    | 01 05.1 | -17 46 | 307 | SBb        |    |    |  |
| NGC 374        | UGC 680     | Galaxy  | PSC | 13.4 | 12.5 | 1.1'  | 01 07.1 | +32 48 | 91  | Sa         |    |    |  |
| NGC 378        | ESO 412- 5  | Galaxy  | SCL | 13.1 | 13.5 | 1.5'  | 01 06.2 | -30 11 | 352 | SB Ring    |    |    |  |
| NGC 379        | UGC 683     | Galaxy  | PSC | 12.9 | 12.8 | 1.4'  | 01 07.3 | +32 31 | 91  | SO         |    |    | H II 215;UGC 683;Arp 331                         |
| NGC 380        | UGC 682     | Galaxy  | PSC | 12.5 | 13.1 | 1.3'  | 01 07.3 | +32 29 | 91  | E2         |    |    | H II 216;NGC 383 group;UGC 682;Arp 331           |
| <b>NGC 381</b> | OCL 317     | Opn CL  | CAS | 9.3  | -    | 6'    | 01 08.4 | +61 35 | 16  | III 2 p    | 50 | 10 | H VIII 64;In Cas OB1?                            |
| NGC 382        | UGC 688;A   | Galaxy  | PSC | 13.2 | 12.3 | 0.9'  | 01 07.4 | +32 24 | 91  | E0         |    |    |  |
| NGC 383        | UGC 689     | Galaxy  | PSC | 12.4 | 13.1 | 2'    | 01 07.4 | +32 25 | 91  | SO         |    |    | Brightest in group;8 galaxies in chain           |
| NGC 384        | UGC 686;A   | Galaxy  | PSC | 13.1 | 13.1 | 1.1'  | 01 07.4 | +32 18 | 91  | E3         |    |    | In NGC 383 group                                 |
| NGC 385        | UGC 687;A   | Galaxy  | PSC | 13   | 12.9 | 1.1'  | 01 07.5 | +32 19 | 91  | E-SO       |    |    | In NGC 383 group                                 |
| NGC 389        | UGC 703     | Galaxy  | AND | 13.8 | 13   | 1.3'  | 01 08.5 | +39 42 | 60  | Sa         |    |    |  |
| NGC 391        | UGC 693     | Galaxy  | CET | 13.4 | 12.8 | 0.9'  | 01 07.4 | +00 56 | 217 | Elliptical |    |    |  |
| NGC 392        | UGC 700     | Galaxy  | PSC | 12.7 | 12.7 | 1.2'  | 01 08.4 | +33 08 | 91  | E-SO       |    |    | H II 218;Brightest of 3;UGC 700                  |
| NGC 393        | UGC 707     | Galaxy  | AND | 12.5 | 13.4 | 1.7'  | 01 08.6 | +39 39 | 60  | E-SO       |    |    | H I 54   |
| NGC 399        | UGC 712     | Galaxy  | PSC | 13.6 | 12.9 | 0.9'  | 01 09.0 | +32 38 | 91  | SBa        |    |    |  |
| NGC 403        | UGC 715     | Galaxy  | PSC | 12.5 | 12.6 | 1.8'  | 01 09.2 | +32 45 | 91  | Sa         |    |    |  |
| <b>NGC 404</b> | UGC 718     | Galaxy  | AND | 10.3 | 12.8 | 4.3'  | 01 09.4 | +35 43 | 91  | E0         |    |    | Mirach's ghost H II 224;UGC 718;Beta AND sf 6'   |
| NGC 407        | UGC 730     | Galaxy  | PSC | 13.4 | 12.9 | 1.8'  | 01 10.6 | +33 07 | 91  | Sa         |    |    | H II 219;UGC 730                                 |

## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 409        | ESO 352-12  | Galaxy | SCL | 13   | 13.3 | 1.3' | 01 09.6 | -35 48 | 352 | Elliptical |    |      |   |
| NGC 410        | UGC 735     | Galaxy | PSC | 11.5 | 12.7 | 2.3' | 01 11.0 | +33 09 | 91  | SB0        |    |      | H II 220;UGC 735  |
| NGC 415        | ESO 352-14  | Galaxy | SCL | 13.5 | 13.5 | 1.5' | 01 10.1 | -35 29 | 352 | SBb        |    |      |   |
| NGC 418        | ESO 412- 9  | Galaxy | SCL | 12.6 | 13.8 | 2'   | 01 10.6 | -30 13 | 352 | SBc        |    |      |   |
| NGC 420        | UGC 752     | Galaxy | PSC | 12.1 | 13.5 | 2'   | 01 12.2 | +32 07 | 91  | SO         |    |      | H III 154   |
| NGC 423        | ESO 412-11  | Galaxy | SCL | 13.4 | 12.1 | 1'   | 01 11.4 | -29 14 | 352 | Sa         |    |      |   |
| NGC 424        | ESO 296- 4  | Galaxy | SCL | 12.8 | 13.1 | 1.8' | 01 11.5 | -38 05 | 352 | SBO-a R    |    |      |   |
| NGC 425        | UGC 758     | Galaxy | AND | 12.6 | 12.4 | 1'   | 01 13.0 | +38 46 | 91  | S pec      |    |      |   |
| NGC 426        | UGC 760     | Galaxy | CET | 12.9 | 13.2 | 1.4' | 01 12.8 | -00 17 | 217 | Elliptical |    |      | H III 592;NGC 430 group                                 |
| NGC 428        | UGC 763     | Galaxy | CET | 11.5 | 14.1 | 4'   | 01 12.9 | +00 59 | 217 | Scp        |    |      | H II 622;patchy central region;UGC 763                  |
| NGC 429        | UGC 762     | Galaxy | CET | 13.4 | 12.3 | 1.4' | 01 13.0 | -00 21 | 217 | SO         |    |      | H III 593;NGC 430 group                                 |
| NGC 430        | UGC 765     | Galaxy | CET | 12.5 | 12.9 | 1.3' | 01 13.0 | -00 15 | 217 | Elliptical |    |      | H II 447;Brightest of 3                                 |
| NGC 431        | UGC 776     | Galaxy | AND | 12.9 | 12.9 | 1.4' | 01 14.1 | +33 42 | 91  | SBO        |    |      |   |
| NGC 433        | OCL 319     | Opn CL | CAS | 9    | -    | 2.5' | 01 15.2 | +60 08 | 36  | III 2 p    | 15 | 9    |   |
| NGC 434        | ESO 113-23  | Galaxy | TUC | 12   | 12.9 | 2.2' | 01 12.2 | -58 15 | 417 | SBab       |    |      |   |
| <b>NGC 436</b> | OCL 320     | Opn CL | CAS | 8.8  | -    | 6'   | 01 16.0 | +58 49 | 36  | I 3 m      | 30 | 11.1 | H VII 45  |
| NGC 437        | UGC 788     | Galaxy | PSC | 12.8 | 13   | 1.3' | 01 14.4 | +05 56 | 172 | Sa         |    |      |   |
| NGC 438        | ESO 296- 7  | Galaxy | SCL | 12.8 | 13.1 | 1.4' | 01 13.6 | -37 54 | 352 | SBb        |    |      |   |
| NGC 439        | ESO 412-18  | Galaxy | SCL | 11.5 | 12.8 | 2.5' | 01 13.8 | -31 45 | 352 | E3         |    |      |   |
| NGC 440        | ESO 113-25  | Galaxy | TUC | 13.2 | 12.8 | 1.2' | 01 12.8 | -58 17 | 417 | Sbc        |    |      |   |
| NGC 441        | ESO 412-19  | Galaxy | SCL | 12.7 | 13.1 | 1.4' | 01 13.9 | -31 47 | 352 | SBO-a      |    |      |   |
| NGC 442        | UGC 789     | Galaxy | CET | 13.4 | 12.5 | 1'   | 01 14.6 | -01 01 | 217 | Sa         |    |      |   |
| NGC 443        | IC 1653     | Galaxy | PSC | 13   | 12.3 | 0.8' | 01 15.1 | +33 23 | 91  | S          |    |      | UGC 796   |
| NGC 447        | IC 1556     | Galaxy | PSC | 14   | 15.5 | 2.2' | 01 15.6 | +33 04 | 91  | SBO-a      |    |      |   |
| NGC 448        | UGC 801     | Galaxy | CET | 12.1 | 12.2 | 1.6' | 01 15.3 | -01 38 | 217 | E-SO       |    |      | H II 531  |
| NGC 450        | UGC 806     | Galaxy | CET | 11.5 | 13.5 | 3'   | 01 15.5 | -00 52 | 217 | SBc        |    |      | H III 440;UGC 807 Superimposed                          |
| NGC 451        | IC 1661     | Galaxy | PSC | 13.9 | 12.5 | 0.7' | 01 16.2 | +33 04 | 91  | Sc         |    |      |   |
| NGC 452        | UGC 820     | Galaxy | PSC | 12.6 | 13.2 | 2.5' | 01 16.3 | +31 02 | 91  | SBab       |    |      |   |
| NGC 454        | ESO 151-36  | Galaxy | PHE | 13.1 | -    | 1.7' | 01 14.4 | -55 24 | 417 | S pec      |    |      |   |
| NGC 455        | UGC 815;A   | Galaxy | PSC | 12.6 | 13.4 | 2'   | 01 16.0 | +05 11 | 217 | Pec        |    |      | Peculiar  |
| <b>NGC 457</b> | OCL 321     | Opn CL | CAS | 6.4  | -    | 13'  | 01 19.5 | +58 17 | 36  | I 3 r      | 80 | 8.6  | H VII 42;Phi Cas is not a member; <b>ET Cluster</b>     |
| NGC 461        | ESO 352-33  | Galaxy | SCL | 13.4 | 13.3 | 1.2' | 01 17.3 | -33 51 | 352 | SBc        |    |      |   |
| NGC 466        | ESO 113-34  | Galaxy | TUC | 13.6 | -    | 1.7' | 01 17.2 | -58 55 | 417 | Sa         |    |      |   |
| NGC 467        | UGC 848     | Galaxy | PSC | 11.9 | 12.9 | 2'   | 01 19.2 | +03 18 | 217 | SO         |    |      | H I 108;NGC 470 group;1st of 3;UGC 848                  |
| NGC 470        | UGC 858     | Galaxy | PSC | 11.8 | 13.4 | 2.9' | 01 19.7 | +03 25 | 217 | Sb Ring    |    |      | H III 250;Brightest of 3;UGC 858                        |
| NGC 471        | UGC 861     | Galaxy | PSC | 13.3 | 12.8 | 1'   | 01 20.0 | +14 47 | 172 | SO         |    |      | Brightest in multiple system                            |
| NGC 472        | UGC 870     | Galaxy | PSC | 14   | -    | 1.3' | 01 20.5 | +32 42 | 91  | Sa         |    |      | very compact  |
| NGC 473        | UGC 859     | Galaxy | PSC | 12.5 | 13.1 | 1.9' | 01 19.9 | +16 33 | 172 | SBO-a      |    |      |   |
| NGC 474        | UGC 864     | Galaxy | PSC | 11.5 | 15.5 | 6.1' | 01 20.1 | +03 25 | 218 | SO Ring    |    |      | H III 251;NGC 470 group;disturbed;UGC 864;Arp 227       |
| NGC 477        | UGC 886     | Galaxy | AND | 13   | 13.9 | 2.2' | 01 21.3 | +40 29 | 61  | SBc        |    |      | H III 577;2 main arms split into several secondary arms |
| NGC 479        | UGC 893     | Galaxy | PSC | 13.9 | 13.7 | 1.1' | 01 21.3 | +03 52 | 218 | Sbc Ring   |    |      |   |
| NGC 481        | MCG - 2- 4- | Galaxy | CET | 14   | -    | 1.7' | 01 21.2 | -09 13 | 263 | E-SO       |    |      |   |
| NGC 482        | ESO 296-13  | Galaxy | PHE | 13.7 | 13.7 | 2.2' | 01 20.3 | -40 58 | 388 | Sab        |    |      | Edge-on w 3 companions                                  |
| NGC 483        | UGC 906     | Galaxy | PSC | 13.1 | 12.3 | 0.7' | 01 21.9 | +33 31 | 91  | S          |    |      |   |
| NGC 484        | ESO 113-36  | Galaxy | TUC | 12.2 | -    | 1.9' | 01 19.6 | -58 32 | 417 | E-SO       |    |      |   |
| NGC 485        | UGC 895     | Galaxy | PSC | 13   | 12.9 | 1.8' | 01 21.5 | +07 01 | 173 | S pec      |    |      |   |
| NGC 487        | MCG - 3- 4- | Galaxy | CET | 14   | -    | 1.1' | 01 21.9 | -16 22 | 263 | Sa         |    |      |   |
| <b>NGC 488</b> | UGC 907     | Galaxy | PSC | 10.3 | 13.4 | 5.4' | 01 21.8 | +05 15 | 218 | Sb Ring    |    |      | delicate spiral pattern                                 |
| NGC 489        | UGC 908     | Galaxy | PSC | 12.6 | 11.9 | 1.7' | 01 21.9 | +09 12 | 173 | S pec      |    |      |   |
| NGC 491        | ESO 352-53  | Galaxy | SCL | 12.5 | 12.8 | 1.4' | 01 21.3 | -34 04 | 352 | SBb        |    |      |   |
| NGC 491A       | ESO 352-46  | Galaxy | SCL | 13.8 | 14.3 | 1.9' | 01 20.1 | -33 54 | 352 | SBd        |    |      |   |
| NGC 493        | UGC 914     | Galaxy | CET | 12.5 | 13.7 | 3.4' | 01 22.2 | +00 57 | 218 | SBc        |    |      | H III 594;SN 1971;v patchy chaotic spir pattern         |
| NGC 494        | UGC 919     | Galaxy | PSC | 12.9 | 13.2 | 2'   | 01 22.9 | +33 10 | 91  | Sab        |    |      |   |
| NGC 495        | UGC 920     | Galaxy | PSC | 12.9 | 12.9 | 1.2' | 01 22.9 | +33 28 | 91  | SBO-a      |    |      | H III 156;in triple sub-group;UGC 920                   |
| NGC 496        | UGC 927     | Galaxy | PSC | 13.3 | 13.5 | 1.6' | 01 23.2 | +33 32 | 91  | Sbc        |    |      | H III 157   |
| NGC 497        | UGC 915;A   | Galaxy | CET | 13   | 13.5 | 2.1' | 01 22.4 | -00 53 | 218 | SBbc       |    |      | split arms  |
| NGC 499        | IC 1686     | Galaxy | PSC | 12.1 | 12.8 | 1.7' | 01 23.2 | +33 28 | 91  | E-SO       |    |      | H III 158;IC 1686; UGC 926                              |
| NGC 502        | UGC 922     | Galaxy | PSC | 12.8 | 12.9 | 1.1' | 01 22.9 | +09 03 | 173 | SO         |    |      |   |
| NGC 504        | UGC 935     | Galaxy | PSC | 13   | 12.6 | 1.7' | 01 23.5 | +33 12 | 91  | SO         |    |      | in very dense part of the cluster                       |
| NGC 505        | UGC 924     | Galaxy | PSC | 13.8 | 13.1 | 0.9' | 01 23.0 | +09 28 | 173 | SO         |    |      |   |
| NGC 507        | UGC 938     | Galaxy | PSC | 11.2 | 13.5 | 4'   | 01 23.7 | +33 15 | 91  | E-SO       |    |      | H III 159;UGC 938                                       |
| NGC 508        | UGC 939     | Galaxy | PSC | 13.1 | 13.6 | 1.3' | 01 23.7 | +33 17 | 91  | EO         |    |      | H III 160   |
| NGC 509        | UGC 932     | Galaxy | PSC | 13.4 | 13.2 | 1.3' | 01 23.4 | +09 26 | 173 | SBO-a      |    |      |   |
| NGC 511        | UGC 936     | Galaxy | PSC | 13.7 | 14.1 | 1.2' | 01 23.5 | +11 17 | 173 | Elliptical |    |      |   |



## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 512        | UGC 944     | Galaxy | AND | 13.2 | 12.4 | 1.6' | 01 24.0 | +33 54 | 91  | Sab        |    |      |   |
| NGC 513        | UGC 953     | Galaxy | AND | 12.9 | 11.1 | 0.7' | 01 24.4 | +33 48 | 91  | Sc         |    |      | H III 169;UGC 953   |
| NGC 514        | UGC 947     | Galaxy | PSC | 11.6 | 13.9 | 3.7' | 01 24.1 | +12 55 | 173 | SBc        |    |      | H II 252  |
| NGC 515        | UGC 956     | Galaxy | PSC | 13   | 13.4 | 1.4' | 01 24.6 | +33 28 | 91  | SO         |    |      | H III 167   |
| NGC 516        | UGC 946     | Galaxy | PSC | 13.1 | 12.7 | 1.4' | 01 24.1 | +09 33 | 173 | SBO-a      |    |      |   |
| NGC 517        | UGC 960     | Galaxy | PSC | 12.4 | 13   | 2'   | 01 24.7 | +33 26 | 91  | SO         |    |      | H III 168;UGC 960   |
| NGC 518        | UGC 952     | Galaxy | PSC | 13.3 | 13.1 | 1.6' | 01 24.3 | +09 20 | 173 | Sab        |    |      |   |
| NGC 520        | UGC 966     | Galaxy | PSC | 11.4 | 13.6 | 3.7' | 01 24.6 | +03 48 | 218 | Sa         |    |      | H III 253;Strongly Peculiar; <b>M82</b> type galaxy;UGC 966 |
| NGC 521        | UGC 962     | Galaxy | CET | 11.7 | 14   | 3.3' | 01 24.6 | +01 44 | 218 | SBbc       |    |      | H II 461;UGC 962;delicate multiple arms                     |
| NGC 522        | UGC 970     | Galaxy | PSC | 12.9 | 13   | 2.8' | 01 24.8 | +10 00 | 173 | Sbc        |    |      |   |
| NGC 523        | NGC 537     | Galaxy | AND | 12.7 | 13.2 | 2.5' | 01 25.3 | +34 01 | 91  | Sbc        |    |      | H III 170?;Peculiar;UGC 979                                 |
| <b>NGC 524</b> | UGC 968     | Galaxy | PSC | 10.3 | 12.3 | 3.2' | 01 24.8 | +09 32 | 173 | Sa         |    |      | H I 151   |
| NGC 525        | UGC 972     | Galaxy | PSC | 13.2 | 13.1 | 1.5' | 01 24.9 | +09 42 | 173 | SO         |    |      |   |
| NGC 526B       | ESO 352-66  | Galaxy | SCL | 14   | -    | 0.8' | 01 23.9 | -35 04 | 352 | SO         |    |      |   |
| NGC 527        | ESO 352-68  | Galaxy | SCL | 13   | 12.6 | 1.6' | 01 24.0 | -35 07 | 352 | SBO-a      |    |      |   |
| NGC 528        | UGC 988     | Galaxy | AND | 12.5 | 13.1 | 1.7' | 01 25.6 | +33 40 | 91  | SO         |    |      |   |
| NGC 529        | UGC 955     | Galaxy | AND | 12.1 | 13.8 | 2.4' | 01 25.7 | +34 43 | 91  | E-SO       |    |      |   |
| NGC 530        | IC 1696; UG | Galaxy | CET | 13   | 12.3 | 1.5' | 01 24.7 | -01 35 | 218 | Sa         |    |      |   |
| NGC 531        | UGC 1012    | Galaxy | AND | 13.8 | 13.6 | 1.8' | 01 26.3 | +34 45 | 91  | SBO-a      |    |      |   |
| NGC 532        | UGC 982     | Galaxy | PSC | 12.9 | 13.5 | 2.3' | 01 25.3 | +09 16 | 173 | Sab        |    |      | H III 556;UGC 982   |
| NGC 533        | UGC 992     | Galaxy | CET | 11.4 | 13.8 | 3.9' | 01 25.5 | +01 46 | 218 | E2         |    |      | H II 462;many S galaxies near;10 w in 5 ';;UGC 992          |
| NGC 534        | ESO 296-21  | Galaxy | SCL | 13.4 | 13.3 | 1'   | 01 24.7 | -38 08 | 352 | SBO        |    |      |   |
| NGC 535        | UGC 997     | Galaxy | CET | 13.8 | 12.4 | 1'   | 01 25.5 | -01 25 | 218 | Sa         |    |      | In dense part of cluster                                    |
| NGC 536        | UGC 1013    | Galaxy | AND | 12.4 | 13.4 | 3'   | 01 26.4 | +34 42 | 91  | SBb        |    |      | H III 171;UGC 1013  |
| NGC 537        | NGC 523     | Galaxy | AND | 13.5 | -    | 2.5' | 01 25.3 | +34 01 | 91  | Sbc        |    |      | H III 170   |
| NGC 538        | UGC 991     | Galaxy | CET | 13.7 | 12.8 | 1'   | 01 25.4 | -01 33 | 218 | Sab        |    |      | in dense part of cluster                                    |
| NGC 539        | NGC 563     | Galaxy | CET | 13.5 | 14.1 | 1.6' | 01 25.4 | -18 10 | 308 | SBc        |    |      |   |
| NGC 541        | UGC 1004    | Galaxy | CET | 12.1 | 13.2 | 1.8' | 01 25.7 | -01 23 | 218 | SO         |    |      |   |
| NGC 543        | MCG -0-4-1  | Galaxy | CET | 13.1 | 10.9 | 0.6' | 01 25.8 | -01 18 | 218 | E6         |    |      |   |
| NGC 544        | ESO 296-24  | Galaxy | SCL | 13.4 | 13.3 | 1.2' | 01 25.2 | -38 06 | 352 | E-SO Ba    |    |      |   |
| NGC 545        | UGC 1007    | Galaxy | CET | 12.2 | 13.5 | 2.6' | 01 26.0 | -01 20 | 218 | SO         |    |      | H II 448;double system in common halo;3C40;                 |
| NGC 546        | ESO 296-25  | Galaxy | SCL | 13.6 | 13.2 | 1.4' | 01 25.2 | -38 04 | 352 | SBb        |    |      |   |
| NGC 547        | UGC 1009    | Galaxy | CET | 12.2 | 12.7 | 1.9' | 01 26.0 | -01 21 | 218 | Elliptical |    |      | H II 449;double system (NGC 545) in common halo;            |
| NGC 548        | UGC 1010    | Galaxy | CET | 13.7 | 13.2 | 0.9' | 01 26.0 | -01 14 | 218 | Elliptical |    |      |   |
| NGC 549        |             | Galaxy | SCL | 13.5 | 13.3 | 0.5' | 01 25.1 | -38 00 | 352 | Compac     |    |      |   |
| NGC 550        | UGC 1021    | Galaxy | CET | 12.7 | 12.5 | 1.4' | 01 26.7 | +02 01 | 218 | Sa         |    |      | H II 463;UGC 1021   |
| NGC 551        | UGC 1034    | Galaxy | AND | 12.7 | 12.9 | 1.8' | 01 27.7 | +37 11 | 91  | SBbc       |    |      | H III 560   |
| NGC 557        | IC 1703     | Galaxy | CET | 13.5 | 13.5 | 1.4' | 01 26.4 | -01 38 | 218 | SBO-a      |    |      |   |
| <b>NGC 559</b> | OCL 322     | Opn CL | CAS | 9.5  | -    | 4.4' | 01 29.5 | +63 19 | 16  | II 2 m     | 60 | 10.6 | H VII 48  |
| NGC 560        | UGC 1036    | Galaxy | CET | 13   | 12.9 | 1.9' | 01 27.4 | -01 55 | 218 | SO         |    |      | H III 441;UGC 1036  |
| NGC 561        | UGC 1048    | Galaxy | AND | 12.9 | 13.7 | 1.6' | 01 28.3 | +34 18 | 91  | SBa        |    |      |   |
| NGC 562        | UGC 1049    | Galaxy | AND | 13.3 | 13.4 | 1.3' | 01 28.5 | +48 23 | 61  | Sc         |    |      |   |
| NGC 563        | NGC 539     | Galaxy | CET | 13.3 | 13.1 | 1.6' | 01 25.4 | -18 10 | 308 | SBc        |    |      |   |
| NGC 564        | UGC 1044    | Galaxy | CET | 12.5 | 13.1 | 1.3' | 01 27.8 | -01 53 | 218 | E2         |    |      | H III 442   |
| NGC 565        | UGC 1052    | Galaxy | CET | 13.5 | 12.6 | 1.3' | 01 28.2 | -01 18 | 218 | Sa         |    |      |   |
| NGC 566        | UGC 1058    | Galaxy | PSC | 13.5 | 12.9 | 1.6' | 01 29.0 | +32 20 | 91  | SO         |    |      |   |
| NGC 567        | MCG -2-4-   | Galaxy | CET | 14   | -    | 1'   | 01 27.0 | -10 16 | 263 | SO         |    |      |   |
| NGC 568        | IC 1709     | Galaxy | SCL | 12.6 | 13.7 | 2.2' | 01 27.9 | -35 43 | 352 | E-SO       |    |      |   |
| NGC 569        | UGC 1063    | Galaxy | PSC | 13.6 | 12.7 | 1'   | 01 29.1 | +11 08 | 173 | Sbc        |    |      | disrupted   |
| NGC 570        | UGC 1061    | Galaxy | CET | 12.8 | 13.3 | 1.6' | 01 29.0 | -00 57 | 218 | SBa        |    |      |   |
| NGC 571        | UGC 1069    | Galaxy | PSC | 13.6 | 14   | 1.3' | 01 29.9 | +32 30 | 91  | S pec      |    |      |   |
| NGC 573        | UGC 1078    | Galaxy | AND | 13.1 | 10.9 | 0.4' | 01 30.8 | +41 15 | 61  | Pec        |    |      | Peculiar  |
| NGC 574        | ESO 353-6   | Galaxy | SCL | 13.3 | 13   | 1.1' | 01 29.1 | -35 36 | 352 | SBb        |    |      |   |
| NGC 575        | IC 1710     | Galaxy | PSC | 12.8 | 13.7 | 1.7' | 01 30.8 | +21 26 | 128 | SBc        |    |      |   |
| NGC 577        | NGC 580     | Galaxy | CET | 12.9 | 13.8 | 1.9' | 01 30.7 | -02 00 | 218 | SBa        |    |      |   |
| NGC 578        | ESO 476-15  | Galaxy | CET | 10.9 | 13.7 | 4.8' | 01 30.5 | -22 40 | 308 | SBc        |    |      |   |
| NGC 579        | UGC 1089    | Galaxy | TRI | 13.3 | 13.3 | 1.1' | 01 31.8 | +33 37 | 91  | Sc         |    |      | disturbed   |
| NGC 580        | NGC 577     | Galaxy | CET | 13.9 | -    | 1.9' | 01 30.7 | -02 00 | 218 | SBa        |    |      |   |
| NGC 582        | UGC 1094    | Galaxy | TRI | 13.2 | 13.3 | 2.2' | 01 32.0 | +33 29 | 91  | SBb        |    |      |   |
| <b>NGC 584</b> | IC 1712;H I | Galaxy | CET | 10.5 | 12.9 | 3.3' | 01 31.3 | -06 52 | 263 | E4         |    |      |   |
| NGC 585        | UGC 1092    | Galaxy | CET | 13.1 | 13   | 2.2' | 01 31.7 | -00 56 | 218 | Sa         |    |      | nucl bulge 0.50'X0.35'                                      |
| NGC 586        | MCG -1-5-   | Galaxy | CET | 13.2 | 13.2 | 1.7' | 01 31.6 | -06 54 | 263 | Sa         |    |      |   |
| NGC 587        | IC 1713     | Galaxy | TRI | 12.8 | 13.3 | 2.2' | 01 32.6 | +35 21 | 91  | SBb        |    |      |   |
| <b>NGC 588</b> |             | Neb+Gx | TRI | -    | -    | 0.7' | 01 32.8 | +30 39 | 91  | E+*        |    |      | Part of NGC 598 = <b>M33</b>                                |

## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 589        | MCG - 2- 5- | Galaxy  | CET | 14   | -    | 1.1' | 01 32.7 | -12 03 | 263 | Sa         |    |      |   |
| NGC 590        | UGC 1109    | Galaxy  | AND | 12.9 | 14.1 | 2.6' | 01 33.7 | +44 56 | 61  | SBO-a      |    |      | sff of 2  |
| NGC 591        | UGC 1111    | Galaxy  | AND | 12.9 | 13   | 1.3' | 01 33.5 | +35 40 | 91  | SBO-a      |    |      |   |
| <b>NGC 592</b> |             | Neb+Gx  | TRI | -    | -    | 0.3' | 01 33.2 | +30 39 | 91  | E+*        |    |      | Part of NGC 598 = <b>M33</b>                                |
| NGC 593        | MCG - 2- 5- | Galaxy  | CET | 14   | -    | 1.2' | 01 32.3 | -12 21 | 263 | SO         |    |      |   |
| NGC 594        | MCG - 3- 5- | Galaxy  | CET | 14   | -    | 1.4' | 01 33.0 | -16 32 | 263 | Sbc        |    |      |   |
| <b>NGC 595</b> |             | Neb+Gx  | TRI | -    | -    | 0.5' | 01 33.6 | +30 42 | 91  | E+*        |    |      | Part of NGC 598 = <b>M33</b>                                |
| <b>NGC 596</b> | MCG - 1- 5- | Galaxy  | CET | 10.9 | 13   | 2.8' | 01 32.9 | -07 02 | 263 | E2         |    |      | H II 4  |
| NGC 597        | ESO 353-11  | Galaxy  | SCL | 13.1 | 13.6 | 1.4' | 01 32.2 | -33 30 | 352 | SBbc       |    |      |   |
| NGC 599        | MCG - 2- 5- | Galaxy  | CET | 13   | -    | 1.4' | 01 32.9 | -12 11 | 263 | E-SO       |    |      | H II 473  |
| NGC 600        | MCG - 1- 5- | Galaxy  | CET | 12.4 | 14.6 | 3.7' | 01 33.1 | -07 19 | 263 | SBcd Rii   |    |      | H III 432   |
| <b>NGC 604</b> |             | Neb+Gx  | TRI | -    | -    | 2'   | 01 34.6 | +30 47 | 91  | E+*        |    |      | Emission neb in arm of <b>M 33</b> ;largest H II reg. known |
| NGC 605        | UGC 1128    | Galaxy  | AND | 12.9 | 13.8 | 2.2' | 01 35.0 | +41 15 | 61  | SO         |    |      |   |
| NGC 606        | UGC 1126    | Galaxy  | PSC | 13.4 | 13.9 | 1.4' | 01 34.8 | +21 25 | 128 | SBc        |    |      | angular   |
| NGC 608        | NGC 618     | Galaxy  | TRI | 13.2 | 12.2 | 0.8' | 01 35.5 | +33 39 | 91  | Sab        |    |      |   |
| NGC 609        | OCL 325     | Opn CL  | CAS | 11   | -    | 3'   | 01 36.4 | +64 32 | 16  | II 3 r     | 77 | 14.4 |   |
| NGC 612        | ESO 353-15  | Galaxy  | SCL | 12.9 | 13.1 | 1.5' | 01 34.0 | -36 30 | 352 | Sa         |    |      |   |
| <b>NGC 613</b> | ESO 413-11  | Galaxy  | SCL | 10.1 | 13.3 | 5.2' | 01 34.3 | -29 25 | 352 | SBbc       |    |      | H I 281   |
| NGC 614        | NGC 627     | Galaxy  | TRI | 12.7 | 13.3 | 1.4' | 01 35.9 | +33 41 | 91  | SO         |    |      | H III 174;UGC 1140  |
| <b>NGC 615</b> | MCG - 1- 5- | Galaxy  | CET | 11.6 | 13.3 | 3.4' | 01 35.1 | -07 20 | 263 | Sb         |    |      | H II 282  |
| NGC 619        | ESO 353-21  | Galaxy  | SCL | 13.5 | 13.8 | 1.5' | 01 34.9 | -36 29 | 352 | SBb        |    |      |   |
| NGC 620        | UGC 1150    | Galaxy  | AND | 14   | -    | 1'   | 01 37.0 | +42 19 | 61  | Compac     |    |      | peculiar  |
| NGC 621        | UGC 1147    | Galaxy  | TRI | 12.7 | 13.9 | 1.9' | 01 36.8 | +35 31 | 91  | SBO        |    |      |   |
| NGC 622        | UGC 1143    | Galaxy  | CET | 12.9 | 13.7 | 1.8' | 01 36.0 | +00 40 | 218 | SBbc       |    |      | H III 454;UGC 1143  |
| NGC 623        | ESO 353-23  | Galaxy  | SCL | 12.5 | 13.6 | 2'   | 01 35.1 | -36 29 | 352 | Elliptical |    |      |   |
| NGC 624        | MCG - 2- 5- | Galaxy  | CET | 14   | -    | 1.5' | 01 35.9 | -10 00 | 263 | Sb         |    |      | H III 471   |
| NGC 625        | ESO 297- 5  | Galaxy  | PHE | 11.1 | 13.6 | 6.4' | 01 35.1 | -41 26 | 388 | Sa/S       |    |      |   |
| NGC 626        | ESO 297- 6  | Galaxy  | SCL | 12.7 | 13.9 | 1.9' | 01 35.2 | -39 09 | 388 | SBc        |    |      |   |
| NGC 627        | NGC 614     | Galaxy  | TRI | 13.7 | -    | 1.4' | 01 35.9 | +33 41 | 91  | SO         |    |      |   |
| NGC 630        | ESO 297- 9  | Galaxy  | SCL | 12.5 | 13.3 | 1.6' | 01 35.6 | -39 22 | 388 | E-SO       |    |      | Wide triple   |
| NGC 631        | UGC 1153    | Galaxy  | PSC | 13.3 | 14.3 | 1.7' | 01 36.8 | +05 50 | 173 | Elliptical |    |      |   |
| NGC 632        | UGC 1157    | Galaxy  | PSC | 12.3 | 12.8 | 1.5' | 01 37.3 | +05 53 | 173 | SO         |    |      |   |
| NGC 633        | ESO 297-11  | Galaxy  | SCL | 12.7 | 12.9 | 1.4' | 01 36.4 | -37 19 | 352 | SBb        |    |      |   |
| NGC 634        | UGC 1164    | Galaxy  | TRI | 13   | 13.1 | 2.1' | 01 38.3 | +35 22 | 91  | Sa         |    |      |   |
| NGC 636        | MCG - 1- 5- | Galaxy  | CET | 11.5 | 13.4 | 2.8' | 01 39.1 | -07 31 | 263 | E1         |    |      | H II 283  |
| <b>NGC 637</b> | OCL 329     | Opn CL  | CAS | 8.2  | -    | 3.5' | 01 43.1 | +64 02 | 16  | I 3 p      | 20 | 10   | H VII 49  |
| NGC 638        | UGC 1170    | Galaxy  | PSC | 13.8 | 12.7 | 0.8' | 01 39.6 | +07 14 | 173 | Sb         |    |      |   |
| NGC 641        | ESO 244-42  | Galaxy  | PHE | 12.1 | 12.7 | 1.4' | 01 38.7 | -42 32 | 388 | E-SO       |    |      |   |
| NGC 642        | ESO 413-14  | Galaxy  | SCL | 12.9 | 13.6 | 2'   | 01 39.1 | -29 55 | 352 | SBc        |    |      |   |
| NGC 644        | ESO 244-43  | Galaxy  | PHE | 14   | 13.6 | 1.3' | 01 38.9 | -42 35 | 388 | SBc        |    |      |   |
| NGC 645        | UGC 1177    | Galaxy  | PSC | 12.6 | 13.7 | 2.6' | 01 40.1 | +05 44 | 173 | SBb        |    |      | 2 massive smooth arms;rare                                  |
| NGC 647        | MCG - 2- 5- | Galaxy  | CET | 14   | -    | 1.5' | 01 39.9 | -09 15 | 263 | SO         |    |      |   |
| NGC 648        | IC 146      | Galaxy  | CET | 14   | -    | 1.1' | 01 38.7 | -17 50 | 308 | E-SO       |    |      |   |
| <b>NGC 651</b> | M 76        | Pln Neb | PER | 10.1 | 10.4 | 163" | 01 42.3 | +51 35 | 37  | 3(6)       |    | 17.6 | Little Dumbbell or Cork Nebula;faintest M obj               |
| NGC 652        | UGC 1184    | Galaxy  | PSC | 13.6 | 12.8 | 1'   | 01 40.7 | +07 59 | 173 | S pec      |    |      |   |
| NGC 653        | UGC 1193    | Galaxy  | AND | 13.4 | 12.1 | 1.5' | 01 42.4 | +35 38 | 92  | Sab        |    |      |   |
| <b>NGC 654</b> | OCL 330     | Opn CL  | CAS | 6.5  | -    | 5'   | 01 44.0 | +61 53 | 16  | II 3 m     | 60 | 7.4  | H VII 46;In Cas OB8?;50* mags 11..14                        |
| NGC 655        | MCG - 2- 5- | Galaxy  | CET | 14   | -    | 1.4' | 01 41.9 | -13 05 | 263 | SO         |    |      |   |
| NGC 656        | UGC 1194    | Galaxy  | PSC | 13.4 | 12.2 | 1.5' | 01 42.5 | +26 09 | 128 | SBO        |    |      |   |
| NGC 657        | OCL 337     | Opn CL  | CAS | -    | -    | 7'   | 01 43.8 | +55 53 | 37  |            | 40 | 7.1  |   |
| NGC 658        | UGC 1196    | Galaxy  | PSC | 12.5 | 14   | 3'   | 01 42.2 | +12 36 | 173 | Sb         |    |      |   |
| <b>NGC 659</b> | OCL 332     | Opn CL  | CAS | 7.9  | -    | 5'   | 01 44.4 | +60 40 | 37  | III 1 p    | 40 | 10.4 | H VIII 65;30* mags 12...                                    |
| NGC 660        | UGC 1201    | Galaxy  | PSC | 11.2 | 14.6 | 8'   | 01 43.0 | +13 39 | 173 | SBap       |    |      | H II 253;UGC 1201   |
| NGC 661        | UGC 1215    | Galaxy  | TRI | 12.2 | 13.2 | 1.6' | 01 44.2 | +28 42 | 92  | SO         |    |      | H II 610  |
| NGC 662        | UGC 1220    | Galaxy  | AND | 12.9 | 11.8 | 0.8' | 01 44.6 | +37 42 | 92  | Sc         |    |      | Peculiar  |
| <b>NGC 663</b> | OCL 333     | Opn CL  | CAS | 7.1  | -    | 16'  | 01 46.0 | +61 15 | 16  | III 2 m    | 80 | 8.4  | H VI 31;In Cas OB8;incl Struve 151 152 & 153                |
| NGC 664        | UGC 1210    | Galaxy  | PSC | 12.8 | 13.4 | 1.5' | 01 43.8 | +04 13 | 218 | Sb         |    |      | Brightest of 3  |
| NGC 665        | UGC 1223    | Galaxy  | PSC | 12.1 | 13.5 | 2.4' | 01 44.9 | +10 25 | 173 | SO         |    |      | H II 588;Brightest in group;UGC 1223                        |
| NGC 666        | UGC 1236    | Galaxy  | TRI | 13.4 | 12.2 | 0.7' | 01 46.1 | +34 22 | 92  | S pec      |    |      |   |
| NGC 668        | UGC 1238    | Galaxy  | AND | 13.1 | 13.8 | 1.8' | 01 46.4 | +36 28 | 92  | Sb         |    |      |   |
| NGC 669        | UGC 1248    | Galaxy  | TRI | 12.3 | 12.8 | 3.1' | 01 47.3 | +35 34 | 92  | Sab        |    |      |   |
| NGC 670        | UGC 1250    | Galaxy  | TRI | 12.7 | 13.3 | 2.1' | 01 47.4 | +27 53 | 128 | SO         |    |      | H II 611  |
| NGC 671        | UGC 1247    | Galaxy  | ARI | 13.2 | 12.7 | 1.5' | 01 47.0 | +13 07 | 173 | S pec      |    |      |   |
| <b>NGC 672</b> | UGC 1256    | Galaxy  | TRI | 10.9 | 13.9 | 7.5' | 01 47.9 | +27 26 | 128 | SBc        |    |      | H I 157;Brightest in group;coarse spiral . P w IC1727       |



## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 673        | UGC 1259    | Galaxy | ARI | 12.6 | 13.8 | 2.1' | 01 48.4 | +11 31 | 173 | Sc         |    |      | H II 589;2 B Main arms;UGC 1259                           |
| NGC 674        | NGC 697     | Galaxy | ARI | 12.8 | -    | 4.4' | 01 51.3 | +22 21 | 128 | SBbc       |    |      |   |
| NGC 676        | UGC 1270    | Galaxy | PSC | 10.5 | -    | 4.2' | 01 49.0 | +05 54 | 173 | Sa         |    |      | H IV 42;Brightest in chain including NGC 693;NGC 706      |
| NGC 677        | UGC 1275    | Galaxy | ARI | 12.2 | 13.7 | 2'   | 01 49.2 | +13 03 | 173 | Elliptical |    |      | comp@ 2.9' PA324 0.7"x0.5'                                |
| NGC 678        | UGC 1280    | Galaxy | ARI | 12.2 | 13.4 | 4.1' | 01 49.4 | +22 00 | 128 | SBb        |    |      | H II 228;In NGC 697 group;UGC 1280                        |
| NGC 679        | UGC 1283    | Galaxy | AND | 12.3 | 13.8 | 2.1' | 01 49.7 | +35 47 | 92  | SO         |    |      | H III 175   |
| NGC 680        | UGC 1286    | Galaxy | ARI | 11.9 | 13.1 | 1.8' | 01 49.8 | +21 58 | 128 | SO p       |    |      | H II 229;UGC 1286   |
| NGC 681        | MCG - 2- 5- | Galaxy | CET | 12   | 13.4 | 2.7' | 01 49.2 | -10 26 | 263 | SBab       |    |      | H II 481;Thin equat dust lane;resembles <b>M 104</b>      |
| NGC 682        | MCG - 3- 5- | Galaxy | CET | 13   | -    | 1.4' | 01 49.1 | -14 59 | 263 | E-SO       |    |      | H II 501  |
| NGC 683        | UGC 1288    | Galaxy | ARI | 13.5 | 13.3 | 1'   | 01 49.8 | +11 42 | 173 | S pec      |    |      | spp of 2  |
| NGC 684        | IC 165      | Galaxy | TRI | 12.4 | 12.9 | 3.4' | 01 50.2 | +27 39 | 128 | Sb         |    |      | NGC 672 group   |
| NGC 685        | ESO 152-24  | Galaxy | ERI | 11   | 13.6 | 3.6' | 01 47.7 | -52 46 | 418 | SBc        |    |      |   |
| NGC 686        | ESO 477- 6  | Galaxy | FOR | 12.4 | 13.2 | 1.7' | 01 48.9 | -23 48 | 308 | E-SO       |    |      | H III 459   |
| NGC 687        | UGC 1298    | Galaxy | AND | 12.3 | 12.9 | 1.4' | 01 50.6 | +36 22 | 92  | SO         |    |      | H III 561   |
| NGC 688        | UGC 1302    | Galaxy | TRI | 12.7 | 13.9 | 2.4' | 01 50.7 | +35 17 | 92  | SBb        |    |      |   |
| NGC 689        | ESO 414- 5  | Galaxy | FOR | 13.6 | 13   | 1'   | 01 49.9 | -27 28 | 308 | Sab        |    |      |   |
| NGC 691        | UGC 1305    | Galaxy | ARI | 11.4 | 13.7 | 3.4' | 01 50.7 | +21 46 | 128 | Sbc        |    |      | H II 617;NGC 697 group;rare;smoother than usual Sc        |
| NGC 692        | ESO 197- 3  | Galaxy | PHE | 13.1 | -    | 2.1' | 01 48.7 | -48 39 | 388 | SBbc       |    |      |   |
| NGC 693        | UGC 1304    | Galaxy | PSC | 12.4 | 13.1 | 2.2' | 01 50.5 | +06 09 | 173 | Sa         |    |      | H II 859;NGC 676 group                                    |
| NGC 694        | UGC 1310    | Galaxy | ARI | 13.7 | 16   | 0.6' | 01 51.0 | +22 00 | 128 | SO         |    |      | peculiar;NGC 697 group                                    |
| NGC 695        | UGC 1315    | Galaxy | ARI | 12.8 | 12.1 | 0.5' | 01 51.2 | +22 35 | 128 | SO         |    |      | H II 618;Peculiar;NGC 697 group;UGC 1315                  |
| NGC 696        | ESO 353-50  | Galaxy | FOR | 13.3 | 13.3 | 1.7' | 01 49.5 | -34 54 | 353 | SBO-a      |    |      |   |
| NGC 697        | NGC 674     | Galaxy | ARI | 12   | 13.9 | 4.4' | 01 51.3 | +22 21 | 128 | SBbc       |    |      | H III 179;brightest in group                              |
| NGC 698        | ESO 353-51  | Galaxy | FOR | 13.9 | 13.4 | 0.9' | 01 49.7 | -34 50 | 353 | SBab Rii   |    |      |   |
| NGC 699        | MCG - 2- 5- | Galaxy | CET | 14   | -    | 1.6' | 01 50.7 | -12 02 | 263 | Sbc        |    |      |   |
| NGC 701        | MCG - 2- 5- | Galaxy | CET | 12.2 | 13.2 | 2.6' | 01 51.1 | -09 42 | 263 | SBc        |    |      | H I 62  |
| NGC 702        | MCG - 1- 5- | Galaxy | CET | 13.1 | 13.6 | 1.5' | 01 51.3 | -04 03 | 218 | SBbc/P     |    |      | H III 192;probable interacting system                     |
| NGC 703        | UGC 1346    | Galaxy | AND | 13.3 | 13.2 | 1.2' | 01 52.7 | +36 10 | 92  | SO         |    |      | H III 562;NGC 708 group                                   |
| NGC 704        | UGC 1343    | Galaxy | AND | 14   | -    | 0.6' | 01 52.6 | +36 08 | 92  | S pec      |    |      | H III 563;Double system;Symbiotic                         |
| NGC 705        | UGC 1345    | Galaxy | AND | 13.6 | 12.3 | 1.2' | 01 52.7 | +36 09 | 92  | Sa         |    |      | H III 564;NGC 708 group                                   |
| NGC 706        | UGC 1334    | Galaxy | PSC | 12.5 | 13.4 | 1.9' | 01 51.8 | +06 18 | 173 | Sc         |    |      | H II 596;NGC 676 group                                    |
| NGC 707        | MCG - 2- 5- | Galaxy | CET | 14   | -    | 1.3' | 01 51.5 | -08 30 | 263 | E-SO       |    |      |   |
| NGC 708        | UGC 1348    | Galaxy | AND | 12.7 | 14.9 | 3'   | 01 52.8 | +36 09 | 92  | E2         |    |      | H III 565;Brightest in group which incl NGC 703-4-5       |
| NGC 710        | UGC 1349    | Galaxy | AND | 13.7 | 14   | 1.3' | 01 52.9 | +36 03 | 92  | Sc         |    |      |   |
| NGC 711        | UGC 1342    | Galaxy | ARI | 13.1 | 13.2 | 1.6' | 01 52.5 | +17 31 | 129 | SO         |    |      |   |
| NGC 712        | UGC 1352    | Galaxy | AND | 12.8 | 12.9 | 1.3' | 01 53.1 | +36 49 | 92  | SO         |    |      |   |
| NGC 714        | UGC 1358    | Galaxy | AND | 13.1 | 12.3 | 1.5' | 01 53.5 | +36 13 | 92  | Sa         |    |      |   |
| NGC 716        | IC 1743     | Galaxy | ARI | 12.9 | 13.1 | 1.8' | 01 53.0 | +12 42 | 174 | SBa        |    |      |   |
| NGC 717        | UGC 1363    | Galaxy | AND | 13.9 | 12.5 | 1.3' | 01 53.9 | +36 14 | 92  | Sa         |    |      |   |
| NGC 718        | UGC 1356    | Galaxy | PSC | 11.7 | 13.3 | 2.3' | 01 53.2 | +04 12 | 219 | SBa        |    |      | H II 270;2 smooth arms;UGC 1356                           |
| NGC 719        | IC 1744     | Galaxy | ARI | 13.2 | 13.6 | 1.4' | 01 53.6 | +19 50 | 129 | SO         |    |      |   |
| <b>NGC 720</b> | MCG - 2- 5- | Galaxy | CET | 10.2 | 12.8 | 4.4' | 01 53.0 | -13 44 | 264 | E4         |    |      | H I 105   |
| NGC 721        | UGC 1376    | Galaxy | AND | 13.5 | 13.9 | 1.7' | 01 54.8 | +39 23 | 61  | SBbc       |    |      |   |
| NGC 722        | UGC 1379    | Galaxy | ARI | 13.4 | 13.1 | 1.7' | 01 54.8 | +20 42 | 129 | Sbc        |    |      |   |
| NGC 723        | NGC 724     | Galaxy | CET | 12.4 | 13   | 1.5' | 01 53.8 | -23 45 | 309 | Sbc        |    |      |   |
| NGC 724        | NGC 723     | Galaxy | FOR | 13.3 | -    | 1.5' | 01 53.8 | -23 45 | 309 | Sbc        |    |      |   |
| NGC 725        | MCG - 3- 5- | Galaxy | CET | 14   | -    | 0.8' | 01 52.6 | -16 31 | 264 | Sc         |    |      |   |
| NGC 726        | MCG - 2- 6- | Galaxy | CET | 14   | -    | 1.2' | 01 55.5 | -10 48 | 264 | Sd         |    |      |   |
| NGC 731        | NGC 757     | Galaxy | CET | 12.1 | 13.1 | 1.7' | 01 54.9 | -09 01 | 264 | EO         |    |      | H III 266   |
| NGC 732        | UGC 1406    | Galaxy | AND | 13.5 | 13.8 | 1.4' | 01 56.5 | +36 48 | 92  | SO         |    |      |   |
| NGC 735        | UGC 1411    | Galaxy | TRI | 13.3 | 13.6 | 1.8' | 01 56.6 | +34 11 | 92  | Sb         |    |      | H III 176   |
| NGC 736        | UGC 1414    | Galaxy | TRI | 12.1 | 13   | 1.7' | 01 56.7 | +33 03 | 92  | SO         |    |      | H II 221?;P w NGC 740                                     |
| NGC 739        | MCG 5- 5-   | Galaxy | TRI | 13.9 | 12.3 | 0.5' | 01 56.9 | +33 16 | 92  | Sa         |    |      |   |
| NGC 740        | UGC 1421    | Galaxy | TRI | 14   | 13.3 | 1.4' | 01 56.9 | +33 01 | 92  | SBb        |    |      | H II 221?;P w NGC 736                                     |
| NGC 741        | IC 1741     | Galaxy | PSC | 11.1 | 13.5 | 3'   | 01 56.3 | +05 38 | 174 | E1         |    |      | H II 271;Brightest in group;UGC 1413                      |
| NGC 743        | OCL 343     | Opn CL | CAS | 9.5  | -    | 5'   | 01 58.5 | +60 10 | 37  | II 1 p     | 12 | 10   |   |
| NGC 744        | OCL 345     | Opn CL | PER | 7.9  | -    | 11'  | 01 58.5 | +55 28 | 37  | IV 2 p     | 20 | 10.4 |   |
| NGC 745        | ESO 152-32  | Galaxy | ERI | 13.3 | -    | 1.3' | 01 54.1 | -56 42 | 418 | Sa         |    |      |   |
| NGC 746        | UGC 1438    | Galaxy | AND | 13   | 13.9 | 1.9' | 01 57.9 | +44 55 | 61  | Ir         |    |      |   |
| NGC 748        | MCG - 1- 6- | Galaxy | CET | 12.6 | 13.5 | 2.3' | 01 56.4 | -04 28 | 219 | Sb Ring    |    |      | H III 193   |
| NGC 749        | ESO 414-11  | Galaxy | FOR | 12.5 | 13.5 | 1.9' | 01 55.7 | -29 55 | 353 | SBO-a      |    |      |   |
| NGC 750        | UGC 1430    | Galaxy | TRI | 11.9 | 12.7 | 1.6' | 01 57.5 | +33 13 | 92  | E1         |    |      | H II 222;Contact P w NGC 751;compact cores;bridge         |
| NGC 751        | UGC 1431    | Galaxy | TRI | 14   | -    | 1.8' | 01 57.6 | +33 12 | 92  | EO         |    |      |   |
| <b>NGC 752</b> | OCL 363     | Opn CL | AND | 5.7  | -    | 50'  | 01 57.7 | +37 40 | 92  | III 1 m    | 60 | 9    | H VII 32;Best in RFT or binocs;Ir scattered cl 70" m 8... |

## 7000 DSO List (sorted by name)

| NAME           | OTHER        | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|----------------|--------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 753        | UGC 1437     | Galaxy | AND | 12.3 | 13.9 | 2.5' | 01 57.7 | +35 55 | 92  | SBbc       |    |    | P w NGC 759                                       |
| NGC 755        | NGC 763      | Galaxy | CET | 12.6 | 13.9 | 3.3' | 01 56.4 | -09 04 | 264 | SBb        |    |    | H III 265   |
| NGC 757        | NGC 731      | Galaxy | CET | 13   | -    | 1.7' | 01 54.9 | -09 01 | 264 | Elliptical |    |    |   |
| NGC 759        | UGC 1440     | Galaxy | AND | 12.7 | 13.6 | 1.8' | 01 57.8 | +36 21 | 92  | EO         |    |    | P w NGC 753                                       |
| NGC 761        | UGC 1439     | Galaxy | TRI | 13.5 | 13.1 | 1.4' | 01 57.8 | +33 23 | 92  | SBab       |    |    |   |
| NGC 762        | MCG - 1- 6-  | Galaxy | CET | 13.5 | -    | 1.4' | 01 57.0 | -05 24 | 219 | SBa        |    |    | H III 464   |
| NGC 763        | NGC 755      | Galaxy | CET | 13.1 | -    | 3.3' | 01 56.4 | -09 04 | 264 | SBb        |    |    |   |
| NGC 765        | UGC 1455     | Galaxy | ARI | 12.8 | 14.9 | 2.7' | 01 58.8 | +24 54 | 129 | SBbc Rim   |    |    | low surface br outside of 2.3'                    |
| NGC 766        | UGC 1458     | Galaxy | PSC | 12.7 | 14.2 | 2'   | 01 58.7 | +08 21 | 174 | Elliptical |    |    | Brightest of 4                                    |
| NGC 767        | MCG - 2- 6-  | Galaxy | CET | 14   | -    | 1.1' | 01 58.8 | -09 35 | 264 | Sb         |    |    |   |
| NGC 768        | UGC 1457     | Galaxy | CET | 13.2 | 13.4 | 1.7' | 01 58.7 | +00 32 | 219 | Sbc        |    |    | sp of 2;disturbed                                 |
| NGC 769        | UGC 1467     | Galaxy | TRI | 12.8 | 11.6 | 0.8' | 01 59.6 | +30 55 | 92  | Sc         |    |    | n of 2  |
| NGC 770        | UGC 1463     | Galaxy | ARI | 12.9 | 12.9 | 1.1' | 01 59.2 | +18 57 | 129 | E3         |    |    |   |
| NGC 771        | 50 CAS       | Star   | CAS | 4    | -    |      | 02 03.4 | +72 25 | 17  |            |    |    |   |
| <b>NGC 772</b> | UGC 1466     | Galaxy | ARI | 10.3 | 13.9 | 7.5' | 01 59.3 | +19 00 | 129 | Sb         |    |    | H I 112;Several tightly coiled arms br on NW side |
| NGC 773        | MCG - 2- 6-  | Galaxy | CET | 14   | -    | 1.4' | 01 58.9 | -11 31 | 264 | Sa         |    |    | H III 468   |
| NGC 774        | UGC 1469     | Galaxy | ARI | 13   | 13.5 | 1.5' | 01 59.6 | +14 00 | 174 | SO         |    |    | H III 214   |
| NGC 775        | ESO 477-18   | Galaxy | FOR | 12.7 | 13.3 | 1.7' | 01 58.5 | -26 18 | 309 | SB Ring    |    |    |   |
| NGC 776        | UGC 1471     | Galaxy | ARI | 12.4 | 13.4 | 1.7' | 01 59.9 | +23 39 | 129 | SBb        |    |    |   |
| NGC 777        | UGC 1476     | Galaxy | TRI | 11.4 | 13.2 | 2.8' | 02 00.2 | +31 26 | 92  | E1/E2      |    |    | H II 223;P w NGC 778                              |
| NGC 778        | UGC 1480     | Galaxy | TRI | 13.2 | 12.5 | 1.1' | 02 00.3 | +31 19 | 92  | SO         |    |    | P w NGC 777                                       |
| <b>NGC 779</b> | MCG - 1- 6-  | Galaxy | CET | 11.2 | 12.7 | 4.1' | 01 59.7 | -05 58 | 264 | SBb        |    |    | H I 101;nearly edge-on spiral                     |
| NGC 781        | UGC 1482     | Galaxy | ARI | 13   | 12.2 | 1.5' | 02 00.1 | +12 39 | 174 | Sb         |    |    | H III 215   |
| NGC 782        | ESO 114-15   | Galaxy | ERI | 11.9 | 13.4 | 2.4' | 01 57.7 | -57 47 | 418 | SBb        |    |    |   |
| NGC 783        | UGC 1497     | Galaxy | TRI | 12.1 | 12.9 | 1.6' | 02 01.1 | +31 53 | 92  | Sc         |    |    |   |
| NGC 784        | UGC 1501     | Galaxy | TRI | 11.7 | 14.1 | 6.6' | 02 01.3 | +28 50 | 92  | SBd        |    |    |   |
| NGC 785        | IC 1776      | Galaxy | TRI | 14   | -    | 1.5' | 02 01.7 | +31 50 | 92  | E-SO       |    |    |   |
| NGC 786        | UGC 1506     | Galaxy | ARI | 13.3 | 12.2 | 0.7' | 02 01.4 | +15 39 | 174 | S pec      |    |    |   |
| NGC 787        | MCG - 2- 6-  | Galaxy | CET | 13   | -    | 2.5' | 02 00.8 | -09 00 | 264 | Sb         |    |    |   |
| NGC 788        | MCG - 1- 6-  | Galaxy | CET | 12.1 | 13   | 2.2' | 02 01.1 | -06 49 | 264 | Sa         |    |    | H II 435  |
| NGC 789        | UGC 1520     | Galaxy | TRI | 13.4 | 11.7 | 0.6' | 02 02.4 | +32 04 | 92  | Sd         |    |    | Peculiar  |
| NGC 790        | MCG - 1- 6-  | Galaxy | CET | 13.5 | -    | 1.4' | 02 01.4 | -05 22 | 219 | SO         |    |    | H III 433   |
| NGC 791        | UGC 1511     | Galaxy | PSC | 13.1 | 14.1 | 1.6' | 02 01.7 | +08 30 | 174 | Elliptical |    |    | Brightest of 3                                    |
| NGC 792        | UGC 1517     | Galaxy | ARI | 13.1 | 13.6 | 1.7' | 02 02.3 | +15 43 | 174 | SO         |    |    |   |
| NGC 794        | IC 191;H III | Galaxy | ARI | 12.7 | 13   | 1.3' | 02 02.5 | +18 22 | 129 | E-SO       |    |    | UGC 1528  |
| NGC 797        | UGC 1541     | Galaxy | AND | 12.6 | 13.3 | 1.6' | 02 03.5 | +38 07 | 92  | SBa        |    |    | H III 566;double nebula                           |
| NGC 798        | UGC 1539     | Galaxy | TRI | 13.5 | 13   | 1.2' | 02 03.3 | +32 05 | 92  | Elliptical |    |    |   |
| NGC 799        | UGC 1527     | Galaxy | CET | 13   | 14.2 | 2'   | 02 02.2 | -00 06 | 219 | SBa        |    |    |   |
| NGC 800        | UGC 1526     | Galaxy | CET | 13.7 | 13.4 | 1'   | 02 02.2 | -00 08 | 219 | Sc         |    |    |   |
| NGC 801        | UGC 1550     | Galaxy | AND | 13.1 | 13.8 | 3.1' | 02 03.7 | +38 16 | 92  | Sc         |    |    | P w NGC 797                                       |
| NGC 803        | UGC 1554     | Galaxy | ARI | 12.6 | 13.9 | 3'   | 02 03.7 | +16 02 | 174 | Sc         |    |    | H III 208;UGC 1554                                |
| NGC 805        | UGC 1566     | Galaxy | TRI | 13.5 | 13.2 | 1.1' | 02 04.5 | +28 49 | 92  | SBO        |    |    |   |
| NGC 806        | MCG - 2- 6-  | Galaxy | CET | 14   | -    | 1.2' | 02 03.5 | -09 56 | 264 | Sc         |    |    |   |
| NGC 807        | UGC 1571     | Galaxy | TRI | 12.5 | 13.4 | 1.8' | 02 04.9 | +28 59 | 92  | Elliptical |    |    | H III 151   |
| NGC 808        | ESO 478- 1   | Galaxy | CET | 13.5 | 13   | 1.2' | 02 03.9 | -23 19 | 309 | SBbc Rim   |    |    |   |
| NGC 809        | MCG - 2- 6-  | Galaxy | CET | 14   | -    | 1.5' | 02 04.3 | -08 44 | 264 | SO         |    |    |   |
| NGC 811        | MCG - 2- 6-  | Galaxy | CET | 14   | -    | 1.1' | 02 04.6 | -10 07 | 264 | Scd        |    |    |   |
| NGC 812        | UGC 1598     | Galaxy | AND | 11.2 | 12.8 | 3'   | 02 06.9 | +44 34 | 62  | Sbc        |    |    | Peculiar  |
| NGC 817        | UGC 1611     | Galaxy | ARI | 13.2 | 11.5 | 0.7' | 02 07.6 | +17 12 | 129 | Pec        |    |    | very high surface br                              |
| NGC 818        | UGC 1633     | Galaxy | AND | 12.5 | 13.8 | 2.9' | 02 08.7 | +38 47 | 92  | SBbc       |    |    | H II 604  |
| NGC 819        | UGC 1632     | Galaxy | TRI | 13.4 | 11.7 | 0.6' | 02 08.6 | +29 14 | 92  | S pec      |    |    | Peculiar  |
| NGC 820        | UGC 1629     | Galaxy | ARI | 12.8 | 12.7 | 1.4' | 02 08.4 | +14 21 | 174 | Sb         |    |    |   |
| NGC 821        | UGC 1631     | Galaxy | ARI | 10.7 | 12.2 | 2.4' | 02 08.4 | +11 00 | 174 | E2         |    |    | H I 152;UGC 1631                                  |
| NGC 822        | ESO 298- 9   | Galaxy | PHE | 13.1 | 12.8 | 1.1' | 02 06.7 | -41 09 | 389 | Elliptical |    |    |   |
| NGC 823        | IC 1782      | Galaxy | FOR | 12.6 | 13.4 | 1.7' | 02 07.3 | -25 27 | 309 | E-SO       |    |    |   |
| NGC 824        | ESO 354-37   | Galaxy | FOR | 13.3 | 13.8 | 1.4' | 02 06.9 | -36 27 | 353 | SBbc Rim   |    |    |   |
| NGC 825        | UGC 1636     | Galaxy | CET | 13.2 | 13.7 | 2.2' | 02 08.5 | +06 19 | 174 | Sa         |    |    |   |
| NGC 827        | UGC 1640     | Galaxy | CET | 12.7 | 13.2 | 2.3' | 02 08.9 | +07 58 | 174 | Sbc        |    |    | H III 227   |
| NGC 828        | UGC 1655     | Galaxy | AND | 12.3 | 14.1 | 2.9' | 02 10.2 | +39 11 | 62  | Sap        |    |    | H II 605;Peculiar                                 |
| NGC 829        | MCG - 1- 6-  | Galaxy | CET | 14   | -    | 1.1' | 02 08.7 | -07 47 | 264 | Sc         |    |    |   |
| NGC 830        | MCG - 1- 6-  | Galaxy | CET | 14   | -    | 1.4' | 02 09.0 | -07 46 | 264 | E-SO       |    |    |   |
| NGC 833        | MCG - 2- 6-  | Galaxy | CET | 12.7 | 12.6 | 1.5' | 02 09.3 | -10 08 | 264 | Sap        |    |    | H II 482  |
| NGC 834        | UGC 1672     | Galaxy | AND | 13.1 | 12.3 | 1.1' | 02 11.0 | +37 40 | 92  | Sbc        |    |    | H III 567   |
| NGC 835        | MCG - 2- 6-  | Galaxy | CET | 12.1 | 12.3 | 1.3' | 02 09.4 | -10 08 | 264 | SBab/P     |    |    | H II 483;Contact P w NGC 833                      |



## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE     | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs  | SAC NOTES   |
|----------------|-------------|----------|-----|------|------|-------|---------|--------|-----|------------|-----|-----|---|
| NGC 836        | ESO 544-17  | Galaxy   | CET | 13.3 | 13.4 | 1.2'  | 02 10.4 | -22 03 | 309 | Sa         |     |     |   |
| NGC 837        | ESO 478-10  | Galaxy   | CET | 14   | 12.8 | 0.9'  | 02 10.3 | -22 26 | 309 | Sb         |     |     |   |
| NGC 838        | MCG - 2- 6- | Galaxy   | CET | 12.9 | 12.8 | 1.2'  | 02 09.6 | -10 09 | 264 | SO         |     |     | H II 484  |
| NGC 839        | MCG - 2- 6- | Galaxy   | CET | 13.1 | 13   | 1.4'  | 02 09.7 | -10 11 | 264 | SO         |     |     | H II 485  |
| NGC 840        | UGC 1664    | Galaxy   | CET | 13.4 | 13.9 | 1.8'  | 02 10.3 | +07 51 | 174 | SBb        |     |     |   |
| NGC 841        | UGC 1676    | Galaxy   | AND | 12.6 | 13.1 | 1.8'  | 02 11.3 | +37 30 | 92  | SBab       |     |     |   |
| NGC 842        | MCG - 1- 6- | Galaxy   | CET | 12.7 | 12.6 | 1.1'  | 02 09.8 | -07 46 | 264 | SO         |     |     |   |
| NGC 845        | UGC 1695    | Galaxy   | AND | 13.5 | 12.9 | 1.7'  | 02 12.3 | +37 29 | 92  | Sb         |     |     | H III 604   |
| NGC 846        | NGC 847     | Galaxy   | AND | 12.1 | 13.3 | 1.9'  | 02 12.2 | +44 34 | 62  | SBab       |     |     |   |
| NGC 847        | NGC 846     | Galaxy   | AND | 13.1 | -    | 1.9'  | 02 12.2 | +44 34 | 62  | SBab       |     |     |   |
| NGC 848        | MCG - 2- 6- | Galaxy   | CET | 13   | 13.3 | 1.5'  | 02 10.3 | -10 19 | 264 | SBab       |     |     |   |
| NGC 850        | UGC 1679    | Galaxy   | CET | 12.9 | 12.9 | 1.2'  | 02 11.2 | -01 29 | 219 | Sa         |     |     | H III 259   |
| NGC 851        | UGC 1680    | Galaxy   | CET | 13.5 | 12.9 | 1'    | 02 11.2 | +03 47 | 219 | Sa         |     |     |   |
| NGC 852        | ESO 153-26  | Galaxy   | ERI | 13.4 | 13.6 | 1.3'  | 02 08.9 | -56 44 | 418 | SBbc       |     |     |   |
| NGC 853        | MCG - 2- 6- | Galaxy   | CET | 13   | -    | 1.6'  | 02 11.7 | -09 18 | 264 | Sm         |     |     | H II 486  |
| NGC 854        | ESO 354-47  | Galaxy   | FOR | 13.1 | 13.1 | 1.8'  | 02 11.5 | -35 50 | 353 | SBc        |     |     |   |
| NGC 855        | UGC 1718    | Galaxy   | TRI | 12.6 | 13.6 | 2.6'  | 02 14.1 | +27 53 | 129 | Elliptical |     |     | H II 613;UGC 1718                                       |
| NGC 856        | NGC 859     | Galaxy   | CET | 13.2 | 13.3 | 1.3'  | 02 13.6 | -00 43 | 219 | Sa         |     |     |   |
| NGC 857        | ESO 415- 6  | Galaxy   | FOR | 12.4 | 13   | 1.5'  | 02 12.6 | -31 57 | 353 | SO         |     |     |   |
| NGC 858        | ESO 478-13  | Galaxy   | CET | 13.7 | 13.9 | 1.3'  | 02 12.5 | -22 28 | 309 | SBc        |     |     |   |
| NGC 861        | UGC 1737    | Galaxy   | TRI | 13.8 | 13.4 | 1.5'  | 02 15.9 | +35 55 | 92  | Sb         |     |     |   |
| NGC 862        | ESO 298-20  | Galaxy   | PHE | 12.8 | 12.4 | 0.9'  | 02 13.0 | -42 02 | 389 | Elliptical |     |     |   |
| NGC 863        | NGC 866     | Galaxy   | CET | 12.9 | 12.9 | 1.1'  | 02 14.6 | -00 46 | 219 | Sa         |     |     | H III 260   |
| NGC 864        | UGC 1736    | Galaxy   | CET | 10.9 | 13.8 | 4.7'  | 02 15.5 | +06 00 | 174 | SBc        |     |     | H III 457;* 12m sf nucl 35"                             |
| NGC 865        | UGC 1747    | Galaxy   | TRI | 13.1 | 12.4 | 1.5'  | 02 16.3 | +28 36 | 92  | S pec      |     |     |   |
| NGC 866        | NGC 863     | Galaxy   | CET | 13.9 | -    | 1.1'  | 02 14.6 | -00 46 | 219 | Sa         |     |     |   |
| NGC 867        | NGC 875     | Galaxy   | CET | 14   | -    | 1.2'  | 02 17.1 | +01 15 | 219 | Sa         |     |     | H III 2   |
| NGC 868        | UGC 1748    | Galaxy   | CET | 13.9 | 14.1 | 1.3'  | 02 16.0 | -00 43 | 219 | E-SO       |     |     |   |
| <b>NGC 869</b> | OCL 350     | Opn CL   | PER | 5.3  | -    | 30'   | 02 19.1 | +57 08 | 37  | I 3 r      | 200 | 6.6 | <b>h Per</b> ; H VI 33; <b>Double Cluster</b> w NGC 884 |
| NGC 871        | UGC 1759    | Galaxy   | ARI | 13.6 | 12.8 | 1.1'  | 02 17.2 | +14 33 | 174 | SBc        |     |     | NGC 877 group;P w NGC 870                               |
| NGC 872        | ESO 544-32  | Galaxy   | CET | 13.8 | 13.8 | 1.5'  | 02 15.4 | -17 47 | 309 | Sc         |     |     |   |
| NGC 873        | MCG - 2- 6- | Galaxy   | CET | 13   | -    | 1.6'  | 02 16.5 | -11 21 | 264 | Sc         |     |     | H II 474  |
| NGC 875        | NGC 867     | Galaxy   | CET | 12.9 | 13   | 1.2'  | 02 17.1 | +01 15 | 219 | Sa         |     |     | P w IC 218  |
| NGC 877        | UGC 1768    | Galaxy   | ARI | 11.9 | 13.4 | 2.4'  | 02 18.0 | +14 33 | 174 | SBbc       |     |     | H II 246;Brightest in group of NGC 870;871;876;877      |
| NGC 878        | ESO 478-22  | Galaxy   | CET | 13.7 | 12.4 | 0.8'  | 02 17.9 | -23 23 | 309 | Sa         |     |     |   |
| NGC 881        | MCG - 1- 6- | Galaxy   | CET | 12.4 | 13.6 | 2.3'  | 02 18.8 | -06 38 | 264 | Sc Ring    |     |     | H II 436  |
| NGC 882        | UGC 1789    | Galaxy   | ARI | 13.6 | 13.1 | 1.2'  | 02 19.7 | +15 49 | 174 | SO         |     |     |   |
| NGC 883        | MCG - 1- 6- | Galaxy   | CET | 13   | -    | 1.7'  | 02 19.1 | -06 47 | 264 | E-SO       |     |     | H II 437  |
| <b>NGC 884</b> | OCL 353     | Opn CL   | PER | 6.1  | -    | 30'   | 02 22.5 | +57 09 | 37  | I 3 r      | 150 | 8.1 | H VI 34;chi Per; <b>Double Cluster</b> w NGC 869        |
| NGC 885        | NGC 863     | Galaxy   | CET | 13.9 | -    | 1.1'  | 02 14.6 | -00 46 | 219 | Sa         |     |     |   |
| NGC 886        | Stock 6     | Opn CL   | CAS | -    | -    | 8'    | 02 23.5 | +63 47 | 17  | II 2p      | 20  | 11  |   |
| NGC 887        | MCG - 3- 7- | Galaxy   | CET | 13   | -    | 2'    | 02 19.5 | -16 04 | 264 | SB Ring    |     |     | H III 486   |
| NGC 889        | ESO 298-27  | Galaxy   | PHE | 13.3 | 13.2 | 1'    | 02 19.1 | -41 45 | 389 | Elliptical |     |     |   |
| NGC 890        | UGC 1823    | Galaxy   | TRI | 11.2 | 12.7 | 2.9'  | 02 22.0 | +33 16 | 93  | E4         |     |     | H II 225;UGC 1823                                       |
| <b>NGC 891</b> | UGC 1831    | Galaxy   | AND | 9.9  | 13.6 | 13.1' | 02 22.6 | +42 21 | 62  | Sb         |     |     | NGC 1023 group;Lord Rosse drawing shows dark lane       |
| NGC 893        | ESO 298-29  | Galaxy   | PHE | 12.9 | 13.1 | 1.4'  | 02 20.0 | -41 24 | 389 | Sc         |     |     |   |
| NGC 894        |             | Galaxy   | CET | -    | -    |       | 02 21.6 | -05 31 | 264 | E+*        |     |     |   |
| NGC 895        | MCG - 1- 7- | Galaxy   | CET | 11.7 | 14   | 3.6'  | 02 21.6 | -05 31 | 264 | Sc         |     |     | H II 438;NGC 894 is part of NGC 895                     |
| NGC 896        | SG 1 4      | Br t Neb | CAS | -    | -    | 27'   | 02 25.5 | +62 01 | 17  | E          |     |     | H III 695   |
| NGC 897        | ESO 355- 7  | Galaxy   | FOR | 11.8 | 12.8 | 2.1'  | 02 21.1 | -33 43 | 354 | Sa         |     |     |   |
| NGC 898        | UGC 1842    | Galaxy   | AND | 12.9 | 12.7 | 1.8'  | 02 23.3 | +41 57 | 62  | Sab        |     |     | H III 570   |
| NGC 899        | ESO 545- 7  | Galaxy   | CET | 12.6 | 13.4 | 1.8'  | 02 21.9 | -20 49 | 309 | Ir         |     |     |   |
| NGC 900        | UGC 1843    | Galaxy   | ARI | 13.7 | 13.4 | 1.1'  | 02 23.5 | +26 31 | 129 | SO         |     |     |   |
| NGC 902        | MCG - 3- 7- | Galaxy   | CET | 14   | -    | 0.6'  | 02 22.4 | -16 41 | 264 | SBbc       |     |     |   |
| NGC 904        | UGC 1852    | Galaxy   | ARI | 13.6 | 13.6 | 1.2'  | 02 24.1 | +27 21 | 130 | Elliptical |     |     | sf of 2   |
| NGC 906        | UGC 1868    | Galaxy   | AND | 12.9 | 13.9 | 1.8'  | 02 25.3 | +42 05 | 62  | SBab       |     |     |   |
| NGC 907        | ESO 545-10  | Galaxy   | CET | 12.6 | 12.6 | 1.9'  | 02 23.0 | -20 43 | 309 | SBd        |     |     | H III 224   |
| <b>NGC 908</b> | ESO 545-11  | Galaxy   | CET | 10.2 | 13   | 6.1'  | 02 23.1 | -21 14 | 309 | SBc        |     |     | H I 153   |
| NGC 909        | UGC 1872    | Galaxy   | AND | 13.3 | 13   | 0.9'  | 02 25.4 | +42 02 | 62  | Elliptical |     |     |   |
| NGC 910        | UGC 1875    | Galaxy   | AND | 12.2 | 13.7 | 2'    | 02 25.4 | +41 49 | 62  | SO         |     |     | H III 571   |
| NGC 911        | UGC 1878    | Galaxy   | AND | 12.7 | 13.2 | 1.7'  | 02 25.7 | +41 57 | 62  | Elliptical |     |     |   |
| NGC 914        | UGC 1887    | Galaxy   | AND | 13   | 13.7 | 1.8'  | 02 26.1 | +42 09 | 62  | Sc         |     |     |   |
| NGC 918        | UGC 1888    | Galaxy   | ARI | 12.2 | 14.2 | 3.5'  | 02 25.8 | +18 30 | 130 | SBc        |     |     |   |
| NGC 920        | UGC 1920    | Galaxy   | AND | 13.9 | 14.3 | 1.5'  | 02 27.9 | +45 57 | 62  | SBab       |     |     | IC 1799 group   |

7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs  | SAC NOTES   |
|----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|-----|---|
| NGC 921        | MCG - 3- 7- | Galaxy | CET | 14   | -    | 1.4'  | 02 26.6 | -15 51 | 265 | Sc         |    |     |   |
| NGC 922        | ESO 478-28  | Galaxy | FOR | 12.1 | 13.2 | 2'    | 02 25.1 | -24 47 | 310 | SBc Ring   |    |     | H III 239   |
| NGC 923        | UGC 1915    | Galaxy | AND | 13.7 | 12.6 | 0.8'  | 02 27.6 | +41 59 | 62  | Sb         |    |     | 2nd of 3  |
| NGC 924        | UGC 1912    | Galaxy | ARI | 12.4 | 13.4 | 2.3'  | 02 26.8 | +20 30 | 130 | SO         |    |     | H III 474;sp of 2;NGC 932 group                       |
| <b>NGC 925</b> | UGC 1913    | Galaxy | TRI | 10.1 | 14.4 | 10.9' | 02 27.3 | +33 35 | 93  | SBcd       |    |     | H III 177;NGC 1023 group;coarse spiral                |
| NGC 926        | UGC 1901    | Galaxy | CET | 13.3 | 13.7 | 1.8'  | 02 26.1 | -00 20 | 220 | SBbc       |    |     |   |
| NGC 927        | UGC 1908    | Galaxy | ARI | 13.4 | 13.7 | 1.2'  | 02 26.6 | +12 09 | 175 | SBc        |    |     | f of 2;3 B arms                                       |
| NGC 928        | MCG 4- 6- 4 | Galaxy | ARI | 13.9 | 12.2 | 0.7'  | 02 27.7 | +27 13 | 130 | S          |    |     |   |
| NGC 931        | UGC 1935    | Galaxy | TRI | 12.8 | 13.9 | 3.9'  | 02 28.2 | +31 19 | 93  | Sbc        |    |     |   |
| NGC 932        | NGC 930     | Galaxy | ARI | 13.4 | -    | 1.9'  | 02 27.9 | +20 20 | 130 | Sa Ring    |    |     | H II 489  |
| NGC 933        | UGC 1956    | Galaxy | AND | 13.8 | 13.8 | 1.3'  | 02 29.3 | +45 55 | 62  | S          |    |     | IC 1799 group   |
| NGC 934        | UGC 1926    | Galaxy | CET | 13.1 | 13.2 | 1.3'  | 02 27.5 | -00 15 | 220 | E-SO       |    |     |   |
| NGC 935        | UGC 1937    | Galaxy | ARI | 12.9 | 13.4 | 1.7'  | 02 28.2 | +19 36 | 130 | Sc         |    |     | P w IC 1801;contact                                   |
| <b>NGC 936</b> | UGC 1929    | Galaxy | CET | 10.1 | 13.2 | 4.3'  | 02 27.6 | -01 09 | 220 | SBO-a      |    |     | H IV 23;Thick central bar;P w NGC 941 12' foll        |
| NGC 938        | UGC 1947    | Galaxy | ARI | 12.4 | 13.1 | 1.6'  | 02 28.6 | +20 17 | 130 | Elliptical |    |     | NGC 932 group   |
| NGC 939        | ESO 246-11  | Galaxy | ERI | 13   | 13.2 | 1.2'  | 02 26.4 | -44 27 | 389 | Elliptical |    |     |   |
| NGC 940        | UGC 1964    | Galaxy | TRI | 12.4 | 12.4 | 1.2'  | 02 29.5 | +31 38 | 93  | SO         |    |     |   |
| NGC 941        | UGC 1954    | Galaxy | CET | 12.4 | 14   | 2.7'  | 02 28.5 | -01 09 | 220 | SBc        |    |     | H III 261;P w NGC 936                                 |
| NGC 942        | MCG - 2- 7- | Galaxy | CET | 14   | -    | 2.8'  | 02 29.2 | -10 50 | 265 | Sa         |    |     | Northern most of a P w NGC 942;RC2 indents switched   |
| NGC 943        | MCG - 2- 7- | Galaxy | CET | 14   | -    | 2.8'  | 02 29.2 | -10 50 | 265 | SO p       |    |     | P w NGC 943   |
| NGC 944        | IC 228      | Galaxy | CET | 14   | -    | 1.1'  | 02 26.7 | -14 31 | 265 | Sa         |    |     |   |
| NGC 945        | MCG - 2- 7- | Galaxy | CET | 12.1 | 13.6 | 2.3'  | 02 28.6 | -10 32 | 265 | SBc        |    |     | H II 487  |
| NGC 946        | UGC 1979    | Galaxy | AND | 13.2 | 13.5 | 1.5'  | 02 30.6 | +42 14 | 62  | SO         |    |     | Compact   |
| NGC 947        | ESO 545-21  | Galaxy | CET | 12.6 | 13.3 | 2.1'  | 02 28.6 | -19 03 | 310 | SBc        |    |     |   |
| NGC 948        | MCG - 2- 7- | Galaxy | CET | 14   | -    | 1.4'  | 02 28.8 | -10 31 | 265 | SBc        |    |     |   |
| NGC 949        | UGC 1983    | Galaxy | TRI | 11.8 | 12.9 | 2.7'  | 02 30.8 | +37 08 | 93  | Sb         |    |     | H I 154;UGC 1983                                      |
| NGC 950        | MCG - 2- 7- | Galaxy | CET | 14   | -    | 1.3'  | 02 29.2 | -11 02 | 265 | Sb         |    |     |   |
| NGC 953        | UGC 1991    | Galaxy | TRI | 13.5 | -    | 1.5'  | 02 31.2 | +29 35 | 93  | Elliptical |    |     |   |
| NGC 954        | ESO 299- 4  | Galaxy | ERI | 12.8 | 13   | 1.6'  | 02 28.9 | -41 24 | 389 | SBc        |    |     |   |
| NGC 955        | UGC 1986    | Galaxy | CET | 12   | 12.6 | 2.9'  | 02 30.6 | -01 07 | 220 | Sab        |    |     | H II 278;Poss edge-on S0 lens shape                   |
| NGC 956        | OCL 377     | Opn CL | AND | 8.9  | -    | 8'    | 02 32.5 | +44 36 | 62  | IV 1 p     | 30 | 9   |   |
| NGC 957        | OCL 362     | Opn CL | PER | 7.6  | -    | 11'   | 02 33.3 | +57 34 | 38  | III 2 p    | 30 | 9.5 | Incl D* B1314 and J. Herschel 2143;Barns-diamond dus  |
| NGC 958        | MCG - 1- 7- | Galaxy | CET | 12.1 | 13.1 | 2.9'  | 02 30.7 | -02 56 | 220 | SBbc       |    |     | H II 237;Nearly edge-on spiral                        |
| NGC 959        | UGC 2002    | Galaxy | TRI | 12.4 | 13.6 | 2.3'  | 02 32.4 | +35 30 | 93  | Sd         |    |     | v patchy  |
| NGC 960        | MCG - 2- 7- | Galaxy | CET | 14   | -    | 1.2'  | 02 31.7 | -09 18 | 265 | Sb         |    |     |   |
| NGC 961        | NGC 1051    | Galaxy | CET | 13.4 | -    | 2.1'  | 02 41.0 | -06 56 | 265 | Sm         |    |     |   |
| NGC 962        | UGC 2013    | Galaxy | ARI | 12.9 | -    | 1.7'  | 02 32.7 | +28 04 | 93  | Elliptical |    |     |   |
| NGC 964        | IC 1814     | Galaxy | FOR | 12.6 | 12.5 | 2.1'  | 02 31.1 | -36 02 | 354 | Sab        |    |     |   |
| NGC 966        | ESO 545-30  | Galaxy | CET | 13.3 | 13.1 | 1'    | 02 31.8 | -19 53 | 310 | E-SO       |    |     |   |
| NGC 967        | ESO 545-31  | Galaxy | CET | 12.5 | 12.9 | 1.6'  | 02 32.2 | -17 13 | 310 | E-SO       |    |     |   |
| NGC 968        | UGC 2040    | Galaxy | TRI | 12.2 | 14.2 | 3.6'  | 02 34.1 | +34 29 | 93  | Elliptical |    |     | npp of 2;possible SN 1856                             |
| NGC 969        | UGC 2039    | Galaxy | TRI | 12.3 | 13.2 | 1.7'  | 02 34.1 | +32 57 | 93  | SO         |    |     | P w NGC 974   |
| NGC 972        | UGC 2045    | Galaxy | ARI | 11.4 | 13.2 | 3.3'  | 02 34.2 | +29 19 | 93  | Sab        |    |     | H II 211;coarse spiral pattern w irregular dust lanes |
| NGC 973        | UGC 2048    | Galaxy | TRI | 12.8 | 13.4 | 3.7'  | 02 34.3 | +32 30 | 93  | Sb         |    |     | strongly asym spindle                                 |
| NGC 974        | UGC 2049    | Galaxy | TRI | 12.7 | 14.2 | 3'    | 02 34.4 | +32 57 | 93  | Sb         |    |     | P w NGC 969   |
| NGC 975        | UGC 2030    | Galaxy | CET | 13.1 | 12.7 | 1.1'  | 02 33.4 | +09 36 | 175 | Sa         |    |     | Brightest of group                                    |
| NGC 976        | UGC 2042    | Galaxy | ARI | 12.4 | 12.9 | 1.6'  | 02 34.0 | +20 59 | 130 | Sbc        |    |     |   |
| NGC 977        | MCG - 2- 7- | Galaxy | CET | 13   | -    | 2'    | 02 33.1 | -10 46 | 265 | Sa         |    |     | H III 472   |
| NGC 978A       | NGC 978     | Galaxy | TRI | 14   | -    | 2'    | 02 34.8 | +32 51 | 93  | E-SO       |    |     | np of 2;contact                                       |
| NGC 979        | ESO 246-23  | Galaxy | ERI | 12.8 | 12.8 | 1.2'  | 02 31.6 | -44 31 | 389 | SBO Rin    |    |     |   |
| NGC 980        | UGC 2063    | Galaxy | AND | 13   | 13.4 | 1.7'  | 02 35.3 | +40 56 | 62  | SO         |    |     | H III 572   |
| NGC 981        | MCG - 2- 7- | Galaxy | CET | 14   | -    | 1'    | 02 33.0 | -10 58 | 265 | Sc         |    |     |   |
| NGC 982        | UGC 2066    | Galaxy | AND | 12.5 | 12.2 | 1.5'  | 02 35.4 | +40 52 | 62  | Sa         |    |     | H III 573   |
| NGC 983        | NGC 1002    | Galaxy | TRI | 14   | -    | 1.2'  | 02 38.9 | +34 37 | 93  | SBb        |    |     |   |
| NGC 984        | UGC 2059    | Galaxy | ARI | 12.8 | 14.6 | 3'    | 02 34.7 | +23 25 | 130 | Sa         |    |     |   |
| NGC 985        | MCG - 2- 7- | Galaxy | CET | 13.4 | 13.1 | 1'    | 02 34.6 | -08 47 | 265 | Ring       |    |     |   |
| <b>NGC 986</b> | ESO 299- 7  | Galaxy | FOR | 10.9 | 13.4 | 4'    | 02 33.6 | -39 03 | 389 | SBab       |    |     |   |
| NGC 986A       | MCG - 7- 6- | Galaxy | FOR | 14   | 14.1 | 1.8'  | 02 32.7 | -39 18 | 389 | Ir Bar     |    |     |   |
| NGC 987        | UGC 2093    | Galaxy | TRI | 12.4 | 12.7 | 1.3'  | 02 36.8 | +33 20 | 93  | SBO-a      |    |     | H III 161   |
| NGC 988        | MCG - 2- 7- | Galaxy | CET | 11   | 13.4 | 4.6'  | 02 35.5 | -09 21 | 265 | SBc        |    |     |   |
| NGC 990        | UGC 2089    | Galaxy | ARI | 12.4 | 13.5 | 1.8'  | 02 36.3 | +11 39 | 175 | Elliptical |    |     | H III 557   |
| NGC 991        | MCG - 1- 7- | Galaxy | CET | 11.7 | 13.5 | 3'    | 02 35.5 | -07 09 | 265 | SB Ring    |    |     | H III 434   |
| NGC 992        | UGC 2103    | Galaxy | ARI | 12.6 | 11.9 | 0.9'  | 02 37.4 | +21 06 | 130 | Sc         |    |     |   |
| NGC 993        | NGC 994     | Galaxy | CET | 13.6 | 13.1 | 0.9'  | 02 36.8 | +02 03 | 220 | E-SO       |    |     |   |



## 7000 DSO List (sorted by name)

| NAME      | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|------|--|
| NGC 995   | UGC 2118    | Galaxy | AND | 13.4 | 14   | 1.7' | 02 38.5 | +41 32 | 62  | SO         |    |      |  |
| NGC 996   | UGC 2123    | Galaxy | AND | 13   | 13.8 | 1.4' | 02 38.7 | +41 39 | 62  | Elliptical |    |      |  |
| NGC 999   | IC 240      | Galaxy | AND | 13.5 | 13.1 | 0.9' | 02 38.8 | +41 40 | 62  | SBa        |    |      |  |
| NGC 1002  | NGC 983     | Galaxy | TRI | 13.1 | 13.1 | 1.2' | 02 38.9 | +34 37 | 93  | SBb        |    |      | comps@ 2.2';PA247;.3X0.3;2.5';PA279;.8X0.5               |
| NGC 1003  | UGC 2137    | Galaxy | PER | 11.4 | 13.8 | 5.7' | 02 39.3 | +40 52 | 62  | Sc         |    |      | main body 4'x1.4' patchy;ill-def'd arms SBc UGC2137      |
| NGC 1004  | UGC 2112    | Galaxy | CET | 12.7 | 13.2 | 1.4' | 02 37.7 | +01 59 | 220 | Elliptical |    |      | Dense part of clstr;comp 3.9';PA83;.5X0.12;4.9';PA67     |
| NGC 1006  | NGC 1010    | Galaxy | CET | 13.6 | -    | 0.9' | 02 37.6 | -11 02 | 265 | Sc         |    |      |  |
| NGC 1008  | UGC 2114    | Galaxy | CET | 13.6 | 12.8 | 0.8' | 02 37.9 | +02 05 | 220 | Elliptical |    |      | In dense part of cluster                                 |
| NGC 1010  | NGC 1006    | Galaxy | CET | 14   | -    | 0.9' | 02 37.6 | -11 02 | 265 | Sc         |    |      |  |
| NGC 1012  | UGC 2141    | Galaxy | ARI | 12   | 12.9 | 2.5' | 02 39.2 | +30 09 | 93  | Sa         |    |      | high surf brtns;fragmts of spiral arms;lge nucleus       |
| NGC 1013  | MCG - 2- 7- | Galaxy | CET | 14   | -    | 0.8' | 02 37.8 | -11 30 | 265 | Sa         |    |      |  |
| NGC 1015  | UGC 2124    | Galaxy | CET | 12.1 | 14   | 2.6' | 02 38.2 | -01 19 | 220 | SBa        |    |      |  |
| NGC 1016  | UGC 2128    | Galaxy | CET | 11.6 | 13.5 | 2.3' | 02 38.3 | +02 07 | 220 | EO         |    |      | in dense part of cluster                                 |
| NGC 1017  | MCG - 2- 7- | Galaxy | CET | 14   | -    | 0.7' | 02 37.8 | -11 01 | 265 | Ir         |    |      |  |
| NGC 1019  | UGC 2132    | Galaxy | CET | 13.5 | 13.3 | 1'   | 02 38.5 | +01 54 | 220 | SBbc       |    |      | in dense part of cluster                                 |
| NGC 1022  | MCG - 1- 7- | Galaxy | CET | 11.3 | 12.9 | 2.6' | 02 38.5 | -06 41 | 265 | SBa        |    |      | H I 102  |
| NGC 1023  | UGC 2154    | Galaxy | PER | 9.4  | 12.8 | 8.1' | 02 40.4 | +39 04 | 62  | E7p        |    |      | brtst in grp;more neb 10' E;lens shp F tuft on E tip     |
| NGC 1023A |             | Galaxy | PER | 13.8 | -    | 1.3' | 02 40.6 | +39 04 | 62  | Ir B       |    |      |  |
| NGC 1024  | UGC 2142    | Galaxy | ARI | 12.1 | 13.8 | 3.9' | 02 39.2 | +10 51 | 175 | Sab        |    |      | brtst in grp;thin circ arms;* se superimp on wisp        |
| NGC 1025  | ESO 154- 4  | Galaxy | HOR | 13.9 | -    | 0.9' | 02 36.3 | -54 52 | 419 | SBb        |    |      |  |
| NGC 1026  | UGC 2145    | Galaxy | CET | 12.6 | 13.8 | 2'   | 02 39.3 | +06 33 | 175 | SO         |    |      | comp in the env at .45';PA160;.15X0.15                   |
| NGC 1027  | OCL 357     | Opn CL | CAS | 6.7  | -    | 20'  | 02 42.6 | +61 36 | 17  | III 2 p n  | 40 | 9.3  | H VIII 66;Scattered group 12"                            |
| NGC 1029  | UGC 2149    | Galaxy | ARI | 13.1 | 12.3 | 1.4' | 02 39.6 | +10 48 | 175 | Sa         |    |      | In NGC 1024 group  |
| NGC 1030  | UGC 2153    | Galaxy | ARI | 13.2 | 13.1 | 1.6' | 02 39.8 | +18 01 | 130 | Sbc        |    |      | H III 581;wedge-shaped;possible edge-on spiral           |
| NGC 1031  | ESO 154- 5  | Galaxy | HOR | 13.4 | -    | 1.9' | 02 36.6 | -54 52 | 419 | SBa        |    |      |  |
| NGC 1032  | UGC 2147    | Galaxy | CET | 11.6 | 12.9 | 3.4' | 02 39.4 | +01 06 | 220 | Sa         |    |      | H II 5;late Sa;comp 4.3';PA313;.6X0.3                    |
| NGC 1033  | MCG - 2- 7- | Galaxy | CET | 14   | -    | 1.2' | 02 40.3 | -08 47 | 265 | Sc         |    |      |  |
| NGC 1034  | MCG - 3- 7- | Galaxy | CET | 14   | -    | 0.9' | 02 38.2 | -15 49 | 265 | Ir         |    |      |  |
| NGC 1035  | MCG - 1- 7- | Galaxy | CET | 12.2 | 12.6 | 2.2' | 02 39.5 | -08 08 | 265 | Sc         |    |      | H II 284;Nearly edge-on spiral                           |
| NGC 1036  | IC 1828     | Galaxy | ARI | 13.2 | 13.5 | 1.5' | 02 40.5 | +19 18 | 130 | Pec        |    |      | H III 475;asymmetric;B prob complex center region        |
| NGC 1038  | UGC 2158    | Galaxy | CET | 13.4 | 12.4 | 1.2' | 02 40.1 | +01 31 | 220 | Sa         |    |      |  |
| NGC 1040  | NGC 1053-1  | Galaxy | PER | 13.9 | -    | 1.7' | 02 43.2 | +41 30 | 62  | SO         |    |      |  |
| NGC 1041  | MCG - 1- 7- | Galaxy | CET | 14   | -    | 1.7' | 02 40.4 | -05 26 | 220 | E-SO       |    |      |  |
| NGC 1042  | MCG - 2- 7- | Galaxy | CET | 11   | 13.9 | 4.9' | 02 40.4 | -08 26 | 265 | SBc        |    |      | Spiral arms well defined                                 |
| NGC 1044  | MCG 1- 7-   | Galaxy | CET | 13.2 | 11.8 | 0.5' | 02 41.1 | +08 44 | 175 | SOp        |    |      | H III 228;dbl system                                     |
| NGC 1045  | MCG - 2- 7- | Galaxy | CET | 13   | -    | 2.3' | 02 40.5 | -11 17 | 265 | E-SO       |    |      | H II 488   |
| NGC 1046  | MCG 1- 7-   | Galaxy | CET | 13.8 | -    | 0.4' | 02 41.2 | +08 43 | 175 | E-SO       |    |      | H III 229  |
| NGC 1048B | NGC 1048    | Galaxy | CET | 14   | -    | 1'   | 02 40.6 | -08 32 | 265 | SBO-a      |    |      |  |
| NGC 1049  | ESO 356-SC  | Glo+Gx | FOR | 12.6 | -    | 1.2' | 02 39.8 | -34 16 | 354 |            |    |      | Invl in Fornax System                                    |
| NGC 1050  | UGC 2178    | Galaxy | PER | 12.6 | 12.9 | 1.4' | 02 42.6 | +34 46 | 93  | SBa        |    |      |  |
| NGC 1051  | NGC 961     | Galaxy | CET | 13   | -    | 2.1' | 02 41.0 | -06 56 | 265 | Sm         |    |      |  |
| NGC 1052  | MCG - 1- 7- | Galaxy | CET | 10.5 | 12.5 | 2.8' | 02 41.1 | -08 15 | 265 | Elliptical |    |      | H I 63   |
| NGC 1053  | NGC 1040-1  | Galaxy | PER | 12.9 | 13   | 1.7' | 02 43.2 | +41 30 | 62  | SO         |    |      | brtst in grp;comp .8';PA354;UGC2194 @ 6.2';PA155         |
| NGC 1054  | MCG 3- 7-   | Galaxy | ARI | 13.6 | 12.4 | 0.9' | 02 42.3 | +18 13 | 130 | Sbc        |    |      |  |
| NGC 1055  | UGC 2173    | Galaxy | CET | 10.6 | 13.7 | 7.6' | 02 41.8 | +00 27 | 220 | SBb        |    |      | H I 1= II 6;Nearly edge-on spiral w equatorial dust lane |
| NGC 1056  | UGC 2183    | Galaxy | ARI | 12.4 | 13.3 | 2.4' | 02 42.8 | +28 34 | 93  | Sa         |    |      | H III 584;v lge nucl bulge;strong abs along edge         |
| NGC 1058  | UGC 2193    | Galaxy | PER | 11.2 | 13.4 | 3.2' | 02 43.5 | +37 20 | 93  | Sc         |    |      | NGC1023 grp;patchy main body;mult arm pattern            |
| NGC 1060  | UGC 2191    | Galaxy | TRI | 11.8 | 13.2 | 2.3' | 02 43.3 | +32 25 | 93  | E-SO       |    | 15.7 | Lies in position given as NGC 1062;very diffuse          |
| NGC 1061  | MCG 5- 7-   | Galaxy | TRI | 14   | 13.2 | 0.9' | 02 43.3 | +32 28 | 93  | Sd         |    |      | Peculiar?  |
| NGC 1063  | MCG - 1- 7- | Galaxy | CET | 14   | -    | 1.4' | 02 42.2 | -05 34 | 265 | SBbc       |    |      |  |
| NGC 1064  | MCG - 2- 7- | Galaxy | CET | 14   | -    | 1.1' | 02 42.4 | -09 22 | 265 | Sc Ring    |    |      |  |
| NGC 1065  | IC 254      | Galaxy | CET | 14   | -    | 0.8' | 02 42.1 | -15 06 | 265 | E-SO       |    |      |  |
| NGC 1066  | UGC 2203    | Galaxy | TRI | 13.3 | 14.3 | 1.7' | 02 43.8 | +32 29 | 93  | Elliptical |    |      | H III 163;Compact;UGC 2201 @ 2.2';NGC 1067 @ 1.8'        |
| NGC 1067  | UGC 2204    | Galaxy | TRI | 13.7 | 13.6 | 1.1' | 02 43.8 | +32 31 | 93  | Sc         |    |      | S-shaped;well def arms;UGC2201 at 1.6';comp 2.3'         |
| NGC 1070  | UGC 2200    | Galaxy | CET | 11.9 | 13.4 | 2.3' | 02 43.4 | +04 58 | 220 | Sb         |    |      | H II 273;UGC 2200  |
| NGC 1072  | IC 1837     | Galaxy | CET | 13.4 | 12.9 | 1.5' | 02 43.5 | +00 18 | 220 | SBab Rii   |    |      |  |
| NGC 1073  | UGC 2210    | Galaxy | CET | 11   | 14.2 | 4.9' | 02 43.7 | +01 23 | 220 | SBc        |    |      | H III 455;NGC 1068 group                                 |
| NGC 1074  | MCG - 3- 8- | Galaxy | CET | 14   | -    | 2'   | 02 43.6 | -16 18 | 265 | Sab        |    |      |  |
| NGC 1076  | MCG - 3- 8- | Galaxy | CET | 13   | -    | 2'   | 02 43.5 | -14 45 | 265 | Sa         |    |      |  |
| NGC 1077B | NGC 1077-2  | Galaxy | PER | 14   | -    | 0.5' | 02 46.0 | +40 06 | 62  | SBb        |    |      |  |
| NGC 1079  | ESO 416-13  | Galaxy | FOR | 11.5 | 13.5 | 3.4' | 02 43.7 | -29 00 | 354 | SBO-a R    |    |      |  |
| NGC 1080  | MCG - 1- 8- | Galaxy | CET | 13.5 | 13.3 | 1.1' | 02 45.2 | -04 43 | 220 | SBc        |    |      |  |
| NGC 1081  | MCG - 3- 8- | Galaxy | ERI | 13   | -    | 1.6' | 02 45.1 | -15 35 | 265 | Sb         |    |      |  |
| NGC 1083  | MCG - 3- 8- | Galaxy | ERI | 14   | -    | 1.6' | 02 45.7 | -15 21 | 265 | Sb         |    |      |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|--|
| <b>NGC 1084</b> | MCG - 1- 8- | Galaxy | ERI | 10.7 | 12.5 | 3.5' | 02 46.0 | -07 35 | 265 | Sc         |    |    | H I 64   |
| NGC 1085        | UGC 2241    | Galaxy | CET | 12.3 | 14.1 | 2.4' | 02 46.4 | +03 36 | 220 | Sbc        |    |    |  |
| NGC 1086        | UGC 2258    | Galaxy | PER | 12.8 | 13.2 | 1.5' | 02 47.9 | +41 15 | 62  | Sc         |    |    | B prob cplx nucl .35X0.35;dif asym ext;2 knotty arms       |
| NGC 1087        | UGC 2245    | Galaxy | CET | 10.9 | 13.1 | 3.9' | 02 46.4 | -00 30 | 220 | SBc Ring   |    |    | In NGC1068 grp;P w NGC1090 @15' and NGC1094,20'            |
| NGC 1089        | MCG - 3- 8- | Galaxy | ERI | 14   | -    | 0.9' | 02 46.2 | -15 04 | 265 | Elliptical |    |    |  |
| NGC 1090        | UGC 2247    | Galaxy | CET | 11.8 | 13.8 | 3.9' | 02 46.6 | -00 15 | 220 | SBbc       |    |    | H II 465;NGC 1068 grp                                      |
| NGC 1092        | ESO 546-17  | Galaxy | ERI | 13.4 | 13.1 | 0.9' | 02 45.5 | -17 33 | 310 | Elliptical |    |    |  |
| NGC 1093        | UGC 2274    | Galaxy | TRI | 13.1 | 13.7 | 1.8' | 02 48.3 | +34 25 | 93  | Sab        |    |    |  |
| NGC 1094        | UGC 2262    | Galaxy | CET | 12.5 | 12.6 | 1.3' | 02 47.5 | -00 17 | 220 | SBab       |    |    | H III 462;NGC 1068 grp;s of 2                              |
| NGC 1095        | UGC 2264    | Galaxy | CET | 13.3 | 13.2 | 1.3' | 02 47.6 | +04 38 | 220 | SBc        |    |    |  |
| NGC 1096        | ESO 115-28  | Galaxy | HOR | 13.6 | -    | 1.9' | 02 43.8 | -59 55 | 419 | SBbc Ring  |    |    |  |
| <b>NGC 1097</b> | ESO 416-20  | Galaxy | FOR | 9.5  | 13.8 | 9.4' | 02 46.3 | -30 17 | 354 | SBb        |    |    | H V 48   |
| NGC 1097A       | ESO 416-19  | Galaxy | FOR | 13.6 | 12.5 | 0.8' | 02 46.2 | -30 14 | 354 | E5         |    |    |  |
| NGC 1098        | ESO 546-14  | Galaxy | ERI | 12.6 | 13.4 | 1.7' | 02 44.9 | -17 40 | 310 | E-SO       |    |    |  |
| NGC 1099        | ESO 546-15  | Galaxy | ERI | 13.1 | 13   | 1.9' | 02 45.3 | -17 43 | 310 | SBb        |    |    |  |
| NGC 1100        | ESO 546-18  | Galaxy | ERI | 13   | 13.1 | 1.7' | 02 45.6 | -17 41 | 310 | SBa        |    |    |  |
| NGC 1101        | UGC 2278    | Galaxy | CET | 13   | 13.2 | 1.3' | 02 48.2 | +04 35 | 220 | SO         |    |    |  |
| NGC 1102        | ESO 546-19  | Galaxy | ERI | 14   | -    | 0.8' | 02 47.2 | -22 13 | 310 | SBb        |    |    |  |
| NGC 1103        | MCG - 2- 8- | Galaxy | ERI | 12.9 | 12.9 | 2.2' | 02 48.1 | -13 58 | 265 | SBb        |    |    |  |
| NGC 1104        | UGC 2287    | Galaxy | CET | 13.6 | 13.4 | 1.2' | 02 48.6 | -00 16 | 220 | SBO-a      |    |    |  |
| NGC 1106        | UGC 2322    | Galaxy | PER | 12.3 | 13.4 | 1.8' | 02 50.7 | +41 40 | 63  | SO         |    |    | comps@ 1.7';PA349;3.7';PA29                                |
| NGC 1107        | UGC 2307    | Galaxy | CET | 12.2 | 13.2 | 1.8' | 02 49.3 | +08 06 | 175 | SO         |    |    | dbl syst;comp at 3.7';PA137;early spiral                   |
| NGC 1109        | IC 1846     | Galaxy | ARI | 13.8 | 13.8 | 1.1' | 02 47.7 | +13 15 | 175 | Elliptical |    |    | CGCG lists IC1852 Mg 14.9 nearby                           |
| NGC 1110        | MCG -01-08- | Galaxy | ERI | 14   | -    | 2.9' | 02 49.2 | -07 50 | 265 | Sm         |    |    |  |
| NGC 1114        | MCG - 3- 8- | Galaxy | ERI | 13   | -    | 1.8' | 02 49.1 | -17 00 | 265 | Sc         |    |    | H III 449  |
| NGC 1118        | MCG - 2- 8- | Galaxy | ERI | 14   | -    | 2.2' | 02 50.0 | -12 10 | 265 | SO         |    |    |  |
| NGC 1120        | MCG -03-08- | Galaxy | ERI | 14   | -    | 1.3' | 02 49.1 | -14 28 | 265 | E-SO       |    |    |  |
| NGC 1121        | UGC 2332    | Galaxy | ERI | 12.9 | 11.5 | 0.9' | 02 50.7 | -01 44 | 220 | SO         |    |    |  |
| NGC 1122        | NGC 1123    | Galaxy | PER | 12.1 | 12.9 | 1.8' | 02 52.9 | +42 12 | 63  | SBb        |    |    |  |
| NGC 1123        | NGC 1122    | Galaxy | PER | 13   | -    | 1.8' | 02 52.9 | +42 12 | 63  | SBb        |    |    | H II 601   |
| NGC 1124        | ESO 480- 7  | Galaxy | FOR | 13.8 | 13.4 | 1'   | 02 51.6 | -25 42 | 310 | Sa Ring    |    |    |  |
| NGC 1125        | MCG - 3- 8- | Galaxy | ERI | 12.6 | 13   | 1.8' | 02 51.7 | -16 39 | 265 | SBO-a      |    |    | H III 450  |
| NGC 1129        | UGC 2373    | Galaxy | PER | 12.5 | 15.2 | 4'   | 02 54.5 | +41 35 | 63  | Elliptical |    |    | H II 602;v ext env;large # of objects in vicinity          |
| NGC 1130        | MCG 7- 7-   | Galaxy | PER | 13   | -    | 0.4' | 02 54.4 | +41 36 | 63  | Compac     |    |    | compact  |
| NGC 1132        | UGC 2359    | Galaxy | ERI | 12.3 | 13.6 | 2.5' | 02 52.9 | -01 17 | 220 | Elliptical |    |    | dbl system   |
| NGC 1134        | UGC 2365    | Galaxy | ARI | 12.1 | 12.8 | 2.5' | 02 53.7 | +13 01 | 175 | Sb         |    |    | material eject from nucl;splash appearance on w side       |
| NGC 1136        | ESO 154-19  | Galaxy | HOR | 13   | 13.4 | 1.4' | 02 50.9 | -54 59 | 419 | SBa        |    |    |  |
| NGC 1137        | UGC 2374    | Galaxy | CET | 12.4 | 13.4 | 2.2' | 02 54.0 | +02 58 | 220 | Sb         |    |    |  |
| NGC 1138        | UGC 2408    | Galaxy | PER | 12.8 | 12.6 | 1.1' | 02 56.6 | +43 03 | 63  | SBO        |    |    | H III 580  |
| NGC 1140        | MCG - 2- 8- | Galaxy | ERI | 12.5 | 12.8 | 1.8' | 02 54.6 | -10 02 | 265 | Sm         |    |    | H II 470   |
| NGC 1142        | NGC 1144    | Galaxy | CET | 13.8 | -    | 0.9' | 02 55.2 | -00 11 | 220 | Elliptical |    |    |  |
| NGC 1143        | NGC 1141    | Galaxy | CET | 14   | -    | 0.9' | 02 55.2 | -00 11 | 220 | Elliptical |    |    |  |
| NGC 1144        | NGC 1142    | Galaxy | CET | 12.9 | 12.5 | 0.9' | 02 55.2 | -00 11 | 220 | Ring       |    |    |  |
| NGC 1145        | ESO 546-29  | Galaxy | ERI | 12.5 | 12.9 | 3.2' | 02 54.6 | -18 38 | 310 | Sc         |    |    |  |
| NGC 1149        | MCG 0- 8-   | Galaxy | CET | 14   | 12.4 | 0.6' | 02 57.4 | -00 19 | 221 | E-SO       |    |    |  |
| NGC 1153        | UGC 2439    | Galaxy | CET | 12.4 | 12.7 | 1.3' | 02 58.2 | +03 22 | 221 | Sa         |    |    | prob v early spiral;* super at 0.25 sp ctr;UGC 2446 ,8.8'  |
| NGC 1154        | MCG - 2- 8- | Galaxy | ERI | 14   | -    | 1'   | 02 58.1 | -10 22 | 266 | Sc         |    |    |  |
| NGC 1155        | MCG - 2- 8- | Galaxy | ERI | 14   | -    | 1'   | 02 58.2 | -10 21 | 266 | SO         |    |    |  |
| NGC 1156        | UGC 2455    | Galaxy | ARI | 11.7 | 13.9 | 3.3' | 02 59.7 | +25 14 | 131 | Ir+        |    |    | H II 619;rrr dwarf w traces of spiral struct;bar-like core |
| NGC 1159        | UGC 2467    | Galaxy | PER | 14   | -    | 0.5' | 03 00.8 | +43 10 | 63  | SO         |    |    |  |
| NGC 1160        | UGC 2475    | Galaxy | PER | 12.8 | 13.3 | 1.9' | 03 01.2 | +44 57 | 63  | SBc Ring   |    |    | H III 199;several short patchy arms;P w NGC 1161           |
| NGC 1161        | UGC 2474    | Galaxy | PER | 11   | 12.8 | 2.8' | 03 01.2 | +44 54 | 63  | SO         |    |    | H II 239;P w NGC1160 at 3.5';PA357                         |
| NGC 1162        | MCG - 2- 8- | Galaxy | ERI | 13   | -    | 1.4' | 02 58.9 | -12 24 | 266 | Elliptical |    |    | H III 469  |
| NGC 1163        | MCG - 3- 8- | Galaxy | ERI | 13.8 | 13.3 | 2.2' | 03 00.4 | -17 09 | 311 | SBbc       |    |    |  |
| NGC 1164        | UGC 2490    | Galaxy | PER | 13.1 | 13.3 | 1.3' | 03 02.0 | +42 35 | 63  | SBab Ring  |    |    | comp 3.8';PA332;.4X0.3;peculiar                            |
| NGC 1165        | ESO 417- 8  | Galaxy | FOR | 12.7 | 13.5 | 2.5' | 02 58.8 | -32 06 | 354 | SBa        |    |    |  |
| NGC 1166        | UGC 2471    | Galaxy | ARI | 14   | 14.1 | 1.2' | 03 00.6 | +11 51 | 176 | Sab        |    |    | P w NGC 1168   |
| NGC 1167        | UGC 2487    | Galaxy | PER | 12.4 | 14.3 | 2.8' | 03 01.7 | +35 12 | 94  | SO         |    |    | H III 178  |
| NGC 1169        | UGC 2503    | Galaxy | PER | 11.3 | 13.8 | 4.6' | 03 03.6 | +46 23 | 63  | SBab       |    |    | H II 620   |
| NGC 1171        | UGC 2510    | Galaxy | PER | 12.3 | 13.4 | 2.7' | 03 04.0 | +43 24 | 63  | Sc         |    |    | comp 3.8';PA21;3.8';PA344                                  |
| NGC 1172        | MCG - 3- 8- | Galaxy | ERI | 11.9 | 13.3 | 2.3' | 03 01.6 | -14 50 | 266 | E1         |    |    | H II 502   |
| NGC 1174        | NGC 1186    | Galaxy | PER | 12.5 | -    | 3.2' | 03 05.5 | +42 50 | 63  | SBbc       |    |    |  |
| NGC 1175        | UGC 2515    | Galaxy | PER | 12.9 | 12.9 | 1.9' | 03 04.5 | +42 20 | 63  | Sa         |    |    | H II 607;sp of 2;BN in center;Saturn-like                  |
| NGC 1179        | ESO 547- 1  | Galaxy | ERI | 12   | 15   | 4.7' | 03 02.6 | -18 54 | 311 | Sp         |    |    |  |



## 7000 DSO List (sorted by name)

| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|----------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|--|
| NGC 1184 | UGC 2583    | Galaxy  | CEP | 12.4 | 12.9 | 2.8' | 03 16.8 | +80 48 | 5   | Sa         |     |      | H II 704   |
| NGC 1186 | NGC 1174    | Galaxy  | PER | 11.4 | 12.7 | 3.2' | 03 05.5 | +42 50 | 63  | SBbc       |     |      | H IV 43  |
| NGC 1187 | ESO 480-23  | Galaxy  | ERI | 10.8 | 14   | 5.6' | 03 02.6 | -22 52 | 311 | SBc        |     |      | H III 245;Multi arm spiral                           |
| NGC 1189 | MCG - 3- 8- | Galaxy  | ERI | 13.9 | 14.8 | 1.7' | 03 03.4 | -15 37 | 266 | SBcd       |     |      |  |
| NGC 1193 | OCL 390     | Opn CL  | PER | 12.6 | -    | 1.5' | 03 05.9 | +44 23 | 63  | II 3 m     | 40  | 14   | H II 608   |
| NGC 1194 | UGC 2514    | Galaxy  | CET | 12.9 | 13.3 | 1.8' | 03 03.8 | -01 06 | 221 | Sa         |     |      | strong abs p side;dif streamer (vis in red) to comp  |
| NGC 1195 | MCG - 2- 8- | Galaxy  | ERI | 14   | -    | 0.5' | 03 03.5 | -12 02 | 266 | E-SO       |     |      |  |
| NGC 1196 | MCG - 2- 8- | Galaxy  | ERI | 14   | -    | 1.4' | 03 03.6 | -12 05 | 266 | SO         |     |      |  |
| NGC 1198 | IC 282      | Galaxy  | PER | 12.5 | 13.2 | 1.9' | 03 06.2 | +41 51 | 63  | E-SO       |     |      |  |
| NGC 1199 | MCG - 3- 8- | Galaxy  | ERI | 11.4 | 13   | 2.3' | 03 03.6 | -15 37 | 266 | E2         |     |      | H II 503;Brightest in small group                    |
| NGC 1200 | MCG - 2- 8- | Galaxy  | ERI | 13   | -    | 2.9' | 03 03.9 | -12 00 | 266 | E-SO       |     |      | H II 475   |
| NGC 1201 | ESO 480-28  | Galaxy  | FOR | 10.7 | 12.8 | 3.3' | 03 04.1 | -26 04 | 311 | Sa         |     |      | H I 109  |
| NGC 1207 | UGC 2548    | Galaxy  | PER | 12.6 | 13.9 | 2.3' | 03 08.3 | +38 23 | 94  | Sb Ring    |     |      | H III 578  |
| NGC 1208 | MCG - 2- 8- | Galaxy  | ERI | 14   | -    | 1.9' | 03 06.2 | -09 32 | 266 | Sa         |     |      | H II 285   |
| NGC 1209 | MCG - 3- 8- | Galaxy  | ERI | 11.4 | 12.5 | 2.2' | 03 06.0 | -15 37 | 266 | E5         |     |      | H II 504   |
| NGC 1210 | ESO 480-31  | Galaxy  | FOR | 12.6 | 13.9 | 1.9' | 03 06.8 | -25 43 | 311 | SBO        |     |      |  |
| NGC 1211 | UGC 2545    | Galaxy  | CET | 12.3 | 13.6 | 2.1' | 03 06.9 | -00 48 | 221 | SBO-a      |     |      | v smooth transp disc;no spiral pattern               |
| NGC 1214 | MCG - 2- 8- | Galaxy  | ERI | 14   | 12.8 | 1.3' | 03 06.9 | -09 33 | 266 | Sa         |     |      |  |
| NGC 1217 | ESO 300-10  | Galaxy  | FOR | 12.4 | 13.2 | 1.8' | 03 06.1 | -39 02 | 390 | Sa         |     |      |  |
| NGC 1218 | 3C78        | Galaxy  | CET | 12.7 | 12.9 | 1.3' | 03 08.4 | +04 07 | 221 | Sa         |     |      |  |
| NGC 1219 | UGC 2556    | Galaxy  | CET | 13   | 13.2 | 1.2' | 03 08.5 | +02 06 | 221 | Sc         |     |      |  |
| NGC 1220 | OCL 380     | Opn CL  | PER | 11.8 | -    | 1.6' | 03 11.7 | +53 21 | 38  | II 2 p     | 15  | 13   |  |
| NGC 1222 | MCG - 1- 9- | Galaxy  | ERI | 12.5 | 12.3 | 0.8' | 03 08.9 | -02 57 | 221 | E-SO       |     |      |  |
| NGC 1224 | UGC 2578    | Galaxy  | PER | 13.7 | 14.1 | 1.4' | 03 11.2 | +41 22 | 63  | SO         |     |      | comp 1.5';PA0  |
| NGC 1226 | UGC 2575    | Galaxy  | PER | 12.9 | 14.3 | 2.1' | 03 11.1 | +35 23 | 94  | Elliptical |     |      | brtst in subgroup                                    |
| NGC 1228 | ESO 480-32  | Galaxy  | ERI | 13.2 | 13.3 | 1.6' | 03 08.2 | -22 55 | 311 | SBO-a      |     |      |  |
| NGC 1229 | ESO 480-33  | Galaxy  | ERI | 14   | 14.1 | 1.4' | 03 08.2 | -22 58 | 311 | SB/P       |     |      |  |
| NGC 1232 | ESO 547-14  | Galaxy  | ERI | 9.9  | 13.9 | 7.1' | 03 09.8 | -20 35 | 311 | Sc         |     |      | H II 258;Excellent face-on spiral                    |
| NGC 1233 | NGC 1235    | Galaxy  | PER | 13.2 | 13.2 | 1.8' | 03 12.6 | +39 19 | 63  | Sb         |     |      | B center region;e dif outside                        |
| NGC 1235 | NGC 1233    | Galaxy  | PER | 13.2 | -    | 1.8' | 03 12.6 | +39 19 | 63  | Sb         |     |      |  |
| NGC 1238 | MCG - 2- 9- | Galaxy  | ERI | 14   | -    | 1.6' | 03 10.9 | -10 45 | 266 | Elliptical |     |      |  |
| NGC 1241 | MCG - 2- 9- | Galaxy  | ERI | 12   | 13.5 | 3.2' | 03 11.2 | -08 55 | 266 | SBb        |     |      | H II 286   |
| NGC 1242 | MCG - 2- 9- | Galaxy  | ERI | 13.7 | 13.3 | 1.2' | 03 11.3 | -08 54 | 266 | SBc        |     |      | H III 591  |
| NGC 1245 | OCL 389     | Opn CL  | PER | 8.4  | -    | 10'  | 03 14.7 | +47 14 | 63  | III 1 r    | 200 | 11.2 | H VI 25  |
| NGC 1247 | MCG - 2- 9- | Galaxy  | ERI | 12.5 | 12.9 | 3.4' | 03 12.2 | -10 29 | 266 | Sbc        |     |      | H II 900   |
| NGC 1248 | MCG - 1- 9- | Galaxy  | ERI | 12.5 | 12.5 | 1.2' | 03 12.8 | -05 14 | 221 | SO         |     |      | H III 443;Br lanes w traces of dark matter           |
| NGC 1249 | ESO 155- 6  | Galaxy  | HOR | 11.8 | 14.3 | 4.7' | 03 10.0 | -53 20 | 419 | SBc        |     |      |  |
| NGC 1250 | UGC 2613    | Galaxy  | PER | 12.8 | 13.3 | 2.1' | 03 15.4 | +41 21 | 63  | SO         |     |      | comp 4.5';PA296;v diff;several eF companions         |
| NGC 1253 | MCG - 1- 9- | Galaxy  | ERI | 11.7 | 14.3 | 5.3' | 03 14.2 | -02 49 | 221 | SBc        |     |      | H IV 17  |
| NGC 1255 | ESO 481-13  | Galaxy  | FOR | 10.9 | 13.4 | 4.2' | 03 13.5 | -25 44 | 311 | SBbc       |     |      |  |
| NGC 1256 | ESO 547-23  | Galaxy  | ERI | 13.6 | 12.7 | 1.1' | 03 14.0 | -21 59 | 311 | E-SO Ba    |     |      |  |
| NGC 1257 | ZWG 540 7   | 2 Stars | PER | 13.7 | -    |      | 03 17.0 | +41 32 | 63  |            |     |      |  |
| NGC 1258 | ESO 547-24  | Galaxy  | ERI | 13.3 | 13.4 | 1.3' | 03 14.1 | -21 47 | 311 | SBc        |     |      |  |
| NGC 1260 | UGC 2634    | Galaxy  | PER | 13.3 | 12.6 | 1.1' | 03 17.5 | +41 24 | 63  | Sa         |     |      | Perseus Cl;5 comp inside 5 ' ;may be interacting     |
| NGC 1261 | GCL 5       | Glob CL | HOR | 8.4  | -    | 6.9' | 03 12.3 | -55 13 | 419 | II         |     |      |  |
| NGC 1265 | UGC 2651    | Galaxy  | PER | 12.1 | 13.2 | 1.8' | 03 18.3 | +41 51 | 63  | SO         |     |      | Perseus Cl;comps 2.7';PA246;4.2';PA308               |
| NGC 1266 | MCG - 1- 9- | Galaxy  | ERI | 14   | -    | 1.6' | 03 16.0 | -02 26 | 221 | SO         |     |      | H III 194  |
| NGC 1268 | UGC 2658    | Galaxy  | PER | 13.4 | 12.7 | 0.9' | 03 18.8 | +41 29 | 63  | Sb         |     |      | Perseus Cl in a cond around NGC 1275 (see N1267)     |
| NGC 1269 | NGC 1291    | Galaxy  | ERI | 9.4  | -    | 9.7' | 03 17.3 | -41 06 | 390 | SBO-a R    |     |      |  |
| NGC 1270 | UGC 2660    | Galaxy  | PER | 13.1 | 13.7 | 0.9' | 03 19.0 | +41 28 | 63  | E2         |     |      | Perseus Cl   |
| NGC 1272 | UGC 2662    | Galaxy  | PER | 11.8 | 13.2 | 2.2' | 03 19.4 | +41 29 | 63  | SO         |     |      | in Perseus Cl  |
| NGC 1273 | MCG 7- 7-   | Galaxy  | PER | 13.2 | 13.2 | 0.9' | 03 19.4 | +41 32 | 63  | SO         |     |      |  |
| NGC 1275 | 3C84;UGC 2  | Galaxy  | PER | 11.9 | 13.1 | 2.3' | 03 19.8 | +41 31 | 63  | SO         |     |      | Seyfert;brtst in Perseus Cl;center in dense galxy cl |
| NGC 1277 | MCG 7- 7-   | Galaxy  | PER | 13.5 | 12.3 | 0.8' | 03 19.9 | +41 34 | 63  | Sa         |     |      | in Perseus Cl  |
| NGC 1278 | IC 1907     | Galaxy  | PER | 12.4 | 13.2 | 1.4' | 03 19.9 | +41 34 | 63  | E2p        |     |      | Persus Cl;sf of 2;disturbed. Comp: NGC 1275,1277     |
| NGC 1280 | UGC 2652    | Galaxy  | CET | 13.4 | 12.9 | 0.9' | 03 18.0 | -00 10 | 221 | SBc        |     |      | asym;thin vB arms;almost circular                    |
| NGC 1281 | MCG 7- 7-   | Galaxy  | PER | 13.3 | 12.9 | 0.4' | 03 20.1 | +41 38 | 63  | E5         |     |      |  |
| NGC 1282 | UGC 2675    | Galaxy  | PER | 12.9 | 13.4 | 1.4' | 03 20.2 | +41 22 | 63  | E1         |     |      | P w N1283;Perseus Cl;2 smlr gal are comp to this Pr  |
| NGC 1283 | UGC 2676    | Galaxy  | PER | 13.6 | 12.6 | 0.7' | 03 20.3 | +41 24 | 63  | E1         |     |      | compact  |
| NGC 1284 | MCG - 2- 9- | Galaxy  | ERI | 14   | -    | 1.7' | 03 17.8 | -10 17 | 266 | SO         |     |      | H III 956  |
| NGC 1285 | MCG - 1- 9- | Galaxy  | ERI | 14   | -    | 1.5' | 03 17.9 | -07 18 | 266 | SB Ring    |     |      |  |
| NGC 1288 | ESO 357-13  | Galaxy  | FOR | 12.1 | 13.6 | 2.3' | 03 17.2 | -32 35 | 355 | SBc        |     |      |  |
| NGC 1289 | IC 314      | Galaxy  | ERI | 12.6 | 13.2 | 1.8' | 03 18.8 | -01 58 | 221 | SO         |     |      |  |
| NGC 1291 | NGC 1269    | Galaxy  | ERI | 8.5  | 13.1 | 9.7' | 03 17.3 | -41 06 | 390 | SBO-a R    |     |      | comp 2.2';PA138;UGC 2666                             |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| NGC 1292        | ESO 418- 1  | Galaxy  | FOR | 12.1 | 13.5 | 3'    | 03 18.2 | -27 37 | 311 | Sc         |    |      |  |
| NGC 1293        | MCG 7- 7-   | Galaxy  | PER | 13.4 | 13.5 | 0.9'  | 03 21.6 | +41 24 | 63  | E0         |    |      | H III 574  |
| NGC 1294        | UGC 2694    | Galaxy  | PER | 13.2 | 13.5 | 1.5'  | 03 21.7 | +41 22 | 63  | SO         |    |      | H III 575;ssf of 2   |
| NGC 1296        | MCG - 2- 9- | Galaxy  | ERI | 14   | -    | 1.1'  | 03 18.8 | -13 04 | 266 | Sab        |    |      |  |
| NGC 1297        | ESO 547-30  | Galaxy  | ERI | 11.8 | 13.2 | 2.3'  | 03 19.2 | -19 06 | 311 | E2         |    |      |  |
| NGC 1298        | UGC 2683    | Galaxy  | ERI | 14   | 14.7 | 1.5'  | 03 20.2 | -02 07 | 221 | E1         |    |      | UGC 2687,2.7';UGC 2460 at .9';PA10; sev sF obj in vic      |
| NGC 1299        | MCG - 1- 9- | Galaxy  | ERI | 14   | -    | 1.2'  | 03 20.2 | -06 16 | 266 | Sb         |    |      | H II 287   |
| <b>NGC 1300</b> | ESO 547-31  | Galaxy  | ERI | 10.4 | 13.8 | 5.9'  | 03 19.7 | -19 25 | 311 | SBbc       |    |      |  |
| NGC 1301        | ESO 547-32  | Galaxy  | ERI | 13.4 | 13.2 | 2.2'  | 03 20.6 | -18 43 | 311 | SBbc       |    |      |  |
| NGC 1302        | ESO 481-20  | Galaxy  | FOR | 10.7 | 13.5 | 4.1'  | 03 19.9 | -26 04 | 311 | SBO-a R    |    |      |  |
| NGC 1305        | UGC 2697    | Galaxy  | ERI | 13.3 | 13.5 | 1.5'  | 03 21.4 | -02 19 | 221 | E2         |    |      |  |
| NGC 1306        | ESO 481-23  | Galaxy  | FOR | 12.8 | 12.6 | 1.1'  | 03 21.1 | -25 31 | 311 | Sb         |    |      |  |
| NGC 1309        | MCG - 3- 9- | Galaxy  | ERI | 11.5 | 13   | 2.3'  | 03 22.1 | -15 24 | 266 | Sbc        |    |      | H I 106  |
| NGC 1310        | ESO 357-19  | Galaxy  | FOR | 12.1 | 13.1 | 1.9'  | 03 21.1 | -37 06 | 355 | SBc        |    |      |  |
| NGC 1311        | ESO 200- 7  | Galaxy  | HOR | 13   | 13.8 | 3'    | 03 20.1 | -52 11 | 419 | SBp        |    |      |  |
| NGC 1315        | ESO 548- 3  | Galaxy  | ERI | 12.4 | 13.2 | 1.6'  | 03 23.1 | -21 23 | 311 | SBO-a      |    |      |  |
| <b>NGC 1316</b> | ESO 357-22  | Galaxy  | FOR | 8.5  | 13.4 | 11.2' | 03 22.7 | -37 13 | 355 | SBO        |    |      | <b>Fornax Galaxy Cluster member</b>                        |
| NGC 1316C       | ESO 357-27  | Galaxy  | FOR | 13.3 | 13.1 | 1.3'  | 03 25.0 | -37 01 | 355 | SO         |    |      |  |
| NGC 1317        | NGC 1318    | Galaxy  | FOR | 11   | 12.9 | 2.8'  | 03 22.7 | -37 06 | 355 | SBa        |    |      | <b>Fornax Galaxy Cluster member</b>                        |
| NGC 1318        | NGC 1317    | Galaxy  | FOR | 12   | -    | 2.8'  | 03 22.7 | -37 06 | 355 | SBa        |    |      |  |
| NGC 1319        | ESO 548- 6  | Galaxy  | ERI | 12.9 | 12.6 | 1.3'  | 03 23.9 | -21 32 | 311 | SO         |    |      |  |
| NGC 1320        | MCG - 1- 9- | Galaxy  | ERI | 12.4 | 12.5 | 1.9'  | 03 24.8 | -03 03 | 221 | Sa         |    |      | H III 197  |
| NGC 1321        | MCG - 1- 9- | Galaxy  | ERI | 14   | -    | 0.9'  | 03 24.8 | -03 01 | 221 | Sa         |    |      | H III 196  |
| NGC 1324        | MCG - 1- 9- | Galaxy  | ERI | 14   | -    | 2.1'  | 03 25.0 | -05 45 | 266 | Sb         |    |      | H III 445  |
| <b>NGC 1325</b> | ESO 548- 7  | Galaxy  | ERI | 11.5 | 13.6 | 4.8'  | 03 24.4 | -21 33 | 311 | SBbc       |    |      | H IV 77  |
| NGC 1325A       | ESO 548-10  | Galaxy  | ERI | 13.5 | -    | 2.1'  | 03 24.8 | -21 20 | 311 | SBb        |    |      |  |
| NGC 1326        | ESO 357-26  | Galaxy  | FOR | 10.5 | 13   | 4.3'  | 03 23.9 | -36 28 | 355 | SBO-a R    |    |      | <b>Fornax Galaxy Cluster member</b>                        |
| NGC 1326A       | ESO 357-28  | Galaxy  | FOR | 13.3 | 14.4 | 1.9'  | 03 25.1 | -36 22 | 355 | SBp        |    |      |  |
| NGC 1326B       | ESO 357-29  | Galaxy  | FOR | 13.3 | 14.6 | 3.6'  | 03 25.3 | -36 23 | 355 | SBd        |    |      |  |
| NGC 1329        | ESO 548-15  | Galaxy  | ERI | 12.6 | 13   | 1.4'  | 03 26.0 | -17 36 | 311 | Sa         |    |      |  |
| NGC 1331        | IC 324      | Galaxy  | ERI | 13.4 | 13.2 | 0.9'  | 03 26.5 | -21 21 | 311 | E2         |    |      | H III 959;IC 324   |
| <b>NGC 1332</b> | ESO 548-18  | Galaxy  | ERI | 10.3 | 12.2 | 4'    | 03 26.3 | -21 20 | 311 | E7         |    |      | H I 60   |
| NGC 1333        | LBN 741     | Br1 Neb | PER | -    | -    | 9'    | 03 29.2 | +31 22 | 94  | R          |    | 9.5  | Bright neb with many dark neb in area incl B205            |
| NGC 1334        | UGC 2694    | Galaxy  | PER | 13.1 | 13.1 | 1.5'  | 03 30.0 | +41 50 | 63  | SBc        |    |      | disrupted spiral;red main body;spir arc f side             |
| NGC 1335        | UGC 2762    | Galaxy  | PER | 13.8 | 13.2 | 1.1'  | 03 30.3 | +41 34 | 63  | E-SO       |    |      |  |
| NGC 1336        | ESO 358- 2  | Galaxy  | FOR | 12.3 | 13.4 | 2.1'  | 03 26.5 | -35 43 | 355 | E-SO       |    |      |  |
| NGC 1337        | MCG - 2- 9- | Galaxy  | ERI | 11.9 | 14.1 | 5.7'  | 03 28.1 | -08 23 | 267 | SBc        |    |      | Nearly edge-on   |
| NGC 1338        | MCG - 2- 9- | Galaxy  | ERI | 13   | -    | 1.4'  | 03 28.9 | -12 09 | 267 | Sb         |    |      |  |
| NGC 1339        | ESO 418- 4  | Galaxy  | FOR | 11.6 | 12.6 | 1.8'  | 03 28.1 | -32 17 | 355 | E2         |    |      |  |
| NGC 1340        | NGC 1344    | Galaxy  | FOR | 11.4 | -    | 6.1'  | 03 28.3 | -31 04 | 355 | Elliptical |    |      |  |
| NGC 1341        | ESO 358- 8  | Galaxy  | FOR | 12.3 | 12.9 | 1.6'  | 03 28.0 | -37 09 | 355 | SBab       |    |      | <b>Fornax Galaxy Cluster member</b>                        |
| <b>NGC 1342</b> | OCL 401     | Opn CL  | PER | 6.7  | -    | 14'   | 03 31.7 | +37 22 | 94  | III 3 p    | 40 | 8.8  | H VIII 88  |
| NGC 1343        | UGC 2792    | Galaxy  | CAS | 12.7 | 14.1 | 2.6'  | 03 37.8 | +72 34 | 5   | SB/P       |    |      | heavy ringshaped nucleus;B blue neutral ring core          |
| NGC 1344        | NGC 1340    | Galaxy  | FOR | 10.4 | 13.7 | 6.1'  | 03 28.3 | -31 04 | 355 | E3         |    |      | H I 257  |
| NGC 1345        | ESO 548-26  | Galaxy  | ERI | 13.8 | 14.2 | 1.5'  | 03 29.5 | -17 47 | 312 | SBc        |    |      |  |
| NGC 1347        | ESO 548-27  | Galaxy  | ERI | 13   | 13.6 | 1.5'  | 03 29.7 | -22 17 | 312 | SBc        |    |      |  |
| NGC 1348        | OCL 391     | Opn CL  | PER | -    | -    | 5'    | 03 34.1 | +51 25 | 39  | II 2 p     | 30 | 8.5  | H VIII 84  |
| NGC 1349        | UGC 2774    | Galaxy  | TAU | 13   | 12.2 | 0.7'  | 03 31.5 | +04 23 | 222 | SO         |    |      |  |
| NGC 1350        | ESO 358-13  | Galaxy  | FOR | 10.3 | 13.1 | 5.4'  | 03 31.1 | -33 38 | 355 | SBab       |    |      | <b>Fornax Galaxy Cluster member</b>                        |
| NGC 1351        | ESO 358-12  | Galaxy  | FOR | 11.6 | 13.1 | 3.4'  | 03 30.6 | -34 51 | 355 | SO         |    |      | <b>Fornax Galaxy Cluster member</b>                        |
| NGC 1351A       | ESO 358- 9  | Galaxy  | FOR | 13.4 | 13.6 | 2.6'  | 03 28.8 | -35 11 | 355 | SBbc       |    |      |  |
| NGC 1352        | ESO 548-30  | Galaxy  | ERI | 13.3 | 12.9 | 1'    | 03 31.5 | -19 17 | 312 | SBO        |    |      |  |
| NGC 1353        | ESO 548-31  | Galaxy  | ERI | 11.4 | 13   | 3.4'  | 03 32.1 | -20 49 | 312 | SBb        |    |      | H III 246  |
| NGC 1354        | MCG - 3-10- | Galaxy  | ERI | 14   | -    | 2.3'  | 03 32.5 | -15 13 | 267 | Sa         |    |      | H III 487  |
| NGC 1355        | MCG - 1-10- | Galaxy  | ERI | 13.3 | 12.5 | 1.5'  | 03 33.4 | -05 00 | 222 | SO         |    |      | poss edgewise S;P w NGC 1358 at 6'8                        |
| NGC 1356        | ESO 200-31  | Galaxy  | HOR | 13   | 13.3 | 1.4'  | 03 30.7 | -50 19 | 420 | SBbc       |    |      |  |
| NGC 1357        | MCG - 2-10- | Galaxy  | ERI | 11.5 | 13.2 | 3.1'  | 03 33.3 | -13 40 | 267 | Sab Ring   |    |      | H II 290   |
| NGC 1358        | MCG - 1-10- | Galaxy  | ERI | 12.1 | 13.8 | 2.5'  | 03 33.7 | -05 05 | 222 | SBO-a      |    |      | H III 446  |
| NGC 1359        | ESO 548-39  | Galaxy  | ERI | 12.2 | 13.6 | 2.5'  | 03 33.8 | -19 29 | 312 | SB/P       |    |      |  |
| <b>NGC 1360</b> | PK 220-53.1 | Pln Neb | FOR | 9.4  | 13.7 | 360"  | 03 33.2 | -25 52 | 312 | 3          |    | 11.3 |  |
| NGC 1362        | ESO 548-41  | Galaxy  | ERI | 12.5 | 12.7 | 1.2'  | 03 33.9 | -20 17 | 312 | SO         |    |      | H III 960  |
| NGC 1363        | IRAS03324-  | Galaxy  | ERI | 13.9 | -    | 0.9'  | 03 34.8 | -09 51 | 267 | Sbc        |    |      |  |
| <b>NGC 1365</b> | ESO 358-17  | Galaxy  | FOR | 9.6  | 14.1 | 11'   | 03 33.6 | -36 08 | 355 | SBb        |    |      | Best example of barred spiral; <b>Fornax Gal Cl member</b> |
| NGC 1366        | ESO 418-10  | Galaxy  | FOR | 12   | 12.6 | 2.1'  | 03 33.9 | -31 12 | 355 | SO         |    |      | H III 857  |



## 7000 DSO List (sorted by name)

| NAME             | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs  | SAC NOTES   |
|------------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|-----|---|
| NGC 1367         | NGC 1371    | Galaxy  | FOR | 11.6 | -    | 5.9' | 03 35.0 | -24 56 | 312 | SBa        |    |     |   |
| NGC 1369         | ESO 358-G0  | Galaxy  | FOR | 12.7 | 13.4 | 1.5' | 03 36.8 | -36 15 | 355 | SBO-a      |    |     |   |
| NGC 1370         | ESO 548-48  | Galaxy  | ERI | 12.4 | 12.8 | 1.5' | 03 35.2 | -20 22 | 312 | Elliptical |    |     | H III 559   |
| NGC 1371         | NGC 1367    | Galaxy  | FOR | 10.7 | 13.9 | 5.9' | 03 35.0 | -24 56 | 312 | SBa        |    |     | H II 262  |
| NGC 1373         | ESO 358-21  | Galaxy  | FOR | 13.3 | 13.2 | 1.2' | 03 35.0 | -35 10 | 355 | Elliptical |    |     |   |
| <b>NGC 1374</b>  | ESO 358-23  | Galaxy  | FOR | 11.1 | 12.9 | 2.7' | 03 35.3 | -35 14 | 355 | E0         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| <b>NGC 1375</b>  | ESO 358-24  | Galaxy  | FOR | 12.4 | 13   | 2.3' | 03 35.3 | -35 16 | 355 | SBO        |    |     |   |
| NGC 1376         | MCG - 1-10- | Galaxy  | ERI | 12.1 | 13.3 | 2.1' | 03 37.1 | -05 03 | 222 | Sc         |    |     | H II 288  |
| NGC 1377         | ESO 548-51  | Galaxy  | ERI | 12.4 | 12.7 | 1.8' | 03 36.7 | -20 54 | 312 | SO         |    |     | H III 961   |
| NGC 1379         | ESO 358-27  | Galaxy  | FOR | 10.9 | 12.8 | 2.4' | 03 36.1 | -35 26 | 355 | E0         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| NGC 1380         | ESO 358-28  | Galaxy  | FOR | 9.9  | 12.4 | 4.8' | 03 36.5 | -34 59 | 355 | SBO        |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| <b>NGC 1380A</b> | ESO 358-33  | Galaxy  | FOR | 12.4 | 12.8 | 2.4' | 03 36.8 | -34 44 | 355 | SO         |    |     |   |
| <b>NGC 1380B</b> | NGC 1382    | Galaxy  | FOR | 13   | -    | 1.5' | 03 37.2 | -35 12 | 355 | E-S0 B     |    |     |   |
| <b>NGC 1381</b>  | ESO 358-29  | Galaxy  | FOR | 11.5 | 12.1 | 2.6' | 03 36.5 | -35 18 | 355 | SO         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| <b>NGC 1382</b>  | NGC 1380B   | Galaxy  | FOR | 12.9 | 13.5 | 1.5' | 03 37.2 | -35 12 | 355 | E-S0 Ba    |    |     | near 1380   |
| NGC 1383         | ESO 548-53  | Galaxy  | ERI | 12.5 | 12.9 | 1.9' | 03 37.7 | -18 20 | 312 | SBO        |    |     |   |
| NGC 1385         | ESO 482-16  | Galaxy  | FOR | 10.9 | 12.9 | 3.6' | 03 37.5 | -24 30 | 312 | SBc        |    |     | H II 263  |
| NGC 1386         | ESO 358-35  | Galaxy  | ERI | 11.2 | 12.7 | 3.4' | 03 36.8 | -36 00 | 355 | Sa         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| <b>NGC 1387</b>  | ESO 358-36  | Galaxy  | FOR | 10.7 | 12.8 | 3.2' | 03 37.0 | -35 30 | 355 | SO         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| <b>NGC 1389</b>  | ESO 358-38  | Galaxy  | ERI | 11.5 | 12.6 | 2.5' | 03 37.2 | -35 45 | 355 | E4         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| NGC 1390         | ESO 548-54  | Galaxy  | ERI | 13.7 | 13.3 | 1.4' | 03 37.9 | -19 00 | 312 | SBa        |    |     |   |
| NGC 1391         | ESO 548-59  | Galaxy  | ERI | 13.3 | 12.6 | 1.2' | 03 38.9 | -18 21 | 312 | SBO        |    |     |   |
| NGC 1393         | ESO 548-58  | Galaxy  | ERI | 12   | 12.9 | 2'   | 03 38.6 | -18 26 | 312 | SBO        |    |     | H III 451   |
| NGC 1394         | ESO 548-60  | Galaxy  | ERI | 12.8 | 12.1 | 1.3' | 03 39.1 | -18 18 | 312 | SO         |    |     |   |
| NGC 1395         | ESO 482-19  | Galaxy  | ERI | 9.6  | 13.1 | 5.6' | 03 38.5 | -23 02 | 312 | E3         |    |     | H I 58  |
| NGC 1396         | FCC 202     | Galaxy  | ERI | 13.8 | 13.5 | 1'   | 03 38.1 | -35 26 | 355 | SAB0       |    |     |   |
| <b>NGC 1398</b>  | ESO 482-22  | Galaxy  | FOR | 9.7  | 13.5 | 7.2' | 03 38.9 | -26 20 | 312 | SBab       |    |     |   |
| <b>NGC 1399</b>  | ESO 358-45  | Galaxy  | FOR | 9.6  | 13.7 | 6.6' | 03 38.5 | -35 27 | 355 | E1p        |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| NGC 1400         | ESO 548-62  | Galaxy  | ERI | 11   | 12.5 | 2.5' | 03 39.5 | -18 41 | 312 | E1         |    |     | H II 593;P w NGC 1407 nf                              |
| NGC 1401         | ESO 482-26  | Galaxy  | ERI | 12.3 | 12.6 | 2.4' | 03 39.4 | -22 44 | 312 | SBO        |    |     | H III 247   |
| NGC 1402         | ESO 548-61  | Galaxy  | ERI | 13.6 | 12.6 | 0.8' | 03 39.5 | -18 32 | 312 | SBO        |    |     |   |
| NGC 1403         | ESO 482-25  | Galaxy  | ERI | 12.7 | 13   | 1.3' | 03 39.2 | -22 23 | 312 | E-S0 Ba    |    |     |   |
| <b>NGC 1404</b>  | ESO 358-46  | Galaxy  | FOR | 10   | 12.5 | 3.9' | 03 38.9 | -35 36 | 355 | E1         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| NGC 1406         | ESO 418-15  | Galaxy  | FOR | 11.8 | 12.8 | 3.9' | 03 39.4 | -31 19 | 355 | SBbc       |    |     |   |
| <b>NGC 1407</b>  | ESO 548-67  | Galaxy  | ERI | 9.7  | 12.9 | 4.9' | 03 40.2 | -18 35 | 312 | EO         |    |     | H I 107   |
| NGC 1409         | UGC 2821    | Galaxy  | TAU | 14   | -    | 1'   | 03 41.2 | -01 18 | 222 | SBO        |    |     | Dbl sys;distorted;post-eruptive pair: red;patchy;halo |
| NGC 1410         | UGC 2821    | Galaxy  | TAU | 14   | -    | 0.8' | 03 41.2 | -01 18 | 222 | E1p        |    |     | blue ellipse;mp=15.4                                  |
| NGC 1411         | IC 1943     | Galaxy  | HOR | 11.3 | 12.6 | 2.2' | 03 38.7 | -44 06 | 391 | SO         |    |     |   |
| NGC 1412         | ESO 482-G0  | Galaxy  | FOR | 12.5 | 12.8 | 1.8' | 03 40.5 | -26 52 | 312 | SBO        |    |     |   |
| NGC 1414         | ESO 548-71  | Galaxy  | ERI | 13.8 | 12.8 | 1.5' | 03 41.0 | -21 43 | 312 | SBbc       |    |     |   |
| NGC 1415         | IC 1983     | Galaxy  | ERI | 11.9 | 13.7 | 3.6' | 03 40.9 | -22 34 | 312 | Sa         |    |     | H II 267;IC 1983                                      |
| NGC 1416         | ESO 482-34  | Galaxy  | ERI | 12.9 | 13.5 | 1.4' | 03 41.0 | -22 43 | 312 | E1         |    |     |   |
| NGC 1417         | MCG - 1-10- | Galaxy  | ERI | 12.1 | 13.6 | 2.7' | 03 42.0 | -04 42 | 222 | SBb        |    |     | H II 455;Bar;comp w NGC 1418;B arms w knots           |
| NGC 1418         | MCG - 1-10- | Galaxy  | ERI | 13.6 | 13.6 | 1'   | 03 42.3 | -04 44 | 222 | SBb        |    |     | H II 456;P w NGC 1417 main arms;v poor resolved       |
| NGC 1419         | ESO 301-23  | Galaxy  | ERI | 12.6 | 12.8 | 1.1' | 03 40.7 | -37 31 | 356 | Elliptical |    |     |   |
| NGC 1421         | MCG - 2-10- | Galaxy  | ERI | 11.4 | 12.5 | 3.4' | 03 42.5 | -13 29 | 267 | SBbc       |    |     | H II 291;Nearly edge-on                               |
| NGC 1422         | ESO 548-77  | Galaxy  | ERI | 13.2 | 13.2 | 2.3' | 03 41.5 | -21 41 | 312 | SBab       |    |     |   |
| NGC 1424         | NGC 1429    | Galaxy  | ERI | 13.8 | 13.7 | 1.6' | 03 43.2 | -04 44 | 222 | SBb        |    |     | 3 main arms;some knots                                |
| NGC 1425         | ESO 419- 4  | Galaxy  | FOR | 10.6 | 13.4 | 5.8' | 03 42.2 | -29 54 | 356 | Sb         |    |     | H II 852  |
| NGC 1426         | ESO 549- 1  | Galaxy  | ERI | 11.4 | 13   | 2.6' | 03 42.8 | -22 07 | 312 | E2         |    |     | H III 248   |
| NGC 1427         | ESO 358-52  | Galaxy  | FOR | 10.9 | 13.2 | 3.8' | 03 42.3 | -35 24 | 356 | E3         |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| NGC 1427A        | ESO 358-49  | Galaxy  | ERI | 12.9 | 14.1 | 2.3' | 03 40.1 | -35 38 | 356 | Ir Bar     |    |     |   |
| NGC 1428         | ESO 358-53  | Galaxy  | FOR | 12.7 | 12.9 | 1.6' | 03 42.4 | -35 09 | 356 | SO         |    |     |   |
| NGC 1431         | UGC 2845    | Galaxy  | TAU | 14   | 13.6 | 1'   | 03 44.7 | +02 50 | 222 | SO         |    |     | comp 3.2' PA338                                       |
| NGC 1432         | LBN 772     | Brn Neb | TAU | -    | -    | 60'  | 03 45.8 | +24 22 | 132 | R          |    |     |   |
| <b>NGC 1433</b>  | ESO 249-14  | Galaxy  | HOR | 9.9  | 13.7 | 6.1' | 03 42.0 | -47 13 | 391 | SBa        |    |     |   |
| NGC 1435         | CED 19I     | Brn Neb | TAU | -    | -    | 30'  | 03 46.2 | +23 46 | 132 | R          |    | 4.2 | <b>Tempel's nebula</b> ; fan-shaped                   |
| NGC 1436         | NGC 1437    | Galaxy  | ERI | 11.8 | -    | 3.1' | 03 43.6 | -35 51 | 356 | SBab       |    |     |   |
| NGC 1437         | NGC 1436    | Galaxy  | ERI | 11.7 | 13.4 | 3.1' | 03 43.6 | -35 51 | 356 | SBab       |    |     | <b>Fornax Galaxy Cluster member</b>                   |
| NGC 1437A        | ESO 358-54  | Galaxy  | ERI | 14   | -    | 1.8' | 03 43.0 | -36 16 | 356 | SBd        |    |     |   |
| NGC 1437B        | ESO 358-61  | Galaxy  | ERI | 13.8 | -    | 2.6' | 03 45.9 | -36 22 | 356 | Sc         |    |     |   |
| NGC 1438         | ESO 482-41  | Galaxy  | ERI | 12.4 | 12.9 | 2'   | 03 45.3 | -23 00 | 312 | SBO-a      |    |     |   |
| NGC 1439         | ESO 549- 9  | Galaxy  | ERI | 11.4 | 13.3 | 2.4' | 03 44.8 | -21 55 | 312 | E1         |    |     | H III 249   |
| NGC 1440         | NGC 1442    | Galaxy  | ERI | 11.5 | 12.8 | 2.2' | 03 45.0 | -18 16 | 312 | SBO        |    |     | H II 458  |

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| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 1441        | MCG - 1-10- | Galaxy  | ERI | 12.9 | 12.8 | 1.7'  | 03 45.7 | -04 06 | 222 | SBb        |    |      | poorly resolved;in NGC 1441-53 grp;P w NGC 1449       |
| NGC 1442        | NGC 1440    | Galaxy  | ERI | 12.6 | -    | 2.2'  | 03 45.0 | -18 16 | 312 | SBO        |    |      | H II 594  |
| <b>NGC 1444</b> | OCL 394     | Opn CL  | PER | 6.6  | -    | 4'    | 03 49.4 | +52 40 | 39  | IV 1 p     | 37 | 6.8  | H VIII 80;In Cam OB1?                                 |
| NGC 1448        | NGC 1457    | Galaxy  | HOR | 10.7 | 13.3 | 7.5'  | 03 44.5 | -44 39 | 391 | Sc         |    |      | Nearly edge-on  |
| NGC 1449        | MCG - 1-10- | Galaxy  | ERI | 13.5 | 12.2 | 0.8'  | 03 46.1 | -04 08 | 222 | SO         |    |      |   |
| NGC 1451        | NGC 1446    | Galaxy  | ERI | 13.3 | 11.9 | 0.8'  | 03 46.1 | -04 04 | 222 | SO         |    |      |   |
| NGC 1452        | NGC 1455    | Galaxy  | ERI | 11.8 | 12.9 | 2.3'  | 03 45.4 | -18 38 | 312 | SBO-a R    |    |      | H II 459;= NGC 1455                                   |
| NGC 1453        | MCG - 1-10- | Galaxy  | ERI | 11.5 | 13.2 | 2.3'  | 03 46.5 | -03 58 | 222 | E2         |    |      | H I 155   |
| NGC 1455        | NGC 1452    | Galaxy  | ERI | 12.8 | -    | 2.3'  | 03 45.4 | -18 38 | 312 | SBO-a R    |    |      |   |
| NGC 1457        | NGC 1448    | Galaxy  | HOR | 11.4 | -    | 7.5'  | 03 44.5 | -44 39 | 391 | Sc         |    |      |   |
| NGC 1458        | MCG 03-10-  | Galaxy  | ERI | 12.6 | -    | 3.3'  | 03 45.0 | -18 14 | 312 | Sb         |    |      |   |
| NGC 1459        | ESO 482-43  | Galaxy  | FOR | 12.8 | 13.4 | 1.7'  | 03 47.0 | -25 31 | 312 | SBbc       |    |      |   |
| NGC 1460        | ESO 358-62  | Galaxy  | ERI | 12.5 | 13.3 | 1.7'  | 03 46.2 | -36 42 | 356 | SBO        |    |      |   |
| NGC 1461        | MCG - 3-10- | Galaxy  | ERI | 11.8 | 12.8 | 3'    | 03 48.5 | -16 24 | 267 | SO         |    |      | H II 460;Lens-shaped                                  |
| NGC 1463        | ESO 117- 9  | Galaxy  | RET | 13.5 | 13.9 | 1.3'  | 03 46.3 | -59 49 | 420 | Sa Ring    |    |      |   |
| NGC 1465        | UGC 2891    | Galaxy  | PER | 13.7 | 13.3 | 1.7'  | 03 53.5 | +32 30 | 95  | Sa         |    |      | brightest of 3  |
| NGC 1469        | UGC 2909    | Galaxy  | CAM | 12.7 | 13.1 | 1.9'  | 04 00.5 | +68 35 | 18  | SO         |    |      |   |
| NGC 1474        | IC 2002     | Galaxy  | TAU | 14   | -    | 1.1'  | 03 54.5 | +10 42 | 177 | SBa        |    |      |   |
| NGC 1476        | ESO 249-24  | Galaxy  | HOR | 13.1 | 12.6 | 1.4'  | 03 52.1 | -44 32 | 391 | Sa         |    |      |   |
| NGC 1481        | ESO 549-32  | Galaxy  | ERI | 13.4 | 12.9 | 1'    | 03 54.5 | -20 26 | 312 | E-SO       |    |      |   |
| NGC 1482        | ESO 549-33  | Galaxy  | ERI | 12.1 | 13.3 | 2.4'  | 03 54.6 | -20 30 | 312 | Sa         |    |      | H III 962   |
| NGC 1483        | ESO 201- 7  | Galaxy  | HOR | 12.7 | 13.4 | 1.6'  | 03 52.8 | -47 29 | 391 | SBbc       |    |      |   |
| NGC 1484        | ESO 359- 6  | Galaxy  | ERI | 12.9 | 13.1 | 2.5'  | 03 54.3 | -36 58 | 356 | Sb         |    |      |   |
| NGC 1485        | UGC 2933    | Galaxy  | CAM | 12.6 | 12.9 | 2.1'  | 04 05.1 | +71 00 | 18  | Sb         |    |      |   |
| NGC 1487        | ESO 249-31  | Galaxy  | ERI | 11.9 | 13.9 | 3.3'  | 03 55.8 | -42 22 | 391 | Sm         |    |      | Double galaxy or collision system                     |
| NGC 1489        | ESO 549-42  | Galaxy  | ERI | 13.8 | 13.4 | 1.4'  | 03 57.6 | -19 13 | 312 | SBb        |    |      |   |
| <b>NGC 1491</b> | LBN 704     | Brn Neb | PER | -    | -    | 6'    | 04 03.2 | +51 19 | 39  | E          |    |      | H I 258   |
| NGC 1492        | ESO 359-12  | Galaxy  | ERI | 13.4 | 12.8 | 0.9'  | 03 58.2 | -35 27 | 356 | Sa         |    |      |   |
| NGC 1493        | ESO 249-33  | Galaxy  | HOR | 11.3 | 13.7 | 3.6'  | 03 57.5 | -46 13 | 391 | SBc        |    |      |   |
| NGC 1494        | ESO 201-12  | Galaxy  | HOR | 11.7 | 13.5 | 3.3'  | 03 57.7 | -48 55 | 391 | SBcd       |    |      |   |
| NGC 1495        | ESO 249-34  | Galaxy  | HOR | 12.6 | 13   | 3'    | 03 58.4 | -44 28 | 391 | Sc         |    |      |   |
| NGC 1496        | OCL 396     | Opn CL  | PER | 9.6  | -    | 6'    | 04 04.5 | +52 40 | 39  | II 1 p     | 10 | 12   |   |
| NGC 1497        | UGC 2929    | Galaxy  | TAU | 13.1 | 13.8 | 1.8'  | 04 02.1 | +23 08 | 133 | SO         |    |      | brightest of 4  |
| <b>NGC 1499</b> | LBN 756     | Brn Neb | PER | 5    | -    | 160'  | 04 03.2 | +36 22 | 95  | E          |    |      | <b>California Nebula</b> ;0.6 deg from Xi Per         |
| NGC 1500        | ESO 201-13  | Galaxy  | DOR | 13.8 | 13.8 | 1.1'  | 03 58.2 | -52 20 | 420 | Elliptical |    |      |   |
| <b>NGC 1501</b> | PK 144+6.1  | Pln Neb | CAM | 12   | 11.6 | 56"   | 04 07.0 | +60 55 | 39  | 3          |    | 14.4 | H IV 53;PK144+6.1                                     |
| <b>NGC 1502</b> | OCL 383     | Opn CL  | CAM | 6.9  | -    | 8'    | 04 07.8 | +62 20 | 18  | II 3 p     | 45 | 6.9  | Incl Stv 484 5"sep PA 130 & Struve 485 18" 6" 11"mul* |
| NGC 1506        | ESO 156-27  | Galaxy  | DOR | 13.5 | 13.4 | 1.2'  | 04 00.4 | -52 34 | 420 | E-SO       |    |      |   |
| NGC 1507        | UGC 2947    | Galaxy  | ERI | 12.3 | 13.4 | 3.6'  | 04 04.5 | -02 11 | 223 | SBp        |    |      | H II 279  |
| NGC 1510        | ESO 250- 3  | Galaxy  | HOR | 13   | 12.8 | 3.2'  | 04 03.5 | -43 24 | 391 | SO         |    |      |   |
| NGC 1512        | ESO 250- 4  | Galaxy  | HOR | 10.3 | 14.4 | 9.7'  | 04 03.9 | -43 21 | 391 | SBa        |    |      | lenticular  |
| <b>NGC 1513</b> | OCL 398     | Opn CL  | PER | 8.4  | -    | 9'    | 04 09.9 | +49 31 | 64  | II 1 m     | 50 | 11.2 | H VII 60  |
| <b>NGC 1514</b> | PK 165-15.1 | Pln Neb | TAU | 10.8 | 12.6 | 120"  | 04 09.3 | +30 47 | 95  | 3(2)       |    | 9.5  | H IV 69;PK165-15.1                                    |
| NGC 1515        | ESO 156-36  | Galaxy  | DOR | 11.2 | 13   | 5.1'  | 04 04.0 | -54 06 | 420 | SBbc       |    |      |   |
| NGC 1517        | UGC 2970    | Galaxy  | TAU | 13.4 | 13.3 | 1.1'  | 04 09.2 | +08 39 | 178 | Sc         |    |      |   |
| NGC 1518        | ESO 550- 7  | Galaxy  | ERI | 11.8 | 13.2 | 2.9'  | 04 06.8 | -21 11 | 313 | SBd        |    |      |   |
| NGC 1519        | ESO 550- 9  | Galaxy  | ERI | 12.9 | 13   | 2.1'  | 04 08.1 | -17 12 | 313 | SBb        |    |      |   |
| NGC 1521        | ESO 550-11  | Galaxy  | ERI | 11.4 | 13.1 | 2.7'  | 04 08.3 | -21 03 | 313 | E3         |    |      |   |
| NGC 1522        | ESO 156-38  | Galaxy  | DOR | 13.6 | 13.4 | 1.2'  | 04 06.1 | -52 40 | 420 | SO         |    |      |   |
| NGC 1524        | NGC 1516    | Galaxy  | ERI | 12.6 | -    | 1.4'  | 04 08.1 | -08 50 | 268 | SBbc       |    |      |   |
| NGC 1527        | ESO 201-20  | Galaxy  | HOR | 10.8 | 12.4 | 3.9'  | 04 08.4 | -47 54 | 391 | SO         |    |      |   |
| <b>NGC 1528</b> | OCL 397     | Opn CL  | PER | 6.4  | -    | 24'   | 04 15.3 | +51 13 | 39  | II 2 m     | 40 | 8.8  | H VII 61;80 * maq 8...;1 deg NNW from b1 PER          |
| NGC 1530        | IC 381      | Galaxy  | CAM | 11.4 | 13.9 | 4.4'  | 04 23.4 | +75 18 | 5   | SBb        |    |      | compact core;surroundq spiral patt;broad bar;filam    |
| NGC 1531        | ESO 359-26  | Galaxy  | ERI | 12.2 | 12.3 | 1.2'  | 04 12.0 | -32 51 | 356 | E6         |    |      | P w NGC 1532  |
| <b>NGC 1532</b> | ESO 359-27  | Galaxy  | ERI | 9.9  | 13.8 | 11.6' | 04 12.1 | -32 52 | 356 | SBb        |    |      | NGC 1531 np 2';Nearly edge-on                         |
| NGC 1533        | ESO 157-3   | Galaxy  | DOR | 10.7 | 12.6 | 2.5'  | 04 09.9 | -56 07 | 420 | SBO        |    |      |   |
| <b>NGC 1535</b> | PK 206-40.1 | Pln Neb | ERI | 9.4  | 7.2  | 20"   | 04 14.3 | -12 44 | 268 | 4(2c)      |    | 12.1 | H IV 26;PK206-40.1                                    |
| NGC 1536        | ESO 157- 5  | Galaxy  | RET | 12.5 | 13.5 | 2.1'  | 04 11.0 | -56 29 | 420 | SBc        |    |      |   |
| NGC 1537        | ESO 420-12  | Galaxy  | ERI | 10.6 | 12.9 | 3.9'  | 04 13.7 | -31 39 | 356 | E4         |    |      |   |
| NGC 1541        | UGC 3001    | Galaxy  | TAU | 13.5 | 12.9 | 1.3'  | 04 17.0 | +00 50 | 223 | Sa         |    |      |   |
| NGC 1542        | UGC 3003    | Galaxy  | TAU | 13.9 | 13.2 | 1.3'  | 04 17.2 | +04 47 | 223 | Sab        |    |      |   |
| NGC 1543        | ESO 118-10  | Galaxy  | RET | 10.5 | 13.2 | 4.7'  | 04 12.7 | -57 44 | 420 | SBO Rin    |    |      |   |
| NGC 1544        | UGC 3160    | Galaxy  | CEP | 13.2 | 13.1 | 1.3'  | 05 02.6 | +86 13 | 1   | S pec      |    |      |   |
| <b>NGC 1545</b> | OCL 399     | Opn CL  | PER | 6.2  | -    | 18'   | 04 20.9 | +50 15 | 39  | II 2 p     | 20 | 7.1  | H VIII 85   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 1546        | ESO 157-12  | Galaxy  | DOR | 10.9 | 12.5 | 3.2' | 04 14.6 | -56 04 | 420 | Sa         |    |      |   |
| NGC 1547        | ESO 550-G0  | Galaxy  | ERI | 13.6 | 13.1 | 1.3' | 04 17.2 | -17 51 | 313 | SBbc       |    |      |   |
| <b>NGC 1549</b> | ESO 157-16  | Galaxy  | DOR | 9.8  | 13   | 4.4' | 04 15.8 | -55 36 | 420 | EO         |    |      | P w NGC 1553  |
| NGC 1550        | NGC 1551    | Galaxy  | TAU | 12   | 13.5 | 2.2' | 04 19.6 | +02 25 | 223 | Elliptical |    |      | nnp of 2;one of which is IC 366 at 3.2';PA162             |
| NGC 1551        | NGC 1550    | Galaxy  | TAU | 13.1 | -    | 2.2' | 04 19.6 | +02 25 | 223 | E          |    |      | H II 464  |
| NGC 1552        | UGC 3015    | Galaxy  | ERI | 12.9 | 13.7 | 1.8' | 04 20.3 | -00 42 | 223 | Sa         |    |      | H III 490;comp 5.4';PA129;spiral                          |
| NGC 1553        | ESO 157-17  | Galaxy  | DOR | 9.4  | 12   | 5'   | 04 16.2 | -55 47 | 420 | SO         |    |      |   |
| NGC 1555        | DG 31       | Brn Neb | TAU | -    | -    | 0.5' | 04 21.9 | +19 32 | 133 | R          |    |      | <b>Hind's Variable Neb</b> ;associated with star T Tauri  |
| NGC 1556        | ESO 202- 4  | Galaxy  | DOR | 13.1 | 12.8 | 1.7' | 04 17.7 | -50 10 | 420 | Sab        |    |      | Apparently misplotted                                     |
| NGC 1558        | ESO 250-17  | Galaxy  | HOR | 12.5 | 13.3 | 2.5' | 04 20.3 | -45 02 | 391 | SBbc       |    |      |   |
| NGC 1560        | IC 2062     | Galaxy  | CAM | 11.4 | 14.3 | 9.8' | 04 32.8 | +71 53 | 19  | Scd        |    |      | BM;no def N;F part resolved arms;low surf brtness         |
| <b>NGC 1566</b> | ESO 157-20  | Galaxy  | DOR | 9.7  | 13.9 | 8.2' | 04 20.0 | -54 56 | 420 | SBbc       |    |      |   |
| NGC 1567        | ESO 202-10  | Galaxy  | CAE | 12.5 | -    | 1.4' | 04 21.1 | -48 15 | 391 | E          |    |      |   |
| NGC 1569        | UGC 3056    | Galaxy  | CAM | 11   | 12.9 | 3.7' | 04 30.8 | +64 51 | 19  | lrrp       |    |      | H II 768;dk markings;well rrr;l trace of spiral structure |
| NGC 1570        | NGC 1571    | Galaxy  | CAE | 13.2 | -    | 2'   | 04 22.1 | -43 38 | 391 | E          |    |      |   |
| NGC 1571        | NGC 1570    | Galaxy  | CAE | 12.3 | 13.5 | 2'   | 04 22.1 | -43 38 | 391 | Elliptical |    |      |   |
| NGC 1572        | ESO 303-14  | Galaxy  | CAE | 12.4 | 13.5 | 2.4' | 04 22.7 | -40 36 | 391 | SBa        |    |      |   |
| NGC 1573        | UGC 3077?   | Galaxy  | CAM | 11.7 | 12.7 | 1.9' | 04 35.1 | +73 16 | 5   | E3         |    | 15.5 | brtst of 4;spiral   |
| NGC 1574        | ESO 157-22  | Galaxy  | RET | 10.4 | 12.9 | 4'   | 04 22.0 | -56 59 | 420 | SO         |    |      |   |
| NGC 1575        | NGC 1577    | Galaxy  | ERI | 13   | -    | 1.5' | 04 26.3 | -10 06 | 268 | SB/P       |    |      |   |
| NGC 1577        | NGC 1575    | Galaxy  | ERI | 13.5 | -    | 1.5' | 04 26.3 | -10 06 | 268 | SB/P       |    |      |   |
| NGC 1578        | ESO 202-14  | Galaxy  | DOR | 13.1 | 13.3 | 1.2' | 04 23.8 | -51 36 | 420 | Sa         |    |      |   |
| NGC 1579        | LBN 766     | Brn Neb | PER | -    | -    | 3'   | 04 30.2 | +35 17 | 96  | R          |    |      | H I 217;Dark lane invl                                    |
| NGC 1581        | ESO 157-26  | Galaxy  | DOR | 12.9 | 13   | 1.8' | 04 24.7 | -54 57 | 420 | E-SO Rii   |    |      |   |
| NGC 1582        | OCL 407     | Opn CL  | PER | 7    | -    | 37'  | 04 31.8 | +43 47 | 65  | IV 2 p     | 20 | 9    | H VIII 70   |
| NGC 1584        | ESO 551- 6  | Galaxy  | ERI | 13.8 | 13.1 | 0.8' | 04 28.2 | -17 31 | 313 | E-SO       |    |      |   |
| NGC 1585        | ESO 303-18  | Galaxy  | CAE | 13.5 | 13.1 | 1.2' | 04 27.6 | -42 10 | 392 | Sc         |    |      |   |
| NGC 1586        | UGC 3062    | Galaxy  | ERI | 13.2 | 13.5 | 1.7' | 04 30.6 | -00 18 | 223 | Sbc        |    |      | ssp of 2;comp 1.2';PA20;spiral                            |
| NGC 1587        | UGC 3063    | Galaxy  | TAU | 11.7 | 12.7 | 1.7' | 04 30.7 | +00 40 | 223 | E1p        |    |      | H II 8  |
| NGC 1588        | UGC 3064    | Galaxy  | TAU | 12.9 | 12.9 | 1.4' | 04 30.7 | +00 40 | 223 | E1p        |    |      | H II 9;compact;disturbed;P w N1587 at 1 ' ;PA257          |
| NGC 1589        | UGC 3065    | Galaxy  | TAU | 11.8 | 12.9 | 3.2' | 04 30.8 | +00 52 | 223 | Sab        |    |      | P w NGC 1587-8 @ 12.2';P w UGC 3072 @ 6 ' ;PA103          |
| NGC 1590        | UGC 3071    | Galaxy  | TAU | 13.7 | 13   | 0.9' | 04 31.2 | +07 38 | 178 | S pec      |    |      | twisted blue post-eruptive gal w several knots & jets     |
| NGC 1591        | ESO 484-25  | Galaxy  | ERI | 12.8 | 12.6 | 1.2' | 04 29.5 | -26 43 | 313 | SBab       |    |      |   |
| NGC 1592        | ESO 421-G0  | Galaxy  | ERI | 13.7 | 13.4 | 1.4' | 04 29.7 | -27 25 | 313 | S          |    |      |   |
| NGC 1594        | IC 2075     | Galaxy  | ERI | 14   | -    | 1.8' | 04 30.9 | -05 48 | 268 | SBbc       |    |      |   |
| NGC 1595        | ESO 202-25  | Galaxy  | CAE | 13.7 | -    | 1.3' | 04 28.4 | -47 49 | 392 | E          |    |      |   |
| NGC 1596        | ESO 157-31  | Galaxy  | DOR | 11.2 | 12.4 | 3.7' | 04 27.6 | -55 02 | 420 | SO         |    |      |   |
| NGC 1598        | ESO 202-26  | Galaxy  | CAE | 13.8 | -    | 1.4' | 04 28.6 | -47 47 | 392 | SBc        |    |      |   |
| NGC 1599        | MCG - 1-12- | Galaxy  | ERI | 13.7 | 13.1 | 0.9' | 04 31.6 | -04 35 | 223 | Sc         |    |      |   |
| NGC 1600        | MCG - 1-12- | Galaxy  | ERI | 10.9 | 12.4 | 3.1' | 04 31.7 | -05 05 | 223 | E2         |    |      | RC1;brtst in grp;P w NGC 1601 at 1'6;NGC 1603 at 2'5      |
| NGC 1601        | MCG - 1-12- | Galaxy  | ERI | 13.8 | 11.9 | 0.6' | 04 31.7 | -05 04 | 223 | SO         |    |      |   |
| NGC 1602        | ESO 157-32  | Galaxy  | DOR | 13   | 13.6 | 1.9' | 04 27.9 | -55 03 | 420 | lr Bar     |    |      |   |
| NGC 1603        | MCG - 1-12- | Galaxy  | ERI | 13.8 | 12.7 | 0.8' | 04 31.8 | -05 06 | 223 | E-SO       |    |      |   |
| NGC 1605        | OCL 406     | Opn CL  | PER | 10.7 | -    | 5'   | 04 34.9 | +45 16 | 65  | III 1 m    | 40 | 12.5 | H VI 26   |
| NGC 1608        | NGC 1593    | Galaxy  | TAU | 13.4 | 13.3 | 1.6' | 04 32.1 | +00 34 | 224 | SO         |    |      |   |
| NGC 1614        | MCG - 1-12- | Galaxy  | ERI | 12.9 | 13.2 | 1.3' | 04 34.0 | -08 35 | 269 | SB/P       |    |      |   |
| NGC 1615        | UGC 3096    | Galaxy  | TAU | 13.6 | 13.3 | 1.2' | 04 36.0 | +19 57 | 134 | SO         |    |      |   |
| NGC 1616        | ESO 251-10  | Galaxy  | CAE | 12.6 | 13   | 1.8' | 04 32.7 | -43 43 | 392 | Sbc        |    |      |   |
| NGC 1617        | ESO 157-41  | Galaxy  | DOR | 10.4 | 12.7 | 4.8' | 04 31.7 | -54 36 | 421 | SBa        |    |      |   |
| NGC 1618        | MCG - 1-12- | Galaxy  | ERI | 12.7 | 13.3 | 2.4' | 04 36.1 | -03 09 | 224 | SBb        |    |      | H II 524;ln NGC 1618-1625 grp;P w NGC 1622 at 7'8         |
| NGC 1620        | UGC 3103    | Galaxy  | ERI | 12.3 | 13.3 | 2.9' | 04 36.6 | -00 09 | 224 | Sc         |    |      | H II 514  |
| NGC 1622        | Ho 77a      | Galaxy  | ERI | 12.5 | 13.4 | 3.7' | 04 36.6 | -03 11 | 224 | SBab       |    |      | Near NGC 1618;NGC 1625                                    |
| NGC 1624        | OCL 403     | CL+Neb  | PER | 11.8 | -    | 1.9' | 04 40.6 | +50 28 | 40  | II 1 p n:b | 12 | 11.8 | H V 49  |
| NGC 1625        | MCG - 1-12- | Galaxy  | ERI | 12.3 | 12.2 | 2.1' | 04 37.1 | -03 18 | 224 | SBb        |    |      | Two other dim edge-on galaxies in field of Nu Eri         |
| NGC 1626        | NGC 1621    | Galaxy  | ERI | 14   | -    | 1.4' | 04 36.4 | -04 59 | 224 | E          |    |      |   |
| NGC 1627        | MCG - 1-12- | Galaxy  | ERI | 13   | -    | 1.6' | 04 37.6 | -04 53 | 224 | Sc         |    |      |   |
| NGC 1628        | MCG - 1-12- | Galaxy  | ERI | 14   | -    | 1.9' | 04 37.6 | -04 43 | 224 | Sb         |    |      |   |
| NGC 1631        | ESO 551-21  | Galaxy  | ERI | 13.4 | 13.5 | 1.5' | 04 38.4 | -20 39 | 314 | SBO-a      |    |      |   |
| NGC 1632        | IC 386      | Galaxy  | ERI | 13   | -    | 1'   | 04 40.0 | -09 27 | 269 | Sa         |    |      |   |
| NGC 1633        | UGC 3125    | Galaxy  | TAU | 13.5 | 13.1 | 1'   | 04 40.2 | +07 21 | 179 | SBab       |    |      | H III 952;P w N1634                                       |
| NGC 1635        | UGC 3126    | Galaxy  | ERI | 12.4 | 12.9 | 1.4' | 04 40.1 | -00 33 | 224 | SBO-a R    |    |      | H II 515  |
| NGC 1636        | MCG - 1-12- | Galaxy  | ERI | 14   | -    | 1.2' | 04 40.7 | -08 37 | 269 | Sab        |    |      | H II 522  |
| NGC 1637        | MCG 0-12-   | Galaxy  | ERI | 10.8 | 13.4 | 3.9' | 04 41.5 | -02 52 | 224 | SBc        |    |      | H I 122;Strong asymm vF but rrr outer arms                |
| NGC 1638        | UGC 3133    | Galaxy  | ERI | 12   | 13.1 | 2.3' | 04 41.6 | -01 49 | 224 | SBO        |    |      | H II 525;comp 2.6';PA50                                   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|-----|------|--|
| NGC 1640        | ESO 551-27  | Galaxy | ERI | 11.7 | 13.3 | 2.7' | 04 42.2 | -20 26 | 314 | SBab       |     |      |  |
| NGC 1642        | UGC 3140    | Galaxy | TAU | 12.6 | 13.6 | 1.8' | 04 42.9 | +00 37 | 224 | Sc         |     |      | UGC 3141 at 8.4';PA24;superimposed comp;bridge   |
| NGC 1643        | MCG - 1-13- | Galaxy | ERI | 14   | -    | 1.2' | 04 43.7 | -05 19 | 224 | Sbc        |     |      | H III 588  |
| NGC 1645        | MCG - 1-13- | Galaxy | ERI | 14   | -    | 2.4' | 04 44.1 | -05 28 | 224 | Sa Ring    |     |      |  |
| <b>NGC 1647</b> | OCL 457     | Opn CL | TAU | 6.4  | -    | 45'  | 04 45.9 | +19 06 | 134 | II 2 m     | 200 | 8.6  | H VIII 8   |
| NGC 1650        | MCG - 3-13- | Galaxy | ERI | 14   | -    | 2.3' | 04 45.2 | -15 52 | 269 | Elliptical |     |      |  |
| NGC 1653        | UGC 3153    | Galaxy | ERI | 12   | 12.8 | 1.5' | 04 45.8 | -02 24 | 224 | E0         |     |      | H II 526   |
| NGC 1654        | UGC 3154    | Galaxy | ERI | 13.4 | 12.6 | 0.8' | 04 45.8 | -02 05 | 224 | Sa         |     |      |  |
| NGC 1656        | MCG - 1-13- | Galaxy | ERI | 14   | -    | 1.5' | 04 45.9 | -05 08 | 224 | Sa         |     |      |  |
| NGC 1657        | UGC 3156    | Galaxy | ERI | 13.8 | 13.6 | 1.2' | 04 46.1 | -02 05 | 224 | SBbc       |     |      |  |
| NGC 1658        | ESO 304-16  | Galaxy | CAE | 13.5 | 13   | 1.5' | 04 44.0 | -41 28 | 392 | Sbc        |     |      |  |
| NGC 1659        | MCG - 1-13- | Galaxy | ERI | 12.5 | 13   | 1.5' | 04 46.5 | -04 47 | 224 | Sbc        |     |      | H III 589;Knotty filamentary arms;strong asym vF |
| NGC 1660        | ESO 304-18  | Galaxy | CAE | 13.9 | 13.1 | 1'   | 04 44.2 | -41 30 | 392 | Sa         |     |      |  |
| NGC 1661        | UGC 3166    | Galaxy | ORI | 13.2 | 13.3 | 1.4' | 04 47.1 | -02 03 | 224 | Sbc        |     |      |  |
| NGC 1662        | OCL 470     | Opn CL | ORI | 6.4  | -    | 20'  | 04 48.4 | +10 57 | 179 | I 2 p      | 35  | 8.3  | H VII 1  |
| NGC 1663        | OCL 461     | Opn CL | ORI | -    | -    |      | 04 49.6 | +13 09 | 179 | IV 2 p     | 30  |      | H VIII 7   |
| <b>NGC 1664</b> | OCL 411     | Opn CL | AUR | 7.6  | -    | 18'  | 04 51.1 | +43 41 | 65  | III 1 p    |     | 10.6 | H VIII 59;40* mags 11...                         |
| NGC 1665        | MCG - 1-13- | Galaxy | ERI | 14   | -    | 1.8' | 04 48.3 | -05 26 | 224 | SO         |     |      | H II 457   |
| NGC 1666        | MCG - 1-13- | Galaxy | ERI | 12.6 | 13   | 1.4' | 04 48.5 | -06 34 | 269 | SBO-a      |     |      |  |
| NGC 1667        | NGC 1689    | Galaxy | ERI | 12.1 | 12.9 | 1.8' | 04 48.6 | -06 19 | 269 | SBc        |     |      |  |
| NGC 1668        | ESO 251-30  | Galaxy | CAE | 12.7 | 13   | 1.6' | 04 46.1 | -44 44 | 392 | E-SO Ba    |     |      |  |
| NGC 1670        | MCG 0-13-   | Galaxy | ORI | 12.7 | 13.4 | 2.1' | 04 49.7 | -02 46 | 224 | SO         |     |      | H III 501  |
| <b>NGC 1672</b> | ESO 118-43  | Galaxy | DOR | 9.7  | 13.4 | 6.7' | 04 45.7 | -59 15 | 421 | SBb        |     |      |  |
| NGC 1678        | MCG 0-13-   | Galaxy | ORI | 13.2 | 12.8 | 1.1' | 04 51.6 | -02 37 | 224 | SO         |     |      | H III 502  |
| NGC 1679        | ESO 422- 1  | Galaxy | CAE | 11.5 | 13.2 | 2.7' | 04 49.9 | -31 58 | 357 | SBp        |     |      |  |
| NGC 1681        | MCG - 1-13- | Galaxy | ERI | 13.5 | -    | 1.3' | 04 51.8 | -05 48 | 269 | Sb         |     |      |  |
| NGC 1682        | MCG - 1-13- | Galaxy | ORI | 14   | -    | 0.8' | 04 52.3 | -03 06 | 224 | E-SO       |     |      | H II 527   |
| NGC 1684        | MCG - 1-13- | Galaxy | ORI | 13   | -    | 2.9' | 04 52.5 | -03 06 | 224 | Elliptical |     |      | H II 528   |
| NGC 1686        | MCG - 3-13- | Galaxy | ERI | 14   | -    | 1.7' | 04 52.9 | -15 21 | 269 | Sbc        |     |      |  |
| NGC 1687        | ESO 361-13  | Galaxy | CAE | 13.9 | 13.3 | 1.3' | 04 51.4 | -33 56 | 357 | SBab       |     |      |  |
| NGC 1688        | ESO 119- 6  | Galaxy | DOR | 12   | 13.4 | 2.4' | 04 48.4 | -59 48 | 421 | SBc        |     |      |  |
| NGC 1689        | NGC 1667    | Galaxy | ERI | 12.8 | -    | 1.8' | 04 48.6 | -06 19 | 269 | SBc        |     |      |  |
| NGC 1691        | UGC 3201    | Galaxy | ORI | 12   | 12.9 | 1.7' | 04 54.6 | +03 16 | 224 | SBO-a R    |     |      |  |
| NGC 1692        | ESO 552-21  | Galaxy | ERI | 13   | 13.4 | 1.3' | 04 55.4 | -20 34 | 314 | SO         |     |      |  |
| NGC 1700        | MCG - 1-13- | Galaxy | ERI | 11.2 | 13.3 | 3'   | 04 56.9 | -04 52 | 224 | E1         |     |      | H IV 32;P w NGC 1699 at 6'6;smooth               |
| NGC 1701        | ESO 422-11  | Galaxy | CAE | 12.8 | 12.8 | 1.2' | 04 55.9 | -29 53 | 357 | Sb         |     |      |  |
| NGC 1703        | ESO 119-19  | Galaxy | DOR | 11.3 | 13.4 | 2.9' | 04 52.9 | -59 45 | 421 | SBb        |     |      |  |
| NGC 1705        | ESO 158-13  | Galaxy | PIC | 12.4 | 13.3 | 1.9' | 04 54.2 | -53 22 | 421 | SOp        |     |      |  |
| NGC 1708        |             | Opn CL | CAM | -    | -    | 20'  | 05 03.4 | +52 50 | 40  |            | 10  | 10   |  |
| NGC 1710        | IC 2108     | Galaxy | LEP | 14   | -    | 1.3' | 04 57.3 | -15 17 | 269 | E-SO       |     |      |  |
| NGC 1713        | UGC 3222    | Galaxy | ORI | 12.7 | 13.3 | 1.4' | 04 58.9 | -00 29 | 224 | Elliptical |     |      | H II 516   |
| NGC 1716        | ESO 552-34  | Galaxy | LEP | 13.2 | 13.6 | 1.4' | 04 58.2 | -20 22 | 314 | SBbc       |     |      |  |
| NGC 1719        | UGC 3226    | Galaxy | ORI | 13.6 | 12.3 | 1.1' | 04 59.6 | -00 16 | 224 | Sa         |     |      |  |
| NGC 1720        | MCG - 1-13- | Galaxy | ERI | 13   | -    | 1.7' | 04 59.3 | -07 52 | 269 | SBab       |     |      |  |
| NGC 1721        | MCG - 2-13- | Galaxy | ERI | 13   | -    | 2.2' | 04 59.3 | -11 07 | 269 | SO         |     |      |  |
| NGC 1723        | MCG - 2-13- | Galaxy | ERI | 12   | -    | 3.3' | 04 59.4 | -10 59 | 269 | SB Ring    |     |      |  |
| NGC 1724        | OCL 405     | Opn CL | AUR | 10   | -    |      | 05 03.5 | +49 30 | 65  |            |     |      |  |
| NGC 1725        | MCG - 2-13- | Galaxy | ERI | 13   | -    | 1.9' | 04 59.4 | -11 08 | 269 | E-SO       |     |      |  |
| NGC 1726        | MCG - 1-13- | Galaxy | ERI | 11.7 | 12.1 | 2.1' | 04 59.7 | -07 45 | 269 | SO         |     |      |  |
| NGC 1728        | MCG - 2-13- | Galaxy | ERI | 13   | -    | 2'   | 04 59.5 | -11 07 | 269 | Sa         |     |      |  |
| NGC 1729        | MCG - 1-13- | Galaxy | ORI | 13   | -    | 1.7' | 05 00.3 | -03 21 | 224 | Sc         |     |      | H III 503  |
| NGC 1730        | IC 2113     | Galaxy | LEP | 13   | -    | 2.3' | 04 59.5 | -15 49 | 269 | SB Ring    |     |      |  |
| NGC 1738        | ESO 552-49  | Galaxy | LEP | 12.9 | 12.6 | 1.3' | 05 01.8 | -18 09 | 314 | SBbc       |     |      |  |
| NGC 1739        | ESO 552-50  | Galaxy | LEP | 13.5 | 13.3 | 1.4' | 05 01.8 | -18 10 | 314 | Sbc        |     |      |  |
| NGC 1744        | ESO 486- 5  | Galaxy | LEP | 11.1 | 14.9 | 9.3' | 05 00.0 | -26 01 | 314 | SBcd       |     |      |  |
| NGC 1746        | OCL 452     | Opn CL | TAU | 6.1  | -    | 42'  | 05 03.8 | +23 46 | 134 | III 1 p    | 20  | 8    |  |
| NGC 1750        |             | Opn CL | TAU | -    | -    |      | 05 03.9 | +23 41 | 134 |            |     | 8    | H VIII 43;Part of NGC 1746                       |
| NGC 1752        | MCG - 1-13- | Galaxy | ERI | 12.4 | 13.1 | 2.6' | 05 02.2 | -08 14 | 269 | SBc        |     |      |  |
| NGC 1758        | OCL 453     | Opn CL | TAU | -    | -    | 39'  | 05 04.7 | +23 47 | 135 | IV 1 p     |     |      | H VII 21   |
| NGC 1759        | ESO 305- 1  | Galaxy | CAE | 13.1 | 13.6 | 1.4' | 05 00.8 | -38 40 | 358 | Elliptical |     |      |  |
| NGC 1762        | UGC 3238    | Galaxy | ORI | 12.6 | 13.1 | 1.7' | 05 03.6 | +01 34 | 224 | Sc         |     |      | H III 453  |
| NGC 1778        | OCL 429     | Opn CL | AUR | 7.7  | -    | 7'   | 05 08.1 | +37 01 | 97  | III 2 p    | 25  | 10.1 | H VIII 61  |
| NGC 1779        | MCG - 2-13- | Galaxy | ERI | 12.1 | 13.1 | 2.5' | 05 05.3 | -09 09 | 270 | SBO-a      |     |      | H III 500  |
| NGC 1780        | ESO 553- 1  | Galaxy | LEP | 13.7 | 12.8 | 0.9' | 05 06.3 | -19 28 | 315 | SBO        |     |      |  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 1781        | NGC 1794    | Galaxy  | LEP | 13.7 | -    | 1.3' | 05 07.9 | -18 11 | 315 | SBO        |    |      | H III 268   |
| NGC 1784        | MCG - 2-13- | Galaxy  | LEP | 11.7 | 14   | 4.1' | 05 05.5 | -11 52 | 270 | SBc        |    |      |   |
| <b>NGC 1788</b> | LBN 916     | Brn Neb | ORI | -    | -    | 5'   | 05 06.9 | -03 20 | 225 | R          |    |      | H V 32; possible reflection nebula                        |
| <b>NGC 1792</b> | ESO 305- 6  | Galaxy  | COL | 10.2 | 12.9 | 5.6' | 05 05.2 | -37 59 | 358 | SBbc       |    |      | close to ngc 1808   |
| NGC 1794        | NGC 1781    | Galaxy  | LEP | 12.7 | 12.9 | 1.3' | 05 07.9 | -18 11 | 315 | SBO        |    |      |   |
| NGC 1798        | OCL 410     | Opn CL  | AUR | 10   | -    | 5'   | 05 11.7 | +47 42 | 65  | I 1 m :b   |    | 13   |   |
| NGC 1800        | ESO 422-30  | Galaxy  | COL | 12.6 | 13.3 | 2'   | 05 06.4 | -31 57 | 358 | E6         |    |      |   |
| NGC 1802        |             | Opn CL  | TAU | -    | -    | 20'  | 05 10.2 | +24 08 | 135 |            | 25 | 9.2  | H VIII 41   |
| NGC 1803        | ESO 203-18  | Galaxy  | PIC | 13.4 | -    | 1.3' | 05 05.4 | -49 34 | 392 | SBbc       |    |      |   |
| NGC 1807        | OCL 462     | Opn CL  | TAU | 7    | -    | 17'  | 05 10.7 | +16 32 | 180 | II 2 p     | 20 | 8.6  | 15 * mag 8-9  |
| <b>NGC 1808</b> | ESO 305- 8  | Galaxy  | COL | 9.9  | 13.3 | 6.3' | 05 07.7 | -37 31 | 358 | SBa        |    |      | F outer arms , close to ngc1792                           |
| NGC 1811        | ESO 422-37  | Galaxy  | COL | 13.5 | 13   | 1.7' | 05 08.7 | -29 17 | 358 | Sa         |    |      |   |
| NGC 1812        | ESO 422-39  | Galaxy  | COL | 12.7 | 12.7 | 1.2' | 05 08.9 | -29 15 | 358 | Sa         |    |      |   |
| <b>NGC 1817</b> | OCL 463     | Opn CL  | TAU | 7.7  | -    | 16'  | 05 12.4 | +16 41 | 180 | III 1 m    | 60 | 11.2 | H VII 4;50 * mags 10 to 14                                |
| NGC 1819        | UGC 3265    | Galaxy  | ORI | 12.4 | 13   | 1.7' | 05 11.8 | +05 12 | 225 | SBO        |    |      |   |
| NGC 1821        | MCG - 3-14- | Galaxy  | LEP | 14   | -    | 1.2' | 05 11.8 | -15 08 | 270 | Ir         |    |      |   |
| NGC 1824        | ESO 119-36  | Galaxy  | DOR | 12.6 | 13.5 | 3.2' | 05 06.9 | -59 44 | 421 | SBp        |    |      |   |
| NGC 1827        | ESO 362- 6  | Galaxy  | COL | 12.5 | 13.1 | 3'   | 05 10.1 | -36 58 | 358 | SBc        |    |      |   |
| NGC 1832        | MCG - 3-14- | Galaxy  | LEP | 11.3 | 12.8 | 2.3' | 05 12.1 | -15 41 | 270 | SBbc Rii   |    |      | H II 292  |
| NGC 1843        | MCG - 2-14- | Galaxy  | ORI | 13   | -    | 2.1' | 05 14.1 | -10 38 | 270 | Sc         |    |      |   |
| <b>NGC 1851</b> | Dunlop 508  | Glob CL | COL | 7.1  | -    | 11'  | 05 14.1 | -40 03 | 393 | II         |    |      | X-ray source;vRi w F*                                     |
| NGC 1853        | ESO 158-22  | Galaxy  | DOR | 13.6 | -    | 2'   | 05 12.3 | -57 24 | 421 | SBcd       |    |      |   |
| <b>NGC 1857</b> | Cr 61       | Opn CL  | AUR | 7    | -    | 6'   | 05 20.1 | +39 21 | 66  | II 2 m     | 40 | 7.4  | H VII 33  |
| NGC 1875        | MCG 1-14-   | Galaxy  | ORI | 13.6 | 13.1 | 1.5' | 05 21.8 | +06 41 | 180 | SO         |    |      |   |
| NGC 1879        | ESO 423- 6  | Galaxy  | COL | 12.8 | 14.2 | 2.5' | 05 19.8 | -32 09 | 358 | SBp        |    |      |   |
| NGC 1883        | OCL 417     | Opn CL  | AUR | 12   | -    | 2.5' | 05 25.9 | +46 29 | 66  | II 1 p     | 30 | 14   | H VII 34  |
| NGC 1886        | ESO 487- 2  | Galaxy  | LEP | 12.8 | 13   | 3.1' | 05 21.8 | -23 49 | 315 | Sbc        |    |      |   |
| NGC 1888        | MCG - 2-14- | Galaxy  | LEP | 11.9 | 12.7 | 3.2' | 05 22.6 | -11 30 | 270 | SB/P       |    |      | H II 289  |
| NGC 1889        | MCG - 2-14- | Galaxy  | LEP | 14   | -    | 0.6' | 05 22.6 | -11 30 | 270 | E0         |    |      |   |
| NGC 1893        | IC 410      | Opn CL  | AUR | 7.5  | -    | 11'  | 05 22.7 | +33 25 | 97  | II 2 m n   | 60 | 9.3  | In Aur OB2;20* mags 9...12;neby IC 410 invl (see ic410)   |
| NGC 1906        | MCG - 3-14- | Galaxy  | LEP | 14   | -    | 0.9' | 05 24.8 | -15 57 | 270 | Scd        |    |      |   |
| <b>NGC 1907</b> | OCL 434     | Opn CL  | AUR | 8.2  | -    | 7'   | 05 28.1 | +35 20 | 97  | II 1 m n   | 30 | 11.3 | H VII 39  |
| <b>NGC 1909</b> | IC 2118     | Brn Neb | ERI | -    | -    | 180' | 05 04.5 | -07 16 | 270 | R          |    |      | <b>Witchhead nebula</b> ; Rigel may be illuminator        |
| NGC 1924        | MCG - 1-14- | Galaxy  | ORI | 12.5 | 13.1 | 1.6' | 05 28.0 | -05 19 | 225 | SBbc Rii   |    |      | H III 447   |
| NGC 1930        | ESO 253- 4  | Galaxy  | PIC | 12.4 | 13.1 | 1.9' | 05 25.9 | -46 44 | 393 | SBO        |    |      |   |
| <b>NGC 1931</b> | OCL 441     | CL+Neb  | AUR | 10.1 | -    | 3'   | 05 31.4 | +34 15 | 97  | I 3 p n:b  |    | 11.5 | H I 261;Contains triple ADS 4112                          |
| NGC 1954        | MCG - 2-15- | Galaxy  | LEP | 11.8 | 14.1 | 4.2' | 05 32.8 | -14 04 | 270 | Sbc        |    |      | H III 590   |
| <b>NGC 1961</b> | IC 2133     | Galaxy  | CAM | 11   | 13.7 | 4.5' | 05 42.1 | +69 23 | 20  | SBbc       |    |      | H III 747;hexagonal;2 branch arms w some knots            |
| NGC 1963        | ESO 363-SC  | Opn CL  | COL | -    | -    | 120' | 05 32.3 | -36 24 | 358 |            |    |      |   |
| <b>NGC 1964</b> | ESO 554-10  | Galaxy  | LEP | 10.8 | 13.4 | 5.5' | 05 33.4 | -21 57 | 315 | SBb        |    |      | H IV 21   |
| <b>NGC 1973</b> | CED 55B     | Brn Neb | ORI | 7    | -    | 5'   | 05 35.1 | -04 44 | 225 | E          |    |      |   |
| NGC 1975        | CED 55C     | Brn Neb | ORI | 7    | -    | 10'  | 05 35.3 | -04 41 | 225 | E          |    |      |   |
| NGC 1977        | OCL 525     | CL+Neb  | ORI | 7    | -    | 20'  | 05 35.3 | -04 51 | 225 | E+R        |    |      | H V 30  |
| NGC 1979        | ESO 487-24  | Galaxy  | LEP | 11.8 | 13.2 | 2.2' | 05 34.0 | -23 19 | 315 | E-SO       |    |      | H III 240;IC 2137   |
| <b>NGC 1980</b> | OCL 529     | CL+Neb  | ORI | 2.5  | -    | 14'  | 05 35.4 | -05 55 | 270 | III 3 m n: |    |      | H V 31  |
| NGC 1981        | OCL 525     | Opn CL  | ORI | 4.2  | -    | 25'  | 05 35.2 | -04 26 | 225 | III 2 p n  | 20 | 6.3  | In Ori OB1;incl D* Struve 750                             |
| NGC 1985        | PK 176+0.1  | Brn Neb | AUR | 12.5 | -    | 0.7' | 05 37.8 | +31 59 | 97  | R          |    | 13.5 | H III 865;Incorrect ID as PK176+0.1                       |
| NGC 1989        | ESO 423-21  | Galaxy  | COL | 13.1 | 13.5 | 1.4' | 05 34.4 | -30 48 | 358 | E-SO       |    |      |   |
| NGC 1990        | LBN 940     | Brn Neb | ORI | -    | -    | 50'  | 05 36.2 | -01 12 | 226 | E+R        |    |      | H V 34  |
| NGC 1992        | ESO 423-23  | Galaxy  | COL | 13.6 | 13.1 | 1.1' | 05 34.5 | -30 54 | 358 | Sa         |    |      |   |
| NGC 1993        | ESO 554-14  | Galaxy  | LEP | 12.4 | 13.1 | 1.5' | 05 35.4 | -17 49 | 315 | E-SO       |    |      | H III 269   |
| <b>NGC 1999</b> | LBN 979     | Brn Neb | ORI | -    | -    | 2'   | 05 36.4 | -06 43 | 271 | E+R        |    |      | H IV 33   |
| NGC 2007        | ESO 204-19  | Galaxy  | PIC | 13.9 | 13.8 | 1.7' | 05 35.0 | -50 55 | 422 | Sc         |    |      |   |
| NGC 2008        | ESO 204-20  | Galaxy  | PIC | 13.8 | 13.8 | 1.4' | 05 35.1 | -50 58 | 422 | Sc         |    |      |   |
| NGC 2013        |             | Opn CL  | AUR | -    | -    |      | 05 44.0 | +55 48 | 41  |            |    |      |   |
| <b>NGC 2022</b> | PK 196-10.1 | Pln Neb | ORI | 11.7 | 9.2  | 28"  | 05 42.1 | +09 05 | 181 | 4(2)       |    | 15.8 | small,faint and distinct w annular form;PK196-10.1        |
| NGC 2023        | LBN 953     | Brn Neb | ORI | -    | -    | 10'  | 05 41.6 | -02 16 | 226 | E+R        |    |      | H IV 24   |
| <b>NGC 2024</b> | CED 55P     | Brn Neb | ORI | -    | -    | 30'  | 05 41.7 | -01 51 | 226 | E          |    |      | <b>Tank Track Neb</b> ; <b>flame</b> , masked by Zeta Ori |
| NGC 2026        |             | Opn CL  | TAU | -    | -    | 7'   | 05 43.0 | +20 08 | 136 |            |    |      | H VIII 28   |
| NGC 2045        |             | Star    | TAU | 6.6  | -    |      | 05 45.0 | +12 53 | 181 |            |    |      |   |
| NGC 2049        | ESO 424-11  | Galaxy  | COL | 12.8 | 13.3 | 2'   | 05 43.3 | -30 05 | 359 | Sa         |    |      |   |
| NGC 2064        | LBN 1627    | Brn Neb | ORI | -    | -    | 10'  | 05 46.3 | +00 00 | 226 | R          |    |      |   |
| <b>NGC 2067</b> | DG 79       | Brn Neb | ORI | -    | -    | 8'   | 05 46.4 | +00 06 | 226 | E          |    |      | part of <b>M78</b>  |
| NGC 2071        | LBN 938     | Brn Neb | ORI | 8    | -    | 7'   | 05 47.1 | +00 18 | 226 | R          |    |      | H IV 36   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class    | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|----------|----|------|--|
| NGC 2073        | ESO 554-31  | Galaxy  | LEP | 12.4 | 13.1 | 1.5' | 05 45.9 | -22 00 | 316 | E-SO     |    |      | H III 241  |
| NGC 2076        | MCG - 3-15- | Galaxy  | LEP | 13   | 14   | 2.2' | 05 46.8 | -16 47 | 271 | Sa       |    |      | H III 267  |
| NGC 2089        | ESO 554-36  | Galaxy  | LEP | 11.9 | 12.6 | 1.9' | 05 47.9 | -17 36 | 316 | E-SO Ba  |    |      | H III 270  |
| NGC 2090        | ESO 363-23  | Galaxy  | COL | 11.2 | 13.7 | 5'   | 05 47.0 | -34 15 | 359 | Sc       |    |      |  |
| NGC 2101        | ESO 205- 1  | Galaxy  | PIC | 13.7 | -    | 2'   | 05 46.4 | -52 05 | 422 | Ir B     |    |      |  |
| NGC 2104        | ESO 205- 2  | Galaxy  | PIC | 13.2 | -    | 2'   | 05 47.1 | -51 33 | 422 | SBp      |    |      |  |
| NGC 2106        | ESO 555- 3  | Galaxy  | LEP | 12.1 | 13.4 | 2.7' | 05 50.8 | -21 34 | 316 | SBO      |    |      |  |
| NGC 2110        | MCG - 1-15- | Galaxy  | ORI | 14   | -    | 1.7' | 05 52.2 | -07 27 | 271 | E-SO     |    |      | H III 448;III 510                                  |
| NGC 2112        | OCL 509     | Opn CL  | ORI | 9.1  | -    | 11'  | 05 53.8 | +00 25 | 226 | II 3 m n | 50 | 10   | H VII 24   |
| NGC 2124        | ESO 555-16  | Galaxy  | LEP | 12.6 | 13.4 | 2.7' | 05 57.9 | -20 05 | 316 | Sb       |    |      | H III 225  |
| <b>NGC 2126</b> | OCL 418     | Opn CL  | AUR | 10.2 | -    | 6'   | 06 02.5 | +49 52 | 67  | II 1 p   | 40 | 13   | H VIII 68;Scattered 20 * mags 11..14               |
| NGC 2128        | UGC 3392    | Galaxy  | CAM | 12.6 | 13.1 | 1.5' | 06 04.6 | +57 38 | 41  | E-SO     |    |      |  |
| <b>NGC 2129</b> | OCL 467     | Opn CL  | GEM | 6.7  | -    | 7'   | 06 00.7 | +23 19 | 136 | III 3 p  | 40 | 7.4  | H VIII 26  |
| NGC 2139        | IC 2154     | Galaxy  | LEP | 11.6 | 13.3 | 2.9' | 06 01.1 | -23 40 | 316 | SBc      |    |      | H II 264;IC 2154                                   |
| NGC 2141        | OCL 487     | Opn CL  | ORI | 9.4  | -    | 10'  | 06 02.9 | +10 27 | 181 | II 3 r   | 10 | 13.3 |  |
| NGC 2142        |             | Star    | MON | 5    | -    |      | 06 01.8 | -10 36 | 271 |          |    |      |  |
| NGC 2143        |             | Opn CL  | ORI | -    | -    | 11'  | 06 03.1 | +05 43 | 181 |          | 12 | 10   |  |
| NGC 2146        | 3C120       | Galaxy  | CAM | 10.6 | 13.7 | 5.7' | 06 18.6 | +78 21 | 6   | SBab/P   |    |      | broad spiral arms;2 main smooth arms;1 w dark lane |
| NGC 2146A       | UGC 3439    | Galaxy  | CAM | 12.9 | 14.1 | 3'   | 06 23.9 | +78 32 | 6   | SBc      |    |      |  |
| NGC 2148        | ESO 120-24  | Galaxy  | PIC | 13.8 | 13.5 | 1.1' | 05 58.8 | -59 08 | 422 | Sb       |    |      |  |
| NGC 2149        | VdB 66      | Brn Neb | MON | -    | -    | 2'   | 06 03.5 | -09 44 | 271 | R        |    |      |  |
| <b>NGC 2158</b> | OCL 468     | Opn CL  | GEM | 8.6  | -    | 5'   | 06 07.4 | +24 06 | 136 | II 3 r   |    | 12.4 | H VI 17;150 F* on edge of <b>M 35</b>              |
| NGC 2163        | Ced 62      | Brn Neb | ORI | -    | -    | 3'   | 06 07.8 | +18 39 | 136 | R        |    |      | Two symmetrical fans extending N-S                 |
| NGC 2165        |             | Opn CL  | AUR | -    | -    | 6'   | 06 11.1 | +51 41 | 41  |          |    |      |  |
| NGC 2167        |             | Star    | MON | 6.6  | -    |      | 06 07.0 | -06 12 | 271 |          |    |      | H IV 44  |
| <b>NGC 2169</b> | OCL 481     | Opn CL  | ORI | 5.9  | -    | 7'   | 06 08.4 | +13 58 | 182 | I 3 p n  | 30 | 6.9  | H VIII 24;In nebula Ced 78                         |
| NGC 2170        | LBN 994     | Brn Neb | MON | -    | -    | 2'   | 06 07.5 | -06 24 | 271 | R        |    |      | H IV 19  |
| <b>NGC 2174</b> | CED 67A     | Brn Neb | ORI | -    | -    | 40'  | 06 09.4 | +20 40 | 137 | E        |    |      | w IC 2159 sf; contains cluster                     |
| <b>NGC 2175</b> | OCL 476     | CL+Neb  | ORI | 6.8  | -    | 18'  | 06 09.6 | +20 29 | 137 | IV 3 p n | 60 | 7.6  | In Gem OB1?  |
| NGC 2175S       | Lund 1182   | Opn CL  | ORI | -    | -    | 21'  | 06 10.9 | +20 36 | 137 |          | 20 |      |  |
| NGC 2179        | ESO 555-38  | Galaxy  | LEP | 12.3 | 12.9 | 2'   | 06 08.0 | -21 45 | 316 | SBO-a    |    |      |  |
| NGC 2180        |             | Opn CL  | ORI | -    | -    |      | 06 09.6 | +04 43 | 227 |          |    |      | H VIII 6   |
| NGC 2182        | LBN 998     | Brn Neb | MON | -    | -    | 3'   | 06 09.5 | -06 20 | 272 | R        |    |      | H IV 38  |
| NGC 2183        | LBN 996     | Brn Neb | MON | -    | -    | 2'   | 06 10.8 | -06 13 | 272 | R        |    |      |  |
| <b>NGC 2185</b> | LBN 997     | Brn Neb | MON | -    | -    | 2'   | 06 11.0 | -06 14 | 272 | R        |    |      | H IV 20  |
| <b>NGC 2186</b> | OCL 498     | Opn CL  | ORI | 8.7  | -    | 4'   | 06 12.1 | +05 28 | 227 | II 2 p   | 30 | 9.8  | H VII 25   |
| NGC 2188        | ESO 364-37  | Galaxy  | COL | 11.7 | 13.2 | 4.7' | 06 10.2 | -34 06 | 359 | SBp      |    |      |  |
| NGC 2191        | ESO 160-14  | Galaxy  | CAR | 12.4 | -    | 1.7' | 06 08.4 | -52 31 | 422 | SBO      |    |      |  |
| NGC 2192        | OCL 437     | Opn CL  | AUR | 10.9 | -    | 6'   | 06 15.3 | +39 51 | 67  | III 1 p  | 45 | 14   | H VII 57;25* mags 12...                            |
| <b>NGC 2194</b> | OCL 495     | Opn CL  | ORI | 8.5  | -    | 10'  | 06 13.8 | +12 48 | 182 | III 1 r  | 80 | 12.1 | H VI 5;faint;rich;look for 2169 nearby             |
| NGC 2196        | ESO 556- 4  | Galaxy  | LEP | 11   | 12.8 | 2.8' | 06 12.2 | -21 48 | 317 | Sa       |    |      | H II 265   |
| NGC 2201        | ESO 254-40  | Galaxy  | PUP | 13.4 | 13.6 | 1.4' | 06 13.5 | -43 42 | 394 | SBb      |    |      |  |
| NGC 2202        |             | Opn CL  | ORI | -    | -    |      | 06 16.8 | +06 00 | 182 |          |    |      |  |
| <b>NGC 2204</b> | OCL 572     | Opn CL  | CMA | 8.6  | -    | 13'  | 06 15.5 | -18 40 | 317 | III 3 m  | 80 | 12.2 | H VII 13;About 20 F *                              |
| NGC 2206        | ESO 489-26  | Galaxy  | CMA | 12.2 | 13.3 | 2.4' | 06 16.0 | -26 46 | 317 | SBbc     |    |      |  |
| <b>NGC 2207</b> | ESO 556- 8  | Galaxy  | CMA | 10.8 | 13.4 | 4.2' | 06 16.4 | -21 22 | 317 | SBbc Rii |    |      | Double galaxy or interacting pair                  |
| NGC 2208        | UGC 3452    | Galaxy  | AUR | 12.8 | 13.3 | 1.6' | 06 22.6 | +51 55 | 41  | SO       |    |      |  |
| NGC 2211        | ESO 556-13  | Galaxy  | CMA | 12.7 | 12.5 | 1.4' | 06 18.5 | -18 32 | 317 | SBO      |    |      |  |
| NGC 2212        | ESO 556-14  | Galaxy  | CMA | 13.4 | 13.5 | 1.5' | 06 18.6 | -18 31 | 317 | SBO-a    |    |      |  |
| <b>NGC 2215</b> | OCL 550     | Opn CL  | MON | 8.4  | -    | 11'  | 06 20.8 | -07 17 | 272 | II 2 p   | 40 | 10.5 | H VII 20   |
| NGC 2216        | ESO 556-17  | Galaxy  | CMA | 12.8 | 13.1 | 1.4' | 06 21.5 | -22 05 | 317 | SBab     |    |      |  |
| NGC 2217        | ESO 489-42  | Galaxy  | CMA | 10.7 | 13.8 | 4.7' | 06 21.7 | -27 14 | 317 | SBO-a R  |    |      |  |
| NGC 2219        |             | Opn CL  | MON | -    | -    | 8'   | 06 23.7 | -04 41 | 227 |          |    |      |  |
| NGC 2221        | ESO 121-24  | Galaxy  | PIC | 13.9 | -    | 2'   | 06 20.3 | -57 35 | 422 | Sa       |    |      |  |
| NGC 2223        | ESO 489-49  | Galaxy  | CMA | 11.6 | 13.8 | 3'   | 06 24.6 | -22 50 | 317 | SBab     |    |      |  |
| NGC 2225        |             | Opn CL  | MON | 14   | -    | 1.5' | 06 26.6 | -09 38 | 272 | 1        |    | 14   | small scattered cluster;compressed core;40 stars   |
| NGC 2226        |             | Opn CL  | MON | 14   | -    | 1.5' | 06 26.6 | -09 39 | 272 | 1        |    |      | compressed core of NGC 2225                        |
| NGC 2227        | ESO 556-23  | Galaxy  | CMA | 12.5 | 13.3 | 2.1' | 06 26.0 | -22 00 | 317 | SBc      |    |      |  |
| <b>NGC 2232</b> | OCL 545     | Opn CL  | MON | 3.9  | -    | 30'  | 06 28.0 | -04 51 | 227 | IV 3 p   | 20 | 5    | H VIII 25  |
| NGC 2236        | OCL 501     | Opn CL  | MON | 8.5  | -    | 7'   | 06 29.7 | +06 50 | 182 | III 2 p  | 50 | 11   | H VII 5  |
| <b>NGC 2237</b> | OCL 511     | CL+Neb  | MON | 5.5  | -    | 80'  | 06 30.9 | +05 03 | 227 | E        |    |      | <b>Rosette nebula</b>                              |
| <b>NGC 2238</b> | LBN 948     | Brn Neb | MON | 6    | -    | 80'  | 06 30.7 | +05 01 | 227 | E        |    |      | <b>Rosette nebula</b>                              |
| <b>NGC 2239</b> | NGC 2244    | Opn CL  | MON | 4.8  | -    | 24'  | 06 31.9 | +04 57 | 227 | II 3 p n | 40 |      |  |
| NGC 2240        |             | Opn CL  | AUR | -    | -    |      | 06 33.2 | +35 15 | 99  |          |    |      | H VIII 49  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|--|
| NGC 2243        | OCL 644     | Opn CL  | CMA | 9.4  | -    | 5'   | 06 29.6 | -31 17 | 360 | I 2 r      | 100 | 11.8 |  |
| <b>NGC 2244</b> | NGC 2239    | CL+Neb  | MON | 4.8  | -    | 24'  | 06 31.9 | +04 57 | 227 | II 3 r n:b | 100 | 5.8  | H VII 2;In Rosette nebula                          |
| <b>NGC 2245</b> | LBN 904     | Brn Neb | MON | -    | -    | 2'   | 06 32.7 | +10 09 | 182 | R          |     |      | H IV 3   |
| NGC 2246        | LBN 948     | Brn Neb | MON | -    | -    | 80'  | 06 32.6 | +05 08 | 227 | E          |     |      | Rosette nebula                                     |
| NGC 2247        | LBN 901     | Brn Neb | MON | -    | -    | 2'   | 06 33.1 | +10 19 | 182 | R          |     |      |  |
| NGC 2250        | OCL 547     | Opn CL  | MON | 8.9  | -    | 8'   | 06 33.8 | -05 05 | 227 | IV 2 p     | 10  | 12   |  |
| <b>NGC 2251</b> | OCL 499     | Opn CL  | MON | 7.3  | -    | 10'  | 06 34.6 | +08 22 | 182 | IV 2 p     | 30  | 9.1  | H VIII 3   |
| NGC 2252        | OCL 514     | Opn CL  | MON | 7.7  | -    | 20'  | 06 34.7 | +05 22 | 227 | IV 2 p n   | 30  | 9    | H VIII 50  |
| NGC 2253        | UGC 3511    | Opn CL  | CAM | 13.1 | -    | 1.4' | 06 43.7 | +65 12 | 21  | 1          |     |      | H VII 54;Mis-identified as galaxy in CGCG          |
| NGC 2254        | OCL 500     | Opn CL  | MON | 9.1  | -    | 4'   | 06 35.8 | +07 40 | 182 | I 2 p      | 50  | 11.9 | H VII 22   |
| NGC 2255        | ESO 365-31  | Galaxy  | COL | 13.4 | 13.4 | 1.5' | 06 34.0 | -34 49 | 360 | SBc        |     |      |  |
| NGC 2256        | UGC 3519    | Galaxy  | CAM | 12.5 | 14   | 2.3' | 06 47.2 | +74 14 | 6   | SBO        |     |      |  |
| NGC 2258        | UGC 3523    | Galaxy  | CAM | 11.9 | 13.1 | 2.3' | 06 47.8 | +74 29 | 6   | SO         |     |      |  |
| NGC 2259        | OCL 492     | Opn CL  | MON | 10.8 | -    | 4.5' | 06 38.4 | +10 53 | 182 | II 2 p n   | 25  | 14   | H VI 28  |
| NGC 2260        |             | Opn CL  | MON | -    | -    | 20'  | 06 38.1 | -01 28 | 227 |            | 50  | 8    | H VIII 48  |
| <b>NGC 2261</b> | LBN 920     | Brn Neb | MON | -    | -    | 2'   | 06 39.2 | +08 45 | 182 | E+R        |     |      | Hubble's variable nebula (fan-shape);R Mon invl    |
| NGC 2262        | OCL 531     | Opn CL  | MON | 11.3 | -    | 3.5' | 06 39.6 | +01 09 | 227 | I 2 p      | 35  |      | H VII 37   |
| NGC 2263        | ESO 490-19  | Galaxy  | CMA | 12.1 | 13.4 | 2.7' | 06 38.5 | -24 51 | 317 | SBab R     |     |      |  |
| <b>NGC 2264</b> | OCL 495     | CL+Neb  | MON | 3.9  | -    | 20'  | 06 41.0 | +09 54 | 183 | III 3 m n: | 40  | 5    | Christmas Tree Cluster; Near Cone nebula           |
| <b>NGC 2266</b> | OCL 471     | Opn CL  | GEM | 9.5  | -    | 7'   | 06 43.3 | +26 58 | 138 | II 2 m     | 50  | 11   | H VI 21  |
| NGC 2267        | ESO 426-29  | Galaxy  | CMA | 12.2 | 12.9 | 1.7' | 06 40.9 | -32 29 | 360 | SBO        |     |      |  |
| NGC 2268        | UGC 3653    | Galaxy  | CAM | 11.5 | 13.4 | 3.3' | 07 14.3 | +84 23 | 7   | SBbc       |     |      | weak bar;many filamentary arms;poor res            |
| NGC 2269        | OCL 524     | Opn CL  | MON | 10   | -    | 4'   | 06 43.3 | +04 37 | 228 | II 2 p     | 12  | 11.6 | H VI 3   |
| NGC 2270        |             | Opn CL  | MON | -    | -    |      | 06 44.0 | +03 29 | 228 |            |     |      | H VII 36   |
| NGC 2271        | ESO 490-34  | Galaxy  | CMA | 12.2 | 13.2 | 2.1' | 06 42.9 | -23 29 | 318 | E-SO Ba    |     |      |  |
| NGC 2272        | ESO 490-33  | Galaxy  | CMA | 11.7 | 13.1 | 2.4' | 06 42.7 | -27 28 | 318 | SO         |     |      |  |
| NGC 2273        | UGC 3546    | Galaxy  | LYN | 11.7 | 13.8 | 3.2' | 06 50.1 | +60 51 | 42  | SBa        |     |      | pseudo round; high surface brightness              |
| NGC 2273A       | UGC 3504    | Galaxy  | LYN | 13.3 | -    | 2.7' | 06 40.1 | +60 05 | 42  | Sc         |     |      |  |
| NGC 2273B       | UGC 3530    | Galaxy  | LYN | 12.5 | 13.9 | 2.7' | 06 46.5 | +60 20 | 42  | SBd        |     |      | asym. v broad knotty arms;diff. broad vF arm north |
| NGC 2274        | UGC 3541    | Galaxy  | GEM | 12.1 | 13.2 | 2.4' | 06 47.3 | +33 34 | 99  | Elliptical |     |      | H II 615;brightest of 4;disturbed                  |
| NGC 2275        | UGC 3542    | Galaxy  | GEM | 13.1 | 13.1 | 1.3' | 06 47.3 | +33 36 | 99  | Sab        |     |      | H II 614;distorted                                 |
| NGC 2276        | UGC 3740    | Galaxy  | CEP | 11.4 | 13.5 | 2.8' | 07 27.2 | +85 45 | 1   | SBc Ring   |     |      | weak bar;many knotty filam arms;P w NGC 2300       |
| NGC 2280        | ESO 427- 2  | Galaxy  | CMA | 10.3 | 13.4 | 6.6' | 06 44.8 | -27 38 | 318 | Sc         |     |      |  |
| <b>NGC 2281</b> | OCL 446     | Opn CL  | AUR | 5.4  | -    | 15'  | 06 48.3 | +41 05 | 68  | I 3 p      | 30  | 7.3  | H VIII 71  |
| NGC 2282        | IC 2172     | Brn Neb | MON | -    | -    | 3'   | 06 46.9 | +01 19 | 228 | E          |     |      |  |
| NGC 2283        | ESO 557-13  | Galaxy  | CMA | 12.2 | 14.6 | 3.6' | 06 45.9 | -18 13 | 318 | SBc        |     |      | H III 271  |
| <b>NGC 2286</b> | OCL 548     | Opn CL  | MON | 7.5  | -    | 15'  | 06 47.7 | -03 09 | 228 | IV 3 m     | 50  | 9.7  | H VIII 31  |
| NGC 2289        | UGC 3560    | Galaxy  | GEM | 13.2 | 12.7 | 1.1' | 06 50.9 | +33 29 | 99  | SO         |     |      | H III 898;compact;birghtest in NGC 2289-2290 group |
| NGC 2290        | UGC 3562    | Galaxy  | GEM | 13.2 | 13   | 1.2' | 06 50.9 | +33 26 | 99  | Sa         |     |      | H III 897?;NGC 2289-2290 group                     |
| NGC 2291        | ZWG 175. 20 | Galaxy  | GEM | 13.2 | 13.1 | 1'   | 06 51.0 | +33 32 | 99  | SO         |     |      | H III 897?;compact IC 2173                         |
| NGC 2292        | ESO 490-48  | Galaxy  | CMA | 10.8 | 13.6 | 4'   | 06 47.7 | -26 45 | 318 | SBO        |     |      |  |
| NGC 2293        | ESO 490-49  | Galaxy  | CMA | 11.2 | 13.9 | 4'   | 06 47.7 | -26 45 | 318 | SBO-a      |     |      |  |
| NGC 2294        | MCG 6-15-   | Galaxy  | GEM | 13.8 | 13.8 | 0.8' | 06 51.2 | +33 32 | 99  | E6         |     |      |  |
| NGC 2295        | ESO 490-47  | Galaxy  | CMA | 12.7 | 12.8 | 2.1' | 06 47.4 | -26 44 | 318 | Sab        |     |      |  |
| NGC 2296        | IC 452      | Brn Neb | CMA | 13   | -    | 0.6' | 06 48.7 | -16 54 | 273 | R          |     |      | Near Sirius; probably a nebula                     |
| NGC 2298        | GCL 11      | Glob CL | PUP | 9.4  | -    | 6.8' | 06 49.0 | -36 00 | 360 | VI         |     |      | Stars eF   |
| NGC 2299        | NGC 2302    | Opn CL  | MON | 8.9  | -    | 2.5' | 06 51.9 | -07 05 | 273 |            |     |      |  |
| <b>NGC 2300</b> | UGC 3798    | Galaxy  | CEP | 11   | 12.8 | 3.5' | 07 32.3 | +85 43 | 1   | E1         |     |      | Pair with NGC 2276 at 6' and IC 1455 at 10'; vsBN  |
| <b>NGC 2301</b> | OCL 540     | Opn CL  | MON | 6    | -    | 12'  | 06 51.8 | +00 28 | 228 | I 3 m      | 80  | 8    | H VI 27;60" 8...;blue&gold D* near center          |
| NGC 2302        | NGC 2302    | Opn CL  | MON | 8.9  | -    | 2.5' | 06 51.9 | -07 05 | 273 | II 2 p     | 30  | 10.2 | H VIII 39  |
| NGC 2303        | UGC 3603    | Galaxy  | AUR | 12.6 | 13.5 | 1.5' | 06 56.3 | +45 30 | 68  | Elliptical |     |      |  |
| <b>NGC 2304</b> | OCL 484     | Opn CL  | GEM | 10   | -    | 5'   | 06 55.2 | +17 59 | 138 | II 1 p     | 30  |      | H VI 2   |
| NGC 2306        |             | Opn CL  | MON | -    | -    |      | 06 54.5 | -07 12 | 273 |            |     |      | H VIII 51  |
| NGC 2308        | UGC 3618    | Galaxy  | LYN | 13.2 | 13.9 | 1.8' | 06 58.6 | +45 13 | 68  | Sab        |     |      |  |
| NGC 2309        | OCL 557     | Opn CL  | MON | 10.5 | -    | 3'   | 06 56.1 | -07 10 | 273 | II 2 m     | 40  | 13   | H VI 18  |
| NGC 2310        | ESO 309- 7  | Galaxy  | PUP | 11.8 | 13   | 4.3' | 06 53.9 | -40 52 | 395 | SO         |     |      | lenticular   |
| <b>NGC 2311</b> | OCL 553     | Opn CL  | MON | 9.6  | -    | 7'   | 06 57.8 | -04 37 | 228 | III 2 p    | 50  | 12   | H VIII 60  |
| NGC 2313        | LDN 1653    | Brn Neb | MON | -    | -    |      | 06 58.0 | -07 57 | 273 | E          |     |      | diffuse nebula                                     |
| NGC 2314        | UGC 3677    | Galaxy  | CAM | 12.2 | 13.2 | 1.7' | 07 10.5 | +75 20 | 7   | E1p        |     |      |  |
| NGC 2315        | UGC 3633    | Galaxy  | LYN | 13.6 | 12.6 | 1.3' | 07 02.6 | +50 35 | 42  | Sa         |     |      | double system                                      |
| NGC 2316        | NGC 2317    | Brn Neb | MON | -    | -    | 4'   | 06 59.7 | -07 47 | 273 | R          |     |      | H II 304   |
| NGC 2317        | NGC 2316    | Brn Neb | MON | -    | -    | 4'   | 06 59.7 | -07 46 | 273 | R          |     |      |  |
| NGC 2320        | UGC 3659    | Galaxy  | LYN | 11.9 | 12.1 | 1.4' | 07 05.7 | +50 35 | 42  | Elliptical |     |      | H II 861   |
| NGC 2321        | UGC 3663    | Galaxy  | LYN | 13.6 | 13.9 | 1.4' | 07 06.0 | +50 45 | 42  | SBa        |     |      |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|---|
| NGC 2322        | UGC 3662    | Galaxy  | LYN | 13.8 | 12.8 | 1.1'  | 07 06.0 | +50 31 | 42  | SBa        |     |      | H III 874   |
| <b>NGC 2324</b> | OCL 542     | Opn CL  | MON | 8.4  | -    | 8'    | 07 04.1 | +01 03 | 228 | II 2 r     | 70  | 10.4 | H VII 38  |
| NGC 2325        | ESO 427-28  | Galaxy  | CMA | 11.4 | 13.4 | 3.5'  | 07 02.7 | -28 42 | 361 | E4         |     |      |   |
| NGC 2326        | UGC 3681    | Galaxy  | LYN | 13.1 | 14.3 | 1.8'  | 07 08.2 | +50 41 | 42  | SBb        |     |      | H II 734  |
| NGC 2327        | CED 89B     | Brn Neb | CMA | -    | -    | 20'   | 07 04.1 | -11 19 | 273 | E          |     |      | H IV 25   |
| NGC 2328        | ESO 309-16  | Galaxy  | PUP | 12.8 | 13.4 | 1.6'  | 07 02.6 | -42 04 | 395 | E-SO Ba    |     |      |   |
| NGC 2329        | UGC 3695    | Galaxy  | LYN | 12.4 | 12.7 | 1.3'  | 07 09.1 | +48 37 | 68  | SO         |     |      | H II 735= III 875   |
| NGC 2330        | IC 457      | Galaxy  | LYN | 14   | -    | 0.4'  | 07 09.5 | +50 09 | 42  | Elliptical |     |      |   |
| NGC 2331        | OCL 475     | Opn CL  | GEM | 8.5  | -    | 18'   | 07 07.0 | +27 16 | 138 | IV 1 p     | 30  | 9    | H VIII 40   |
| NGC 2332        | UGC 3699    | Galaxy  | LYN | 12.8 | 13.2 | 1.5'  | 07 09.6 | +50 11 | 42  | SO         |     |      | H II 862  |
| NGC 2333        | UGC 3689    | Galaxy  | GEM | 13.3 | 12.7 | 1'    | 07 08.4 | +35 10 | 100 | Sa         |     |      | H III 899   |
| <b>NGC 2335</b> | OCL 562     | Opn CL  | MON | 7.2  | -    | 12'   | 07 06.8 | -10 02 | 273 | III 3 m n  | 35  | 9.5  | H VIII 32;In CMa OB1                                      |
| NGC 2336        | UGC 3809    | Galaxy  | CAM | 10.4 | 13.9 | 6.8'  | 07 27.1 | +80 11 | 7   | SBbc Rii   |     |      | weak bar;many weak filam arms w knots; P w IC 467         |
| NGC 2336A       | UGC 4066    | Galaxy  | CAM | 14   | -    | 1.7'  | 07 56.3 | +78 01 | 7   | Sc         |     |      | diffuse arms;chain of bright patches in one               |
| NGC 2337        | UGC 3711    | Galaxy  | LYN | 12.4 | 13.7 | 2.3'  | 07 10.2 | +44 27 | 68  | Ir         |     |      |   |
| NGC 2339        | UGC 3693    | Galaxy  | GEM | 11.8 | 13.5 | 2.7'  | 07 08.3 | +18 47 | 138 | SBbc Rii   |     |      | B nucleus in weak compl bar w dk.lanes;F knotty arms      |
| NGC 2340        | UGC 3720    | Galaxy  | LYN | 11.7 | 12.6 | 1.8'  | 07 11.2 | +50 10 | 42  | Elliptical |     |      | H II 736  |
| NGC 2341        | UGC 3708    | Galaxy  | GEM | 13.2 | 12.6 | 0.8'  | 07 09.2 | +20 36 | 138 | Sc         |     |      | peculiar  |
| NGC 2342        | UGC 3709    | Galaxy  | GEM | 12.6 | 13   | 1.4'  | 07 09.3 | +20 38 | 138 | Sc         |     |      | distorted   |
| <b>NGC 2343</b> | OCL 565     | Opn CL  | MON | 6.7  | -    | 7'    | 07 08.1 | -10 37 | 273 | III 3 p n  | 20  | 8.4  | H VIII 33   |
| NGC 2344        | UGC 3734    | Galaxy  | LYN | 12   | 13   | 1.7'  | 07 12.5 | +47 10 | 68  | SBbc       |     |      |   |
| NGC 2345        | OCL 575     | Opn CL  | CMA | 7.7  | -    | 12'   | 07 08.3 | -13 12 | 273 | I 3 m      | 70  | 9.9  |   |
| <b>NGC 2346</b> | PK 215+3.1  | Pln Neb | MON | 12.5 | 11.5 | 60"   | 07 09.4 | -00 48 | 228 | 3b(6)      |     | 11.3 | H IV 65;PK215+3.1; cent* V651 Mon a variable star         |
| NGC 2347        | UGC 3759    | Galaxy  | CAM | 12.4 | 13.2 | 1.8'  | 07 16.1 | +64 43 | 21  | Sb         |     |      | H III 746;traces faint roundness                          |
| NGC 2349        |             | Opn CL  | MON | -    | -    |       | 07 10.8 | -08 36 | 273 |            |     |      | H VII 27  |
| NGC 2350        | UGC 3747    | Galaxy  | CMI | 12.3 | 12.1 | 1.4'  | 07 13.2 | +12 16 | 184 | Sa         |     |      |   |
| <b>NGC 2353</b> | OCL 567     | Opn CL  | MON | 7.1  | -    | 20'   | 07 14.5 | -10 16 | 274 | II 2 p     | 30  | 9.2  | H VIII 34;In CMa OB1                                      |
| <b>NGC 2354</b> | OCL 639     | Opn CL  | CMA | 6.5  | -    | 20'   | 07 14.3 | -25 42 | 319 | III 2 m    | 100 | 9.1  | H VII 16  |
| <b>NGC 2355</b> | NGC 2356    | Opn CL  | GEM | 9.7  | -    | 9'    | 07 17.0 | +13 45 | 184 | II 2 p     | 40  | 13   | H VI 6  |
| NGC 2356        | NGC 2355    | Opn CL  | GEM | 9.7  | -    | 9'    | 07 17.0 | +13 45 | 184 |            |     |      | H VII 6   |
| NGC 2357        | UGC 3782    | Galaxy  | GEM | 13.3 | 13.7 | 3.6'  | 07 17.7 | +23 21 | 139 | Sc         |     |      | smaller companion   |
| NGC 2358        |             | Opn CL  | CMA | -    | -    | 8'    | 07 16.9 | -17 07 | 319 |            |     |      | H VIII 45   |
| <b>NGC 2359</b> | LBN 1041    | Brn Neb | CMA | -    | -    | 10'   | 07 18.5 | -13 14 | 274 | E          |     | 11   | <b>Duck Neb</b> ;curved filam;cent* Wolf Rayet;UHC helps  |
| <b>NGC 2360</b> | OCL 589     | Opn CL  | CMA | 7.2  | -    | 13'   | 07 17.7 | -15 38 | 274 | II 2 m     | 80  | 10.4 | H VII 12  |
| <b>NGC 2361</b> |             | Brn Neb | CMA | -    | -    |       | 07 18.4 | -13 13 | 274 | E          |     |      | knot in 2359  |
| <b>NGC 2362</b> | OCL 633     | Opn CL  | CMA | 4.1  | -    | 8'    | 07 18.7 | -24 57 | 319 | I 3 p n    | 60  | 4.4  | H VII 17;40 * to 13 mag surround Tau Cma;sev pairs        |
| NGC 2364        |             | Opn CL  | MON | -    | -    |       | 07 20.8 | -07 33 | 274 |            |     |      |   |
| NGC 2365        | UGC 3821    | Galaxy  | GEM | 12.4 | 13.4 | 2.4'  | 07 22.4 | +22 05 | 139 | SBa        |     |      | hnf of 2  |
| NGC 2366        | UGC 3851    | Galaxy  | CAM | 11.1 | 14.6 | 7.8'  | 07 28.9 | +69 13 | 21  | Ir         |     |      | H III 748;P w NGC 2363                                    |
| NGC 2367        | OCL 621     | Opn CL  | CMA | 7.9  | -    | 3.5'  | 07 20.1 | -21 53 | 319 | IV 3 p     | 30  | 9.4  | H VIII 28   |
| NGC 2368        | OCL 571     | Opn CL  | MON | 11.8 | -    | 5'    | 07 21.1 | -10 22 | 274 | IV 2 p     | 15  |      |   |
| NGC 2370        | UGC 3835    | Galaxy  | GEM | 13.6 | 12.5 | 0.8'  | 07 25.0 | +23 47 | 139 | SBc        |     |      |   |
| <b>NGC 2371</b> | NGC 2372    | Pln Neb | GEM | 11.2 | 10.5 | 74"   | 07 25.6 | +29 29 | 100 | 3a+6       |     | 14.9 | faint double-lobed planetary;use filter;PK189+19.1        |
| <b>NGC 2372</b> | NGC 2371    | Pln Neb | GEM | 11.2 | 10.5 | 74"   | 07 25.6 | +29 30 | 100 | 3a(4)      |     | 14.8 | faint double-lobed planetary;use filter;PK189+19.1        |
| NGC 2373        | UGC 3848    | Galaxy  | GEM | 13.7 | 12.2 | 0.6'  | 07 26.6 | +33 49 | 100 | Sbc        |     |      |   |
| NGC 2374        | OCL 585     | Opn CL  | CMA | 8    | -    | 19'   | 07 23.9 | -13 16 | 274 | II 3 p     | 25  | 10.7 | H VIII 35   |
| NGC 2375        | UGC 3854    | Galaxy  | GEM | 13.6 | 13.8 | 1.3'  | 07 27.2 | +33 50 | 100 | SBb        |     |      | NGC 2389 group  |
| NGC 2377        | UGCA 132    | Galaxy  | MON | 12.7 | 13.4 | 1.7'  | 07 24.9 | -09 40 | 274 | Sc         |     |      |   |
| NGC 2379        | UGC 3857    | Galaxy  | GEM | 13.5 | 12.8 | 0.8'  | 07 27.4 | +33 49 | 100 | SO         |     |      | very compact;NGC 2389 group                               |
| NGC 2380        | NGC 2382    | Galaxy  | CMA | 11.2 | 12.6 | 2.1'  | 07 23.9 | -27 32 | 319 | SBO        |     |      |   |
| NGC 2382        | NGC 2380    | Galaxy  | CMA | 12.3 | -    | 2.1'  | 07 23.9 | -27 32 | 319 | SBO        |     |      |   |
| <b>NGC 2383</b> | OCL 616     | Opn CL  | CMA | 8.4  | -    | 6'    | 07 24.7 | -20 57 | 319 | I 3 m      | 40  | 9.8  | Near cluster NGC 2384                                     |
| <b>NGC 2384</b> | OCL 618     | Opn CL  | CMA | 7.4  | -    | 2.5'  | 07 25.2 | -21 01 | 319 | IV 3 p     | 15  | 8.6  | Near cluster NGC 2383                                     |
| NGC 2388        | UGC 3870    | Galaxy  | GEM | 13.7 | 12.9 | 1'    | 07 28.9 | +33 49 | 100 | S          |     |      | H III 900;NGC 2389 group                                  |
| NGC 2389        | UGC 3872    | Galaxy  | GEM | 12.9 | 13.9 | 2'    | 07 29.1 | +33 52 | 100 | SBc        |     |      | H III 901;brightest in group;many knotty filam arms       |
| <b>NGC 2392</b> | PK 197+17.1 | Pln Neb | GEM | 8.6  | 6.8  | 47"   | 07 29.2 | +20 55 | 139 | 3b(3b)     |     | 10.6 | <b>Clown Face</b> or <b>Eskimo Nebula</b> ;,.1;sev shells |
| NGC 2393        | UGC 3884    | Galaxy  | GEM | 14   | 13.8 | 1.2'  | 07 30.1 | +34 02 | 100 | Sc         |     |      | NGC 2389 group  |
| NGC 2394        |             | Opn CL  | CMI | -    | -    |       | 07 28.6 | +07 05 | 184 |            |     |      | H VIII 44   |
| <b>NGC 2395</b> | OCL 502     | Opn CL  | GEM | 8    | -    | 12'   | 07 27.2 | +13 37 | 184 | III 1 p    | 30  | 10   | H VIII 11   |
| NGC 2396        | OCL 579     | Opn CL  | PUP | 7.4  | -    | 10'   | 07 27.5 | -11 43 | 274 | III 3 p    | 30  | 10   | H VIII 36   |
| NGC 2401        | OCL 508     | Opn CL  | PUP | 12.6 | -    | 2'    | 07 29.4 | -13 58 | 274 | II 3 p     | 20  |      | H VII 65  |
| <b>NGC 2403</b> | UGC 3918    | Galaxy  | CAM | 8.5  | 14.4 | 23.4' | 07 36.8 | +65 36 | 21  | SBc        |     |      | in M81 group;many well res irreg arms;broad bar           |
| <b>NGC 2404</b> |             | Neb+Gx  | CAM | -    | -    |       | 07 37.1 | +65 37 | 21  | E+*        |     |      | An HII region within the Gx NGC 2403 on the NE side       |
| NGC 2407        | UGC 3896    | Galaxy  | GEM | 13.4 | 13.4 | 1.1'  | 07 31.9 | +18 20 | 139 | E-SO       |     |      | brightest in group  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|---|
| NGC 2409        |             | Opn CL  | PUP | 8    | -    | 2.5' | 07 31.6 | -17 11 | 319 |            |     |      |   |
| NGC 2410        | UGC 3917    | Galaxy  | GEM | 13   | 13.4 | 2.4' | 07 35.0 | +32 49 | 100 | SBb        |     |      |   |
| NGC 2413        |             | Opn CL  | PUP | -    | -    | 10'  | 07 33.3 | -13 06 | 274 |            |     |      | H VIII 52   |
| NGC 2414        | OCL 598     | Opn CL  | PUP | 7.9  | -    | 4'   | 07 33.2 | -15 27 | 274 | I 3 m      | 35  | 8.2  | H VIII 37   |
| NGC 2415        | UGC 3930    | Galaxy  | LYN | 12.4 | 12   | 0.9' | 07 36.9 | +35 14 | 100 | Ir         |     |      | H II 821;peculiar;high surface brightness;irreg fringes |
| NGC 2416        | UGC 3925    | Galaxy  | CMI | 13.4 | 12.9 | 1'   | 07 35.7 | +11 37 | 184 | Sc         |     |      | brightest in group;asymmetrical spiral                  |
| NGC 2418        | UGC 3931    | Galaxy  | GEM | 12.2 | 13.4 | 1.8' | 07 36.6 | +17 53 | 139 | Elliptical |     |      | slightly asym envelope;sev. v faint companions          |
| <b>NGC 2419</b> | GCL 12      | Glob CL | LYN | 10.4 | -    | 6.2' | 07 38.1 | +38 53 | 100 | II         |     |      | H I 218;Most distant globular;Brightest * 17 mag        |
| <b>NGC 2420</b> | OCL 488     | Opn CL  | GEM | 8.3  | -    | 10'  | 07 38.4 | +21 34 | 139 | I 2 r      | 100 | 11.1 | H VI 1  |
| <b>NGC 2421</b> | OCL 626     | Opn CL  | PUP | 8.3  | -    | 10'  | 07 36.2 | -20 37 | 319 | I 2 m      | 70  | 10.4 | H VII 67  |
| <b>NGC 2423</b> | OCL 592     | Opn CL  | PUP | 6.7  | -    | 19'  | 07 37.1 | -13 52 | 274 | IV 2 m     | 40  | 9    | H VII 28  |
| NGC 2424        | UGC 3959    | Galaxy  | LYN | 12.6 | 13.3 | 3.6' | 07 40.7 | +39 14 | 69  | SBb        |     |      | bright nucleus in narrow bar;dark lane on one side      |
| NGC 2425        | OCL 599     | Opn CL  | PUP | -    | -    | 3.3' | 07 38.3 | -14 53 | 274 | III 2 p    | 30  | 14   | H VIII 87   |
| NGC 2426        | UGC 3977    | Galaxy  | LYN | 13.1 | 13.3 | 1.1' | 07 43.3 | +52 19 | 43  | Elliptical |     |      | H II 822  |
| NGC 2427        | ESO 208-27  | Galaxy  | PUP | 11.5 | 14   | 4.9' | 07 36.5 | -47 38 | 396 | SBd        |     |      |   |
| NGC 2428        |             | Opn CL  | PUP | -    | -    | 6'   | 07 39.4 | -16 32 | 274 |            |     |      | H VIII 47   |
| NGC 2429A       | NGC 2429    | Galaxy  | LYN | 14   | -    | 1.5' | 07 43.8 | +52 21 | 43  | Sbc        |     |      | distorted early spiral interacting w comp at 0.8        |
| NGC 2431        | NGC 2436    | Galaxy  | LYN | 13.4 | 13   | 0.9' | 07 45.2 | +53 05 | 43  | SBa        |     |      | H III 829   |
| NGC 2432        | OCL 620     | Opn CL  | PUP | 10.2 | -    | 8'   | 07 40.9 | -19 05 | 319 | II 1 p     | 50  |      | H VI 36   |
| NGC 2435        | UGC 3996    | Galaxy  | GEM | 12.8 | 12.8 | 2.2' | 07 44.2 | +31 39 | 101 | Sa         |     |      | H II 616  |
| <b>NGC 2438</b> | PK 231+4.2  | Pln Neb | PUP | 11   | 11.7 | 65"  | 07 41.8 | -14 44 | 274 | 4(2)       |     | 17.5 | H IV 39;PK231+4.2 , inside M46                          |
| <b>NGC 2439</b> | OCL 688     | Opn CL  | PUP | 6.9  | -    | 10'  | 07 40.8 | -31 42 | 362 | II 3 m     | 80  | 8.9  |   |
| <b>NGC 2440</b> | PK 234+2.1  | Pln Neb | PUP | 11.5 | 6.4  | 54"  | 07 41.9 | -18 13 | 319 | 5(3)       |     | 17.5 | almost starlike;irregular at high power;PK234+2.1       |
| NGC 2441        | UGC 4036    | Galaxy  | CAM | 12.2 | 13.4 | 2'   | 07 51.9 | +73 01 | 7   | SBb Ring   |     |      |   |
| NGC 2444        | UGC 4016    | Galaxy  | LYN | 13.2 | 13   | 1.2' | 07 46.9 | +39 02 | 69  | SO         |     |      | double;elong. w distorted envelope;knotty plume         |
| NGC 2445        | UGC 4017    | Galaxy  | LYN | 13.3 | 13.6 | 1.4' | 07 46.9 | +39 01 | 69  | Ring       |     |      | double system;see NGC 2444                              |
| NGC 2446        | UGC 4027    | Galaxy  | LYN | 12.9 | 13.5 | 1.9' | 07 48.7 | +54 37 | 43  | Sb         |     |      |   |
| NGC 2448        | ESO 493-**8 | Opn CL  | PUP | -    | -    | 5'   | 07 44.6 | -24 40 | 320 |            |     |      |   |
| NGC 2449        | UGC 4026    | Galaxy  | GEM | 13.4 | 13.1 | 1.3' | 07 47.3 | +26 56 | 140 | Sab        |     |      |   |
| NGC 2451        | OCL 716     | Opn CL  | PUP | 2.8  | -    | 50'  | 07 45.3 | -37 58 | 362 | II 2 p     | 40  | 3.6  | includes naked eye red star c Pup; not a true cluster   |
| NGC 2452        | PK 243-1.1  | Pln Neb | PUP | 12.6 | 9.4  | 22"  | 07 47.4 | -27 20 | 320 | 4(3)       |     | 17.5 |   |
| NGC 2453        | OCL 670     | Opn CL  | PUP | 8.3  | -    | 5'   | 07 47.6 | -27 12 | 320 | I 2 p      | 30  | 9.5  |   |
| NGC 2455        | OCL 636     | Opn CL  | PUP | 10.2 | -    | 8'   | 07 49.0 | -21 18 | 320 | III 2 p    | 50  | 12   |   |
| NGC 2456        | UGC 4073    | Galaxy  | LYN | 13.1 | 13   | 1.1' | 07 54.2 | +55 30 | 43  | Elliptical |     |      |   |
| NGC 2459        |             | Opn CL  | CMI | -    | -    | 1.5' | 07 52.0 | +09 33 | 185 |            |     |      | H III 479   |
| NGC 2460        | UGC 4097    | Galaxy  | CAM | 11.8 | 13.3 | 2.2' | 07 56.9 | +60 21 | 43  | Sab        |     |      | vBN;spir struct in lens;vF smooth arms surrounding      |
| NGC 2462        | MCG 10-12-  | Galaxy  | LYN | 14   | -    | 0.4' | 07 56.5 | +56 41 | 43  | S          |     |      |   |
| <b>NGC 2467</b> | OCL 668     | CL+Neb  | PUP | 7.1  | -    | 15'  | 07 52.5 | -26 26 | 320 | I 3 m n:b  | 50  |      | Scattered stars 8..12 w vF haze of neb;in PUP OB1       |
| NGC 2469        | UGC 4111    | Galaxy  | LYN | 12.7 | 12.4 | 1'   | 07 58.1 | +56 41 | 43  | SB/P       |     |      | H III 836   |
| NGC 2470        | UGC 4091    | Galaxy  | CMI | 12.7 | 12.7 | 2'   | 07 54.3 | +04 28 | 230 | Sab        |     |      |   |
| NGC 2474        | UGC 4114    | Galaxy  | LYN | 13.5 | -    | 0.6' | 07 58.0 | +52 51 | 43  | EO         |     |      | H III 830;double system w 2475;contact                  |
| NGC 2475        | PK 164+31.1 | Galaxy  | LYN | 13.1 | 12.5 | 0.8' | 07 58.0 | +52 52 | 43  | E1         |     |      | double system w 2474;contact                            |
| NGC 2476        | UGC 4106    | Galaxy  | LYN | 12.6 | 12.8 | 1.4' | 07 56.8 | +39 56 | 69  | Elliptical |     |      |   |
| <b>NGC 2477</b> | OCL 720     | Opn CL  | PUP | 5.8  | -    | 27'  | 07 52.2 | -38 32 | 362 | I 2 r :b   | 200 | 12   | <b>300</b> * to 12 mag;Shapley--richest of OPNCL        |
| <b>NGC 2478</b> | NGC 2422    | Opn CL  | PUP | 4.4  | -    | 30'  | 07 36.6 | -14 29 | 274 |            |     |      | Equals 2422 ( <b>M 47</b> )                             |
| <b>NGC 2479</b> | OCL 623     | Opn CL  | PUP | 9.6  | -    | 7'   | 07 55.1 | -17 42 | 320 | III 1 m    | 45  |      | H VII 58  |
| NGC 2480        | UGC 4116    | Galaxy  | GEM | 13.7 | 13.4 | 1.3' | 07 57.2 | +23 47 | 140 | SBcd       |     |      | distorted   |
| NGC 2481        | UGC 4118    | Galaxy  | GEM | 12.9 | 12.4 | 1.4' | 07 57.2 | +23 46 | 140 | Sa         |     |      | H II 302;distorted                                      |
| <b>NGC 2482</b> | OCL 653     | Opn CL  | PUP | 7.3  | -    | 12'  | 07 55.2 | -24 15 | 320 | III 1 m    | 40  | 10   | H VII 10  |
| NGC 2483        | ESO 430-SO  | Opn CL  | PUP | 7.6  | -    | 10'  | 07 55.6 | -27 53 | 320 |            | 30  | 9.3  |   |
| NGC 2484        | UGC 4125    | Galaxy  | LYN | 13.1 | 12.6 | 0.9' | 07 58.5 | +37 47 | 101 | SO         |     |      |   |
| NGC 2485        | UGC 4112    | Galaxy  | CMI | 12.2 | 13   | 1.6' | 07 56.8 | +07 29 | 185 | Sa         |     |      | double  |
| NGC 2486        | UGC 4123    | Galaxy  | GEM | 13.3 | 13.6 | 1.7' | 07 57.9 | +25 10 | 140 | Sa         |     |      | P w NGC 2487  |
| NGC 2487        | UGC 4126    | Galaxy  | GEM | 12.5 | 14.2 | 2.7' | 07 58.3 | +25 09 | 140 | SBb        |     |      | P w NGC 2486  |
| NGC 2488        | UGC 4161    | Galaxy  | LYN | 12.4 | 12.4 | 1.4' | 08 01.8 | +56 33 | 43  | E-SO       |     |      | H III 837   |
| <b>NGC 2489</b> | OCL 690     | Opn CL  | PUP | 7.9  | -    | 8'   | 07 56.3 | -30 04 | 362 | II 2 m     | 45  | 11.1 | H VII 23  |
| NGC 2492        | UGC 4138    | Galaxy  | GEM | 12.7 | 12.6 | 1'   | 07 59.5 | +27 02 | 140 | E-SO       |     |      | compact   |
| NGC 2493        | UGC 4150    | Galaxy  | LYN | 12   | 13.3 | 1.9' | 08 00.4 | +39 50 | 69  | SBO        |     |      | H III 750   |
| NGC 2494        | IC 487      | Galaxy  | MON | 13.1 | 12.4 | 0.9' | 07 59.1 | -00 38 | 230 | SBO-a      |     |      |   |
| NGC 2496        | UGC 4127    | Galaxy  | CMI | 12.9 | 13.5 | 1.4' | 07 58.6 | +08 02 | 185 | Elliptical |     |      |   |
| NGC 2497        | UGC 4168    | Galaxy  | LYN | 13.1 | 13.6 | 1.4' | 08 02.2 | +56 57 | 43  | E-SO       |     |      | H III 838;compact                                       |
| NGC 2498        | UGC 4142    | Galaxy  | GEM | 13.4 | 13.1 | 1.1' | 07 59.6 | +24 59 | 140 | SBa        |     |      | very bright bar;singular loop westw                     |
| NGC 2500        | UGC 4165    | Galaxy  | LYN | 11.6 | 13.7 | 2.9' | 08 01.9 | +50 44 | 43  | SBcd       |     |      | bright nucleus in bar;many well resolved clumpy arms    |
| NGC 2501        | MCG - 2-21- | Galaxy  | PUP | 14   | -    | 1.4' | 07 58.5 | -14 21 | 275 | SO         |     |      |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|-----|------|---|
| NGC 2502        | ESO 209- 8  | Galaxy | CAR | 13.2 | -    | 2.1' | 07 55.9 | -52 18 | 424 | SBO        |     |      |   |
| NGC 2503        | UGC 4158    | Galaxy | CNC | 13.7 | 13.6 | 1.1' | 08 00.6 | +22 24 | 140 | SBbc Rii   |     |      |   |
| NGC 2504        | UGC 4152    | Galaxy | CMI | 13.9 | 11.9 | 0.5' | 07 59.9 | +05 36 | 185 | Pec        |     |      | peculiar  |
| NGC 2505        | UGC 4193    | Galaxy | LYN | 13.2 | 12.6 | 1.2' | 08 04.1 | +53 33 | 43  | SBa        |     |      | H III 839   |
| <b>NGC 2506</b> | OCL 593     | Opn CL | MON | 7.6  | -    | 7'   | 08 00.0 | -10 46 | 275 | I 2 r      | 150 | 10.8 | H VI 37   |
| NGC 2507        | UGC 4172    | Galaxy | CNC | 12.2 | 13.7 | 2.5' | 08 01.6 | +15 43 | 185 | Sa         |     |      | H II 554;peculiar;brightest in group;faint outer whirls       |
| NGC 2508        | UGC 4174    | Galaxy | CMI | 12.7 | 13.2 | 1.4' | 08 02.0 | +08 33 | 185 | Elliptical |     |      | H III 7   |
| <b>NGC 2509</b> | OCL 630     | Opn CL | PUP | 9.3  | -    | 8'   | 08 00.8 | -19 03 | 320 | II 1 p     | 70  |      | H VIII 1  |
| NGC 2510        | UGC 4178    | Galaxy | CMI | 13.4 | 12.9 | 1'   | 08 02.2 | +09 29 | 185 | SO         |     |      | NGC 2513  |
| NGC 2512        | UGC 4191    | Galaxy | CNC | 13.1 | 13.2 | 1.4' | 08 03.1 | +23 23 | 140 | SBb        |     |      | H III 605   |
| NGC 2513        | UGC 4184    | Galaxy | CNC | 11.6 | 13.4 | 2.5' | 08 02.4 | +09 25 | 185 | Elliptical |     |      | H III 512;brightest in group                                  |
| NGC 2514        | UGC 4189    | Galaxy | CNC | 13.4 | 13.8 | 1.3' | 08 02.8 | +15 48 | 185 | SBbc       |     |      | NGC 2507 group  |
| NGC 2517        | MCG - 2-21- | Galaxy | PUP | 11.8 | 12.1 | 1.4' | 08 02.8 | -12 19 | 275 | SBO        |     |      |   |
| NGC 2518        | UGC 4221    | Galaxy | LYN | 13   | 13.1 | 1.2' | 08 07.3 | +51 08 | 43  | E-SO       |     |      | spiral  |
| NGC 2520        | NGC 2527    | Opn CL | PUP | 6.5  | -    | 22'  | 08 05.0 | -28 09 | 362 |            |     |      |   |
| NGC 2521        | UGC 4235    | Galaxy | LYN | 12.8 | 12.6 | 1.2' | 08 08.8 | +57 46 | 43  | SOp        |     |      | disturbed   |
| NGC 2522        | UGC 4218    | Galaxy | CNC | 13.8 | 12.4 | 1'   | 08 06.2 | +17 42 | 140 | Sa         |     |      | brightest in group;1st in chain of 5 galaxies                 |
| NGC 2523        | UGC 4271    | Galaxy | CAM | 11.9 | 13.6 | 2.9' | 08 15.0 | +73 35 | 7   | SBab       |     |      | bright diff Nuc on bar;several filam arms w knots             |
| NGC 2523A       | UGC 4166    | Galaxy | CAM | 13.8 | 13.3 | 1'   | 08 04.1 | +74 03 | 7   | SBc        |     |      | disturbed?  |
| NGC 2523B       | UGC 4259    | Galaxy | CAM | 13.9 | 13.4 | 2'   | 08 12.9 | +73 34 | 7   | Sb         |     |      | exact minor replica of NGC 5746                               |
| NGC 2523C       | UGC 4290    | Galaxy | CAM | 12.9 | 13.1 | 1.5' | 08 17.7 | +73 19 | 7   | E5         |     |      |   |
| NGC 2524        | UGC 4234    | Galaxy | LYN | 12.7 | 12.9 | 1.4' | 08 08.2 | +39 09 | 69  | Sa         |     |      |   |
| NGC 2525        | MCG - 2-21- | Galaxy | PUP | 11.6 | 13.3 | 3'   | 08 05.6 | -11 26 | 275 | SBc/P      |     |      | H III 877   |
| NGC 2526        | UGC 4231    | Galaxy | CNC | 13.7 | 12.6 | 0.9' | 08 07.0 | +08 00 | 185 | Sab        |     |      |   |
| <b>NGC 2527</b> | NGC 2520    | Opn CL | PUP | 6.5  | -    | 22'  | 08 05.0 | -28 09 | 362 | III 1 p    | 40  | 8.6  | H VIII 30   |
| NGC 2528        | UGC 4227    | Galaxy | LYN | 12.6 | 13.4 | 1.5' | 08 07.4 | +39 12 | 69  | Sb Ring    |     |      |   |
| NGC 2530        | UGC 4237    | Galaxy | CNC | 13.6 | 13.8 | 1.4' | 08 07.9 | +17 49 | 140 | SBcd       |     |      | H III 752   |
| NGC 2532        | UGC 4256    | Galaxy | LYN | 12.4 | 13.8 | 2.1' | 08 10.3 | +33 57 | 101 | SBc        |     |      | H II 726;sev br knotty arms;high surf br                      |
| NGC 2533        | OCL 695     | Opn CL | PUP | 7.6  | -    | 3.5' | 08 07.1 | -29 53 | 362 | III 1 p    | 60  | 9    |   |
| NGC 2534        | UGC 4268    | Galaxy | LYN | 12.9 | 13.5 | 1.4' | 08 12.9 | +55 40 | 43  | E1p        |     |      | H III 840;peculiar;vB complex center region;multiple?         |
| NGC 2535        | UGC 4264    | Galaxy | CNC | 12.8 | 13.8 | 2.5' | 08 11.2 | +25 12 | 140 | Scp        |     |      | 2 long v open arms;2536 is comp at tip of 1 arm;bridge        |
| NGC 2537        | UGC 4274    | Galaxy | LYN | 11.7 | 12.6 | 3.1' | 08 13.2 | +45 59 | 69  | SBp        |     |      | spiral;bright partly resolved bar w strong asym arm           |
| NGC 2538        | UGC 4266    | Galaxy | CMI | 12.6 | 13.1 | 1.5' | 08 11.4 | +03 38 | 230 | SBa        |     |      |   |
| <b>NGC 2539</b> | OCL 611     | Opn CL | PUP | 6.5  | -    | 22'  | 08 10.6 | -12 49 | 275 | II 1 m     | 50  | 9.1  | Rich cluster;near <b>M46</b> and M47;D* 19 Pup in field       |
| NGC 2540        | UGC 4275    | Galaxy | CNC | 13.5 | 13.5 | 1.3' | 08 12.8 | +26 22 | 140 | SBc        |     |      |   |
| NGC 2541        | UGC 4284    | Galaxy | LYN | 11.8 | 14.9 | 6.3' | 08 14.7 | +49 04 | 69  | SBc        |     |      | H III 710   |
| NGC 2542        |             | Star   | PUP | 4.7  | -    |      | 08 11.3 | -12 56 | 275 |            |     |      |   |
| NGC 2543        | IC 2232     | Galaxy | LYN | 11.9 | 13   | 2.3' | 08 13.0 | +36 15 | 101 | SBb        |     |      | H II 719;broad bar w dark matter;UGC 4273                     |
| NGC 2544        | UGC 4327    | Galaxy | CAM | 12.9 | 12.5 | 1.1' | 08 21.7 | +73 59 | 7   | SBa        |     |      |   |
| NGC 2545        | UGC 4287    | Galaxy | CNC | 12.4 | 13.1 | 2.2' | 08 14.2 | +21 21 | 140 | SBab Rii   |     |      | one-arm spiral from inr loop;F smooth bar;F out arms          |
| NGC 2546        | OCL 726     | Opn CL | PUP | 6.3  | -    | 41'  | 08 12.3 | -37 36 | 362 | III 2 m    | 40  | 8.2  |   |
| <b>NGC 2547</b> | OCL 753     | Opn CL | VEL | 4.7  | -    | 20'  | 08 10.2 | -49 12 | 396 | II 2 p n   | 80  | 6.5  |   |
| NGC 2549        | UGC 4313    | Galaxy | LYN | 11.2 | 12.8 | 3.8' | 08 19.0 | +57 48 | 43  | SO         |     |      | B elongated w traces of bright tips;F outer envel             |
| NGC 2550        | UGC 4359    | Galaxy | CAM | 12.8 | 11.6 | 1'   | 08 24.6 | +74 01 | 7   | SB/P       |     |      | peculiar?   |
| NGC 2550A       | UGC 4397    | Galaxy | CAM | 12.7 | 13.5 | 1.6' | 08 28.7 | +73 45 | 7   | Sc         |     |      | slightly asym patchy arms                                     |
| NGC 2551        | UGC 4362    | Galaxy | CAM | 12.1 | 12.6 | 1.6' | 08 24.8 | +73 25 | 7   | Sa         |     |      | B diff N in lens;trace F whirls or dk lanes                   |
| NGC 2552        | UGC 4325    | Galaxy | LYN | 12.1 | 14.2 | 3.6' | 08 19.3 | +50 00 | 43  | Ir         |     |      | H III 711;highly res;irreg spiral struct;v low surf brightnes |
| NGC 2553        | MCG 4-20-   | Galaxy | CNC | 13.8 | 13.1 | 0.9' | 08 17.6 | +20 54 | 141 | S          |     |      |   |
| NGC 2554        | UGC 4312    | Galaxy | CNC | 12   | 14   | 3.2' | 08 17.9 | +23 28 | 141 | Sa         |     |      | H II 303;very faint slightly asym disc w spiral arcs          |
| NGC 2555        | UGC 4319    | Galaxy | HYA | 12.2 | 13.1 | 1.9' | 08 17.9 | +00 45 | 231 | SBab       |     |      | H III 256   |
| NGC 2557        | UGC 4330    | Galaxy | CNC | 13.2 | 13.3 | 1.2' | 08 19.2 | +21 26 | 141 | SBO        |     |      | IC 2293 at 5.5;117 (m=15.2)                                   |
| NGC 2558        | UGC 4331    | Galaxy | CNC | 12.9 | 13.7 | 1.8' | 08 19.2 | +20 31 | 141 | Sab        |     |      | H III 606   |
| NGC 2559        | ESO 494-41  | Galaxy | PUP | 10.9 | 12.8 | 3.7' | 08 17.1 | -27 27 | 321 | SBbc       |     |      |   |
| NGC 2560        | UGC 4337    | Galaxy | CNC | 13.3 | 12.4 | 1.4' | 08 19.9 | +20 59 | 141 | Sa         |     |      | dense part of cl  |
| NGC 2561        | UGC 4336    | Galaxy | HYA | 13.1 | 12.5 | 1.1' | 08 19.6 | +04 39 | 231 | SBc        |     |      | brightest in group;short massive arms;thick bar               |
| NGC 2562        | UGC 4345    | Galaxy | CNC | 12.9 | 12.3 | 1'   | 08 20.4 | +21 08 | 141 | Sa         |     |      | H III 607;dense part of cl                                    |
| NGC 2563        | UGC 4347    | Galaxy | CNC | 12.2 | 13.3 | 2'   | 08 20.6 | +21 04 | 141 | SO         |     |      | H II 634;dense part of cl                                     |
| NGC 2564        | ESO 562- 1  | Galaxy | PUP | 13.5 | -    | 1.2' | 08 18.5 | -21 49 | 321 | E-SO       |     |      |   |
| NGC 2565        | UGC 4334    | Galaxy | CNC | 12.6 | 13   | 1.9' | 08 19.8 | +22 02 | 141 | SBbc       |     |      | sff of 2  |
| NGC 2566        | ESO 495- 3  | Galaxy | PUP | 11   | 13.1 | 3.4' | 08 18.8 | -25 30 | 321 | SBab       |     |      |   |
| <b>NGC 2567</b> | OCL 708     | Opn CL | PUP | 7.4  | -    | 10'  | 08 18.5 | -30 39 | 362 | III 2 m    | 40  | 10.1 | H VII 64  |
| NGC 2568        | OCL 727     | Opn CL | PUP | 10   | -    | 2.0' | 08 18.3 | -37 06 | 362 |            |     |      |   |
| <b>NGC 2571</b> | OCL 701     | Opn CL | PUP | 7    | -    | 13'  | 08 18.9 | -29 45 | 362 | IV 1 p     | 30  | 8.8  | H VI 39   |
| NGC 2572        | UGC 4355    | Galaxy | CNC | 13.8 | 13.1 | 1.3' | 08 21.4 | +19 09 | 141 | Sa         |     |      |   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|--|
| NGC 2574        | MCG - 1-22- | Galaxy  | HYA | 14   | -    | 2.3' | 08 20.8 | -08 55 | 276 | Sab        |    |      |  |
| NGC 2575        | UGC 4368    | Galaxy  | CNC | 12.7 | 14.2 | 2.3' | 08 22.8 | +24 18 | 141 | Sc         |    |      |  |
| NGC 2577        | UGC 4367    | Galaxy  | CNC | 12.4 | 13   | 1.8' | 08 22.7 | +22 33 | 141 | SO         |    |      | H II 259   |
| NGC 2578        | MCG - 2-22- | Galaxy  | PUP | 12.6 | 13.4 | 2.2' | 08 21.4 | -13 19 | 276 | SBO-a      |    |      | H III 902  |
| NGC 2579        | OCL 724     | CL+Neb  | PUP | 7.5  | -    | 10'  | 08 20.9 | -36 13 | 363 | IV 2 p :b  | 20 | 9.5  |  |
| NGC 2580        | OCL 709     | Opn CL  | PUP | 9.7  | -    | 8'   | 08 21.5 | -30 19 | 363 | II 2 m     | 50 |      |  |
| NGC 2581        | UGC 4388    | Galaxy  | CNC | 13.3 | 13   | 1.1' | 08 24.5 | +18 36 | 141 | SB Ring    |    |      |  |
| NGC 2582        | IC 2359     | Galaxy  | CNC | 13   | 13.3 | 1.2' | 08 25.2 | +20 20 | 141 | SBab       |    |      | H III 753;s-shaped;almost circular arms IC 2359            |
| NGC 2583        | MCG - 1-22- | Galaxy  | HYA | 13.4 | 12.9 | 0.8' | 08 23.1 | -05 00 | 231 | E1         |    |      |  |
| NGC 2587        | OCL 706     | Opn CL  | PUP | 9.2  | -    | 9'   | 08 23.4 | -29 31 | 363 | II 1 p     | 40 |      |  |
| NGC 2588        | OCL 715     | Opn CL  | PUP | 11.8 | -    | 2'   | 08 23.2 | -32 59 | 363 | II 1 p     | 20 |      |  |
| NGC 2590        | IC 507      | Galaxy  | HYA | 13.1 | 13.4 | 2.2' | 08 25.0 | -00 36 | 231 | Sbc        |    |      |  |
| NGC 2591        | UGC 4472    | Galaxy  | CAM | 12.3 | 12.8 | 3'   | 08 37.4 | +78 02 | 7   | Sc         |    |      | patchy;probably late Sc                                    |
| NGC 2592        | UGC 4411    | Galaxy  | CNC | 12.3 | 13.2 | 1.7' | 08 27.1 | +25 58 | 141 | Elliptical |    |      | brightest of 3;in triple group w 2594 and NGC 2481         |
| NGC 2593        | UGC 4408    | Galaxy  | CNC | 13.9 | 12.9 | 0.9' | 08 26.8 | +17 22 | 141 | Sa         |    |      |  |
| NGC 2595        | UGC 4422    | Galaxy  | CNC | 12.3 | 14.3 | 3.1' | 08 27.7 | +21 29 | 141 | SBc        |    |      | slightly asym spiral pattern;barred w prominent nucl       |
| NGC 2596        | UGC 4419    | Galaxy  | CNC | 13.5 | 13.1 | 1.5' | 08 27.4 | +17 17 | 141 | Sb         |    |      |  |
| NGC 2598        | UGC 4443    | Galaxy  | CNC | 13.6 | 12.7 | 1'   | 08 30.0 | +21 29 | 141 | SBa        |    |      |  |
| NGC 2599        | UGC 4458    | Galaxy  | CNC | 12.2 | 13.3 | 1.9' | 08 32.2 | +22 34 | 141 | Sa         |    |      | H III 234  |
| NGC 2604A       | NGC 2604    | Galaxy  | CNC | 13.5 | -    | 2.1' | 08 33.4 | +29 32 | 102 | SBc        |    |      | H III 292;irregular;sev vF objects near                    |
| NGC 2607        | UGC 4473    | Galaxy  | CNC | 13.6 | 13.2 | 0.9' | 08 33.9 | +26 58 | 141 | Sc         |    |      | bright core in R diff disc;extreme diff outer disc         |
| NGC 2608        | UGC 4484    | Galaxy  | CNC | 12.3 | 13.4 | 2.2' | 08 35.3 | +28 28 | 102 | SBb Ring   |    |      | 2 asym arms vhigh surf brightn;2* superimposed on bar      |
| NGC 2610        | PK 239+13.1 | Pln Neb | HYA | 13   | 12.1 | 50"  | 08 33.4 | -16 09 | 276 | 4(2)       |    | 15.9 | H IV 35;PK239+13.1   |
| NGC 2612        | MCG - 2-22- | Galaxy  | HYA | 13   | -    | 2.8' | 08 33.8 | -13 10 | 276 | E-SO       |    |      |  |
| <b>NGC 2613</b> | ESO 495-18  | Galaxy  | PYX | 10.3 | 12.9 | 7.1' | 08 33.4 | -22 58 | 321 | Sb         |    |      | 1.2 deg W from D* Burnham 208;Nearly edge-on               |
| NGC 2614        | UGC 4523    | Galaxy  | UMA | 12.9 | 14.5 | 2.4' | 08 42.8 | +72 59 | 7   | Sc         |    |      |  |
| NGC 2615        | UGC 4481    | Galaxy  | HYA | 12.5 | 13.1 | 1.9' | 08 34.6 | -02 33 | 231 | SBb        |    |      |  |
| NGC 2616        | UGC 4489    | Galaxy  | HYA | 12.5 | 13.2 | 1.5' | 08 35.6 | -01 51 | 231 | SO         |    |      | compact;brightest of 3                                     |
| NGC 2618        | UGC 4492    | Galaxy  | HYA | 12.1 | 13.6 | 2.5' | 08 35.9 | +00 42 | 231 | Sab        |    |      | H III 257;very diffuse outside                             |
| NGC 2619        | UGC 4503    | Galaxy  | CNC | 12.4 | 13.5 | 2.3' | 08 37.5 | +28 42 | 102 | SBbc       |    |      | H II 319;many very thin arms                               |
| NGC 2620        | UGC 4501    | Galaxy  | CNC | 13.4 | 13.3 | 2'   | 08 37.5 | +24 57 | 141 | S pec      |    |      | very diffuse dwarf;NGC 2621 at 3.8 nf (m=15.5)             |
| NGC 2622        | MCG 4-21-   | Galaxy  | CNC | 14   | 12.7 | 0.8' | 08 38.2 | +24 54 | 141 | Sb         |    |      |  |
| NGC 2623        | UGC 4509    | Galaxy  | CNC | 13.4 | 13.8 | 2.4' | 08 38.4 | +25 45 | 141 | Sb         |    |      | triple; contact;2 long curved streamers (or arms)          |
| NGC 2626        | ESO 313-N*  | Brn Neb | VEL | -    | -    | 5'   | 08 35.5 | -40 40 | 397 | E+R        |    |      |  |
| <b>NGC 2627</b> | OCL 714     | Opn CL  | PYX | 8.4  | -    | 11'  | 08 37.2 | -29 57 | 363 | III 2 m    | 60 | 11   | H VII 63   |
| NGC 2628        | UGC 4519    | Galaxy  | CNC | 13.3 | 13.4 | 1.1' | 08 40.4 | +23 32 | 141 | Sc Ring    |    |      | H III 235  |
| NGC 2629        | UGC 4569    | Galaxy  | UMA | 12.3 | 13.2 | 2.3' | 08 47.3 | +72 59 | 7   | SO         |    |      | H III 982  |
| NGC 2633        | UGC 4574    | Galaxy  | CAM | 12.2 | 13.5 | 2.3' | 08 48.1 | +74 06 | 7   | SBb/P      |    |      | bright bar w dk lanes;2 main arms; Br in grp w N 2634      |
| NGC 2634        | UGC 4581    | Galaxy  | CAM | 12   | 13.1 | 2'   | 08 48.4 | +73 58 | 7   | E1         |    |      | disturbed; Pw NGC 2634A at 1.9' sf                         |
| NGC 2634A       | UGC 4585    | Galaxy  | CAM | 13.6 | 13   | 1.8' | 08 48.6 | +73 56 | 7   | SBbc       |    |      | disturbed;poor resolution;dimmer for bright part only      |
| NGC 2635        | OCL 728     | Opn CL  | PYX | 11.2 | -    | 3'   | 08 38.4 | -34 46 | 363 | I 3 p      | 15 | 12.4 |  |
| NGC 2636        | UGC 4583    | Galaxy  | CAM | 13.8 | 12.8 | 0.3' | 08 48.4 | +73 40 | 7   | EO         |    |      | compact;disc w v high surf br                              |
| NGC 2638        | UGC 4534    | Galaxy  | LYN | 12.8 | 12.6 | 1.7' | 08 42.4 | +37 13 | 102 | Sa         |    |      |  |
| NGC 2639        | UGC 4544    | Galaxy  | UMA | 11.6 | 12.3 | 1.8' | 08 43.6 | +50 12 | 44  | Sa         |    |      | H I 204;v faint thin spiral arm;partly obscure on one side |
| NGC 2640        | ESO 165- 2  | Galaxy  | CAR | 12.7 | -    | 2.2' | 08 37.4 | -55 07 | 425 | E-S0 B     |    |      |  |
| NGC 2641        | UGC 4577    | Galaxy  | UMA | 13.6 | 13.9 | 1.3' | 08 48.0 | +72 54 | 7   | SO         |    |      | H III 983;compact  |
| NGC 2642        | MCG - 1-22- | Galaxy  | HYA | 12.6 | 13.9 | 2'   | 08 40.7 | -04 07 | 231 | SBbc Ring  |    |      | B nucleus in weak bar;4 or 5 knotty filam arms;            |
| NGC 2644        | UGC 4533    | Galaxy  | HYA | 12.3 | 12.8 | 2.1' | 08 41.5 | +04 59 | 231 | Sc         |    |      | strongly asym.;spiral arcs north;filaments south           |
| NGC 2645        | Pismis 6    | Opn CL  | VEL | 7.1  | -    | 1.5' | 08 39.1 | -46 14 | 397 | II 2 p     | 15 | 8.9  |  |
| NGC 2646        | UGC 4604    | Galaxy  | CAM | 12.1 | 12.5 | 1.5' | 08 50.4 | +73 28 | 7   | SBO        |    |      | bright nucleus on faint bar; also identified as IC 520     |
| NGC 2648        | UGC 4541    | Galaxy  | CNC | 11.8 | 13.1 | 3.2' | 08 42.7 | +14 17 | 186 | Sa         |    |      | spiral;abs lanes in comp;diff arms extend beyond comp      |
| NGC 2649        | UGC 4555    | Galaxy  | LYN | 12.3 | 13.1 | 1.5' | 08 44.1 | +34 43 | 102 | SBbc       |    |      | H II 727   |
| NGC 2650        | UGC 4603    | Galaxy  | UMA | 13.3 | 13.8 | 1.6' | 08 50.0 | +70 18 | 22  | SBb        |    |      | H II 908   |
| <b>NGC 2652</b> | MCG +00-25  | Galaxy  | SEX | 11.9 | -    | 3.4' | 09 42.5 | -03 42 | 231 | E 4        |    |      | see 2974   |
| NGC 2654        | UGC 4605    | Galaxy  | UMA | 11.8 | 12.9 | 4.2' | 08 49.2 | +60 13 | 44  | SBab       |    |      |  |
| <b>NGC 2655</b> | UGC 4637    | Galaxy  | CAM | 10.1 | 13.2 | 4.9' | 08 55.6 | +78 13 | 7   | SBO-a      |    |      | large nucleus w asym dk matter;faint outer whirls          |
| NGC 2656        | MCG 9-15-   | Galaxy  | UMA | 13.8 | 14.2 | 1.3' | 08 47.9 | +53 53 | 44  | SOp        |    |      | double system in halo                                      |
| NGC 2657        | UGC 4573    | Galaxy  | CNC | 13   | 13.5 | 1.3' | 08 45.3 | +09 39 | 186 | Scd Ring   |    |      |  |
| NGC 2658        | OCL 723     | Opn CL  | PYX | 9.2  | -    | 10'  | 08 43.5 | -32 39 | 363 | I 2 r :b   | 80 | 12   |  |
| NGC 2659        | OCL 752     | Opn CL  | VEL | 8.6  | -    | 14'  | 08 42.6 | -45 00 | 397 | III 3 m    | 80 | 9.7  | In Vel OB1   |
| NGC 2660        | OCL 759     | Opn CL  | VEL | 8.8  | -    | 4'   | 08 42.6 | -47 12 | 397 | I 3 m      | 70 | 11.7 |  |
| NGC 2661        | UGC 4584    | Galaxy  | CNC | 12.8 | 13.4 | 1.4' | 08 46.0 | +12 37 | 186 | Sc         |    |      | patchy;asym broken arms;no disturbing obj visible          |
| NGC 2663        | ESO 371-14  | Galaxy  | PYX | 10.9 | 13.1 | 3.5' | 08 45.1 | -33 48 | 363 | Elliptical |    |      |  |
| NGC 2664        |             | Opn CL  | CNC | -    | -    | 5'   | 08 47.1 | +12 36 | 186 |            |    |      |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs  | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|-----|---|
| NGC 2665        | ESO 563-19  | Galaxy  | HYA | 12.2 | 13.3 | 2'   | 08 46.0 | -19 18 | 321 | SBa        |    |     |   |
| NGC 2668        | UGC 4616    | Galaxy  | LYN | 13.8 | 13.4 | 1.2' | 08 49.4 | +36 43 | 102 | SBab       |    |     |   |
| NGC 2669        | OCL 768     | Opn CL  | VEL | 6.1  | -    | 20'  | 08 46.4 | -52 57 | 425 | II 3 p     | 40 | 7.6 |   |
| NGC 2670        | OCL 764     | Opn CL  | VEL | 7.8  | -    | 6'   | 08 45.5 | -48 48 | 397 | II 2 p     | 30 | 9.3 |   |
| NGC 2671        | OCL 745     | Opn CL  | VEL | 11.6 | -    | 4'   | 08 46.2 | -41 53 | 397 | I 3 p      | 40 |     |   |
| NGC 2672        | UGC 4619    | Galaxy  | CNC | 11.7 | 14   | 2.5' | 08 49.4 | +19 04 | 142 | E1         |    |     | in halo of NGC 2673;contact;has curved plume            |
| NGC 2675        | UGC 4629    | Galaxy  | UMA | 13.3 | 13.8 | 1.5' | 08 52.1 | +53 37 | 44  | Elliptical |    |     |   |
| NGC 2676        | UGC 4627    | Galaxy  | UMA | 13.1 | 13.3 | 1.2' | 08 51.6 | +47 33 | 70  | SO         |    |     | vB core;e diff disc or corona;compact                   |
| NGC 2678        |             | Opn CL  | CNC | -    | -    | 10'  | 08 50.0 | +11 20 | 187 |            |    |     | H VIII 10   |
| <b>NGC 2681</b> | UGC 4645    | Galaxy  | UMA | 10.3 | 12.8 | 3.7' | 08 53.5 | +51 19 | 44  | SBO-a      |    |     | H I 242;Compact center and distinct spiral arms         |
| <b>NGC 2683</b> | UGC 4641    | Galaxy  | LYN | 9.8  | 12.9 | 8.8' | 08 52.7 | +33 25 | 102 | Sb         |    |     | peanut-shaped bulge;many filam; arm w dk lanes 1 side   |
| NGC 2684        | UGC 4662    | Galaxy  | UMA | 12.9 | 12.4 | 0.9' | 08 54.9 | +49 10 | 70  | Sc         |    |     | peculiar;group of small galaxies;bright center;asymdisc |
| NGC 2685        | UGC 4666    | Galaxy  | UMA | 11.3 | 13.7 | 4.6' | 08 55.6 | +58 44 | 44  | SBO-a      |    |     | appears cigar-shaped;w equatorial rings;dk lanes        |
| NGC 2690        | UGC 4647    | Galaxy  | HYA | 13.1 | 12.9 | 1.9' | 08 52.6 | -02 36 | 232 | Sab        |    |     |   |
| NGC 2691        | UGC 4664    | Galaxy  | LYN | 13.1 | 13   | 1.2' | 08 54.8 | +39 32 | 70  | Sa         |    |     | H II 658;compact  |
| NGC 2692        | UGC 4675    | Galaxy  | UMA | 13.3 | 12.7 | 1.3' | 08 57.0 | +52 04 | 44  | SBab       |    |     | H III 831   |
| NGC 2693        | UGC 4674    | Galaxy  | UMA | 11.9 | 13.6 | 3'   | 08 57.0 | +51 21 | 44  | Ep         |    |     | H II 823;very compact                                   |
| NGC 2695        | MCG 0-23-   | Galaxy  | HYA | 11.9 | 12.5 | 1.7' | 08 54.5 | -03 04 | 232 | SO         |    |     | H II 280  |
| NGC 2697        | MCG 0-23-   | Galaxy  | HYA | 12.3 | 12.9 | 1.8' | 08 55.0 | -02 59 | 232 | Sa         |    |     |   |
| NGC 2698        | MCG 0-23-   | Galaxy  | HYA | 12.6 | 12.3 | 1.5' | 08 55.6 | -03 11 | 232 | Sa         |    |     |   |
| NGC 2699        | MCG 0-23-   | Galaxy  | HYA | 12.6 | 12.6 | 1.1' | 08 55.8 | -03 08 | 232 | Elliptical |    |     |   |
| NGC 2701        | UGC 4695    | Galaxy  | UMA | 12.3 | 13.5 | 2.2' | 08 59.1 | +53 46 | 44  | SBc        |    |     | bright center;weak bar w dk lanes;knotty spiral arms    |
| NGC 2704        | IC 2424     | Galaxy  | LYN | 13.4 | 13.3 | 1'   | 08 56.8 | +39 23 | 70  | SBab Ring  |    |     | H III 625;IC 2424                                       |
| NGC 2706        | UGC 4680    | Galaxy  | HYA | 13   | 12.9 | 1.8' | 08 56.2 | -02 34 | 232 | SBc        |    |     |   |
| NGC 2708        | NGC 2727    | Galaxy  | HYA | 12   | 13.2 | 2.7' | 08 56.1 | -03 22 | 232 | Sb         |    |     | H II 281  |
| NGC 2709        | MCG 0-23-   | Galaxy  | HYA | 13.6 | 12.8 | 0.8' | 08 56.2 | -03 15 | 232 | SO         |    |     |   |
| NGC 2710        | UGC 4705    | Galaxy  | UMA | 12.9 | 13.4 | 2'   | 08 59.8 | +55 42 | 44  | SBb        |    |     | H III 841   |
| NGC 2711        | UGC 4688    | Galaxy  | CNC | 13.6 | 12.9 | 0.9' | 08 57.4 | +17 17 | 142 | SBbc       |    |     |   |
| NGC 2712        | UGC 4708    | Galaxy  | LYN | 12.1 | 13.6 | 2.8' | 08 59.5 | +44 55 | 70  | SBb        |    |     | bright nucl;smooth narrow bar;sev knotty branch arms    |
| NGC 2713        | UGC 4691    | Galaxy  | HYA | 11.8 | 13.4 | 3.3' | 08 57.3 | +02 55 | 232 | SBab       |    |     | B N in strng bar w dk lanes;2 main fil arms w knots     |
| NGC 2714        | ESO 125- 7  | Galaxy  | CAR | 14   | -    | 0.9' | 08 53.5 | -59 13 | 425 | E          |    |     |   |
| NGC 2715        | UGC 4759    | Galaxy  | CAM | 11.2 | 13.4 | 4.8' | 09 08.1 | +78 05 | 7   | SBc        |    |     | several filamentary knotty arms;sharp outline           |
| NGC 2716        | UGC 4692    | Galaxy  | HYA | 11.8 | 12   | 1.6' | 08 57.6 | +03 05 | 232 | SBO-a      |    |     | close to cluster of faint galaxies                      |
| NGC 2717        | ESO 496-21  | Galaxy  | PYX | 12.3 | 13.5 | 2.1' | 08 57.0 | -24 40 | 322 | E-SO Ba    |    |     |   |
| NGC 2718        | UGC 4707    | Galaxy  | HYA | 11.8 | 13.3 | 2.1' | 08 58.8 | +06 18 | 187 | SBab       |    |     | H II 557  |
| NGC 2719        | UGC 4718    | Galaxy  | LYN | 13.5 | -    | 1.1' | 09 00.3 | +35 44 | 103 | Irp        |    |     | high surf brightn;core+loop;diffuse bridge to comp      |
| NGC 2719A       | MCG 6-20-   | Galaxy  | LYN | 13.5 | -    | 0.4' | 09 00.3 | +35 43 | 103 | Irp        |    |     |   |
| NGC 2720        | UGC 4710    | Galaxy  | CNC | 12.8 | 13   | 1.2' | 08 59.1 | +11 09 | 187 | Sc         |    |     |   |
| NGC 2721        | MCG - 1-23- | Galaxy  | HYA | 12.5 | -    | 2.4' | 08 58.9 | -04 54 | 232 | Sbc Ring   |    |     | H II 529  |
| NGC 2722        | NGC 2733    | Galaxy  | HYA | 13.4 | -    | 2.1' | 08 58.8 | -03 43 | 232 | SBc        |    |     | H III 264   |
| NGC 2723        | UGC 4723    | Galaxy  | HYA | 13.2 | 12.9 | 0.9' | 09 00.2 | +03 11 | 232 | SO         |    |     |   |
| NGC 2724        | UGC 4726    | Galaxy  | LYN | 13.6 | 14.6 | 1.8' | 09 01.0 | +35 46 | 103 | SBc        |    |     |   |
| NGC 2725        | UGC 4732    | Galaxy  | CNC | 13.4 | 12.3 | 0.7' | 09 01.1 | +11 06 | 187 | Pec        |    |     | peculiar  |
| NGC 2726        | UGC 4750    | Galaxy  | UMA | 12.5 | 12.2 | 1.6' | 09 04.9 | +59 56 | 44  | Sa         |    |     | H II 834  |
| NGC 2727        | NGC 2708    | Galaxy  | HYA | 12.8 | -    | 2.7' | 08 56.1 | -03 22 | 232 | Sb         |    |     |   |
| NGC 2728        | UGC 4738    | Galaxy  | CNC | 13.6 | 13.4 | 1.1' | 09 01.7 | +11 05 | 187 | Sb         |    |     |   |
| NGC 2729        | UGC 4737    | Galaxy  | HYA | 13.4 | 12.3 | 0.8' | 09 01.5 | +03 43 | 232 | SO         |    |     |   |
| NGC 2730        | UGC 4743    | Galaxy  | CNC | 13   | 13.6 | 1.7' | 09 02.3 | +16 50 | 187 | SBc Irr    |    |     | disturbed;chaotic patchy spirals ;S blue cond p part    |
| NGC 2731        | UGC 4741    | Galaxy  | CNC | 13.5 | 12.4 | 0.8' | 09 02.1 | +08 18 | 187 | Sc         |    |     | several filamentary knotty arms;sharp outline           |
| NGC 2732        | UGC 4818    | Galaxy  | CAM | 11.9 | 12.4 | 2.1' | 09 13.4 | +79 11 | 8   | SO         |    |     | peculiar;disturbed?                                     |
| NGC 2733        | NGC 2722    | Galaxy  | HYA | 13.4 | -    | 2.1' | 08 58.8 | -03 43 | 232 | Sbc        |    |     |   |
| NGC 2735        | UGC 4744    | Galaxy  | CNC | 13.3 | 12.4 | 1.2' | 09 02.6 | +25 56 | 142 | SBb/P      |    |     | bright core;bridge;disturbed by companion (N2375A)      |
| NGC 2736        | RCW 37      | Brn Neb | VEL | -    | -    | 30'  | 09 00.4 | -45 54 | 397 | E          |    |     | luminous filamentary nebula                             |
| NGC 2738        | UGC 4752    | Galaxy  | CNC | 13   | 12.7 | 1.4' | 09 04.0 | +21 58 | 142 | Sc         |    |     | brightest in group;spiral                               |
| NGC 2740        | MCG 9-15-   | Galaxy  | UMA | 13.9 | 13.3 | 1'   | 09 06.1 | +51 44 | 44  | Sab Ring   |    |     |   |
| <b>NGC 2742</b> | NGC 2816    | Galaxy  | UMA | 11.4 | 13   | 3'   | 09 07.6 | +60 29 | 44  | Sc         |    |     | H I 249;bright nucleus;several filamentary knotty arms  |
| NGC 2742A       | UGC 4803    | Galaxy  | UMA | 13.2 | 13.1 | 1.6' | 09 10.0 | +62 15 | 23  | SBb/P      |    |     |   |
| NGC 2743        | UGC 4760    | Galaxy  | CNC | 13.7 | 13.5 | 1.1' | 09 04.9 | +25 00 | 142 | Sd         |    |     | H III 608   |
| NGC 2744        | UGC 4757    | Galaxy  | CNC | 13.5 | 13.9 | 1.6' | 09 04.7 | +18 28 | 142 | SBb/P      |    |     | double;bright complex center;2 main smooth arms         |
| NGC 2746        | UGC 4770    | Galaxy  | LYN | 13.1 | 13.9 | 1.6' | 09 06.0 | +35 23 | 103 | SBa        |    |     | medium compact;several faint objects in vicinity        |
| NGC 2748        | UGC 4825    | Galaxy  | CAM | 11.7 | 12.9 | 3.1' | 09 13.7 | +76 29 | 8   | Sbc        |    |     | vB center w sN;sev knotty arms w dk lanes               |
| NGC 2749        | UGC 4763    | Galaxy  | CNC | 11.8 | 12.8 | 1.8' | 09 05.4 | +18 19 | 142 | E2         |    |     | brightest in group                                      |
| NGC 2750        | UGC 4769    | Galaxy  | CNC | 11.9 | 13.3 | 2.2' | 09 05.8 | +25 26 | 142 | Sc         |    |     | slightly asym;distorted arm at p side brighttr outw     |
| NGC 2752        | UGC 4772    | Galaxy  | CNC | 13.7 | 13.4 | 1.8' | 09 05.7 | +18 20 | 142 | SBb        |    |     | triple grp w NGC 2749 @ 5.4';PA252;and NGC 2744 @       |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|--|
| NGC 2755        | UGC 4789    | Galaxy  | LYN | 13.1 | 13   | 1.2' | 09 08.0 | +41 42 | 70  | Sb         |    |      | H III 626;compact  |
| NGC 2756        | UGC 4796    | Galaxy  | UMA | 12.4 | 13   | 1.7' | 09 09.0 | +53 51 | 44  | Sb         |    |      | H II 828   |
| NGC 2758        | ESO 564-20  | Galaxy  | HYA | 13.2 | 12.8 | 1.9' | 09 05.5 | -19 03 | 322 | Sc         |    |      |  |
| NGC 2759        | UGC 4795    | Galaxy  | LYN | 13   | 12.6 | 1'   | 09 08.6 | +37 37 | 103 | E-SO       |    |      | H III 647;brightest in group                             |
| NGC 2760        | MCG+13-07-  | Galaxy  | CAM | 14   | -    | 0.5' | 09 24.2 | +76 32 | 8   |            |    |      |  |
| NGC 2763        | MCG - 2-23- | Galaxy  | HYA | 12   | 13.5 | 2.3' | 09 06.8 | -15 30 | 277 | SBc        |    |      | H III 275  |
| NGC 2764        | UGC 4794    | Galaxy  | CNC | 12.9 | 13.1 | 1.5' | 09 08.3 | +21 27 | 142 | SO         |    |      | H III 236  |
| NGC 2765        | UGC 4791    | Galaxy  | HYA | 12.1 | 12.9 | 2.1' | 09 07.6 | +03 24 | 232 | SO         |    |      | H II 520   |
| NGC 2766        | UGC 4801    | Galaxy  | CNC | 13.6 | 13.1 | 1.4' | 09 08.8 | +29 52 | 103 | SBab R     |    |      |  |
| NGC 2767        | UGC 4813    | Galaxy  | UMA | 13.8 | 11.6 | 0.4' | 09 10.2 | +50 24 | 44  | S          |    |      | NGC 2769 group   |
| <b>NGC 2768</b> | UGC 4821    | Galaxy  | UMA | 9.9  | 13.7 | 8.2' | 09 11.6 | +60 02 | 44  | E5         |    |      | vsvB center; smooth neb in lens and external envelope    |
| NGC 2769        | UGC 4816    | Galaxy  | UMA | 13   | 12.5 | 1.8' | 09 10.5 | +50 26 | 44  | Sa         |    |      | brightest in NGC 2769 group                              |
| NGC 2770A       | UGC 4806    | Galaxy  | LYN | 12.2 | 13.7 | 3.7' | 09 09.6 | +33 07 | 103 | Sc         |    |      | H II 490;2 nuclei in common envelope                     |
| NGC 2771        | UGC 4817    | Galaxy  | UMA | 12.7 | 14.1 | 2.3' | 09 10.7 | +50 23 | 44  | SBab       |    |      | P w NGC 2769;2769 group                                  |
| NGC 2772        | ESO 497-14  | Galaxy  | PYX | 13.4 | 13.6 | 1.5' | 09 07.7 | -23 37 | 322 | Sb         |    |      |  |
| NGC 2773        | UGC 4815    | Galaxy  | CNC | 14   | 12.3 | 0.7' | 09 09.7 | +07 10 | 187 | S pec      |    |      |  |
| <b>NGC 2775</b> | UGC 4820    | Galaxy  | CNC | 10.1 | 12.9 | 4.5' | 09 10.3 | +07 02 | 187 | Sab        |    |      | N in B smooth lens;many knotty arms form dk lane         |
| NGC 2776        | UGC 4838    | Galaxy  | LYN | 11.6 | 13.8 | 2.8' | 09 12.2 | +44 57 | 71  | SBc        |    |      | bright nucleus;2 main knotty arms;similar to <b>M101</b> |
| NGC 2777        | UGC 4823    | Galaxy  | CNC | 13.3 | 12.4 | 0.7' | 09 10.7 | +07 12 | 187 | Sab        |    |      |  |
| NGC 2778        | UGC 4840    | Galaxy  | LYN | 12.4 | 12.8 | 1.4' | 09 12.4 | +35 02 | 103 | E          |    |      | H II 564;brightest in group                              |
| NGC 2780        | UGC 4843    | Galaxy  | LYN | 13.3 | 12.6 | 0.9' | 09 12.7 | +34 56 | 103 | SB/P       |    |      | massive very tightly wound arms;NGC 2778 group           |
| NGC 2781        | MCG - 2-24- | Galaxy  | HYA | 11.6 | 13.1 | 3.1' | 09 11.5 | -14 49 | 277 | SBO-a R    |    |      | H I 66   |
| <b>NGC 2782</b> | UGC 4862    | Galaxy  | LYN | 11.6 | 13.9 | 3.7' | 09 14.1 | +40 07 | 71  | SBa        |    |      | broad bar w strong dk. lane;asym smooth arms dk lane     |
| NGC 2783A       | NGC 2783    | Galaxy  | CNC | 14   | -    | 2.2' | 09 13.7 | +30 00 | 103 | Elliptical |    |      | H III 295;NGC 2778 group                                 |
| <b>NGC 2784</b> | ESO 497-23  | Galaxy  | HYA | 10.2 | 12.8 | 5.7' | 09 12.3 | -24 10 | 322 | SO         |    |      | H I 59   |
| NGC 2786        | UGC 4861    | Galaxy  | CNC | 13.7 | -    | 0.9' | 09 13.6 | +12 26 | 187 | Sa Ring    |    |      |  |
| <b>NGC 2787</b> | UGC 4914    | Galaxy  | UMA | 10.8 | 12.6 | 3.1' | 09 19.3 | +69 12 | 23  | SBO-a      |    |      | H I 216;B nucl in B inner lens;strong narrow bar w blobs |
| NGC 2789        | UGC 4875    | Galaxy  | CNC | 12.2 | 13.5 | 2'   | 09 15.0 | +29 44 | 103 | SBO-a      |    |      | brightest in group                                       |
| NGC 2792        | PK 265+4.1  | Pln Neb | VEL | 13.5 | 8.5  | 13"  | 09 12.4 | -42 26 | 398 | 4          |    | 16.9 |  |
| NGC 2793        | UGC 4894    | Galaxy  | LYN | 13.1 | 13.3 | 1.2' | 09 16.8 | +34 26 | 103 | SBp        |    |      | bright knotty bar;blue patchy spiral arc on n edge       |
| NGC 2794        | UGC 4885    | Galaxy  | CNC | 13.1 | 13.4 | 1.2' | 09 16.0 | +17 35 | 142 | SB/P       |    |      | amorphous v diff outside;bridge to comp?;brightest       |
| NGC 2795        | UGC 4887    | Galaxy  | CNC | 12.8 | 13.2 | 1.4' | 09 16.1 | +17 38 | 142 | Elliptical |    |      | a large nr of small galaxies in vicinity; NGC 2749 group |
| NGC 2798        | UGC 4905    | Galaxy  | LYN | 12.3 | 13.2 | 2.8' | 09 17.4 | +42 00 | 71  | SBap       |    |      | bright bar;2 smooth faint arms;knots;Nearly edge-on      |
| NGC 2799        | UGC 4909    | Galaxy  | LYN | 13.8 | 13.6 | 1.9' | 09 17.5 | +42 00 | 71  | SBp        |    |      | bright center and bar;2 main smooth arms edgewise        |
| NGC 2800        | UGC 4920    | Galaxy  | UMA | 12.8 | 13.1 | 1.4' | 09 18.6 | +52 31 | 44  | Elliptical |    |      | H III 832  |
| NGC 2801        | UGC 4899    | Galaxy  | CNC | 14   | 14   | 1.1' | 09 16.7 | +19 56 | 142 | Sc         |    |      | several companions;NGC 2809 group                        |
| NGC 2804        | UGC 4901    | Galaxy  | CNC | 12.9 | 14.4 | 2.2' | 09 16.8 | +20 12 | 142 | SO         |    |      | NGC 2809 group   |
| NGC 2805        | UGC 4936    | Galaxy  | UMA | 11   | 14.6 | 6.3' | 09 20.3 | +64 06 | 23  | SBcd R     |    |      | slightly asym;many irreg res vF knotty arms;multi sys    |
| NGC 2809        | UGC 4910    | Galaxy  | CNC | 13   | 13.3 | 1.3' | 09 17.1 | +20 04 | 142 | SO         |    |      | brightest in group;6 galaxies inside 3.7";double system  |
| NGC 2810A       | NGC 2810    | Galaxy  | UMA | 13.5 | -    | 1.7' | 09 22.1 | +71 51 | 23  | E0         |    |      | H III 749  |
| <b>NGC 2811</b> | MCG - 3-24- | Galaxy  | HYA | 11.3 | 12   | 2.2' | 09 16.2 | -16 19 | 277 | SBa        |    |      | H II 502   |
| NGC 2813        | UGC 4916    | Galaxy  | CNC | 13.5 | 13.8 | 1.3' | 09 17.8 | +19 54 | 142 | SO         |    |      | sf of 2;NGC 2809 group                                   |
| NGC 2814        | UGC 4952    | Galaxy  | UMA | 13.7 | 12.5 | 1.1' | 09 21.2 | +64 15 | 23  | Sb         |    |      | H II 868;NGC 2805 group                                  |
| NGC 2815        | ESO 497-32  | Galaxy  | HYA | 11.9 | 13.2 | 3.5' | 09 16.3 | -23 38 | 322 | SBb        |    |      | H III 242  |
| <b>NGC 2816</b> | NGC 2742    | Galaxy  | UMA | 12.1 | -    | 3'   | 09 07.6 | +60 29 | 44  | Sc         |    |      | see 2742   |
| NGC 2817        | MCG - 1-24- | Galaxy  | HYA | 13   | -    | 2'   | 09 17.2 | -04 45 | 232 | SBc        |    |      |  |
| NGC 2818        | PK 261+8.1  | Opn CL  | PYX | 8.2  | -    | 0.6' | 09 16.0 | -36 38 | 364 | II 2 m n   | 40 | 11.3 | 30 F* mags 12...   |
| NGC 2818A       | PK 261+8.1  | Pln Neb | PYX | 11.9 | 11.1 | 36"  | 09 16.0 | -36 36 | 364 | 3b         |    | 16.1 | double neb shaped like barbell on W side of cluster      |
| NGC 2819        | UGC 4924    | Galaxy  | CNC | 12.8 | 13.4 | 1.4' | 09 18.2 | +16 12 | 187 | Elliptical |    |      |  |
| NGC 2820        | UGC 4961    | Galaxy  | UMA | 12.8 | 13.4 | 4.1' | 09 21.8 | +64 15 | 23  | SBc/P      |    |      | v flat cent bulge w dk lanes;knotty out arms;w 2820      |
| NGC 2821        | ESO 497-34  | Galaxy  | PYX | 13   | 12.8 | 2'   | 09 16.8 | -26 49 | 322 | Sbc        |    |      |  |
| NGC 2824        | UGC 4933    | Galaxy  | CNC | 13.3 | 12.6 | 0.9' | 09 19.0 | +26 16 | 142 | SO         |    |      |  |
| NGC 2826        | UGC 4939    | Galaxy  | LYN | 13.6 | 12.6 | 1.6' | 09 19.4 | +33 37 | 103 | Sa         |    |      |  |
| NGC 2832        | UGC 4942    | Galaxy  | LYN | 11.9 | 13.5 | 3'   | 09 19.8 | +33 45 | 103 | E4         |    |      | comp east is compact;2831 superimposed;lens shape        |
| <b>NGC 2835</b> | ESO 564-35  | Galaxy  | HYA | 10.5 | 14   | 6.3' | 09 17.9 | -22 21 | 322 | SBc        |    |      | Fine multi arm spiral                                    |
| NGC 2840        | UGC 4960    | Galaxy  | LYN | 13.8 | 13.6 | 1'   | 09 20.9 | +35 22 | 103 | SBbc       |    |      | H III 827  |
| <b>NGC 2841</b> | UGC 4966    | Galaxy  | UMA | 9.2  | 12.7 | 7.7' | 09 22.0 | +50 59 | 44  | Sb         |    |      | H I 205;fine spiral w symmetrical whorls                 |
| NGC 2844        | UGC 4971    | Galaxy  | LYN | 12.9 | 13   | 1.7' | 09 21.8 | +40 09 | 71  | Sa         |    |      | H III 628;brightest in NGC2852 group;bright nucl         |
| NGC 2845        | ESO 314-10  | Galaxy  | VEL | 11.7 | 12.3 | 2'   | 09 18.6 | -38 01 | 364 | Sa         |    |      |  |
| NGC 2847        |             | Neb+Gx  | HYA | -    | -    | 0.4' | 09 20.1 | -16 31 | 278 | E+*        |    |      | An HII region within the GALXY NGC 2848 on the N         |
| NGC 2848        | MCG - 3-24- | Galaxy  | HYA | 11.8 | 13.3 | 2.5' | 09 20.2 | -16 32 | 278 | SBc        |    |      | H III 488;NGC 2851 is 5' ENE                             |
| NGC 2849        | Cr 207      | Opn CL  | VEL | 12.5 | -    | 3'   | 09 19.4 | -40 31 | 398 | I 1 m      | 40 |      |  |
| NGC 2852        | UGC 4986    | Galaxy  | LYN | 13.2 | 12.6 | 1.4' | 09 23.2 | +40 10 | 71  | SBa        |    |      | H III 629;compact;NGC 2844 group                         |
| NGC 2853        | UGC 4987    | Galaxy  | LYN | 13.3 | 13.6 | 1.8' | 09 23.3 | +40 12 | 71  | SBO-a      |    |      | H III 630;NGC 2844 group                                 |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| NGC 2854        | UGC 4995    | Galaxy  | UMA | 13   | 12.9 | 1.6'  | 09 24.0 | +49 12 | 71  | SBb        |    |      | H III 714;Arp class=double galaxy;brightest of 3         |
| NGC 2855        | MCG - 2-24- | Galaxy  | HYA | 11.6 | 13.3 | 2.4'  | 09 21.5 | -11 55 | 278 | Sa         |    |      | H I 132  |
| NGC 2856        | UGC 4997    | Galaxy  | UMA | 13.1 | 12.3 | 1.1'  | 09 24.3 | +49 15 | 71  | Sbc        |    |      | narrow tail leads away from nucleus;2854 group           |
| NGC 2857        | UGC 5000    | Galaxy  | UMA | 12.3 | 13.7 | 2.2'  | 09 24.6 | +49 21 | 71  | Sc         |    |      | Arp's spiral w low surf brightness;2 very long thin arms |
| NGC 2858        | UGC 4989    | Galaxy  | HYA | 12.6 | 12.9 | 1.7'  | 09 22.9 | +03 09 | 233 | Sa         |    |      |  |
| <b>NGC 2859</b> | UGC 5001    | Galaxy  | LMI | 10.9 | 13.8 | 4'    | 09 24.3 | +34 31 | 103 | SBO-a R    |    |      | H I 137;bright nucleus in diff. bar w diff. blobs        |
| NGC 2860        | UGC 5007    | Galaxy  | LYN | 13.7 | 13.4 | 1.5'  | 09 24.9 | +41 04 | 71  | SBa        |    |      |  |
| NGC 2861        | UGC 4999    | Galaxy  | HYA | 12.7 | 13.4 | 1.5'  | 09 23.6 | +02 08 | 233 | SBbc       |    |      | hnp of 2;interaction?                                    |
| NGC 2862        | UGC 5010    | Galaxy  | LEO | 12.8 | 13   | 2.5'  | 09 24.9 | +26 46 | 143 | SBbc       |    |      |  |
| NGC 2863        | NGC 2869    | Galaxy  | HYA | 13   | -    | 1'    | 09 23.6 | -10 26 | 278 | Sm         |    |      | H III 520  |
| NGC 2865        | ESO 498- 1  | Galaxy  | HYA | 11.7 | 13.3 | 2.5'  | 09 23.5 | -23 10 | 323 | E4         |    |      |  |
| NGC 2866        | OCL 774     | Opn CL  | VEL | 10   | -    | 1.5'  | 09 22.1 | -51 06 | 425 |            |    |      |  |
| <b>NGC 2867</b> | PK 278-5.1  | Pln Neb | CAR | 9.7  | 6.5  | 12"   | 09 21.4 | -58 19 | 425 | 4          |    | 16   |  |
| NGC 2869        | NGC 2863    | Galaxy  | HYA | 13.5 | -    | 1'    | 09 23.6 | -10 26 | 278 | Sm         |    |      |  |
| NGC 2870        | UGC 5034    | Galaxy  | UMA | 13   | 13.4 | 2.5'  | 09 27.9 | +57 23 | 44  | SBbc       |    |      | H III 846  |
| NGC 2872        | UGC 5018    | Galaxy  | LEO | 11.9 | 13.3 | 1.8'  | 09 25.7 | +11 26 | 188 | E2         |    |      | H II 57=II 546   |
| NGC 2874        | UGC 5021    | Galaxy  | LEO | 12.5 | 13   | 2.2'  | 09 25.8 | +11 26 | 188 | SBbc       |    |      | disturbed;possibly not interacting;largest of triplet    |
| NGC 2875        |             | Neb+Gx  | LEO | -    | -    | 0.5'  | 09 25.8 | +11 26 | 188 | E+*        |    |      | An HII region within the GALXY 2874 on the NE side       |
| NGC 2880        | UGC 5051    | Galaxy  | UMA | 11.5 | 12.4 | 2.4'  | 09 29.6 | +62 29 | 23  | E3         |    |      | very compact;bright nucleus in bar near minor axis       |
| NGC 2881        | MCG - 2-24- | Galaxy  | HYA | 14   | -    | 1.1'  | 09 25.9 | -12 00 | 278 | S          |    |      |  |
| NGC 2882        | UGC 5030    | Galaxy  | LEO | 12.6 | 12.6 | 1.5'  | 09 26.6 | +07 57 | 188 | S pec      |    |      |  |
| NGC 2884        | MCG - 2-24- | Galaxy  | HYA | 13   | -    | 2.1'  | 09 26.4 | -11 33 | 278 | Sa         |    |      |  |
| NGC 2888        | ESO 434- 2  | Galaxy  | PYX | 12.6 | 13   | 1.5'  | 09 26.3 | -28 02 | 364 | E2         |    |      |  |
| NGC 2889        | MCG - 2-24- | Galaxy  | HYA | 11.7 | 13.1 | 2.3'  | 09 27.2 | -11 39 | 278 | SBc Ring   |    |      | H II 555   |
| NGC 2891        | ESO 498- 8  | Galaxy  | PYX | 12.6 | 13.3 | 1.5'  | 09 26.9 | -24 47 | 323 | E-SO       |    |      |  |
| NGC 2892        | UGC 5073    | Galaxy  | UMA | 13.1 | 13.7 | 1.4'  | 09 32.9 | +67 37 | 23  | SO p       |    |      | brightest in group;compact? (*) superimposed at 0.3      |
| NGC 2893        | UGC 5060    | Galaxy  | LEO | 13.2 | 13.2 | 1.1'  | 09 30.3 | +29 32 | 103 | SBO-a R    |    |      | H III 297;brightest in group                             |
| NGC 2894        | UGC 5056    | Galaxy  | LEO | 12.4 | 12.9 | 1.9'  | 09 29.5 | +07 43 | 188 | Sa         |    |      | H III 8;diffuse  |
| NGC 2898        | MCG 0-24-   | Galaxy  | HYA | 13.4 | 13.1 | 1'    | 09 29.8 | +02 04 | 233 | Sa         |    |      |  |
| NGC 2899        | PK 277-3.1  | Pln Neb | VEL | 12.2 | 13.1 | 2'    | 09 27.1 | -56 06 | 425 |            |    | 15.9 |  |
| NGC 2900        | UGC 5065    | Galaxy  | HYA | 13   | 13.8 | 1.7'  | 09 30.3 | +04 09 | 233 | SBc        |    |      | filaments from the bar;appears too red to be SBc         |
| NGC 2902        | MCG - 2-24- | Galaxy  | HYA | 12.2 | 12.6 | 1.6'  | 09 30.9 | -14 44 | 278 | SO         |    |      | H III 276;IC 543   |
| <b>NGC 2903</b> | UGC 5079    | Galaxy  | LEO | 9    | 13.6 | 12'   | 09 32.2 | +21 30 | 143 | SBbc       |    |      | H I 56;short B nucleus bar;fine multi arm spiral         |
| NGC 2904        | ESO 434- 6  | Galaxy  | ANT | 12.4 | 12.6 | 1.5'  | 09 30.3 | -30 23 | 364 | E-SO Ba    |    |      |  |
| NGC 2905        |             | Neb+Gx  | LEO | -    | -    | 13.3" | 09 32.2 | +21 31 | 143 | E+*        |    |      | H I 57; NE arm of NGC 2903                               |
| NGC 2906        | UGC 5081    | Galaxy  | LEO | 12.7 | 12.8 | 1.4'  | 09 32.1 | +08 27 | 188 | Sc         |    |      | H II 495   |
| NGC 2907        | MCG - 3-25- | Galaxy  | HYA | 11.6 | 12.3 | 2'    | 09 31.6 | -16 44 | 278 | Sab        |    |      | H II 506;Equatorial dust band;Nearly edge-on             |
| NGC 2908        | UGC 5152    | Galaxy  | DRA | 14   | -    | 0.8'  | 09 43.5 | +79 42 | 8   | S pec      |    |      | H III 977  |
| NGC 2909        |             | 2 Stars | UMA | 14   | -    |       | 09 37.0 | +65 56 | 23  |            |    |      |  |
| NGC 2910        | OCL 781     | Opn CL  | VEL | 7.2  | -    | 5'    | 09 30.5 | -52 55 | 426 | I 2 p      | 30 | 9.3  |  |
| NGC 2911        | UGC 5092    | Galaxy  | LEO | 11.5 | 14.2 | 4'    | 09 33.8 | +10 09 | 188 | SO         |    |      | brightest in group;diffuse nebula w dk lane on one side  |
| NGC 2913        | UGC 5095    | Galaxy  | LEO | 13.1 | 12.7 | 1.1'  | 09 34.0 | +09 29 | 188 | Sc         |    |      |  |
| NGC 2914        | UGC 5096    | Galaxy  | LEO | 13.1 | 12.6 | 0.9'  | 09 34.0 | +10 07 | 188 | SBab       |    |      | NGC 2911 group;2 main reg arms;poor resolution           |
| NGC 2916        | UGC 5103    | Galaxy  | LEO | 12.1 | 13.4 | 2.5'  | 09 35.0 | +21 42 | 143 | Sb         |    |      | asym;radial filaments n;term on patchy arc;spir centr    |
| NGC 2917        | UGC 5098    | Galaxy  | HYA | 13.6 | 12.6 | 1.3'  | 09 34.5 | -02 30 | 233 | Sa         |    |      |  |
| NGC 2918        | UGC 5112    | Galaxy  | LEO | 12.6 | 12.9 | 1.4'  | 09 35.7 | +31 42 | 103 | Elliptical |    |      | H III 298  |
| NGC 2919        | UGC 5102    | Galaxy  | LEO | 12.9 | 12.8 | 1.6'  | 09 34.8 | +10 17 | 188 | SBbc       |    |      | NGC 2911 group;bright nucleus in weak bar                |
| NGC 2920        | ESO 565-15  | Galaxy  | HYA | 13   | 12.1 | 0.9'  | 09 34.2 | -20 52 | 323 | Sa         |    |      |  |
| NGC 2921        | ESO 565-17  | Galaxy  | HYA | 12   | 13   | 2.9'  | 09 34.5 | -20 55 | 323 | SB Ring    |    |      | H III 597  |
| NGC 2924        | MCG - 3-25- | Galaxy  | HYA | 12   | 12.6 | 1.3'  | 09 35.2 | -16 24 | 278 | E0         |    |      |  |
| NGC 2925        | OCL 783     | Opn CL  | VEL | 8.3  | -    | 12'   | 09 33.2 | -53 24 | 426 | III 1 p    | 40 |      |  |
| NGC 2926        | UGC 5125    | Galaxy  | LEO | 13.4 | 12.8 | 0.8'  | 09 37.5 | +32 50 | 103 | SBb        |    |      | peculiar   |
| NGC 2927        | UGC 5122    | Galaxy  | LEO | 12.9 | 13.6 | 1.9'  | 09 37.3 | +23 35 | 143 | SBb        |    |      | small blue cond in spiral arm sp center                  |
| NGC 2929        | UGC 5126    | Galaxy  | LEO | 13.7 | 12.6 | 1.2'  | 09 37.5 | +23 10 | 143 | Sc         |    |      | brightest in group w N2930 (m=14.5) N2931(m=15)          |
| NGC 2935        | ESO 565-23  | Galaxy  | HYA | 11.4 | 13.8 | 3.7'  | 09 36.7 | -21 08 | 323 | SBab       |    |      | H II 556   |
| NGC 2936        | UGC 5130    | Galaxy  | HYA | 13.1 | 13.3 | 1.3'  | 09 37.7 | +02 46 | 233 | Ring       |    |      | multiple system;strongly distorted                       |
| NGC 2937        | UGC 5131    | Galaxy  | HYA | 13.7 | 14.1 | 2'    | 09 37.8 | +02 45 | 233 | Ring       |    |      |  |
| NGC 2938        | UGC 5115    | Galaxy  | DRA | 13.5 | 14   | 1.8'  | 09 38.4 | +76 19 | 8   | SBc        |    |      | H III 963?   |
| NGC 2939        | UGC 5134    | Galaxy  | LEO | 12.4 | 13.1 | 2.5'  | 09 38.1 | +09 31 | 188 | Sbc        |    |      | H III 4;brightest of 3                                   |
| NGC 2940        | MCG 2-25-   | Galaxy  | LEO | 13.5 | 12.9 | 0.9'  | 09 38.1 | +09 37 | 188 | SO         |    |      |  |
| NGC 2942        | UGC 5140    | Galaxy  | LMI | 12.6 | 13.9 | 2.3'  | 09 39.1 | +34 00 | 103 | Sc         |    |      | bright nucl.;2 main branch arms;faint;poor resolution    |
| NGC 2943        | UGC 5136    | Galaxy  | LEO | 12.4 | 13.5 | 2.2'  | 09 38.5 | +17 02 | 143 | Elliptical |    |      | brightest in group;several comps                         |
| NGC 2944        | UGC 5144    | Galaxy  | LEO | 14   | 13   | 1'    | 09 39.3 | +32 19 | 103 | Sc         |    |      | double ;blue w 2 compact knots;contact;disrupted         |
| NGC 2945        | ESO 565-28  | Galaxy  | HYA | 12.2 | 12.8 | 1.6'  | 09 37.7 | -22 02 | 323 | E-SO       |    |      |  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|------|--|
| NGC 2946        | UGC 5143    | Galaxy | LEO | 13.9 | 12.9 | 1.2' | 09 39.0 | +17 02 | 143 | SB/P       |    |      |  |
| NGC 2947        | IC 547      | Galaxy | HYA | 13.2 | -    | 1.5' | 09 36.1 | -12 26 | 278 | Sbc Ring   |    |      |  |
| NGC 2948        | UGC 5141    | Galaxy | LEO | 12.9 | 13   | 1.4' | 09 39.0 | +06 57 | 188 | SBbc       |    |      | H III 519  |
| <b>NGC 2950</b> | UGC 5176    | Galaxy | UMA | 10.9 | 12.5 | 2.7' | 09 42.6 | +58 51 | 45  | SBO Rin    |    |      | H IV 68  |
| NGC 2954        | UGC 5155    | Galaxy | LEO | 12.4 | 13.1 | 1.7' | 09 40.4 | +14 55 | 188 | Elliptical |    |      |  |
| NGC 2955        | UGC 5166    | Galaxy | LMI | 12.9 | 13.2 | 1.5' | 09 41.3 | +35 53 | 104 | Sb         |    |      | H III 541;many filam. knotty arms in bright part       |
| NGC 2958        | UGC 5160    | Galaxy | LEO | 13.2 | 12.8 | 1'   | 09 40.7 | +11 53 | 188 | SBbc       |    |      |  |
| NGC 2959        | UGC 5202    | Galaxy | UMA | 12.8 | 13.2 | 1.3' | 09 45.1 | +68 36 | 23  | SBb/P      |    |      | P w NGC 2961   |
| NGC 2960        | UGC 5159    | Galaxy | HYA | 12.4 | 13.1 | 1.8' | 09 40.6 | +03 35 | 233 | Sa         |    |      |  |
| NGC 2962        | UGC 5167    | Galaxy | HYA | 11.9 | 13.6 | 2.6' | 09 40.9 | +05 10 | 233 | SBO-a R    |    |      | B diff nucleus in bright lens;slightly brighter at rim |
| NGC 2963        | UGC 5222    | Galaxy | DRA | 13.5 | 13   | 1.2' | 09 47.8 | +72 58 | 8   | SBab       |    |      | H III 315;P w NGC 2957                                 |
| <b>NGC 2964</b> | UGC 5183    | Galaxy | LEO | 11.3 | 12.8 | 3'   | 09 42.9 | +31 51 | 104 | SBbc Rin   |    |      | H I 114;v faint bar;2 mn. knotty arms; Mrk 404 in disc |
| NGC 2965        | UGC 5191    | Galaxy | LMI | 13.4 | 13.4 | 1.2' | 09 43.3 | +36 15 | 104 | SO         |    |      | H III 751;brightest in group                           |
| NGC 2966        | UGC 5181    | Galaxy | SEX | 12.6 | 13.1 | 2.2' | 09 42.2 | +04 40 | 233 | SBbc       |    |      | 2 v broad ill defined arms;3 or 4 stellar obj superimp |
| NGC 2967        | UGC 5180    | Galaxy | SEX | 11.6 | 13.8 | 2.8' | 09 42.1 | +00 20 | 233 | Sc         |    |      | B center part;2 main part. res.; arms w some branches  |
| <b>NGC 2968</b> | UGC 5190    | Galaxy | LEO | 11.7 | 13   | 2.1' | 09 43.2 | +31 56 | 104 | Sa         |    |      | H II 491;diffuse; Mrk 405 east 5.1 min , near 2964     |
| NGC 2969        | MCG - 1-25- | Galaxy | SEX | 13   | -    | 1.4' | 09 41.9 | -08 36 | 278 | Sc         |    |      | H III 527  |
| NGC 2970        | MCG 5-23-   | Galaxy | LEO | 13.6 | 12.4 | 0.4' | 09 43.5 | +31 59 | 104 | E1         |    |      |  |
| NGC 2971        | UGC 5197    | Galaxy | LMI | 14   | 13.7 | 1.1' | 09 43.8 | +36 11 | 104 | SBb        |    |      | NGC 2965 group   |
| NGC 2972        | NGC 2999    | Opn CL | VEL | 9.9  | -    | 4'   | 09 40.2 | -50 19 | 426 | I 1 p      | 25 | 11.4 |  |
| <b>NGC 2974</b> | MCG 0-25-   | Galaxy | SEX | 10.9 | 13   | 3.4' | 09 42.6 | -03 42 | 233 | Sa         |    |      | H I 61;bright nucleus;10m * @ 0.7'                     |
| <b>NGC 2976</b> | UGC 5221    | Galaxy | UMA | 10.2 | 13   | 6.2' | 09 47.2 | +67 55 | 23  | Scp        |    |      | B main body;chaotic inner w many dk lane;F outer disc  |
| NGC 2977        | UGC 5175    | Galaxy | DRA | 12.5 | 12.8 | 1.8' | 09 43.8 | +74 52 | 8   | Sb         |    |      | H I 282;low surface br                                 |
| NGC 2978        | MCG - 1-25- | Galaxy | SEX | 13.5 | -    | 1.1' | 09 43.3 | -09 45 | 278 | Sbc        |    |      |  |
| NGC 2979        | NGC 3050    | Galaxy | SEX | 14   | -    | 1.5' | 09 43.1 | -10 23 | 278 | Sa         |    |      | H III 521  |
| NGC 2980        | MCG - 1-25- | Galaxy | SEX | 13   | 13.2 | 1.6' | 09 43.2 | -09 37 | 278 | SBbc       |    |      | H III 528  |
| NGC 2981        | UGC 5208    | Galaxy | LEO | 13.6 | 13.7 | 1.2' | 09 44.9 | +31 06 | 104 | SBbc Rin   |    |      |  |
| NGC 2982        | OCL 770     | Opn CL | VEL | -    | -    | 12'  | 09 42.0 | -44 02 | 398 |            |    |      |  |
| NGC 2983        | ESO 566- 3  | Galaxy | HYA | 11.8 | 13.1 | 2.5' | 09 43.7 | -20 29 | 323 | SBO-a      |    |      | H III 289  |
| NGC 2984        | IC 556      | Galaxy | LEO | 13.4 | 12.6 | 0.7' | 09 43.7 | +11 04 | 188 | SO         |    |      | H III 34;IC 556  |
| <b>NGC 2985</b> | UGC 5253    | Galaxy | UMA | 10.4 | 13.3 | 4.6' | 09 50.4 | +72 17 | 23  | Sb         |    |      | diff BN;many poor res knotty arms; P w NGC 3027        |
| NGC 2986        | ESO 566- 5  | Galaxy | HYA | 10.8 | 13.1 | 3.5' | 09 44.3 | -21 17 | 323 | E1         |    |      | H II 311   |
| NGC 2987        | UGC 5220    | Galaxy | SEX | 12.9 | 12.9 | 1.5' | 09 45.7 | +04 56 | 233 | Sab        |    |      |  |
| NGC 2989        | ESO 566- 9  | Galaxy | HYA | 13   | 13.4 | 1.7' | 09 45.4 | -18 23 | 323 | Sbc        |    |      |  |
| NGC 2990        | UGC 5229    | Galaxy | SEX | 12.7 | 12.4 | 1.1' | 09 46.3 | +05 43 | 188 | Sc         |    |      | H II 624;bright nucleus;2 main arms;poor resolution    |
| NGC 2991        | UGC 5233    | Galaxy | LEO | 12.6 | 13   | 1.4' | 09 46.8 | +22 01 | 143 | SO         |    |      | Contact P w NGC 2988;sev alm stel objects in vicinity  |
| NGC 2992        | MCG - 2-25- | Galaxy | HYA | 12.2 | 13.5 | 3.7' | 09 45.7 | -14 20 | 278 | Sa         |    |      | H III 277;Long streamer extends 2' N                   |
| NGC 2993        | MCG - 2-25- | Galaxy | HYA | 12.6 | 12.7 | 1.8' | 09 45.8 | -14 22 | 278 | Sa         |    |      | H III 278  |
| NGC 2994        | UGC 5239    | Galaxy | LEO | 13.1 | 13.2 | 1.3' | 09 47.3 | +22 05 | 143 | SO         |    |      | P w NGC 2988;2891                                      |
| NGC 2996        | ESO 566-12  | Galaxy | HYA | 12.5 | 13.2 | 1.5' | 09 46.5 | -21 34 | 323 | Sa         |    |      |  |
| <b>NGC 2997</b> | ESO 434-35  | Galaxy | ANT | 9.4  | 13.7 | 9.2' | 09 45.6 | -31 11 | 365 | SBc        |    |      | H V 50   |
| NGC 2998        | UGC 5250    | Galaxy | UMA | 12.5 | 13.9 | 2.7' | 09 48.7 | +44 05 | 71  | SBc        |    |      | br in NGC 2998-3010 group;many filam knotty arms       |
| NGC 2999        | NGC 2972    | Opn CL | VEL | 9    | -    | 5'   | 09 40.2 | -50 19 | 426 |            |    |      |  |
| NGC 3001        | ESO 434-38  | Galaxy | ANT | 11.9 | 13.7 | 2.9' | 09 46.3 | -30 26 | 365 | SBbc Rin   |    |      |  |
| NGC 3003        | UGC 5251    | Galaxy | LMI | 11.9 | 14   | 5.7' | 09 48.6 | +33 25 | 104 | SBbc       |    |      | H V 26;BM;no def N;dk mark & knots;filam arms          |
| NGC 3009        | UGC 5264    | Galaxy | UMA | 13.5 | 12.7 | 0.8' | 09 50.2 | +44 18 | 71  | Sc         |    |      | NGC 2998 at 20 sp                                      |
| NGC 3011        | UGC 5259    | Galaxy | LEO | 13.3 | 12.8 | 0.9' | 09 49.7 | +32 13 | 104 | SO Ring    |    |      |  |
| NGC 3012        | UGC 5262    | Galaxy | LMI | 13.5 | 13.6 | 1.1' | 09 49.9 | +34 43 | 104 | Elliptical |    |      | compact  |
| NGC 3014        | MCG - 1-25- | Galaxy | SEX | 14   | -    | 1'   | 09 49.1 | -04 45 | 233 | Sbc        |    |      |  |
| NGC 3015        | UGC 5261    | Galaxy | SEX | 13.9 | 12   | 0.5' | 09 49.4 | +01 09 | 233 | SO         |    |      | brightest of 3   |
| NGC 3016        | UGC 5266    | Galaxy | LEO | 12.9 | 12.9 | 1.2' | 09 49.8 | +12 42 | 188 | Sb         |    |      | NGC 3020 group   |
| NGC 3017        | MCG 0-25-   | Galaxy | SEX | 13.1 | 13   | 1'   | 09 49.1 | -02 49 | 233 | Elliptical |    |      |  |
| NGC 3018        | UGC 5265    | Galaxy | SEX | 13.3 | 12.9 | 1.2' | 09 49.7 | +00 37 | 233 | Sb         |    |      | distorted;bridge?                                      |
| NGC 3020        | UGC 5271    | Galaxy | LEO | 11.9 | 13.5 | 3'   | 09 50.1 | +12 49 | 188 | SBc        |    |      | H III 51;brightest in group                            |
| NGC 3021        | UGC 5280    | Galaxy | LMI | 12.1 | 12.3 | 1.5' | 09 51.0 | +33 33 | 104 | Sbc        |    |      | vsvBN;many filam B knotty arms;NGC 3003 at 30 spp      |
| NGC 3022        | MCG - 1-25- | Galaxy | SEX | 14   | -    | 1.6' | 09 49.7 | -05 10 | 233 | SO         |    |      |  |
| NGC 3023        | UGC 5269    | Galaxy | SEX | 13.5 | -    | 3'   | 09 49.9 | +00 37 | 233 | SBc/P      |    |      | distorted;bridge?                                      |
| NGC 3024        | UGC 5275    | Galaxy | LEO | 13.1 | 12.9 | 2'   | 09 50.5 | +12 46 | 188 | Sc         |    |      | H III 52;NGC 3020 group                                |
| NGC 3025        | ESO 566-15  | Galaxy | HYA | 12.9 | 13.4 | 1.5' | 09 49.5 | -21 45 | 323 | SO         |    |      |  |
| NGC 3026        | UGC 5279    | Galaxy | LEO | 13   | 13.7 | 2.7' | 09 50.9 | +28 33 | 104 | Ir         |    |      |  |
| NGC 3027        | UGC 5316    | Galaxy | UMA | 11.8 | 13.9 | 4.2' | 09 55.7 | +72 12 | 23  | SBcd       |    |      | H V 23;P w NGC 2985 @ 2.7' PA296;UGC 5316              |
| NGC 3028        | ESO 566-16  | Galaxy | HYA | 12.7 | 12.8 | 1.3' | 09 49.9 | -19 11 | 323 | Sb         |    |      |  |
| NGC 3029        | MCG - 1-25- | Galaxy | SEX | 14   | 14.2 | 1.5' | 09 48.9 | -08 03 | 278 | Sc         |    |      |  |
| NGC 3032        | UGC 5292    | Galaxy | LEO | 12.5 | 13.8 | 2.4' | 09 52.1 | +29 14 | 104 | SBO Rin    |    |      | svBN in sh stubby bar                                  |

## 7000 DSO List (sorted by name)

| NAME     | OTHER         | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|----------|---------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 3033 | OCL 796       | Opn CL | VEL | 8.8  | -    | 12'   | 09 48.7 | -56 25 | 426 | II 3 p     | 50 | 10.6 |   |
| NGC 3035 | MCG - 1-25-   | Galaxy | SEX | 13.5 | -    | 1.7'  | 09 51.9 | -06 49 | 278 | SBbc Ring  |    |      |   |
| NGC 3037 | ESO 499-10    | Galaxy | HYA | 13.1 | 13.3 | 1.3'  | 09 51.4 | -27 01 | 323 | SBp        |    |      |   |
| NGC 3038 | ESO 374- 2    | Galaxy | ANT | 11.6 | 12.7 | 2.5'  | 09 51.3 | -32 45 | 365 | Sb         |    |      |   |
| NGC 3039 | UGC 5297      | Galaxy | SEX | 13.4 | 13   | 1.2'  | 09 52.5 | +02 09 | 234 | SBbc       |    |      | comp 2 ' ;PA323;0.3'X 0.15'                             |
| NGC 3041 | UGC 5303      | Galaxy | LEO | 11.5 | 13.8 | 3.7'  | 09 53.1 | +16 41 | 189 | SBc        |    |      | H II 98;sBN;sev F knotty arms;poor res                  |
| NGC 3042 | UGC 5307      | Galaxy | SEX | 12.9 | 12.6 | 1.2'  | 09 53.3 | +00 42 | 234 | SO         |    |      | comp 1.4';PA2;0.3'X0.2'                                 |
| NGC 3043 | UGC 5327      | Galaxy | UMA | 12.6 | 12.5 | 1.7'  | 09 56.2 | +59 18 | 45  | Sb         |    |      | H II 835  |
| NGC 3044 | UGC 5311      | Galaxy | SEX | 11.9 | 13.1 | 4.7'  | 09 53.7 | +01 35 | 234 | SBc        |    |      | H III 254;Nearly edge-on                                |
| NGC 3045 | ESO 566-22    | Galaxy | HYA | 14   | -    | 1.4'  | 09 53.3 | -18 39 | 324 | Sb         |    |      |   |
| NGC 3049 | UGC 5325      | Galaxy | LEO | 12.1 | 13.2 | 2.2'  | 09 54.8 | +09 16 | 189 | SBab Ring  |    |      |   |
| NGC 3050 | NGC 2979      | Galaxy | SEX | 13.6 | -    | 1.5'  | 09 43.1 | -10 23 | 278 | Sa         |    |      |   |
| NGC 3051 | ESO 499-16    | Galaxy | ANT | 11.8 | 13.2 | 2.1'  | 09 54.0 | -27 17 | 324 | E-SO Bar   |    |      |   |
| NGC 3052 | ESO 566-26    | Galaxy | HYA | 12.2 | 13.1 | 2.1'  | 09 54.5 | -18 38 | 324 | SBc Ring   |    |      | H III 272   |
| NGC 3053 | UGC 5329      | Galaxy | LEO | 12.7 | 13.1 | 1.8'  | 09 55.6 | +16 26 | 189 | SBa        |    |      | H III 600;UGC 5332 at 3.8';PA108;mag17;1.2'X0.3'        |
| NGC 3054 | ESO 499-18    | Galaxy | HYA | 11.8 | 14   | 3.8'  | 09 54.5 | -25 42 | 324 | SBb        |    |      |   |
| NGC 3055 | UGC 5328      | Galaxy | SEX | 12.1 | 13   | 2.1'  | 09 55.3 | +04 16 | 234 | SBc        |    |      | vsvBN in sh narrow bar;2 main knotty arms w m branch    |
| NGC 3056 | ESO 435- 7    | Galaxy | ANT | 11.7 | 12.3 | 2.1'  | 09 54.5 | -28 18 | 365 | SBO-a      |    |      |   |
| NGC 3057 | UGC 5404      | Galaxy | DRA | 13   | 14   | 2.2'  | 10 05.7 | +80 17 | 8   | SBd        |    |      | H III 978   |
| NGC 3060 | UGC 5338      | Galaxy | LEO | 13   | 13.1 | 2.2'  | 09 56.3 | +16 50 | 189 | Sb         |    |      | H III 601;P w UGC 5343 at 6.4';PA101;mag 15.5;1.2'X0.5' |
| NGC 3061 | UGC 5319      | Galaxy | DRA | 12.8 | 13.6 | 1.7'  | 09 56.2 | +75 52 | 8   | SBc        |    |      | H II 903?   |
| NGC 3065 | UGC 5375      | Galaxy | UMA | 12.5 | 13.5 | 1.8'  | 10 01.9 | +72 10 | 23  | SO         |    |      | P w 3066 2.9' SSE;svBN w inner B center;huge halo       |
| NGC 3066 | UGC 5379      | Galaxy | UMA | 12.9 | 12.9 | 1.1'  | 10 02.2 | +72 08 | 23  | SBb/P      |    |      | P w NGC 3065;disturbed;asym main body 0.8'X0.6'         |
| NGC 3067 | UGC 5351      | Galaxy | LEO | 12.1 | 12.8 | 2.4'  | 09 58.4 | +32 22 | 104 | SBab       |    |      | H II 492;B complx bar or lens w B knots & dk lanes      |
| NGC 3070 | UGC 5350      | Galaxy | LEO | 12.3 | 13.1 | 1.5'  | 09 58.1 | +10 22 | 189 | Elliptical |    |      | H II 59;comp 4.2';PA88;0.6'X0.3';IC 580 at 5.1';PA330   |
| NGC 3072 | ESO 566-33    | Galaxy | HYA | 12.7 | 12.7 | 1.9'  | 09 57.4 | -19 21 | 324 | Sa         |    |      | H III 273   |
| NGC 3073 | UGC 5374      | Galaxy | UMA | 13.4 | 13.7 | 1.2'  | 10 00.9 | +55 37 | 45  | SBO        |    |      | H III 853;NGC 3079 group                                |
| NGC 3074 | UGC 5366      | Galaxy | LMI | 12.7 | 14.2 | 2.3'  | 09 59.7 | +35 24 | 104 | Sc         |    |      | H III 542;SN 1965n;comp 4.7';PA122;0.5'X0.2'            |
| NGC 3075 | UGC 5360      | Galaxy | LEO | 13.6 | 13.4 | 1.2'  | 09 58.9 | +14 25 | 189 | Sc         |    |      | comp 3.5';PA242;0.3'x0.1';v dif                         |
| NGC 3076 | ESO 566-34    | Galaxy | HYA | 13.1 | 12.8 | 1'    | 09 57.6 | -18 11 | 324 | Sab        |    |      |   |
| NGC 3077 | UGC 5398      | Galaxy | UMA | 9.9  | 13.1 | 5.2'  | 10 03.3 | +68 44 | 23  | Sd         |    |      | m81 group;dust streamers tending to radial direction    |
| NGC 3078 | ESO 499-27    | Galaxy | HYA | 11.1 | 12.9 | 2.7'  | 09 58.4 | -26 56 | 324 | E3         |    |      | H II 268  |
| NGC 3079 | UGC 5387      | Galaxy | UMA | 10.9 | 13.4 | 8.1'  | 10 02.0 | +55 41 | 45  | SBc        |    |      | H V 47;brightest of 3;comp 6.5 nf;0.9'X0.4';mag 14.6    |
| NGC 3080 | UGC 5372      | Galaxy | LEO | 13.4 | 12.9 | 0.9'  | 09 59.9 | +13 03 | 189 | Sa         |    |      | H III 934;P w IC 585 mag 14.8;1 'X1 '                   |
| NGC 3081 | IC 2529;H III | Galaxy | HYA | 12   | 13.1 | 2.2'  | 09 59.5 | -22 50 | 324 | SBO-a Ring |    |      |   |
| NGC 3082 | ESO 435-18    | Galaxy | ANT | 12.5 | 12.5 | 1.8'  | 09 58.9 | -30 21 | 365 | E-SO       |    |      |   |
| NGC 3083 | MCG 0-26-     | Galaxy | SEX | 13.7 | 12.4 | 1.1'  | 09 59.8 | -02 53 | 234 | Sa         |    |      |   |
| NGC 3084 | IC 2528       | Galaxy | ANT | 12.3 | 12.9 | 1.7'  | 09 59.1 | -27 08 | 324 | SBab Ring  |    |      |   |
| NGC 3085 | ESO 566-38    | Galaxy | HYA | 13   | 11.9 | 1.2'  | 09 59.5 | -19 30 | 324 | SO         |    |      |   |
| NGC 3086 | MCG 0-26-     | Galaxy | SEX | 13.9 | 12.8 | 1.2'  | 10 00.2 | -02 59 | 234 | Sb         |    |      |   |
| NGC 3087 | ESO 374-15    | Galaxy | ANT | 11.6 | 13.3 | 2.5'  | 09 59.1 | -34 14 | 365 | E0         |    |      |   |
| NGC 3089 | ESO 435-24    | Galaxy | ANT | 12.4 | 12.9 | 1.8'  | 09 59.6 | -28 20 | 365 | SBb Ring   |    |      |   |
| NGC 3090 | MCG 0-26-     | Galaxy | SEX | 12.6 | 13.5 | 1.7'  | 10 00.5 | -02 58 | 234 | Elliptical |    |      |   |
| NGC 3091 | ESO 566-41    | Galaxy | HYA | 11.1 | 13   | 3'    | 10 00.2 | -19 38 | 324 | E2         |    |      | H II 293;Brightest memb of small group                  |
| NGC 3092 | MCG 0-26-     | Galaxy | SEX | 13.3 | 12.9 | 1.3'  | 10 00.8 | -03 01 | 234 | Sa         |    |      |   |
| NGC 3094 | UGC 5390      | Galaxy | LEO | 12.3 | 13.3 | 2'    | 10 01.4 | +15 46 | 189 | SBa        |    |      |   |
| NGC 3095 | ESO 435-26    | Galaxy | ANT | 11.7 | 13.7 | 3.6'  | 10 00.1 | -31 33 | 365 | SBc        |    |      |   |
| NGC 3096 | ESO 566-42    | Galaxy | HYA | 13.4 | 13   | 1'    | 10 00.6 | -19 40 | 324 | SBO        |    |      |   |
| NGC 3098 | UGC 5397      | Galaxy | LEO | 12   | 12.2 | 2.2'  | 10 02.3 | +24 43 | 144 | Sa         |    |      | sBN;B lens  |
| NGC 3100 | NGC 3103      | Galaxy | ANT | 11.1 | 12.8 | 3.2'  | 10 00.7 | -31 40 | 365 | SBO        |    |      |   |
| NGC 3102 | UGC 5418      | Galaxy | UMA | 13.3 | 12.6 | 0.9'  | 10 04.5 | +60 06 | 45  | E-SO       |    |      | H III 916   |
| NGC 3103 | NGC 3100      | Galaxy | ANT | 12.1 | -    | 3.2'  | 10 00.7 | -31 40 | 365 | SBO        |    |      |   |
| NGC 3104 | UGC 5414      | Galaxy | LMI | 13.1 | 15.1 | 3.3'  | 10 04.0 | +40 45 | 72  | Irr        |    |      | H IV 48;irr   |
| NGC 3105 | OCL 798       | Opn CL | VEL | 9.7  | -    | 2'    | 10 00.7 | -54 47 | 426 | I 3 p      | 20 | 12.4 |   |
| NGC 3106 | UGC 5419      | Galaxy | LMI | 12.4 | 13.5 | 1.8'  | 10 04.1 | +31 11 | 104 | SO Ring    |    |      | H II 320;comp at 5.6' f;0.2'X0.2';compact;mag 15.7      |
| NGC 3107 | UGC 5425      | Galaxy | LEO | 13.4 | 12.4 | 0.7'  | 10 04.4 | +13 37 | 189 | Sbc        |    |      | H II 898;UGC 5425                                       |
| NGC 3108 | ESO 435-32    | Galaxy | ANT | 11.8 | 13.3 | 2.5'  | 10 02.5 | -31 41 | 365 | Sa         |    |      |   |
| NGC 3109 | ESO 499-36    | Galaxy | HYA | 9.9  | 14.4 | 19.7' | 10 03.1 | -26 10 | 324 | Irr        |    |      |   |
| NGC 3110 | NGC 3122      | Galaxy | SEX | 13.5 | -    | 1.6'  | 10 04.0 | -06 29 | 279 | Sb         |    |      |   |
| NGC 3111 | UGC 5441      | Galaxy | UMA | 13   | 12.5 | 0.9'  | 10 06.1 | +47 16 | 72  | E-SO       |    |      | comp 2.1';PA20;0.4'X0.2';dif                            |
| NGC 3113 | ESO 435-35    | Galaxy | ANT | 12.7 | 14.1 | 3.3'  | 10 04.4 | -28 27 | 365 | SBcd       |    |      |   |
| NGC 3115 | MCG - 1-26-   | Galaxy | SEX | 8.9  | 11.9 | 7.3'  | 10 05.2 | -07 43 | 279 | E6         |    |      | Spindle Galaxy H I 163;                                 |
| NGC 3117 | UGC 5445      | Galaxy | SEX | 13.3 | 13   | 0.9'  | 10 06.2 | +02 55 | 234 | Elliptical |    |      |   |
| NGC 3118 | UGC 5452      | Galaxy | LMI | 13.5 | 13.3 | 2.5'  | 10 07.2 | +33 02 | 104 | Sbc        |    |      |   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 3120        | ESO 374-29  | Galaxy  | ANT | 12.8 | 13.5 | 1.8'  | 10 05.4 | -34 13 | 365 | SBbc       |    |      |   |
| NGC 3121        | NGC 3119    | Galaxy  | LEO | 12.6 | 13.5 | 1.7'  | 10 06.9 | +14 22 | 189 | Elliptical |    |      | P w UGC 5436 II companion superimposed                      |
| NGC 3122        | NGC 3110    | Galaxy  | SEX | 13.5 | -    | 1.6'  | 10 04.0 | -06 29 | 279 | Sb         |    |      | H II 305  |
| NGC 3124        | ESO 567-17  | Galaxy  | HYA | 12.1 | 14.2 | 2.9'  | 10 06.7 | -19 13 | 324 | SBbc       |    |      | Fine face-on spiral;D* South-607 4' to south                |
| NGC 3125        | ESO 435-41  | Galaxy  | ANT | 13   | 12.8 | 1.1'  | 10 06.6 | -29 56 | 365 | E5         |    |      |   |
| NGC 3126        | UGC 5466    | Galaxy  | LMI | 12.8 | 13.1 | 2.8'  | 10 08.3 | +31 52 | 104 | Sb         |    |      |   |
| NGC 3127        | MCG - 3-26- | Galaxy  | HYA | 14   | -    | 1.2'  | 10 06.4 | -16 08 | 279 | Sb         |    |      |   |
| NGC 3128        | MCG - 3-26- | Galaxy  | HYA | 14   | -    | 1.6'  | 10 06.0 | -16 07 | 279 | Sb         |    |      |   |
| NGC 3130        | UGC 5468    | Galaxy  | LEO | 13.4 | 12.6 | 1'    | 10 08.2 | +09 59 | 189 | Sa         |    |      | nearby GC 13911 at 4.6';mag 4.58                            |
| NGC 3131        | UGC 5471    | Galaxy  | LEO | 13   | 13.4 | 2.4'  | 10 08.6 | +18 14 | 144 | SBb        |    |      | comp 1.5';PA152;0.25'X0.5'                                  |
| <b>NGC 3132</b> | PK 272+12.1 | Pln Neb | VEL | 8.2  | 8.2  | 84"   | 10 07.0 | -40 26 | 399 | 4(2)       |    | 15.8 | <b>Eight-Burst Nebula</b> ; actual central star is 15.8 mag |
| NGC 3135        | UGC 5486    | Galaxy  | UMA | 13.4 | 12.5 | 0.9'  | 10 10.9 | +45 57 | 72  | Sbc        |    |      |   |
| NGC 3137        | ESO 435-47  | Galaxy  | ANT | 11.5 | 14.2 | 6.2'  | 10 09.1 | -29 04 | 365 | SBc        |    |      |   |
| NGC 3140        | MCG - 3-26- | Galaxy  | HYA | 14   | 13   | 0.9'  | 10 09.5 | -16 38 | 279 | Sc         |    |      |   |
| NGC 3142        | MCG - 1-26- | Galaxy  | SEX | 14   | -    | 1'    | 10 10.1 | -08 29 | 279 | SO         |    |      |   |
| NGC 3144        | NGC 3174    | Galaxy  | DRA | 13.4 | 13.1 | 1.2'  | 10 15.5 | +74 13 | 8   | SBap       |    |      | H III 964   |
| NGC 3145        | MCG - 2-26- | Galaxy  | HYA | 11.7 | 13.3 | 3'    | 10 10.2 | -12 26 | 279 | SBbc       |    |      | H III 518   |
| NGC 3146        | ESO 567-23  | Galaxy  | HYA | 13.1 | 12.8 | 1'    | 10 11.2 | -20 52 | 324 | SBb        |    |      |   |
| <b>NGC 3147</b> | UGC 5532    | Galaxy  | DRA | 10.6 | 13.3 | 4.3'  | 10 16.9 | +73 24 | 8   | Sbc        |    |      | H I 79;vBN;many filam. narrow arms in lens                  |
| NGC 3151        | MCG 7-21-   | Galaxy  | LMI | 13.8 | 13.5 | 0.8'  | 10 13.5 | +38 37 | 104 | SO         |    |      |   |
| NGC 3153        | UGC 5505    | Galaxy  | LEO | 12.6 | 13.3 | 2.1'  | 10 12.8 | +12 40 | 189 | Sc         |    |      | H III 53;comp at 5.3';PA96;0.9'X0.5';mag 15.5               |
| NGC 3155        | NGC 3194    | Galaxy  | DRA | 12.9 | 13.1 | 1.4'  | 10 17.7 | +74 21 | 8   | S pec      |    |      | H III 965   |
| NGC 3156        | UGC 5503    | Galaxy  | SEX | 12.3 | 13   | 1.9'  | 10 12.7 | +03 08 | 234 | SO         |    |      | H III 255;NGC 3166 group                                    |
| NGC 3157        | IC 2555     | Galaxy  | ANT | 13.2 | 13.3 | 2.5'  | 10 11.7 | -31 39 | 365 | SBc        |    |      |   |
| NGC 3158        | UGC 5511    | Galaxy  | LMI | 11.9 | 13.3 | 2.3'  | 10 13.8 | +38 46 | 104 | E2         |    |      | H II 639;brightest in group;sev galaxies in vic;UGC 5511    |
| NGC 3159        | MCG 7-21-   | Galaxy  | LMI | 13.6 | 15.2 | 1'    | 10 13.9 | +38 39 | 104 | E2p        |    |      |   |
| NGC 3161        | MCG 7-21-   | Galaxy  | LMI | 13.5 | 14.8 | 0.4'  | 10 14.0 | +38 39 | 104 | Elliptical |    |      |   |
| NGC 3162        | NGC 3575    | Galaxy  | LEO | 11.6 | 13.7 | 3.1'  | 10 13.5 | +22 44 | 144 | SBbc Ring  |    |      | H II 43;svBN: 0.5'X0.3';2 main knotty arms                  |
| NGC 3163        | UGC 5517    | Galaxy  | LMI | 13.3 | 14   | 1'    | 10 14.1 | +38 39 | 104 | SO         |    |      | H II 640;NGC 3158 group;UGC 5517                            |
| NGC 3164        | UGC 5527    | Galaxy  | UMA | 13.6 | 12.8 | 0.9'  | 10 15.2 | +56 40 | 45  | S pec      |    |      | comp at 4.3';PA176;0.6'X0.3'                                |
| <b>NGC 3165</b> | UGC 5512    | Galaxy  | SEX | 13.9 | 14   | 1.3'  | 10 13.5 | +03 22 | 234 | Sdm        |    |      | Irr;NGC 3166 group;NGC 3166 at 4.6' PA50                    |
| <b>NGC 3166</b> | UGC 5516    | Galaxy  | SEX | 10.4 | 12.9 | 4.8'  | 10 13.8 | +03 26 | 234 | SBO-a      |    |      | H I 3;brightest in group                                    |
| NGC 3168        | UGC 5536    | Galaxy  | UMA | 13.4 | 13.3 | 1'    | 10 16.4 | +60 14 | 45  | Elliptical |    |      | compact;brightest in triple group                           |
| <b>NGC 3169</b> | UGC 5525    | Galaxy  | SEX | 10.2 | 12.8 | 4.2'  | 10 14.2 | +03 28 | 234 | Sa         |    |      | H I 4;eF corona vis to approx 8X6;P w NGC 3166              |
| NGC 3171        | ESO 567-31  | Galaxy  | HYA | 12.8 | 13.3 | 1.6'  | 10 15.6 | -20 39 | 324 | E-SO       |    |      |   |
| NGC 3173        | ESO 500-16  | Galaxy  | ANT | 12.8 | 14.1 | 2.1'  | 10 14.6 | -27 42 | 324 | Sc         |    |      |   |
| NGC 3175        | ESO 436-3   | Galaxy  | ANT | 11.2 | 13.2 | 5.1'  | 10 14.7 | -28 52 | 365 | SBab       |    |      |   |
| NGC 3177        | UGC 5544    | Galaxy  | LEO | 12.4 | 12.8 | 1.5'  | 10 16.6 | +21 07 | 144 | Sbc        |    |      | H III 25;NGC 3189-90 group                                  |
| NGC 3178        | MCG - 3-26- | Galaxy  | HYA | 13   | -    | 1.4'  | 10 16.2 | -15 48 | 279 | Sc         |    |      |   |
| NGC 3179        | UGC 5555    | Galaxy  | UMA | 13.1 | 13   | 1.8'  | 10 18.0 | +41 07 | 72  | SO         |    |      |   |
| <b>NGC 3180</b> |             | Neb+Gx  | UMA | -    | -    |       | 10 18.2 | +41 27 | 72  | E+*        |    |      | An HII region within the GALXY NGC 3184 on the NW side      |
| <b>NGC 3181</b> |             | Neb+Gx  | UMA | -    | -    |       | 10 18.2 | +41 25 | 72  | E+*        |    |      | An HII region within the GALXY NGC 3184 on the W side       |
| NGC 3182        | UGC 5568    | Galaxy  | UMA | 12.1 | 13.1 | 2.1'  | 10 19.6 | +58 12 | 45  | Sa         |    |      | H I 265   |
| NGC 3183        | NGC 3218    | Galaxy  | DRA | 11.9 | 13   | 2.3'  | 10 21.8 | +74 11 | 8   | SBbc       |    |      | H I 283   |
| <b>NGC 3184</b> | UGC 5557    | Galaxy  | UMA | 9.8  | 13.9 | 7.6'  | 10 18.3 | +41 25 | 72  | SBc        |    |      | svBN;smooth lens w spiral pattern of dark markings          |
| NGC 3185        | UGC 5554    | Galaxy  | LEO | 12.2 | 13.4 | 2.1'  | 10 17.6 | +21 41 | 144 | SBbc       |    |      | NGC 3189-90 group   |
| <b>NGC 3187</b> | UGC 5556    | Galaxy  | LEO | 13.4 | 14.7 | 2.9'  | 10 17.8 | +21 52 | 144 | SBc/P      |    |      | NGC 3189-90 group;distorted                                 |
| NGC 3188        | UGC 5569    | Galaxy  | UMA | 13.7 | 13.3 | 0.9'  | 10 19.7 | +57 25 | 45  | SBab       |    |      | H III 910;nff of 2;comp 0.7';PA246;0.45'X0.3'               |
| <b>NGC 3189</b> | NGC 3190    | Neb+Gx  | LEO | -    | -    |       | 10 18.1 | +21 50 | 144 | E+*        |    |      | HII region within the 3190 on the W edge of the Nucleus     |
| <b>NGC 3190</b> | UGC 5559    | Galaxy  | LEO | 11.1 | 13.1 | 4'    | 10 18.1 | +21 50 | 144 | Sa         |    |      | H II 44;bright in grp;disturbed edge-on spiral;P w 3187     |
| NGC 3191        | NGC 3192    | Galaxy  | UMA | 13.3 | 12.4 | 0.8'  | 10 19.1 | +46 27 | 72  | SBbc/P     |    |      | massive;v tightly wound arms;comp at 1.3';PA268             |
| <b>NGC 3193</b> | UGC 5562    | Galaxy  | LEO | 10.9 | 13.1 | 2.9'  | 10 18.4 | +21 54 | 144 | E0         |    |      | H II 45;NGC 3189-90 group;vB center in smooth nebula        |
| NGC 3194        | NGC 3155    | Galaxy  | DRA | 13.8 | -    | 1.4'  | 10 17.7 | +74 21 | 8   | S pec      |    |      |   |
| NGC 3197        | UGC 5500    | Galaxy  | DRA | 13.5 | 13.6 | 1.3'  | 10 14.5 | +77 49 | 8   | Sbc        |    |      | H III 966   |
| <b>NGC 3198</b> | UGC 5572    | Galaxy  | UMA | 10.3 | 13.8 | 8.1'  | 10 19.9 | +45 33 | 72  | SBc Ring   |    |      | H I 199;svBN in bar partly obscured on one side             |
| NGC 3199        | ESO 127-EN  | Brn Neb | CAR | -    | -    | 22'   | 10 17.4 | -57 55 | 426 | E          |    |      | partial ring  |
| NGC 3200        | ESO 567-45  | Galaxy  | HYA | 12   | 13.7 | 4.2'  | 10 18.6 | -17 59 | 324 | SBbc       |    |      | Nearly edge-on  |
| <b>NGC 3201</b> | Dunlop 445  | Glob CL | VEL | 6.8  | -    | 18.2' | 10 17.6 | -46 25 | 399 | X          |    |      | * mags 13...; loose structured globular                     |
| NGC 3202        | UGC 5581    | Galaxy  | UMA | 13.2 | 13.1 | 1.2'  | 10 20.5 | +43 01 | 72  | SBa        |    |      | tri grp w NGC3205@ 4.4';PA132;NGC3207;PA112                 |
| NGC 3203        | ESO 500-24  | Galaxy  | HYA | 12.1 | 12.6 | 2.8'  | 10 19.6 | -26 42 | 324 | Sa         |    |      | Lens shaped   |
| NGC 3204        | UGC 5580    | Galaxy  | LEO | 13.5 | 13.6 | 1.3'  | 10 20.2 | +27 49 | 144 | SBb        |    |      | comps @ 2.8';PA122;0.3'X0.2';4.2';PA161;0.35'X0.15'         |
| NGC 3205        | UGC 5585    | Galaxy  | UMA | 13.2 | 13.5 | 1.4'  | 10 20.8 | +42 58 | 72  | Pec        |    |      | H II 721;peculiar;NGC 3202 group                            |
| NGC 3206        | UGC 5589    | Galaxy  | UMA | 11.9 | 13.6 | 2.9'  | 10 21.8 | +56 56 | 45  | SBc        |    |      | H I 266;disturbed;UGC 5589                                  |
| NGC 3207        | UGC 5587    | Galaxy  | UMA | 13.2 | 13.1 | 1.3'  | 10 21.0 | +42 59 | 72  | Pec        |    |      | H II 722;peculiar;NGC 3202 group                            |

## 7000 DSO List (sorted by name)

| NAME      | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 3208  | ESO 500-25  | Galaxy  | HYA | 12.7 | 13.7 | 1.8' | 10 19.7 | -25 49 | 324 | SBc        |    |      |   |
| NGC 3209  | UGC 5584    | Galaxy  | LEO | 12.7 | 13.1 | 1.3' | 10 20.6 | +25 30 | 144 | Elliptical |    |      | brightest in group                                      |
| NGC 3212  | UGC 5643    | Galaxy  | DRA | 13.1 | 13.5 | 1.5' | 10 28.3 | +79 49 | 8   | SBb        |    |      | H III 980;P w NGC 3215;distorted                        |
| NGC 3213  | UGC 5590    | Galaxy  | LEO | 13.5 | 13.3 | 1'   | 10 21.3 | +19 39 | 144 | Sbc        |    |      |   |
| NGC 3214  | MCG 10-15   | Galaxy  | UMA | 13.9 | 13.9 | 0.7' | 10 23.1 | +57 02 | 45  | Sa         |    |      |   |
| NGC 3215  | UGC 5659    | Galaxy  | DRA | 13   | 13   | 1.1' | 10 28.7 | +79 49 | 8   | Sbc        |    |      | H III 981;P w NGC 3212;distorted                        |
| NGC 3216  | UGC 5593    | Galaxy  | LEO | 13.4 | 13.6 | 1.3' | 10 21.7 | +23 55 | 144 | Elliptical |    |      | H III 330;brightest in group;UGC 5593                   |
| NGC 3218  | NGC 3183    | Galaxy  | DRA | 12.6 | -    | 2.3' | 10 21.8 | +74 11 | 8   | SBbc       |    |      |   |
| NGC 3220  | IC 604      | Galaxy  | UMA | 13   | 12.9 | 1.3' | 10 23.7 | +57 02 | 45  | Sb         |    |      | H III 911   |
| NGC 3221  | UGC 5601    | Galaxy  | LEO | 13.1 | 13.8 | 3.1' | 10 22.3 | +21 34 | 144 | SBc        |    |      | SN 1961 I   |
| NGC 3222  | UGC 5610    | Galaxy  | LEO | 12.8 | 13   | 1.2' | 10 22.6 | +19 53 | 144 | SBO        |    |      | quadruple group;indiv mag approx 16.5                   |
| NGC 3223  | IC 2571     | Galaxy  | ANT | 11   | 13.3 | 4.1' | 10 21.6 | -34 16 | 366 | Sb         |    |      |   |
| NGC 3224  | ESO 375-13  | Galaxy  | ANT | 12   | 13.2 | 1.9' | 10 21.7 | -34 42 | 366 | Elliptical |    |      |   |
| NGC 3225  | UGC 5631    | Galaxy  | UMA | 12.6 | 13.3 | 2'   | 10 25.2 | +58 09 | 45  | Sc         |    |      | H II 882  |
| NGC 3226  | UGC 5617    | Galaxy  | LEO | 11.4 | 13.8 | 2.5' | 10 23.4 | +19 54 | 144 | Elliptical |    |      | H II 28;P w NGC 3227 at 2.3' sf;UGC 5617                |
| NGC 3227  | UGC 5620    | Galaxy  | LEO | 10.3 | 13.4 | 6.6' | 10 23.5 | +19 52 | 144 | SBa        |    |      | P w NGC 3226;vF env surr system;50' E of Gam Leo        |
| NGC 3228  | OCL 800     | Opn CL  | VEL | 6    | -    | 5'   | 10 21.4 | -51 43 | 426 | I 1 p      | 15 | 7.9  | 25* mags 9...   |
| NGC 3230  | UGC 5624    | Galaxy  | LEO | 12.8 | 13.7 | 2.3' | 10 23.7 | +12 34 | 189 | SO         |    |      |   |
| NGC 3231  |             | Opn CL  | UMA | -    | -    | 4'   | 10 27.0 | +66 49 | 24  |            |    |      |   |
| NGC 3233  | ESO 568- 1  | Galaxy  | HYA | 12.5 | 12.8 | 1.8' | 10 22.0 | -22 16 | 324 | SBO-a R    |    |      |   |
| NGC 3235  | NGC 3234    | Galaxy  | LMI | 13.3 | 13.3 | 1.2' | 10 25.0 | +28 01 | 105 | E-SO Ba    |    |      | IC 2572 at 4.7';PA 23                                   |
| NGC 3237  | UGC 5640    | Galaxy  | UMA | 13   | 13.4 | 1.3' | 10 25.7 | +39 39 | 72  | SO Ring    |    |      | H III 631;comp 2.2';PA316;0.35'X 0.25';UGC 5640         |
| NGC 3238  | UGC 5649    | Galaxy  | UMA | 12.9 | 13.4 | 1.3' | 10 26.7 | +57 14 | 45  | SO         |    |      | H II 883;UGC 5649                                       |
| NGC 3239  | UGC 5637    | Galaxy  | LEO | 11.3 | 14.2 | 4.5' | 10 25.1 | +17 10 | 145 | Ir Bar     |    |      | H IV 10;strongly peculiar;UGC 5637                      |
| NGC 3240  | ESO 568- 3  | Galaxy  | HYA | 13.2 | 13.1 | 1.1' | 10 24.5 | -21 48 | 325 | Sc         |    |      |   |
| NGC 3241  | ESO 436-16  | Galaxy  | ANT | 12.2 | 13.4 | 2.4' | 10 24.3 | -32 29 | 366 | SBab       |    |      |   |
| NGC 3242  | PK 261+32.1 | Pln Neb | HYA | 8.6  | 5.4  | 40"  | 10 24.8 | -18 39 | 325 | 4(3b)      |    | 12.3 | Ghost of Jupiter ; H IV 27                              |
| NGC 3243  | UGC 5652    | Galaxy  | SEX | 12.6 | 13   | 1.4' | 10 26.4 | -02 37 | 235 | SO         |    |      |   |
| NGC 3244  | ESO 317-24  | Galaxy  | ANT | 12.3 | 13.4 | 2.1' | 10 25.5 | -39 50 | 399 | Sc         |    |      |   |
| NGC 3245  | UGC 5663    | Galaxy  | LMI | 10.8 | 12.6 | 3.5' | 10 27.3 | +28 30 | 105 | SO         |    |      | H I 86  |
| NGC 3245A | UGC 5662    | Galaxy  | LMI | 13.9 | 13.9 | 3.5' | 10 27.0 | +28 38 | 105 | SBb        |    |      |   |
| NGC 3246  | UGC 5661    | Galaxy  | SEX | 12.7 | 13.8 | 2.4' | 10 26.7 | +03 52 | 235 | SBd        |    |      |   |
| NGC 3247  | OCL 809     | Opn CL  | CAR | 7.6  | -    | 7'   | 10 25.9 | -57 56 | 426 | II 2 p n   | 20 | 10   |   |
| NGC 3248  | UGC 5669    | Galaxy  | LEO | 12.4 | 13.4 | 2.5' | 10 27.8 | +22 51 | 145 | SO         |    |      | H II 347  |
| NGC 3249  | ESO 375-24  | Galaxy  | ANT | 13.1 | 13.8 | 1.6' | 10 26.4 | -34 58 | 366 | SBc        |    |      |   |
| NGC 3250  | ESO 317-26  | Galaxy  | ANT | 11.1 | 13   | 2.7' | 10 26.5 | -39 57 | 399 | Elliptical |    |      |   |
| NGC 3250B | ESO 317-29  | Galaxy  | VEL | 12.7 | 12.9 | 2.2' | 10 27.7 | -40 26 | 399 | SBa        |    |      |   |
| NGC 3250C | ESO 317-28  | Galaxy  | ANT | 13.3 | 13.2 | 1.7' | 10 27.7 | -40 00 | 399 | Sab        |    |      |   |
| NGC 3250D | ESO 317-31  | Galaxy  | ANT | 13.3 | 12.4 | 1.7' | 10 28.0 | -39 49 | 399 | SO         |    |      |   |
| NGC 3250E | ESO 317-34  | Galaxy  | ANT | 12.5 | 13.5 | 2.1' | 10 29.0 | -40 05 | 399 | SBc        |    |      |   |
| NGC 3251  | IC 2579     | Galaxy  | LEO | 13.3 | 12.9 | 2'   | 10 29.3 | +26 06 | 145 | SBc        |    |      | comp @ 2.1';PA140;0.55'X0.15'                           |
| NGC 3252  | UGC 5732    | Galaxy  | DRA | 13.5 | 13.6 | 1.9' | 10 34.4 | +73 46 | 8   | Scp        |    |      | H III 316;comps 4';PA266;0.2'X0.15';5' ;PA285;0.6'x0.4' |
| NGC 3253  | UGC 5674    | Galaxy  | LEO | 13.6 | 13.8 | 1.2' | 10 28.5 | +12 42 | 190 | SBbc       |    |      | comp 2.1';PA 229;0.6'X0.1'                              |
| NGC 3254  | UGC 5685    | Galaxy  | LMI | 11.7 | 13.8 | 4.8' | 10 29.3 | +29 30 | 105 | Sbc        |    |      | H I 72  |
| NGC 3256  | ESO 263-38  | Galaxy  | VEL | 11.5 | 13.6 | 4.5' | 10 27.9 | -43 54 | 399 | Sb         |    |      |   |
| NGC 3256B | ESO 263-39  | Galaxy  | VEL | 13.1 | 12.9 | 1.9' | 10 29.0 | -44 24 | 399 | SBbc       |    |      |   |
| NGC 3256C | ESO 263-41  | Galaxy  | VEL | 12.7 | 13.2 | 1.7' | 10 29.1 | -43 51 | 399 | SBcd       |    |      |   |
| NGC 3257  | ESO 375-36  | Galaxy  | ANT | 13.1 | 12.9 | 1'   | 10 28.8 | -35 40 | 366 | E-SO Ba    |    |      |   |
| NGC 3258  | ESO 375-37  | Galaxy  | ANT | 11.5 | 13.6 | 3.3' | 10 28.9 | -35 36 | 366 | Elliptical |    |      |   |
| NGC 3258A | ESO 375-32  | Galaxy  | ANT | 13.2 | 12.4 | 1.1' | 10 28.3 | -35 27 | 366 | SBO-a      |    |      |   |
| NGC 3258C | ESO 375-53  | Galaxy  | ANT | 13.7 | 13.6 | 1.1' | 10 31.4 | -35 13 | 366 | SB Ring    |    |      |   |
| NGC 3258D | ESO 375-58  | Galaxy  | ANT | 13.2 | 13.4 | 1.6' | 10 31.9 | -35 25 | 366 | SBb        |    |      |   |
| NGC 3259  | UGC 5717    | Galaxy  | UMA | 12.1 | 13   | 2.2' | 10 32.6 | +65 02 | 24  | SBbc       |    |      | H II 870;comp 1.2';PA198;0.3'X0.15';UGC 5717            |
| NGC 3260  | ESO 375-40  | Galaxy  | ANT | 12.6 | 12.8 | 1.2' | 10 29.1 | -35 36 | 366 | Elliptical |    |      |   |
| NGC 3261  | ESO 263-40  | Galaxy  | VEL | 11.2 | 13.6 | 3.5' | 10 29.0 | -44 39 | 399 | SBbc       |    |      |   |
| NGC 3262  | ESO 263-42  | Galaxy  | VEL | 13.2 | 13.1 | 1.2' | 10 29.1 | -44 10 | 399 | SBO        |    |      |   |
| NGC 3263  | ESO 263-43  | Galaxy  | VEL | 11.9 | 13.9 | 6.2' | 10 29.2 | -44 07 | 399 | SBc        |    |      |   |
| NGC 3264  | UGC 5719    | Galaxy  | UMA | 12   | 13.2 | 2.9' | 10 32.3 | +56 05 | 46  | SB         |    |      |   |
| NGC 3265  | UGC 5705    | Galaxy  | LMI | 12.9 | 13.1 | 0.9' | 10 31.1 | +28 48 | 105 | Elliptical |    |      | H III 349;UGC 5705                                      |
| NGC 3266  | UGC 5725    | Galaxy  | UMA | 12.4 | 13.1 | 1.4' | 10 33.3 | +64 45 | 24  | SBO        |    |      | H II 871  |
| NGC 3267  | ESO 375-42  | Galaxy  | ANT | 12.5 | 13.1 | 1.7' | 10 29.8 | -35 19 | 366 | SBO        |    |      |   |
| NGC 3268  | ESO 375-45  | Galaxy  | ANT | 11.4 | 13.8 | 4'   | 10 30.0 | -35 20 | 366 | Elliptical |    |      |   |
| NGC 3269  | ESO 375-44  | Galaxy  | ANT | 12.2 | 13.2 | 2.4' | 10 30.0 | -35 13 | 366 | SBO-a R    |    |      |   |
| NGC 3270  | UGC 5711    | Galaxy  | LEO | 13.1 | 13.9 | 3.1' | 10 31.5 | +24 52 | 145 | SBb Ring   |    |      | H III 331;comp 2.6';PA121;0.25'X0.12'                   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs  | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|-----|-----|--|
| NGC 3271        | IC 2585     | Galaxy | ANT | 11.8 | 13.5 | 2.8' | 10 30.4 | -35 22 | 366 | SBO        |     |     |  |
| NGC 3273        | ESO 375-49  | Galaxy | ANT | 12.5 | 12.6 | 1.6' | 10 30.5 | -35 37 | 366 | SBO        |     |     |  |
| NGC 3274        | UGC 5721    | Galaxy | LEO | 12.8 | 13.5 | 2'   | 10 32.3 | +27 40 | 145 | SBcd       |     |     | H II 358;comp 1.5';PA305;0.3'X0.2'                 |
| NGC 3275        | ESO 375-50  | Galaxy | ANT | 11.8 | 13.6 | 2.8' | 10 30.9 | -36 44 | 366 | SBab       |     |     |  |
| NGC 3276        | ESO 317-40  | Galaxy | ANT | 13.4 | 12.7 | 1'   | 10 31.2 | -39 57 | 399 | SO         |     |     |  |
| <b>NGC 3277</b> | UGC 5731    | Galaxy | LMI | 11.7 | 12.9 | 2.1' | 10 32.9 | +28 31 | 105 | Sab        |     |     | H II 359   |
| NGC 3278        | ESO 317-43  | Galaxy | ANT | 12.3 | 12.4 | 1.3' | 10 31.6 | -39 57 | 399 | Sc         |     |     |  |
| NGC 3279        | IC 622      | Galaxy | LEO | 13.4 | 13.2 | 2.9' | 10 34.7 | +11 12 | 190 | Scd        |     |     |  |
| NGC 3281        | ESO 375-55  | Galaxy | ANT | 11.7 | 13.4 | 3.2' | 10 31.9 | -34 51 | 366 | Sab Ring   |     |     |  |
| NGC 3281C       | ESO 375-63  | Galaxy | ANT | 13.3 | 12.2 | 1.4' | 10 33.0 | -34 53 | 366 | SO         |     |     |  |
| NGC 3281D       | ESO 375-68  | Galaxy | ANT | 14   | 13.7 | 2'   | 10 34.3 | -34 24 | 366 | SBcd       |     |     |  |
| NGC 3282        | ESO 568-16  | Galaxy | HYA | 13   | 13   | 1.9' | 10 32.4 | -22 18 | 325 | SBO Ring   |     |     |  |
| NGC 3285        | ESO 501-15  | Galaxy | HYA | 12   | 13.4 | 2.7' | 10 33.6 | -27 27 | 325 | SBa        |     |     |  |
| NGC 3285A       | ESO 501- 8  | Galaxy | HYA | 13.9 | 13.7 | 1.2' | 10 32.8 | -27 31 | 325 | SBc        |     |     |  |
| NGC 3285B       | ESO 501-18  | Galaxy | HYA | 13.1 | 13.5 | 1.5' | 10 34.6 | -27 39 | 325 | SBb        |     |     |  |
| NGC 3286        | NGC 3284    | Galaxy | UMA | 13.6 | 12.5 | 1.4' | 10 36.4 | +58 37 | 46  | Elliptical |     |     | H III 917  |
| NGC 3287        | UGC 5742    | Galaxy | LEO | 12.3 | 12.9 | 2'   | 10 34.8 | +21 39 | 145 | SBcd       |     |     | P w NGC 3301                                       |
| NGC 3288        | UGC 5752    | Galaxy | UMA | 14   | 13.8 | 0.9' | 10 36.4 | +58 33 | 46  | SBbc       |     |     | H III 918;P w NGC 3286;UGC 5752                    |
| NGC 3289        | ESO 375-65  | Galaxy | ANT | 12.5 | 12.6 | 2.2' | 10 34.1 | -35 19 | 366 | SBO-a      |     |     |  |
| NGC 3290        | MCG - 3-27- | Galaxy | HYA | 14   | -    | 1'   | 10 35.3 | -17 17 | 325 | SBbc/P     |     |     |  |
| NGC 3293        | OCL 816     | Opn CL | CAR | 4.7  | -    | 40'  | 10 35.8 | -58 13 | 427 | I 3 r n    | 6.5 |     | In Car OB1   |
| <b>NGC 3294</b> | UGC 5753    | Galaxy | LMI | 11.8 | 13.7 | 3.4' | 10 36.3 | +37 19 | 105 | Sc         |     |     | H I 164  |
| NGC 3299        | UGC 5761    | Galaxy | LEO | 12.8 | 14.1 | 1.9' | 10 36.4 | +12 42 | 190 | SBd        |     |     | H III 54;NGC 3306 group;UGC 5761                   |
| NGC 3300        | UGC 5766    | Galaxy | LEO | 12.1 | 12.7 | 1.7' | 10 36.6 | +14 10 | 190 | SBO        |     |     | H III 55   |
| NGC 3301        | NGC 3760    | Galaxy | LEO | 11.4 | 12.7 | 3.3' | 10 36.9 | +21 53 | 145 | SBO-a      |     |     | H II 46;P w NGC 3287 at 33' PA245;Nearly edge-on   |
| NGC 3302        | ESO 437- 7  | Galaxy | ANT | 12.5 | 13.1 | 1.6' | 10 35.8 | -32 22 | 366 | SO         |     |     |  |
| NGC 3304        | UGC 5777    | Galaxy | LMI | 13.4 | 13.2 | 1.4' | 10 37.6 | +37 27 | 105 | SBa        |     |     | H III 615  |
| NGC 3305        | ESO 501-30  | Galaxy | HYA | 12.8 | 13   | 1.1' | 10 36.2 | -27 10 | 325 | Elliptical |     |     |  |
| NGC 3306        | UGC 5774    | Galaxy | LEO | 13.5 | 12.9 | 1.4' | 10 37.2 | +12 39 | 190 | SB         |     |     | brightest in group                                 |
| NGC 3308        | ESO 501-34  | Galaxy | HYA | 11.9 | 12.6 | 1.7' | 10 36.4 | -27 26 | 325 | E-SO Ba    |     |     |  |
| NGC 3309        | ESO 501-36  | Galaxy | HYA | 11.6 | 12.8 | 2.4' | 10 36.6 | -27 31 | 325 | Elliptical |     |     |  |
| <b>NGC 3310</b> | UGC 5786    | Galaxy | UMA | 10.8 | 12.8 | 2.8' | 10 38.8 | +53 30 | 46  | SBbc/P     |     |     | H IV 60;UGC 5786                                   |
| NGC 3311        | ESO 501-38  | Galaxy | HYA | 11.6 | 14.1 | 3.7' | 10 36.7 | -27 32 | 325 | E2         |     |     |  |
| NGC 3312        | IC 629      | Galaxy | HYA | 11.9 | 13.3 | 3.3' | 10 37.0 | -27 34 | 325 | Sb Ring    |     |     |  |
| NGC 3313        | ESO 501-50  | Galaxy | HYA | 11.4 | 14   | 3.9' | 10 37.4 | -25 19 | 325 | SBab Ring  |     |     |  |
| NGC 3314        | ESO 501-46  | Galaxy | HYA | 14   | -    | 1.5' | 10 37.2 | -27 41 | 325 | SBap       |     |     |  |
| NGC 3315        | ESO 501-G0  | Galaxy | HYA | 13.4 | 13.3 | 1.1' | 10 37.3 | -27 12 | 325 | E-SO       |     |     |  |
| NGC 3316        | ESO 501-54  | Galaxy | HYA | 12.6 | 12.8 | 1.4' | 10 37.6 | -27 36 | 325 | SBO        |     |     |  |
| NGC 3318        | ESO 317-52  | Galaxy | VEL | 11.6 | 12.6 | 2.3' | 10 37.3 | -41 38 | 399 | SBbc       |     |     |  |
| NGC 3318B       | ESO 317-53  | Galaxy | VEL | 13.2 | 13.6 | 1.5' | 10 37.6 | -41 28 | 399 | SBc        |     |     |  |
| NGC 3319        | UGC 5789    | Galaxy | UMA | 11.1 | 14.2 | 6.1' | 10 39.2 | +41 41 | 72  | SBc        |     |     | flattened central region along NE-SW coarse spiral |
| NGC 3320        | UGC 5794    | Galaxy | UMA | 12.3 | 13   | 2.2' | 10 39.6 | +47 24 | 72  | SBc        |     |     | H II 745;UGC 5794                                  |
| NGC 3321        | NGC 3322    | Galaxy | HYA | 14   | -    | 2.5' | 10 38.8 | -11 39 | 280 | Sc         |     |     |  |
| NGC 3323        | UGC 5800    | Galaxy | LMI | 13.3 | 12.9 | 1.3' | 10 39.7 | +25 19 | 145 | SB/P       |     |     | peculiar   |
| NGC 3324        | IC 2599     | CL+Neb | CAR | 6.7  | -    | 16'  | 10 37.3 | -58 40 | 427 | I 3 r n    | 8.2 |     |  |
| NGC 3325        | UGC 5795    | Galaxy | SEX | 12.7 | 13   | 1.2' | 10 39.3 | -00 12 | 235 | Elliptical |     |     | brightest of 3                                     |
| NGC 3326        | UGC 5799    | Galaxy | SEX | 13.7 | 12.4 | 0.6' | 10 39.5 | +05 06 | 235 | Sa         |     |     |  |
| NGC 3327        | UGC 5803    | Galaxy | LMI | 13.4 | 13.1 | 1.1' | 10 40.0 | +24 05 | 145 | Sb Ring    |     |     | H II 348   |
| NGC 3329        | NGC 3397    | Galaxy | DRA | 12.2 | 12.6 | 1.9' | 10 44.7 | +76 49 | 8   | Sb         |     |     | brightest in a subgroup of 12 or more galaxies     |
| NGC 3330        | OCL 806     | Opn CL | VEL | 7.4  | -    | 7'   | 10 38.8 | -54 07 | 427 | II 2 p     | 30  | 8.8 |  |
| NGC 3331        | ESO 501-72  | Galaxy | HYA | 13.2 | 13.2 | 1.2' | 10 40.2 | -23 49 | 325 | SBc        |     |     |  |
| NGC 3332        | NGC 3342    | Galaxy | LEO | 12.3 | 13   | 1.4' | 10 40.5 | +09 11 | 190 | E-SO       |     |     | H I 272?   |
| NGC 3333        | ESO 376- 2  | Galaxy | ANT | 13.2 | 12.7 | 2.1' | 10 39.8 | -36 02 | 366 | SBbc       |     |     |  |
| NGC 3334        | UGC 5817    | Galaxy | LMI | 12.8 | 12.8 | 1.1' | 10 41.5 | +37 19 | 105 | SO         |     |     | H II 641   |
| NGC 3335        | ESO 501-71  | Galaxy | HYA | 13   | 12.9 | 1.1' | 10 39.6 | -23 55 | 325 | SBO-a      |     |     |  |
| NGC 3336        | ESO 437-36  | Galaxy | HYA | 12.3 | 13.4 | 2'   | 10 40.3 | -27 47 | 325 | SBc        |     |     |  |
| NGC 3338        | UGC 5826    | Galaxy | LEO | 11.1 | 14.2 | 5.7' | 10 42.1 | +13 45 | 190 | Sc         |     |     | H II 77;Leo group                                  |
| NGC 3339        | NGC 3340    | Star   | SEX | 13.6 | -    |      | 10 42.2 | -00 22 | 235 |            |     |     | * 2.1 WNW of NGC 3340                              |
| NGC 3340        | NGC 3339    | Galaxy | SEX | 13   | 12.7 | 1'   | 10 42.3 | -00 23 | 235 | Sbc        |     |     |  |
| NGC 3342        | NGC 3332    | Galaxy | LEO | 12.5 | -    | 1.4' | 10 40.5 | +09 11 | 190 | E-SO       |     |     | H III 5  |
| NGC 3343        | UGC 5863    | Galaxy | DRA | 13.4 | 13.6 | 1.3' | 10 46.2 | +73 21 | 8   | Elliptical |     |     | H III 317  |
| <b>NGC 3344</b> | UGC 5840    | Galaxy | LMI | 9.9  | 13.9 | 7.1' | 10 43.5 | +24 55 | 145 | SBbc Ring  |     |     | H I 81   |
| NGC 3346        | UGC 5842    | Galaxy | LEO | 11.7 | 13.7 | 2.7' | 10 43.6 | +14 52 | 190 | SBc        |     |     | H V 7  |
| NGC 3347        | ESO 376-13  | Galaxy | ANT | 11.3 | 13.3 | 3.4' | 10 42.8 | -36 21 | 366 | SBb        |     |     |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|--|
| NGC 3347A       | ESO 376- 4  | Galaxy  | ANT | 12.8 | 13   | 2'   | 10 40.3 | -36 25 | 366 | SBc        |    |    |  |
| NGC 3347B       | ESO 376-10  | Galaxy  | ANT | 13.2 | 14   | 3.2' | 10 42.0 | -36 56 | 366 | SBcd       |    |    |  |
| NGC 3348        | UGC 5875    | Galaxy  | UMA | 11.1 | 12.7 | 2'   | 10 47.2 | +72 50 | 8   | Elliptical |    |    | H I 80;comp 2.6';PA115;0.6'X0.4';UGC 5875                        |
| NGC 3352        | UGC 5851    | Galaxy  | LEO | 12.6 | 13.1 | 1.6' | 10 44.2 | +22 22 | 145 | SO         |    |    |  |
| NGC 3353        | UGC 5860    | Galaxy  | UMA | 12.8 | 12.9 | 1.4' | 10 45.4 | +55 58 | 46  | Sb         |    |    | H III 842;Haro 3;UGC 5860  |
| NGC 3354        | ESO 376-14  | Galaxy  | ANT | 13.2 | 12.4 | 0.8' | 10 43.0 | -36 22 | 366 | S pec      |    |    |  |
| NGC 3355        |             | Galaxy  | HYA | 13   | -    | 3.2' | 10 42.6 | -23 56 | 325 | Sb         |    |    |  |
| NGC 3356        | UGC 5852    | Galaxy  | LEO | 13.3 | 13.5 | 1.7' | 10 44.2 | +06 46 | 190 | Sbc        |    |    | H III 107;P w NGC 3362   |
| NGC 3357        | UGC 5206    | Galaxy  | LEO | 12.6 | 13.4 | 1.3' | 10 44.3 | +14 05 | 190 | Elliptical |    |    |  |
| NGC 3358        | ESO 376-17  | Galaxy  | ANT | 11.4 | 13.3 | 3.2' | 10 43.6 | -36 25 | 366 | SBO-a      |    |    |  |
| <b>NGC 3359</b> | UGC 5873    | Galaxy  | UMA | 10.6 | 14.2 | 7.5' | 10 46.6 | +63 13 | 24  | SBc        |    |    | H V 52   |
| NGC 3360        | MCG - 2-28- | Galaxy  | SEX | 13.7 | 13.6 | 1.2' | 10 44.3 | -11 15 | 280 | Sc         |    |    |  |
| NGC 3361        | MCG - 2-28- | Galaxy  | SEX | 12.8 | 13.6 | 2.1' | 10 44.5 | -11 13 | 280 | SBc        |    |    |  |
| NGC 3362        | UGC 5857    | Galaxy  | LEO | 12.8 | 13.1 | 1.4' | 10 44.9 | +06 36 | 190 | Sc         |    |    | P w NGC 3356   |
| NGC 3363        | UGC 5866    | Galaxy  | LEO | 13.3 | 13.3 | 1.3' | 10 45.2 | +22 05 | 145 | Sc         |    |    | comp @ 2.4';PA230;0.8'X0.7';v dif                                |
| NGC 3364        | UGC 5890    | Galaxy  | UMA | 12.8 | 13.5 | 1.5' | 10 48.5 | +72 25 | 24  | SBbc       |    |    | H III 318  |
| NGC 3365        | UGC 5878    | Galaxy  | SEX | 12.6 | 13.8 | 4.5' | 10 46.2 | +01 49 | 235 | Sc         |    |    |  |
| NGC 3366        | IC 2592     | Galaxy  | VEL | 11.3 | 12.1 | 2.2' | 10 35.1 | -43 42 | 399 | SBb        |    |    |  |
| NGC 3367        | UGC 5880    | Galaxy  | LEO | 11.5 | 13.2 | 2.5' | 10 46.6 | +13 45 | 190 | SBc        |    |    | H II 78  |
| NGC 3369        | ESO 501-95  | Galaxy  | HYA | 13.6 | 13.6 | 1.4' | 10 46.7 | -25 15 | 325 | E-SO       |    |    |  |
| NGC 3370        | UGC 5887    | Galaxy  | LEO | 11.6 | 13.3 | 2.9' | 10 47.1 | +17 16 | 145 | Sc         |    |    | H II 81  |
| <b>NGC 3371</b> | NGC 3384    | Galaxy  | LEO | 10.9 | -    | 5.4' | 10 48.3 | +12 38 | 190 | E-SO Ba    |    |    | near <b>M 105</b>  |
| <b>NGC 3372</b> | Dunlop 309  | Brn Neb | CAR | 3    | -    | 120' | 10 45.1 | -59 52 | 427 | E          |    |    | <b>Keyhole Nebula</b> & nova-like var <b>Eta Car</b> ; drk lanes |
| <b>NGC 3373</b> | NGC 3389    | Galaxy  | LEO | 11.8 | -    | 2.9' | 10 48.5 | +12 32 | 190 | Sc         |    |    | near <b>M 105</b>  |
| NGC 3374        | UGC 5901    | Galaxy  | UMA | 13.7 | 13.7 | 1.3' | 10 48.0 | +43 11 | 72  | SBc        |    |    | nrf of 2;comp at 2.3';PA197;0.35'x 0.18';mag 15.6                |
| NGC 3375        | MCG - 2-28- | Galaxy  | SEX | 12.6 | 13.1 | 1.6' | 10 47.0 | -09 57 | 280 | SO         |    |    |  |
| NGC 3376        | UGC 5891    | Galaxy  | SEX | 13.8 | 12.4 | 0.8' | 10 47.4 | +06 03 | 190 | S pec      |    |    |  |
| <b>NGC 3377</b> | UGC 5899    | Galaxy  | LEO | 10.4 | 13.4 | 4.3' | 10 47.7 | +13 59 | 190 | Elliptical |    |    | H II 99;Leo group  |
| NGC 3377A       | UGC 5889    | Galaxy  | LEO | 13.6 | 15.2 | 2'   | 10 47.4 | +14 04 | 190 | SB         |    |    | dwarf spiral   |
| NGC 3378        | ESO 318-12  | Galaxy  | ANT | 12.8 | 13.4 | 1.5' | 10 46.7 | -40 01 | 399 | SBbc       |    |    |  |
| NGC 3380        | UGC 5906    | Galaxy  | LMI | 12.5 | 13.2 | 1.6' | 10 48.2 | +28 36 | 105 | SBa        |    |    | H II 360;massive spiral arms;UGC 5906                            |
| NGC 3381        | UGC 5909    | Galaxy  | LMI | 11.7 | 13   | 2'   | 10 48.4 | +34 43 | 105 | SB/P       |    |    | H II 565   |
| NGC 3383        | ESO 501-97  | Galaxy  | HYA | 12.7 | 13.1 | 1.4' | 10 47.3 | -24 26 | 325 | SBbc       |    |    |  |
| <b>NGC 3384</b> | NGC 3371    | Galaxy  | LEO | 9.9  | 12.6 | 5.4' | 10 48.3 | +12 38 | 190 | E7         |    |    | Leo group;near <b>M105</b> w NGC 3379 and NGC 3389               |
| NGC 3385        | UGC 5908    | Galaxy  | SEX | 12.6 | 12.8 | 1.5' | 10 48.2 | +04 56 | 235 | SO         |    |    | P w NGC 3386 at 4.3';PA0;0.8'X0.7'                               |
| NGC 3389        | NGC 3373    | Galaxy  | LEO | 11.9 | 13.2 | 2.9' | 10 48.5 | +12 32 | 190 | Sc         |    |    | H II 41;Leo group;SN 1967c                                       |
| NGC 3390        | ESO 437-62  | Galaxy  | HYA | 11.9 | 12.5 | 3.5' | 10 48.1 | -31 32 | 366 | Sb         |    |    | Nearly edge-on   |
| NGC 3391        | UGC 5920    | Galaxy  | LEO | 12.9 | 12.3 | 1'   | 10 48.9 | +14 13 | 190 | Sc         |    |    |  |
| NGC 3392        | MCG 11-13-  | Galaxy  | UMA | 13.7 | 12.8 | 0.8' | 10 51.0 | +65 47 | 24  | Elliptical |    |    | H III 881  |
| NGC 3393        | ESO 501-100 | Galaxy  | HYA | 12.2 | 13.6 | 2.2' | 10 48.4 | -25 10 | 325 | SBa        |    |    |  |
| NGC 3394        | UGC 5937    | Galaxy  | UMA | 12.4 | 13.3 | 1.9' | 10 50.7 | +65 44 | 24  | Sc Ring    |    |    | H II 872;sp of 2   |
| <b>NGC 3395</b> | UGC 5931    | Galaxy  | LMI | 12.1 | 12.9 | 1.7' | 10 49.8 | +32 59 | 105 | SBc        |    |    | H I 116;P w NGC 3396;contact disrupted;brightest of 7            |
| <b>NGC 3396</b> | UGC 5935    | Galaxy  | LMI | 12.1 | 13.4 | 2.9' | 10 49.9 | +32 59 | 105 | SB         |    |    | H I 117;P w NGC 3395   |
| NGC 3397        | NGC 3329    | Galaxy  | DRA | 13   | -    | 1.9' | 10 44.7 | +76 49 | 8   | Sb         |    |    | H I 284  |
| NGC 3399        | MCG 3-28-   | Galaxy  | LEO | 12.8 | 13.8 | 1.7' | 10 49.5 | +16 13 | 190 | SO         |    |    |  |
| NGC 3400        | UGC 5949    | Galaxy  | LMI | 13.2 | 13.2 | 1.1' | 10 50.8 | +28 28 | 105 | SBa        |    |    | H II 361   |
| NGC 3402        | NGC 3411    | Galaxy  | HYA | 11.9 | -    | 2.1' | 10 50.4 | -12 51 | 280 | Elliptical |    |    |  |
| NGC 3403        | UGC 5997    | Galaxy  | DRA | 12.2 | 13.4 | 3'   | 10 53.9 | +73 41 | 8   | Sbc        |    |    | H II 335   |
| NGC 3404        | IC 2609     | Galaxy  | HYA | 14   | -    | 2.1' | 10 50.3 | -12 07 | 280 | SBab       |    |    |  |
| NGC 3406        | UGC 5970    | Galaxy  | UMA | 13.7 | -    | 0.9' | 10 51.7 | +51 01 | 46  | E-SO       |    |    | double system  |
| NGC 3407        | UGC 5978    | Galaxy  | UMA | 13.6 | 13.5 | 1.4' | 10 52.3 | +61 23 | 24  | E-SO       |    |    | H III 919  |
| NGC 3408        | UGC 5977    | Galaxy  | UMA | 13.4 | 13.1 | 0.8' | 10 52.2 | +58 26 | 46  | Sc         |    |    | H III 913  |
| NGC 3411        | NGC 3402    | Galaxy  | HYA | 11.9 | 13.5 | 2.1' | 10 50.4 | -12 51 | 280 | Elliptical |    |    | H III 522  |
| <b>NGC 3412</b> | UGC 5952    | Galaxy  | LEO | 10.5 | 12.6 | 3.7' | 10 50.9 | +13 25 | 190 | SBO        |    |    | H I 27;Leo group   |
| NGC 3413        | UGC 5960    | Galaxy  | LMI | 12.1 | 12.7 | 1.8' | 10 51.3 | +32 46 | 105 | SO         |    |    | H II 493;NGC 3395 group  |
| <b>NGC 3414</b> | UGC 5959    | Galaxy  | LMI | 11   | 13.3 | 3.6' | 10 51.3 | +27 58 | 145 | SBO        |    |    | H II 362;P w NGC 3418 at 8'2';UGC 5959                           |
| NGC 3415        | UGC 5969    | Galaxy  | UMA | 12.6 | 13.6 | 2.1' | 10 51.7 | +43 43 | 73  | Sa         |    |    | H II 718   |
| NGC 3418        | UGC 5963    | Galaxy  | LMI | 13.2 | 13.5 | 1.1' | 10 51.4 | +28 07 | 105 | SBO-a      |    |    | H II 363   |
| NGC 3419        | UGC 5964    | Galaxy  | LEO | 12.5 | 12.6 | 0.8' | 10 51.3 | +13 57 | 190 | SBO-a      |    |    | NGC 3419A at 4.7';PA6  |
| NGC 3420        | MCG - 3-28- | Galaxy  | HYA | 14   | -    | 1.3' | 10 50.2 | -17 15 | 325 | SBa        |    |    |  |
| NGC 3421        | IC 652      | Galaxy  | HYA | 14   | -    | 1.8' | 10 51.0 | -12 27 | 280 | Sa Ring    |    |    |  |
| NGC 3423        | UGC 5962    | Galaxy  | SEX | 11.1 | 13.7 | 3.9' | 10 51.2 | +05 50 | 190 | Sc         |    |    | H IV 6= II 131;fine face on spiral                               |
| NGC 3424        | UGC 5972    | Galaxy  | LMI | 12.4 | 13.1 | 2.7' | 10 51.8 | +32 54 | 105 | SBb        |    |    | H II 494;NGC 3395 group  |
| NGC 3425        | NGC 3388    | Galaxy  | LEO | 13.1 | 13   | 1'   | 10 51.4 | +08 34 | 190 | SO         |    |    | H III 108;nrf of 2   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 3426        | UGC 5975    | Galaxy  | LEO | 13.1 | 12.8 | 1.1' | 10 51.7 | +18 29 | 145 | S          |    |    |   |
| NGC 3427        | UGC 5966    | Galaxy  | LEO | 13.2 | 12.5 | 1.1' | 10 51.4 | +08 18 | 190 | Sa         |    |    |   |
| NGC 3428        | NGC 3429    | Galaxy  | LEO | 13.1 | 13.1 | 1.5' | 10 51.5 | +09 17 | 190 | SBb        |    |    |   |
| NGC 3429        | NGC 3428    | Galaxy  | LEO | 13.2 | -    | 1.5' | 10 51.5 | +09 17 | 190 | SBb        |    |    |   |
| NGC 3430        | UGC 5982    | Galaxy  | LMI | 11.6 | 13.8 | 4.1' | 10 52.2 | +32 57 | 105 | SBc        |    |    | NGC 3395 group;H I 118                              |
| NGC 3431        | MCG - 3-28- | Galaxy  | CRT | 14   | -    | 1.3' | 10 51.3 | -17 01 | 325 | Sb         |    |    |   |
| <b>NGC 3432</b> | UGC 5986    | Galaxy  | LMI | 11.3 | 13.6 | 6.6' | 10 52.5 | +36 37 | 105 | SB         |    |    | H I 172;P w UGC 5983;mag 17;1.2'X1 '                |
| NGC 3433        | UGC 5981    | Galaxy  | LEO | 11.6 | 14.1 | 3.7' | 10 52.1 | +10 09 | 190 | Sc         |    |    | H III 20;UGC 5981                                   |
| NGC 3434        | UGC 5980    | Galaxy  | LEO | 12.1 | 13.4 | 2.1' | 10 52.0 | +03 47 | 235 | Sb         |    |    | H III 497   |
| NGC 3435        | UGC 6025    | Galaxy  | UMA | 13.2 | 13.9 | 1.8' | 10 54.8 | +61 17 | 24  | Sb         |    |    | H II 887;B main body;F disc;alm dissolved arms      |
| NGC 3437        | UGC 5995    | Galaxy  | LEO | 12.1 | 12.7 | 2.6' | 10 52.6 | +22 56 | 145 | SBc        |    |    | H II 47   |
| NGC 3438        | UGC 5988    | Galaxy  | LEO | 13.3 | 12.7 | 0.8' | 10 52.4 | +10 33 | 190 | S pec      |    |    | n of 2  |
| NGC 3440        | UGC 6009    | Galaxy  | UMA | 13.2 | 13.1 | 2.1' | 10 53.8 | +57 07 | 46  | SBb        |    |    | H III 914;NGC 3445 group                            |
| NGC 3441        | UGC 5993    | Galaxy  | LEO | 13.5 | 12   | 0.7' | 10 52.5 | +07 13 | 190 | Sc         |    |    |   |
| NGC 3442        | UGC 6001    | Galaxy  | LMI | 13.4 | 11.9 | 0.6' | 10 53.1 | +33 55 | 105 | Sa         |    |    | peculiar  |
| NGC 3443        | UGC 6000    | Galaxy  | LEO | 13.1 | 14.4 | 2.8' | 10 53.0 | +17 34 | 145 | Scd        |    |    |   |
| NGC 3445        | UGC 6021    | Galaxy  | UMA | 12.6 | 13.4 | 1.6' | 10 54.6 | +56 59 | 46  | Sc         |    |    | H I 267;Brightest in group;NGC 3458 14' NE          |
| NGC 3446        | ESO 264-SC  | Opn CL  | VEL | -    | -    | 7'   | 10 52.1 | -45 08 | 400 |            |    |    | small cluster of 10 to 15 stars                     |
| NGC 3447        | UGC 6006    | Galaxy  | LEO | 12.6 | 14.7 | 3.8' | 10 53.4 | +16 46 | 190 | SBdp       |    |    | P w UGC 6007 at 1.7';PA65;comp 1.7';PA150;0.3'X0.3' |
| NGC 3448        | UGC 6024    | Galaxy  | UMA | 12.1 | 14.4 | 5.6' | 10 54.6 | +54 18 | 46  | Sa         |    |    | P w UGC 6016;bridge;UGC 6024;Arp 205; near 44 UMA   |
| NGC 3449        | ESO 376-25  | Galaxy  | ANT | 12.2 | 13.3 | 3.3' | 10 52.9 | -32 56 | 366 | SBab       |    |    |   |
| NGC 3450        | ESO 569- 6  | Galaxy  | HYA | 11.9 | 13.6 | 2.6' | 10 48.1 | -20 51 | 325 | SBb        |    |    |   |
| NGC 3451        | UGC 6023    | Galaxy  | LMI | 13   | 13.2 | 1.7' | 10 54.4 | +27 14 | 145 | SBcd       |    |    | H II 364  |
| NGC 3453        | ESO 569-17  | Galaxy  | HYA | 13   | 12.4 | 1.1' | 10 53.7 | -21 48 | 325 | SBb        |    |    |   |
| NGC 3454        | UGC 6026    | Galaxy  | LEO | 13.5 | 13.2 | 1.8' | 10 54.5 | +17 21 | 145 | SBc        |    |    | P w NGC 3455 at 3.7';PA175                          |
| NGC 3455        | UGC 6028    | Galaxy  | LEO | 12   | 13.3 | 2.7' | 10 54.5 | +17 17 | 145 | SBb        |    |    | H II 82;P w NGC 3454;Nearly edge-on                 |
| NGC 3456        | MCG - 3-28- | Galaxy  | CRT | 13   | -    | 1.7' | 10 54.1 | -16 02 | 280 | SBbc       |    |    | H IV 29   |
| NGC 3457        | NGC 3460    | Galaxy  | LEO | 12.6 | 12.3 | 0.9' | 10 54.8 | +17 37 | 145 | Compac     |    |    |   |
| NGC 3458        | UGC 6037    | Galaxy  | UMA | 12.2 | 12.3 | 1.4' | 10 56.0 | +57 07 | 46  | SBO        |    |    | H I 268;NGC 3445 group                              |
| NGC 3459        | MCG - 3-28- | Galaxy  | CRT | 14   | -    | 1.6' | 10 54.7 | -17 03 | 325 | Sab        |    |    |   |
| NGC 3460        | NGC 3457    | Galaxy  | LEO | 12.6 | -    | 0.9' | 10 54.8 | +17 37 | 145 | Compac     |    |    |   |
| NGC 3462        | UGC 6034    | Galaxy  | LEO | 12.2 | 12.9 | 1.7' | 10 55.4 | +07 42 | 190 | SO         |    |    | H II 16;plume;comp 2.8';PA255;0.25'X0.2'            |
| NGC 3463        | ESO 502- 2  | Galaxy  | HYA | 12.9 | 12.8 | 1.5' | 10 55.2 | -26 08 | 325 | Sb         |    |    |   |
| NGC 3464        | ESO 569-22  | Galaxy  | HYA | 12.6 | 14   | 2.5' | 10 54.7 | -21 04 | 325 | SBc        |    |    | Red * V HYA is 43' WSW                              |
| NGC 3465        | UGC 6056    | Galaxy  | DRA | 13.5 | 13.6 | 1.2' | 10 59.5 | +75 11 | 8   | Sab        |    |    | NGC 3523 group                                      |
| NGC 3466        | UGC 6042    | Galaxy  | LEO | 13.6 | 13.1 | 1'   | 10 56.3 | +09 45 | 191 | SBab       |    |    | NGC 3467 group                                      |
| NGC 3467        | UGC 6045    | Galaxy  | LEO | 13.4 | 13   | 0.9' | 10 56.7 | +09 46 | 191 | SO         |    |    | brightest in group;NGC 3466 at 7 ' ;PA267           |
| NGC 3468        | UGC 6048    | Galaxy  | UMA | 13   | 13.4 | 1.6' | 10 57.5 | +40 57 | 73  | SO         |    |    | H III 632;nff of 2;comp 1.9';PA243;0.4'X0.2'        |
| NGC 3469        | MCG - 2-28- | Galaxy  | CRT | 14   | -    | 1.7' | 10 57.0 | -14 18 | 281 | SBab Ri    |    |    |   |
| NGC 3470        | UGC 6060    | Galaxy  | UMA | 13.2 | 13.7 | 1.5' | 10 58.7 | +59 31 | 46  | Sab Ring   |    |    | H II 888;n of 2;UGC 6060                            |
| NGC 3471        | UGC 6064    | Galaxy  | UMA | 12.5 | 12.8 | 1.7' | 10 59.1 | +61 32 | 24  | Sa         |    |    | H III 972;sp of 2;comp 2.4';PA55;0.8'X0.2'          |
| NGC 3473        | UGC 6052    | Galaxy  | LEO | 13.6 | 13.6 | 1.1' | 10 58.1 | +17 07 | 146 | SBb        |    |    | H III 67;P w NGC 3474                               |
| NGC 3474        | MCG 3-28-   | Galaxy  | LEO | 13.9 | 13   | 0.8' | 10 58.1 | +17 06 | 146 | S          |    |    |   |
| NGC 3475        | UGC 6058    | Galaxy  | LEO | 13.1 | 13.6 | 1.7' | 10 58.4 | +24 14 | 146 | Sa         |    |    | H III 332;brightest in group                        |
| NGC 3476        | NGC 3480    | Galaxy  | LEO | 13.8 | -    | 0.5' | 10 58.1 | +09 17 | 191 | Elliptical |    |    |   |
| NGC 3478        | UGC 6069    | Galaxy  | UMA | 12.9 | 13.9 | 2.6' | 10 59.5 | +46 07 | 73  | SBbc       |    |    | H III 705;comp 2 ' ;PA195;UGC 6069                  |
| NGC 3479        | NGC 3502    | Galaxy  | CRT | 13   | -    | 1.8' | 10 58.9 | -14 58 | 281 | SBbc       |    |    |   |
| NGC 3481        | MCG - 1-28- | Galaxy  | CRT | 14   | -    | 0.9' | 10 59.4 | -07 33 | 281 | Pec        |    |    |   |
| NGC 3482        | ESO 264-56  | Galaxy  | VEL | 13.5 | -    | 1.9' | 10 58.6 | -46 35 | 400 | SBa        |    |    |   |
| NGC 3483        | ESO 438- 1  | Galaxy  | HYA | 12.1 | 12.8 | 1.8' | 10 59.0 | -28 29 | 366 | Sa         |    |    |   |
| NGC 3485        | UGC 6077    | Galaxy  | LEO | 11.8 | 13.3 | 2.4' | 11 00.0 | +14 50 | 191 | SBbc       |    |    | H II 100;UGC 6077                                   |
| <b>NGC 3486</b> | UGC 6079    | Galaxy  | LMI | 10.5 | 14.3 | 6.8' | 11 00.4 | +28 59 | 106 | SBc        |    |    | H I 87  |
| NGC 3488        | UGC 6096    | Galaxy  | UMA | 12.9 | 13.6 | 1.8' | 11 01.4 | +57 41 | 46  | SBc        |    |    | H I 269;Lord Rosse says cB in 72 inch               |
| <b>NGC 3489</b> | UGC 6082    | Galaxy  | LEO | 10.3 | 12.3 | 3.6' | 11 00.3 | +13 54 | 191 | SBO-a      |    |    | H II 101;Leo group                                  |
| NGC 3490        | MCG 2-28-   | Galaxy  | LEO | 13.8 | -    | 0.5' | 10 59.9 | +09 22 | 191 | Elliptical |    |    |   |
| NGC 3491        | UGC 6088    | Galaxy  | LEO | 13.2 | 13   | 0.9' | 11 00.6 | +12 10 | 191 | E-SO       |    |    | H III 21  |
| NGC 3492        | UGC 6094    | Galaxy  | LEO | 13.1 | 12.8 | 1.1' | 11 01.0 | +10 30 | 191 | Elliptical |    |    | double system;brightest in group                    |
| NGC 3495        | UGC 6098    | Galaxy  | LEO | 11.8 | 13.6 | 4.9' | 11 01.3 | +03 38 | 236 | Scd        |    |    | H III 498;Nearly edge-on                            |
| NGC 3497        | NGC 3525    | Galaxy  | CRT | 12.6 | -    | 2.6' | 11 07.3 | -19 28 | 326 | SO         |    |    | H III 824   |
| NGC 3499        | UGC 6115    | Galaxy  | UMA | 13.6 | 12.9 | 0.7' | 11 03.2 | +56 13 | 46  | Sa         |    |    | H III 793   |
| NGC 3501        | UGC 6116    | Galaxy  | LEO | 12.9 | 13.5 | 3.9' | 11 02.8 | +17 59 | 146 | Sc         |    |    | P w NGC 3507 at 12.7';PA45                          |
| NGC 3502        | NGC 3479    | Galaxy  | CRT | 14   | -    | 1.8' | 10 58.9 | -14 58 | 281 | SBbc       |    |    |   |
| NGC 3503        | OCL 833     | Br1 Neb | CAR | -    | -    | 3'   | 11 01.3 | -59 51 | 427 | E+*        |    |    |   |
| <b>NGC 3504</b> | UGC 6118    | Galaxy  | LMI | 11   | 12.8 | 2.7' | 11 03.2 | +27 58 | 146 | SBab Ri    |    |    | P w NGC 3512 at 12 ' ;PA72;comp 4 ' ;PA55;0.4'X0.1' |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs  | SAC NOTES   |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|-----|-----|---|
| NGC 3505        | NGC 3508    | Galaxy | CRT | 14   | -    | 1.1'  | 11 03.0 | -16 17 | 281 | Sb         |     |     |   |
| NGC 3506        | UGC 6120    | Galaxy | LEO | 12.5 | 12.6 | 1.1'  | 11 03.2 | +11 05 | 191 | Sc         |     |     | H III 22;P w UGC 6122 at 5.3';PA 62                 |
| NGC 3507        | UGC 6123    | Galaxy | LEO | 10.9 | 13.3 | 3.4'  | 11 03.4 | +18 08 | 146 | SBb        |     |     | H IV 7;P w NGC 3501                                 |
| NGC 3508        | NGC 3505    | Galaxy | CRT | 14   | -    | 1.1'  | 11 03.0 | -16 17 | 281 | Sb         |     |     | H II 507  |
| NGC 3509        | UGC 6134    | Galaxy | LEO | 12.7 | 13.4 | 1.4'  | 11 04.4 | +04 50 | 236 | SBbc       |     |     | H II 598;large luminous system;strongly peculiar    |
| NGC 3510        | UGC 6126    | Galaxy | LMI | 12.2 | 13.3 | 4.1'  | 11 03.7 | +28 53 | 106 | SB         |     |     | H II 365  |
| NGC 3511        | ESO 502-13  | Galaxy | CRT | 11   | 13.5 | 6'    | 11 03.4 | -23 05 | 326 | SBc        |     |     | H V 39  |
| NGC 3512        | UGC 6128    | Galaxy | LMI | 12.3 | 13.1 | 1.5'  | 11 04.0 | +28 02 | 106 | SBc        |     |     | H II 366;P w NGC 3504                               |
| NGC 3513        | ESO 502-14  | Galaxy | CRT | 11.5 | 13.4 | 2.9'  | 11 03.8 | -23 15 | 326 | SBb        |     |     | H V 40;S shaped spiral                              |
| NGC 3514        | ESO 570- 1  | Galaxy | CRT | 13   | -    | 1.1'  | 11 04.0 | -18 47 | 326 | SBc        |     |     |   |
| NGC 3515        | UGC 6139    | Galaxy | LMI | 13.9 | 13.4 | 0.9'  | 11 04.6 | +28 14 | 106 | Sbc        |     |     |   |
| NGC 3516        | UGC 6153    | Galaxy | UMA | 11.7 | 12.5 | 1.9'  | 11 06.8 | +72 34 | 8   | SBO Rin    |     |     | H II 336;Seyfert                                    |
| NGC 3517        | UGC 6144    | Galaxy | UMA | 13.8 | -    | 0.7'  | 11 05.6 | +56 31 | 46  | Sab        |     |     | H II 884;s of 2;contact                             |
| NGC 3518        | NGC 3110    | Galaxy | LEO | 13.5 | -    | 1.6'  | 10 04.0 | -06 29 | 279 | Sb         |     |     |   |
| <b>NGC 3521</b> | UGC 6150    | Galaxy | LEO | 9    | 13.2 | 11.2' | 11 05.8 | -00 02 | 236 | SBbc       |     |     | H I 13  |
| NGC 3522        | UGC 6159    | Galaxy | LEO | 13.1 | 13   | 1.2'  | 11 06.7 | +20 05 | 146 | Elliptical |     |     | comp 2.1';PA255;0.4'X0.1'                           |
| NGC 3523        | UGC 6105    | Galaxy | DRA | 12.9 | 13.6 | 1.5'  | 11 03.1 | +75 07 | 8   | Sbc        |     |     | H II 904;brightest of 3                             |
| NGC 3524        | UGC 6158    | Galaxy | LEO | 12.8 | 12.4 | 1.6'  | 11 06.5 | +11 23 | 191 | Sa         |     |     | H III 23;sf of 2                                    |
| NGC 3525        | NGC 3497    | Galaxy | CRT | 12.6 | -    | 2.6'  | 11 07.3 | -19 28 | 326 | SO         |     |     |   |
| NGC 3526        | NGC 3531    | Galaxy | LEO | 13.2 | 12.8 | 1.9'  | 11 06.9 | +07 10 | 191 | Sc         |     |     |   |
| NGC 3527        | UGC 6170    | Galaxy | UMA | 13.7 | 13.5 | 1'    | 11 07.3 | +28 32 | 106 | SBa        |     |     | H III 350;P w UGC 6166                              |
| NGC 3528        | NGC 3497    | Galaxy | CRT | 13   | -    | 2.6'  | 11 07.3 | -19 28 | 326 | SO         |     |     | NGC 3528 = NGC 3525 = NGC 3497 = IC 2624            |
| NGC 3529        | IC 2625     | Galaxy | CRT | 14   | -    | 1'    | 11 07.3 | -19 33 | 326 | SBb        |     |     |   |
| NGC 3530        | UGC 6188    | Galaxy | UMA | 13.8 | 11.7 | 0.7'  | 11 08.7 | +57 14 | 46  | S          |     |     | H III 915   |
| NGC 3531        | NGC 3526    | Galaxy | LEO | 13.8 | -    | 1.9'  | 11 06.9 | +07 10 | 191 | Sc         |     |     |   |
| <b>NGC 3532</b> | OCL 839     | Opn CL | CAR | 3    | -    | 50'   | 11 05.2 | -58 44 | 427 | II 1 m     | 150 | 7.1 | Fine object   |
| NGC 3533        | NGC 3557A   | Galaxy | CEN | 12.9 | 13.4 | 2.8'  | 11 07.1 | -37 10 | 367 | Sab        |     |     |   |
| NGC 3535        | UGC 6189    | Galaxy | LEO | 13.5 | 12.6 | 1.1'  | 11 08.6 | +04 50 | 236 | Sa         |     |     | H III 111   |
| NGC 3536        | UGC 6191    | Galaxy | UMA | 13.7 | 13.5 | 1.1'  | 11 08.9 | +28 29 | 106 | SBO-a R    |     |     |   |
| NGC 3537        |             | Galaxy | CRT | 14   | -    | 1.2'  | 11 08.4 | -10 15 | 281 | Sab        |     |     |   |
| NGC 3540        | NGC 3548    | Galaxy | UMA | 13.3 | 13.7 | 1.4'  | 11 09.3 | +36 01 | 106 | SBO        |     |     |   |
| NGC 3544        | NGC 3571    | Galaxy | CRT | 13.1 | -    | 3'    | 11 11.5 | -18 17 | 326 | SBa        |     |     |   |
| NGC 3546        | MCG - 2-29- | Galaxy | CRT | 14   | -    | 1.3'  | 11 09.8 | -13 23 | 281 | E-SO       |     |     |   |
| NGC 3547        | UGC 6209    | Galaxy | LEO | 12.8 | 13.3 | 2'    | 11 09.9 | +10 43 | 191 | Sb         |     |     | H II 42   |
| NGC 3549        | UGC 6215    | Galaxy | UMA | 12.1 | 13.4 | 3.1'  | 11 10.9 | +53 23 | 46  | Sc         |     |     | H I 220;nearly edge on flattened oval               |
| NGC 3550        | UGC 6214    | Galaxy | UMA | 13.3 | 13.2 | 1'    | 11 10.6 | +28 46 | 106 | E-SO       |     |     | H III 351;peculiar;double nucleus                   |
| NGC 3555        | ZWG 125. 34 | Galaxy | LEO | 12.8 | 14   | 0.4'  | 11 09.8 | +21 49 | 146 | SO         |     |     |   |
| NGC 3557        | ESO 377-16  | Galaxy | CEN | 10.4 | 13.1 | 4'    | 11 10.0 | -37 32 | 367 | Elliptical |     |     |   |
| NGC 3557A       | NGC 3533    | Galaxy | CEN | 13.8 | -    | 2.8'  | 11 07.1 | -37 10 | 367 | Sab        |     |     |   |
| NGC 3557B       | ESO 377-15  | Galaxy | CEN | 12.6 | 12.8 | 2'    | 11 09.5 | -37 21 | 367 | Elliptical |     |     |   |
| NGC 3558        | MCG 5-27-   | Galaxy | UMA | 13.6 | 13.1 | 0.9'  | 11 10.9 | +28 33 | 106 | Elliptical |     |     | compact   |
| NGC 3559        | NGC 3560    | Galaxy | LEO | 12.7 | 12.7 | 1.3'  | 11 10.8 | +12 01 | 191 | S pec      |     |     | H III 79;spiral-type obj w complex str              |
| NGC 3560        | NGC 3559    | Galaxy | LEO | 13.7 | -    | 1.3'  | 11 10.8 | +12 01 | 191 | Spec       |     |     |   |
| NGC 3562        | UGC 6242    | Galaxy | DRA | 12.2 | -    | 1.7'  | 11 13.0 | +72 53 | 9   | Elliptical |     |     | H II 337;comp at 4.9';PA67;0.7'X0.15'               |
| NGC 3564        | ESO 377-18  | Galaxy | CEN | 12.1 | 12.3 | 1.7'  | 11 10.6 | -37 33 | 367 | SO         |     |     |   |
| NGC 3567        | UGC 6230    | Galaxy | LEO | 13.3 | 12.8 | 0.9'  | 11 11.3 | +05 50 | 191 | SO         |     |     | H III 89;np of 2;contact                            |
| NGC 3568        | ESO 377-20  | Galaxy | CEN | 12.3 | 12.9 | 2.5'  | 11 10.8 | -37 27 | 367 | SBc        |     |     |   |
| NGC 3569        | UGC 6238    | Galaxy | UMA | 13.3 | 13.3 | 1.1'  | 11 12.1 | +35 27 | 106 | SO         |     |     | comp 1.9';PA248;0.25'X0.15';B lens                  |
| NGC 3570        | UGC 6240    | Galaxy | LEO | 13.5 | 13.4 | 1'    | 11 12.1 | +27 35 | 146 | SO         |     |     |   |
| NGC 3571        | NGC 3544    | Galaxy | CRT | 12.1 | 13.2 | 3'    | 11 11.5 | -18 17 | 326 | SBa        |     |     | H II 819  |
| NGC 3573        | ESO 377-22  | Galaxy | CEN | 12.3 | 13.5 | 3.6'  | 11 11.3 | -36 53 | 367 | Sa         |     |     |   |
| NGC 3575        | NGC 3162    | Galaxy | LEO | 12.2 | -    | 3.1'  | 10 13.5 | +22 44 | 144 | SBbc Rin   |     |     |   |
| NGC 3577        | UGC 6257    | Galaxy | UMA | 13.4 | 14   | 1.4'  | 11 13.7 | +48 16 | 73  | SBa        |     |     | P w NGC 3583 at 5.1';PA57;comp 2.8';PA322;0.6'X0.5' |
| NGC 3580        | MCG 1-29-   | Galaxy | LEO | 14   | 12.4 | 0.9'  | 11 13.3 | +03 39 | 236 | SO         |     |     |   |
| NGC 3583        | UGC 6263    | Galaxy | UMA | 11.1 | 12.7 | 2.5'  | 11 14.2 | +48 19 | 73  | SBb        |     |     | H II 728;P w NGC 3577                               |
| NGC 3585        | ESO 502-25  | Galaxy | HYA | 9.9  | 12.6 | 5.2'  | 11 13.3 | -26 45 | 326 | Elliptical |     |     | H II 269  |
| NGC 3589        | UGC 6275    | Galaxy | UMA | 13.8 | 13.8 | 1.5'  | 11 15.2 | +60 42 | 46  | SBcd Rin   |     |     | H III 921   |
| NGC 3591        | MCG - 2-29- | Galaxy | CRT | 14   | -    | 1.3'  | 11 14.1 | -14 05 | 281 | Sa         |     |     | H III 529   |
| NGC 3592        | UGC 6267    | Galaxy | LEO | 13.7 | 13.6 | 1.8'  | 11 14.5 | +17 16 | 146 | Sc         |     |     | P w NGC 3598 at 10.4';PA 90                         |
| <b>NGC 3593</b> | UGC 6272    | Galaxy | LEO | 10.9 | 13.3 | 4.9'  | 11 14.6 | +12 49 | 191 | Sa         |     |     | H I 29;in NGC 3607 group;BN w L bulge and dk lane   |
| NGC 3594        | UGC 6286    | Galaxy | UMA | 13.7 | 14.1 | 1.3'  | 11 16.2 | +55 42 | 46  | SBO        |     |     | H III 770;comp 2.2';PA219;0.45'X0.4'                |
| NGC 3595        | UGC 6280    | Galaxy | UMA | 12.1 | 12.1 | 1.6'  | 11 15.4 | +47 27 | 73  | E-SO       |     |     | H III 706   |
| NGC 3596        | UGC 6277    | Galaxy | LEO | 11.3 | 14.1 | 4.1'  | 11 15.1 | +14 47 | 191 | SBc        |     |     | H II 102;Leo group;UGC 6277                         |
| NGC 3597        | ESO 503- 3  | Galaxy | CRT | 12.6 | 13.6 | 1.8'  | 11 14.7 | -23 44 | 326 | Sa         |     |     |   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|--|
| NGC 3598        | UGC 6278    | Galaxy | LEO | 12.3 | 13.1 | 1.8'  | 11 15.2 | +17 16 | 146 | E-SO       |    |    | P w NGC 3592   |
| NGC 3599        | UGC 6281    | Galaxy | LEO | 11.9 | 13.7 | 2.5'  | 11 15.4 | +18 07 | 146 | SO         |    |    | H II 49;NGC 3607 group                                 |
| NGC 3600        | UGC 6283    | Galaxy | UMA | 11.7 | 12.9 | 4.1'  | 11 15.9 | +41 35 | 73  | Sa         |    |    | comp 1.8;305;0.3'X0.15';F;comp 2.7;288;0.4'X0.2'       |
| NGC 3601        | UGC 6282    | Galaxy | LEO | 13.8 | 12.1 | 0.5'  | 11 15.6 | +05 07 | 236 | Sab        |    |    | comps 3.8';PA107;0.5'X0.4';4.4';PA85;0.45'X0.1'        |
| NGC 3604        | NGC 3611    | Galaxy | LEO | 12.8 | -    | 2'    | 11 17.5 | +04 33 | 236 | Sa         |    |    | H II 626   |
| NGC 3605        | UGC 6295    | Galaxy | LEO | 12.3 | 12.8 | 1.4'  | 11 16.8 | +18 01 | 146 | Elliptical |    |    | H III 27;NGC 3607 nf                                   |
| NGC 3606        | ESO 377-32  | Galaxy | HYA | 12.4 | 13.1 | 1.5'  | 11 16.3 | -33 50 | 367 | Elliptical |    |    |  |
| <b>NGC 3607</b> | UGC 6297    | Galaxy | LEO | 9.9  | 12.5 | 4.6'  | 11 16.9 | +18 03 | 146 | E-SO       |    |    | H II 50;brightest in group;P w NGC 3608 at 6.2';PA10   |
| <b>NGC 3608</b> | UGC 6299    | Galaxy | LEO | 10.8 | 13   | 3.5'  | 11 17.0 | +18 09 | 146 | Elliptical |    |    | H II 51;NGC 3607 group;comp 5.9';PA251;0.8'X0.3'       |
| NGC 3609        | UGC 6310    | Galaxy | LEO | 13.1 | 13.1 | 1.2'  | 11 17.8 | +26 37 | 146 | SBab Rir   |    |    | P w NGC 3612 at 5.4';PA274                             |
| <b>NGC 3610</b> | UGC 6319    | Galaxy | UMA | 10.8 | 12.8 | 2.5'  | 11 18.4 | +58 47 | 46  | Elliptical |    |    | H I 270;comp 3.7';PA232;0.25'X0.25'                    |
| NGC 3611        | NGC 3604    | Galaxy | LEO | 12.1 | 13.4 | 2'    | 11 17.5 | +04 33 | 236 | Sa         |    |    | H II 521;comp 3.1' 348;UGC 6305                        |
| <b>NGC 3613</b> | UGC 6323    | Galaxy | UMA | 10.9 | 13   | 3.6'  | 11 18.6 | +58 00 | 46  | Elliptical |    |    | H I 271;P w NGC 3619 at 15.7' PA158                    |
| NGC 3614        | UGC 6318    | Galaxy | UMA | 11.6 | 14.1 | 4.8'  | 11 18.4 | +45 45 | 73  | Sc         |    |    | H II 729;comp at 2.6';PA220;0.9'X0.7' dwarf;dif;patchy |
| NGC 3615        | UGC 6313    | Galaxy | LEO | 12.8 | 13.1 | 1.4'  | 11 18.1 | +23 24 | 146 | Elliptical |    |    | H III 333;P w NGC 3618                                 |
| NGC 3617        | ESO 503-12  | Galaxy | HYA | 12.8 | 13.6 | 2.8'  | 11 17.8 | -26 08 | 326 | Elliptical |    |    |  |
| NGC 3618        | UGC 6327    | Galaxy | LEO | 13.6 | 13.1 | 0.9'  | 11 18.5 | +23 28 | 146 | Sb Ring    |    |    | H III 334;P w NGC 3615                                 |
| <b>NGC 3619</b> | UGC 6330    | Galaxy | UMA | 11.5 | 13.4 | 3.5'  | 11 19.4 | +57 45 | 46  | Sa         |    |    | H I 244;P w NGC 3613 @ 15'                             |
| <b>NGC 3621</b> | ESO 377-37  | Galaxy | HYA | 9.7  | 14.4 | 12.4' | 11 18.3 | -32 49 | 367 | SBcd       |    |    | H I 241  |
| NGC 3622        | UGC 6339    | Galaxy | UMA | 13.2 | 12.4 | 1.2'  | 11 20.2 | +67 14 | 24  | S pec      |    |    | H II 879   |
| NGC 3624        | MCG 1-29-   | Galaxy | LEO | 13.9 | 12.9 | 0.9'  | 11 18.8 | +07 31 | 191 | SBb        |    |    |  |
| NGC 3625        | UGC 6348    | Galaxy | UMA | 13.1 | 13.2 | 2'    | 11 20.5 | +57 47 | 46  | SBb        |    |    | H II 885;UGC 6348                                      |
| <b>NGC 3626</b> | NGC 3632    | Galaxy | LEO | 11   | 12.6 | 3.2'  | 11 20.1 | +18 21 | 146 | Sa         |    |    | Indense part of clust;nearest comp 2' PA73 .5'X0.4'    |
| <b>NGC 3628</b> | UGC 6350    | Galaxy | LEO | 9.5  | 13.4 | 13.1' | 11 20.3 | +13 35 | 191 | Sb         |    |    | H V 8;Leo group;disturbed                              |
| NGC 3629        | UGC 6352    | Galaxy | LEO | 12.1 | 13.4 | 2'    | 11 20.5 | +26 58 | 146 | SBc        |    |    | H II 338   |
| NGC 3630        | NGC 3645    | Galaxy | LEO | 11.9 | 14.6 | 2'    | 11 20.3 | +02 58 | 236 | Sa         |    |    | NGC 3640 group;comp 2.6';PA135;0.3'X0.15'              |
| <b>NGC 3631</b> | UGC 6360    | Galaxy | UMA | 10.4 | 13.7 | 5'    | 11 21.0 | +53 10 | 46  | Sc         |    |    | H I 226;SN 1964a;UGC 6360;Arp 27                       |
| <b>NGC 3632</b> | NGC 3626    | Galaxy | LEO | 11.8 | -    | 3.2'  | 11 20.1 | +18 21 | 146 | Sa         |    |    | see 3626   |
| NGC 3633        | UGC 6351    | Galaxy | LEO | 13.6 | 12.6 | 1.1'  | 11 20.4 | +03 35 | 236 | Sab        |    |    | NGC 3640 group   |
| NGC 3636        | MCG - 2-29- | Galaxy | CRT | 12.4 | 13   | 1.7'  | 11 20.4 | -10 17 | 281 | Elliptical |    |    | H II 550   |
| NGC 3637        | MCG - 2-29- | Galaxy | CRT | 12.7 | 13.6 | 1.8'  | 11 20.7 | -10 15 | 281 | SBO Rin    |    |    | H II 551   |
| NGC 3639        | UGC 6374    | Galaxy | LEO | 13.6 | 12.3 | 0.6'  | 11 21.6 | +18 27 | 146 | S pec      |    |    |  |
| <b>NGC 3640</b> | UGC 6368    | Galaxy | LEO | 10.4 | 13.2 | 4.5'  | 11 21.1 | +03 14 | 236 | Elliptical |    |    | H II 33;P w NGC 3641 at 2.5';PA170                     |
| NGC 3641        | UGC 6370    | Galaxy | LEO | 13.2 | 13.3 | 0.8'  | 11 21.1 | +03 12 | 236 | Elliptical |    |    |  |
| NGC 3642        | UGC 6385    | Galaxy | UMA | 11.2 | 14.5 | 5.5'  | 11 22.3 | +59 04 | 46  | Sbc        |    |    | H I 245  |
| NGC 3644        | IC 684      | Galaxy | LEO | 13.7 | 13.6 | 1.5'  | 11 21.5 | +02 49 | 236 | Sa         |    |    |  |
| NGC 3646        | UGC 6376    | Galaxy | LEO | 11.1 | 13.3 | 3.9'  | 11 21.7 | +20 10 | 146 | Sc         |    |    | H III 15;P w NGC 3649                                  |
| NGC 3648        | UGC 6389    | Galaxy | UMA | 12.6 | 12.5 | 1.3'  | 11 22.5 | +39 53 | 73  | SO         |    |    |  |
| NGC 3649        | UGC 6386    | Galaxy | LEO | 13.7 | 13.1 | 1.4'  | 11 22.2 | +20 12 | 146 | SBa        |    |    | H III 16;P w NGC 3646                                  |
| NGC 3650        | UGC 6391    | Galaxy | LEO | 13.9 | 13   | 1.6'  | 11 22.6 | +20 42 | 146 | Sb         |    |    | comps 1.9';PA137;0.4'X0.2';3.8';PA52;0.9'X0.1'         |
| NGC 3651        | UGC 6388    | Galaxy | LEO | 13.2 | 13.4 | 1.1'  | 11 22.4 | +24 18 | 146 | Elliptical |    |    | brightest in group;comp 0.4'X0.2' superimp s center    |
| NGC 3652        | UGC 6392    | Galaxy | UMA | 12.2 | 12.4 | 2'    | 11 22.7 | +37 46 | 106 | SBc/P      |    |    | H II 775   |
| NGC 3653        | MCG 4-27-   | Galaxy | LEO | 13.6 | 12.8 | 0.9'  | 11 22.5 | +24 17 | 146 | E-SO       |    |    | H III 336  |
| NGC 3654        | UGC 6407    | Galaxy | UMA | 12.7 | 12.3 | 1.2'  | 11 24.2 | +69 25 | 25  | S pec      |    |    | H II 880   |
| <b>NGC 3655</b> | UGC 6396    | Galaxy | LEO | 11.6 | 12   | 1.5'  | 11 22.9 | +16 35 | 191 | Sc         |    |    | H I 5  |
| NGC 3656        | UGC 6403    | Galaxy | UMA | 12.5 | 13.4 | 1.5'  | 11 23.6 | +53 51 | 46  | Elliptical |    |    | H II 782;B main body 0.6'X0.5'                         |
| NGC 3657        | UGC 6406    | Galaxy | UMA | 12.4 | 13.1 | 1.7'  | 11 23.9 | +52 55 | 46  | SBc/P      |    |    | H III 768  |
| NGC 3658        | UGC 6409    | Galaxy | UMA | 12.2 | 13   | 1.8'  | 11 24.0 | +38 34 | 106 | SO         |    |    | H IV 59;P w NGC 3665                                   |
| NGC 3659        | UGC 6405    | Galaxy | LEO | 12.3 | 13   | 2.3'  | 11 23.8 | +17 49 | 146 | SB         |    |    | H II 53  |
| NGC 3660        | MCG 1-29-   | Galaxy | CRT | 12.5 | -    | 2.8'  | 11 23.5 | -08 40 | 281 | SBbc       |    |    | H II 635   |
| NGC 3661        | IC 689      | Galaxy | CRT | 14   | -    | 1.6'  | 11 23.6 | -13 50 | 281 | Sa         |    |    | H III 530  |
| NGC 3662        | UGC 6408    | Galaxy | LEO | 12.9 | 13   | 1.3'  | 11 23.8 | -01 06 | 236 | SBb/P      |    |    | H IV 4;triple system                                   |
| NGC 3663        | MCG - 2-29- | Galaxy | CRT | 13   | -    | 2'    | 11 24.0 | -12 18 | 281 | Sbc        |    |    |  |
| NGC 3664        | UGC 6419    | Galaxy | LEO | 12.8 | 14.1 | 2'    | 11 24.4 | +03 20 | 236 | SB/P       |    |    | strongly asym  |
| <b>NGC 3665</b> | UGC 6426    | Galaxy | UMA | 10.8 | 12.4 | 3.5'  | 11 24.7 | +38 46 | 106 | SO         |    |    | H I 219;P w NGC 3658                                   |
| NGC 3666        | UGC 6420    | Galaxy | LEO | 12   | 13.6 | 4.6'  | 11 24.4 | +11 21 | 191 | SBc        |    |    | H I 20;UGC 6420;Nearly edge-on                         |
| NGC 3667A       | NGC 3667    | Galaxy | CRT | 13   | -    | 1.5'  | 11 24.3 | -13 51 | 281 | Sab Ring   |    |    | H III 531  |
| NGC 3668        | UGC 6430    | Galaxy | UMA | 12.3 | 13.1 | 1.7'  | 11 25.5 | +63 27 | 25  | Sbc        |    |    | H II 845   |
| NGC 3669        | UGC 6431    | Galaxy | UMA | 12.4 | 12.5 | 2'    | 11 25.4 | +57 43 | 46  | SBcd       |    |    | H II 829   |
| NGC 3670        | UGC 6427    | Galaxy | LEO | 13.5 | 13   | 1.1'  | 11 24.8 | +23 57 | 146 | SBO-a      |    |    | H III 337  |
| NGC 3672        | MCG - 2-29- | Galaxy | CRT | 11.4 | 13.5 | 4'    | 11 25.0 | -09 48 | 281 | Sc         |    |    | H I 131;Multi arm spiral                               |
| NGC 3673        | ESO 503-16  | Galaxy | HYA | 11.5 | 13.7 | 3.7'  | 11 25.2 | -26 44 | 326 | SBb        |    |    |  |
| NGC 3674        | UGC 6444    | Galaxy | UMA | 12.2 | 12.4 | 1.7'  | 11 26.4 | +57 03 | 46  | SO         |    |    | H II 886   |
| <b>NGC 3675</b> | UGC 6439    | Galaxy | UMA | 10.2 | 13.2 | 6.2'  | 11 26.1 | +43 35 | 73  | Sb         |    |    | H I 194;in field of 56 UMa                             |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 3677        | UGC 6441    | Galaxy  | UMA | 12.3 | 13.4 | 1.6' | 11 26.3 | +46 58 | 73  | Sa         |    |      | sp of 2   |
| NGC 3678        | UGC 6443    | Galaxy  | LEO | 13.6 | 12.9 | 0.8' | 11 26.3 | +27 52 | 146 | Sbc        |    |      |   |
| NGC 3680        | OCL 823     | Opn CL  | CEN | 7.6  | -    | 6'   | 11 25.6 | -43 15 | 400 | I 2 p      | 30 | 10.1 |   |
| NGC 3681        | UGC 6445    | Galaxy  | LEO | 11.2 | 12.8 | 3'   | 11 26.5 | +16 52 | 191 | SBbc       |    |      | H II 159;NGC 3684 at 14;44                          |
| NGC 3682        | UGC 6459    | Galaxy  | DRA | 12.5 | 13   | 1.7' | 11 27.7 | +66 35 | 25  | Sa         |    |      | H I 262   |
| NGC 3683        | UGC 6458    | Galaxy  | UMA | 12.4 | 12.6 | 1.8' | 11 27.5 | +56 53 | 46  | SBc        |    |      | H I 246   |
| NGC 3683A       | UGC 6484    | Galaxy  | UMA | 11.9 | 13.3 | 2.4' | 11 29.2 | +57 08 | 46  | SBc        |    |      | P w NGC 3683 at 20'                                 |
| NGC 3684        | UGC 6453    | Galaxy  | LEO | 11.4 | 13.3 | 3.4' | 11 27.2 | +17 02 | 146 | Sbc        |    |      | NGC 3686 at 14';PA 33                               |
| <b>NGC 3686</b> | UGC 6460    | Galaxy  | LEO | 11.3 | 13.4 | 3.1' | 11 27.7 | +17 13 | 146 | SBbc       |    |      | H II 160=H III 28                                   |
| NGC 3687        | UGC 6463    | Galaxy  | UMA | 12   | 13.3 | 1.9' | 11 28.0 | +29 31 | 106 | SBbc Ring  |    |      | comp superimp on the disc at 0.8';PA93;0.1'X0.1'    |
| NGC 3689        | UGC 6467    | Galaxy  | LEO | 12.3 | 12.9 | 1.7' | 11 28.2 | +25 40 | 147 | SBc        |    |      | H II 339;comp at 4.7';PA347;0.4'X0.1'               |
| NGC 3690        | UGC 6472    | Galaxy  | UMA | 11.5 | 12.6 | 2'   | 11 28.5 | +58 34 | 46  | Sp?        |    |      | H I 247;double system;collision w IC 694            |
| NGC 3691        | UGC 6464    | Galaxy  | LEO | 11.8 | 12   | 1.4' | 11 28.2 | +16 55 | 192 | SB/P       |    |      | H II 54;NGC 3681 at 19.2';PA352                     |
| NGC 3692        | UGC 6474    | Galaxy  | LEO | 12.1 | 12.9 | 3.1' | 11 28.4 | +09 24 | 192 | Sb         |    |      | H II 152  |
| NGC 3693        | MCG - 2-29- | Galaxy  | CRT | 13   | -    | 3.4' | 11 28.2 | -13 12 | 282 | Sb         |    |      | H III 532   |
| NGC 3694        | UGC 6480    | Galaxy  | UMA | 12.9 | 11.8 | 0.7' | 11 28.9 | +35 25 | 106 | Elliptical |    |      | comp 4.8';PA56;0.3'X0.1'                            |
| NGC 3699        | PK 292+1.1  | Pln Neb | CEN | 14   | 10.4 | 67"  | 11 28.0 | -59 57 | 427 |            |    |      | S neby w few F*                                     |
| NGC 3700        | UGC 6494    | Galaxy  | UMA | 14   | 13.6 | 1'   | 11 29.6 | +35 31 | 106 | SBab       |    |      | comp 1.5';PA70;0.35'X0.12'                          |
| NGC 3701        | UGC 6493    | Galaxy  | LEO | 12.9 | 13.4 | 1.9' | 11 29.5 | +24 06 | 147 | Sbc        |    |      | H II 349  |
| NGC 3704        | NGC 3707    | Galaxy  | CRT | 14   | -    | 1.6' | 11 30.1 | -11 33 | 282 | Elliptical |    |      |   |
| NGC 3705        | UGC 6498    | Galaxy  | LEO | 11.1 | 13.4 | 4.6' | 11 30.1 | +09 17 | 192 | SBab       |    |      | H II 13   |
| NGC 3706        | ESO 378- 6  | Galaxy  | CEN | 11.3 | 13.1 | 3.1' | 11 29.7 | -36 24 | 367 | E-SO       |    |      |   |
| NGC 3710        | UGC 6504    | Galaxy  | LEO | 13.1 | 12.8 | 1'   | 11 31.1 | +22 46 | 147 | Elliptical |    |      | H II 350  |
| NGC 3712        | UGC 6511    | Galaxy  | UMA | 13.9 | 13.8 | 1.7' | 11 31.2 | +28 34 | 106 | SB/P       |    |      |   |
| NGC 3713        | UGC 6511    | Galaxy  | LEO | 13.2 | 13.1 | 1.2' | 11 31.7 | +28 09 | 106 | E-SO       |    |      | H II 367  |
| NGC 3715        | MCG - 2-29- | Galaxy  | CRT | 13   | -    | 1.4' | 11 31.5 | -14 14 | 282 | Sbc        |    |      | H II 562  |
| NGC 3716        | UGC 6513    | Galaxy  | LEO | 13.5 | 12.6 | 0.7' | 11 31.7 | +03 29 | 237 | SO         |    |      |   |
| <b>NGC 3717</b> | ESO 439-15  | Galaxy  | HYA | 11.2 | 13.1 | 6.2' | 11 31.5 | -30 19 | 367 | Sb         |    |      | Nearly edge-on                                      |
| <b>NGC 3718</b> | UGC 6524    | Galaxy  | UMA | 10.8 | 14.4 | 8.2' | 11 32.6 | +53 04 | 47  | SBap       |    |      | P w NGC 3729 at 11.5'ENE;cent dust lane sprl arms   |
| NGC 3719        | UGC 6521    | Galaxy  | LEO | 13   | 13.8 | 1.7' | 11 32.2 | +00 49 | 237 | Sbc Ring   |    |      | P w NGC 3720 at 2.2';PA115                          |
| NGC 3720        | UGC 6523    | Galaxy  | LEO | 12.9 | 12.6 | 1'   | 11 32.4 | +00 48 | 237 | Sa         |    |      | P w NGC 3719  |
| NGC 3723        | MCG - 2-30- | Galaxy  | CRT | 14   | -    | 1'   | 11 32.5 | -09 58 | 282 | E-SO       |    |      |   |
| NGC 3725        | UGC 6542    | Galaxy  | UMA | 13   | 13   | 1.2' | 11 33.7 | +61 53 | 25  | SBc        |    |      | H II 836  |
| <b>NGC 3726</b> | UGC 6537    | Galaxy  | UMA | 10.4 | 13.8 | 6'   | 11 33.3 | +47 02 | 73  | SBc Ring   |    |      | H II 730;well defined spiral pattern                |
| NGC 3728        | UGC 6536    | Galaxy  | LEO | 13   | 14.1 | 2'   | 11 33.3 | +24 27 | 147 | Sb         |    |      | H II 351  |
| <b>NGC 3729</b> | UGC 6547    | Galaxy  | UMA | 11.4 | 13.1 | 2.9' | 11 33.8 | +53 08 | 47  | SB/P       |    |      | H I 222;In field w NGC 3718                         |
| NGC 3730        | MCG - 1-30- | Galaxy  | CRT | 14   | -    | 1'   | 11 34.3 | -09 35 | 282 | Elliptical |    |      |   |
| NGC 3732        | MCG - 2-30- | Galaxy  | CRT | 12.5 | 12.8 | 1.4' | 11 34.2 | -09 51 | 282 | SBO-a      |    |      | H II 552  |
| NGC 3733        | UGC 6554    | Galaxy  | UMA | 12.4 | 14.8 | 4.9' | 11 35.0 | +54 51 | 47  | SBc        |    |      | tri chain w NGC 3738 at 20.9' and NGC 3756 at 16.4' |
| NGC 3734        | MCG - 2-30- | Galaxy  | CRT | 14   | -    | 1.3' | 11 34.7 | -14 05 | 282 | Sbc        |    |      | H III 935   |
| NGC 3735        | UGC 6567    | Galaxy  | DRA | 11.8 | 13   | 4'   | 11 36.0 | +70 32 | 25  | Sc         |    |      | H I 287;nearly edge-on                              |
| NGC 3737        | UGC 6563    | Galaxy  | UMA | 12.9 | 12.8 | 1.1' | 11 35.6 | +54 57 | 47  | SBO        |    |      | H III 772   |
| NGC 3738        | UGC 6565    | Galaxy  | UMA | 11.7 | 13.3 | 2.6' | 11 35.8 | +54 31 | 47  | Ir         |    |      | H II 783;UGC 6565;Arp 234;NGC 3756 15' SE           |
| NGC 3741        | UGC 6572    | Galaxy  | UMA | 14   | 14.8 | 2'   | 11 36.1 | +45 17 | 74  | Ir         |    |      |   |
| NGC 3742        | ESO 320- 6  | Galaxy  | CEN | 12.1 | 13.4 | 2.4' | 11 35.5 | -37 57 | 367 | SBab Ring  |    |      |   |
| NGC 3749        | ESO 320- 8  | Galaxy  | CEN | 12.3 | 13.2 | 3.2' | 11 35.9 | -38 00 | 367 | Sa         |    |      |   |
| NGC 3750        | MCG 4-28-   | Galaxy  | LEO | 13.9 | 13.1 | 0.8' | 11 37.9 | +21 58 | 147 | E-SO       |    |      |   |
| NGC 3751        | UGC 6601    | Galaxy  | LEO | 13.9 | 12.7 | 0.8' | 11 37.9 | +21 56 | 147 | E-SO       |    |      |   |
| NGC 3752        | UGC 6515    | Galaxy  | DRA | 12.9 | 12.9 | 1.7' | 11 32.5 | +74 38 | 9   | Sab        |    |      | H II 905  |
| NGC 3753        | UGC 6602    | Galaxy  | LEO | 13.6 | 13.2 | 1.7' | 11 37.9 | +21 59 | 147 | Sab        |    |      |   |
| NGC 3755        | UGC 6577    | Galaxy  | UMA | 12.8 | 14.3 | 3.4' | 11 36.6 | +36 25 | 106 | SBc/P      |    |      |   |
| NGC 3756        | UGC 6579    | Galaxy  | UMA | 11.5 | 13.7 | 4.2' | 11 36.8 | +54 18 | 47  | SBbc       |    |      | H II 784;NGC 3738 in field                          |
| NGC 3757        | UGC 6584    | Galaxy  | UMA | 12.6 | 12.7 | 1.1' | 11 37.0 | +58 25 | 47  | SO         |    |      | H III 843   |
| NGC 3759        | UGC 6581    | Galaxy  | UMA | 13.3 | 13.3 | 1'   | 11 36.9 | +54 49 | 47  | SBO        |    |      | P w IC 2943   |
| NGC 3759A       | UGC 6582    | Galaxy  | UMA | 13.6 | 13.7 | 1.2' | 11 37.0 | +55 10 | 47  | SBc/P      |    |      | n of 2  |
| NGC 3760        | NGC 3301    | Galaxy  | LEO | 12.3 | -    | 3.3' | 10 36.9 | +21 53 | 145 | SBO-a      |    |      |   |
| NGC 3762        | UGC 6591    | Galaxy  | UMA | 12.6 | 12.4 | 1.8' | 11 37.4 | +61 46 | 25  | Sa         |    |      | H II 837  |
| NGC 3763        | IC 714      | Galaxy  | CRT | 13   | -    | 1.2' | 11 36.5 | -09 51 | 282 | SB Ring    |    |      |   |
| NGC 3765        | MCG 4-28-   | Galaxy  | LEO | 14   | 13.1 | 0.8' | 11 37.1 | +24 06 | 147 | Sc         |    |      |   |
| NGC 3767        | UGC 6590    | Galaxy  | LEO | 13.4 | 13.1 | 1'   | 11 37.3 | +16 53 | 192 | SBO        |    |      | comp 1.3';PA178;0.5'X0.1'                           |
| NGC 3768        | UGC 6589    | Galaxy  | LEO | 12.4 | 13.1 | 1.8' | 11 37.2 | +17 50 | 147 | SO         |    |      | H III 29  |
| NGC 3769        | UGC 6595    | Galaxy  | UMA | 11.8 | 12.8 | 2.9' | 11 37.7 | +47 54 | 74  | SBb        |    |      | H II 731;np of 2;P w NGC 3769A;nearly edge on       |
| NGC 3770        | UGC 6600    | Galaxy  | UMA | 12.9 | 12.4 | 1'   | 11 38.0 | +59 37 | 47  | SBa        |    |      | H II 838  |
| NGC 3771        |             | Galaxy  | CRT | 12.6 | 13.2 | 1.4' | 11 39.1 | -09 21 | 282 | Elliptical |    |      |   |



7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|--|
| NGC 3772        | UGC 6598    | Galaxy | LEO | 13.5 | 13   | 1.1' | 11 37.8 | +22 41 | 147 | SBa        |    |    | H II 352   |
| NGC 3773        | UGC 6605    | Galaxy | LEO | 12   | 12.1 | 1.2' | 11 38.2 | +12 07 | 192 | SO         |    |    | H III 81   |
| NGC 3777        | MCG - 2-30- | Galaxy | CRT | 14   | -    | 1.1' | 11 36.1 | -12 34 | 282 | Sab        |    |    |  |
| NGC 3779        | IC 717      | Galaxy | CRT | 14   | -    | 1.9' | 11 38.8 | -10 35 | 282 | Scd        |    |    |  |
| NGC 3780        | UGC 6615    | Galaxy | UMA | 11.5 | 13.5 | 3'   | 11 39.4 | +56 16 | 47  | Sc         |    |    | H I 227;P w NGC 3804 at 13.2';PA108                |
| NGC 3781        | MCG 5-28-   | Galaxy | LEO | 13.7 | -    | 0.5' | 11 39.1 | +26 22 | 147 | SO         |    |    |  |
| NGC 3782        | UGC 6618    | Galaxy | UMA | 12.4 | 12.9 | 1.6' | 11 39.3 | +46 31 | 74  | SBcd       |    |    | H II 732;asymmetric spiral                         |
| NGC 3783        | ESO 378-14  | Galaxy | CEN | 11.7 | 12.9 | 1.9' | 11 39.0 | -37 44 | 367 | SBa        |    |    |  |
| NGC 3786        | UGC 6621    | Galaxy | UMA | 12.3 | 13.3 | 2.1' | 11 39.7 | +31 54 | 106 | SBap       |    |    | P w NGC 3788 at 1.5'                               |
| NGC 3788        | UGC 6623    | Galaxy | UMA | 12.6 | 12.8 | 1.8' | 11 39.7 | +31 56 | 106 | SBab/P     |    |    | P w NGC 3786                                       |
| NGC 3790        | UGC 6624    | Galaxy | LEO | 13.9 | 12.6 | 1.1' | 11 39.8 | +17 43 | 147 | Sa         |    |    | H III 109;NGC 3801 group                           |
| NGC 3795        | UGC 6629    | Galaxy | UMA | 13.1 | 13.1 | 2.1' | 11 40.1 | +58 37 | 47  | Sbc        |    |    | H III 844  |
| NGC 3795B       | UGC 6604    | Galaxy | UMA | 14   | -    | 1'   | 11 38.1 | +58 45 | 47  | E-SO       |    |    |  |
| NGC 3796        | UGC 6638    | Galaxy | UMA | 12.5 | 12.6 | 1.3' | 11 40.5 | +60 18 | 47  | S pec      |    |    |  |
| NGC 3798        | UGC 6632    | Galaxy | LEO | 12.1 | 13.6 | 2.5' | 11 40.2 | +24 42 | 147 | SBO        |    |    | tri grp w NGC 3812 at 14.2';PA58;NGC 3815 at 20.3' |
| NGC 3799        | UGC 6630    | Galaxy | LEO | 13.9 | 12.8 | 0.7' | 11 40.2 | +15 20 | 192 | SBb/P      |    |    | P w NGC 3800 at 1.4' nf                            |
| NGC 3800        | UGC 6634    | Galaxy | LEO | 12.7 | 12.8 | 2'   | 11 40.2 | +15 21 | 192 | SBb/P      |    |    | H II 103;P w NGC 3799                              |
| NGC 3801        | UGC 6635    | Galaxy | LEO | 12   | 14.1 | 2.8' | 11 40.3 | +17 44 | 147 | SO         |    |    | H II 161   |
| NGC 3802        | UGC 6636    | Galaxy | LEO | 13.3 | 11.9 | 1.1' | 11 40.3 | +17 46 | 147 | Sc         |    |    | H III 30   |
| NGC 3804        | NGC 3794    | Galaxy | UMA | 12.9 | 14   | 2.2' | 11 40.9 | +56 12 | 47  | SBc        |    |    | P w NGC 3780 at 13.5';H II 830                     |
| NGC 3805        | UGC 6642    | Galaxy | LEO | 12.6 | 13   | 1.4' | 11 40.7 | +20 21 | 147 | E-SO       |    |    | H III 375  |
| NGC 3806        | UGC 6641    | Galaxy | LEO | 13.6 | 14.1 | 1.4' | 11 40.8 | +17 48 | 147 | SBb        |    |    | NGC 3801 at 8.1';PA240                             |
| NGC 3808        | UGC 6643    | Galaxy | LEO | 13.4 | 13.7 | 1.6' | 11 40.7 | +22 26 | 147 | SBc/P      |    |    | H III 338;double system;distorted;twisted bridge   |
| NGC 3809        | UGC 6649    | Galaxy | UMA | 12.7 | 12.4 | 1'   | 11 41.3 | +59 53 | 47  | SO         |    |    |  |
| <b>NGC 3810</b> | UGC 6644    | Galaxy | LEO | 10.8 | 13.4 | 4.1' | 11 41.0 | +11 28 | 192 | Sc         |    |    | H I 21   |
| NGC 3811        | UGC 6650    | Galaxy | UMA | 12.3 | 13.5 | 2.2' | 11 41.3 | +47 41 | 74  | SBc/P      |    |    | H II 737;SN 1969c                                  |
| NGC 3812        | UGC 6648    | Galaxy | LEO | 12.4 | 13.4 | 1.7' | 11 41.1 | +24 49 | 147 | Elliptical |    |    | H III 320;NGC 3815 at 6.7';PA100                   |
| <b>NGC 3813</b> | UGC 6651    | Galaxy | UMA | 11.6 | 12.5 | 2'   | 11 41.3 | +36 33 | 107 | Sb         |    |    | H I 94   |
| NGC 3815        | UGC 6654    | Galaxy | LEO | 13   | 13.3 | 1.7' | 11 41.7 | +24 48 | 147 | Sab        |    |    | H III 339  |
| NGC 3816        | UGC 6656    | Galaxy | LEO | 12.5 | 13.2 | 1.9' | 11 41.8 | +20 06 | 147 | SO         |    |    |  |
| NGC 3817        | UGC 6657    | Galaxy | LEO | 13.3 | 13.1 | 1'   | 11 41.9 | +10 18 | 192 | SBO-a      |    |    | comp superimp at 0.35';PA252;0.1'X0.1'             |
| NGC 3818        | MCG - 1-30- | Galaxy | VIR | 11.7 | 12.7 | 2'   | 11 42.0 | -06 09 | 282 | Elliptical |    |    | H III 284  |
| NGC 3819        | MCG 2-30-   | Galaxy | LEO | 13.8 | 13   | 0.8' | 11 42.1 | +10 21 | 192 | Elliptical |    |    |  |
| NGC 3821        | UGC 6663    | Galaxy | LEO | 12.9 | 13.4 | 1.4' | 11 42.2 | +20 19 | 147 | SBO-a R    |    |    | H III 376;comp 3.1';PA275;0.8'X0.7'                |
| NGC 3822        | NGC 3848    | Galaxy | VIR | 13.1 | 13.1 | 1.4' | 11 42.2 | +10 17 | 192 | SO         |    |    | H II 153;NGC 3825 at 3.2;105                       |
| NGC 3823        | MCG - 2-30- | Galaxy | CRT | 14   | -    | 1.5' | 11 42.3 | -13 52 | 282 | Elliptical |    |    |  |
| NGC 3824        | UGC 6676    | Galaxy | UMA | 13.6 | 13.3 | 1.3' | 11 42.7 | +52 47 | 47  | Sa         |    |    | H III 774;P w NGC 3829                             |
| NGC 3825        | NGC 3852    | Galaxy | VIR | 13   | 13.2 | 1.3' | 11 42.4 | +10 16 | 192 | SBa        |    |    | H II 154   |
| NGC 3826        | NGC 3830    | Galaxy | LEO | 13.4 | 12.9 | 0.9' | 11 42.5 | +26 29 | 147 | Elliptical |    |    | H II 341   |
| NGC 3827        | UGC 6673    | Galaxy | LEO | 13.3 | 12.7 | 0.9' | 11 42.6 | +18 51 | 147 | Sm         |    |    |  |
| NGC 3829        | UGC 6690    | Galaxy | UMA | 14   | 13.5 | 1'   | 11 43.5 | +52 43 | 47  | SBb        |    |    | H III 775;P w NGC 3824 at 7.6';PA304               |
| NGC 3831        | MCG - 2-30- | Galaxy | CRT | 14   | -    | 2.7' | 11 43.3 | -12 53 | 282 | Sa Ring    |    |    |  |
| NGC 3832        | UGC 6693    | Galaxy | LEO | 13   | 14.1 | 1.9' | 11 43.5 | +22 43 | 147 | SBc        |    |    | H III 340;the ring is open on f side               |
| NGC 3833        | UGC 6692    | Galaxy | VIR | 13.5 | 13.4 | 1.4' | 11 43.5 | +10 10 | 192 | Sc         |    |    | H III 102  |
| NGC 3834        | MCG 3-30-   | Galaxy | LEO | 13.4 | 13.6 | 1.4' | 11 43.6 | +19 05 | 147 | S          |    |    |  |
| NGC 3835        | UGC 6703    | Galaxy | UMA | 12.4 | 12.7 | 1.8' | 11 44.1 | +60 07 | 47  | Sab        |    |    |  |
| NGC 3835A       | UGC 6762    | Galaxy | UMA | 14   | -    | 1'   | 11 47.4 | +60 18 | 47  | Sb         |    |    |  |
| NGC 3836        | MCG - 3-30- | Galaxy | CRT | 13   | -    | 1.4' | 11 43.5 | -16 48 | 282 | Sb         |    |    |  |
| NGC 3837        | UGC 6701    | Galaxy | LEO | 13.3 | 12.2 | 0.6' | 11 43.9 | +19 54 | 147 | Elliptical |    |    | NGC 3842 at 3.6;21                                 |
| NGC 3838        | UGC 6707    | Galaxy | UMA | 12.3 | 12.2 | 1.4' | 11 44.2 | +57 57 | 47  | Sa         |    |    | H II 831   |
| NGC 3839        | UGC 6700    | Galaxy | LEO | 13.6 | 12.7 | 1'   | 11 43.9 | +10 47 | 192 | Sd         |    |    |  |
| NGC 3840        | UGC 6702    | Galaxy | LEO | 13.8 | 13.5 | 1.1' | 11 44.0 | +20 05 | 147 | Sa         |    |    |  |
| NGC 3841        | MCG 3-30-   | Galaxy | LEO | 13.6 | 12.6 | 0.7' | 11 44.0 | +19 58 | 147 | S          |    |    |  |
| NGC 3842        | UGC 6704    | Galaxy | LEO | 11.8 | 12.2 | 1.4' | 11 44.0 | +19 57 | 147 | Elliptical |    |    | H III 377;brightest in cluster Abell 1367          |
| NGC 3843        | UGC 6699    | Galaxy | VIR | 13.5 | 12.2 | 0.9' | 11 43.9 | +07 56 | 192 | Sa         |    |    |  |
| NGC 3844        | UGC 6705    | Galaxy | LEO | 13.9 | 12.4 | 1.2' | 11 44.0 | +20 02 | 147 | Sa         |    |    |  |
| NGC 3845        | MCG 3-30-   | Galaxy | LEO | 14   | 12.5 | 0.8' | 11 44.1 | +20 00 | 147 | Sb         |    |    |  |
| NGC 3846        | UGC 6710    | Galaxy | UMA | 13.9 | 13.5 | 1'   | 11 44.5 | +55 39 | 47  | Sbc        |    |    |  |
| NGC 3846A       | UGC 6706    | Galaxy | UMA | 13.3 | 14.3 | 1.9' | 11 44.2 | +55 02 | 47  | Ir Bar     |    |    |  |
| NGC 3847        | NGC 3856    | Galaxy | UMA | 13.3 | 13.5 | 1.1' | 11 44.2 | +33 31 | 107 | Elliptical |    |    |  |
| NGC 3850        | UGC 6733    | Galaxy | UMA | 13.3 | 14.1 | 2.1' | 11 45.6 | +55 53 | 47  | SBc        |    |    | H III 776  |
| NGC 3852        | NGC 3825    | Galaxy | VIR | 13.7 | -    | 1.3' | 11 42.4 | +10 16 | 192 | SBa        |    |    | H III 36   |
| NGC 3853        | UGC 6712    | Galaxy | LEO | 12.4 | 13   | 1.6' | 11 44.5 | +16 33 | 192 | Elliptical |    |    | nff of 2;comp 1.3';PA252;0.4'X0.3'                 |
| NGC 3854        | NGC 3865    | Galaxy | CRT | 13   | -    | 2.1' | 11 44.9 | -09 14 | 282 | SBb        |    |    |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 3858        | NGC 3866    | Galaxy  | CRT | 14   | -    | 1.4' | 11 45.2 | -09 19 | 282 | Sa         |    |      |   |
| NGC 3861A       | UGC 6724    | Galaxy  | LEO | 14   | -    | 2.3' | 11 45.1 | +19 58 | 147 | Sb Ring    |    |      | npp of 2;contact  |
| NGC 3862        | UGC 6723    | Galaxy  | LEO | 12.7 | 13.5 | 1.5' | 11 45.1 | +19 36 | 147 | Elliptical |    |      | H III 385   |
| NGC 3863        | UGC 6722    | Galaxy  | VIR | 12.9 | 13.3 | 2.8' | 11 45.1 | +08 28 | 192 | Sbc        |    |      |   |
| NGC 3865        | NGC 3854    | Galaxy  | CRT | 12   | 13.1 | 2.1' | 11 44.9 | -09 14 | 282 | SBb        |    |      |   |
| NGC 3866        | NGC 3858    | Galaxy  | CRT | 14   | -    | 1.4' | 11 45.2 | -09 19 | 282 | Sa         |    |      |   |
| NGC 3867        | UGC 6731    | Galaxy  | LEO | 13.2 | 12.9 | 1.5' | 11 45.5 | +19 24 | 147 | S Ring     |    |      |   |
| NGC 3869        | UGC 6737    | Galaxy  | LEO | 12.8 | 12.6 | 1.9' | 11 45.8 | +10 49 | 192 | Sa         |    |      |   |
| NGC 3870        | UGC 6742    | Galaxy  | UMA | 13   | 12.8 | 1'   | 11 45.9 | +50 12 | 47  | SO         |    |      | H III 833   |
| NGC 3872        | UGC 6738    | Galaxy  | LEO | 11.7 | 12.6 | 2.3' | 11 45.8 | +13 46 | 192 | Elliptical |    |      | P w UGC 6758 at 19 ' ;PA101;comp PA 259;0.2'X0.2'       |
| NGC 3873        | UGC 6735    | Galaxy  | LEO | 12.9 | 13.5 | 1.5' | 11 45.8 | +19 46 | 147 | Elliptical |    |      | comp 1.2';PA259;0.2'X0.2'                               |
| NGC 3875        | UGC 6739    | Galaxy  | LEO | 13.9 | 12.3 | 1'   | 11 45.8 | +19 46 | 147 | Sa         |    |      | H III 387;P w NGC 3873                                  |
| NGC 3876        | UGC 6730    | Galaxy  | VIR | 12.8 | 12.4 | 1.1' | 11 45.4 | +09 10 | 192 | Sab        |    |      | H III 103;comp at 3.5';PA138                            |
| <b>NGC 3877</b> | UGC 6745    | Galaxy  | UMA | 11   | 13   | 5.3' | 11 46.1 | +47 30 | 74  | Sc         |    |      | H I 201;edge on spiral;16' south from Chi Uma           |
| NGC 3879        | UGC 6752    | Galaxy  | DRA | 13.1 | 13.2 | 2.7' | 11 46.8 | +69 23 | 25  | Sd         |    |      | H II 881  |
| NGC 3880        | MCG 6-26-   | Galaxy  | UMA | 13.8 | 12.7 | 0.7' | 11 46.4 | +33 10 | 107 | Elliptical |    |      |   |
| NGC 3882        | ESO 170-11  | Galaxy  | CEN | 13.3 | -    | 2.3' | 11 46.1 | -56 23 | 428 | SBbc       |    |      |   |
| NGC 3883        | UGC 6754    | Galaxy  | LEO | 12.6 | 14.6 | 2.8' | 11 46.8 | +20 41 | 147 | Sb         |    |      | H III 372   |
| NGC 3884        | UGC 6746    | Galaxy  | LEO | 12.6 | 13.6 | 2.1' | 11 46.2 | +20 23 | 147 | Sa Ring    |    |      | H III 388;comp 3.4';PA348;0.5'X0.2'                     |
| NGC 3885        | ESO 440- 7  | Galaxy  | HYA | 11.9 | 12.6 | 2.7' | 11 46.8 | -27 55 | 327 | SBO-a      |    |      | H III 828   |
| NGC 3886        | UGC 6760    | Galaxy  | LEO | 13.1 | 13   | 1.2' | 11 47.1 | +19 50 | 147 | E-SO       |    |      |   |
| NGC 3887        | MCG - 3-30- | Galaxy  | CRT | 10.6 | 12.8 | 3.5' | 11 47.1 | -16 51 | 282 | SBbc       |    |      | H I 120   |
| NGC 3888        | UGC 6765    | Galaxy  | UMA | 12.1 | 12.9 | 1.8' | 11 47.6 | +55 58 | 47  | SBc        |    |      | H II 785;comp 3.7';PA30;0.5'X0.4'                       |
| NGC 3890        | NGC 3939    | Galaxy  | DRA | 13.1 | 12.8 | 0.9' | 11 49.3 | +74 18 | 9   | Sc         |    |      | H III 940   |
| NGC 3891        | UGC 6772    | Galaxy  | UMA | 12.4 | 13.6 | 2'   | 11 48.1 | +30 22 | 107 | Sbc        |    |      | H II 723  |
| NGC 3892        | MCG - 2-30- | Galaxy  | CRT | 11.5 | 13.4 | 3.1' | 11 48.0 | -10 58 | 282 | SBO-a      |    |      | H II 553  |
| <b>NGC 3893</b> | UGC 6778    | Galaxy  | UMA | 10.5 | 13   | 4.5' | 11 48.6 | +48 43 | 74  | SBc        |    |      | H II 738;P w NGC 3896 at 3.9';PA125                     |
| NGC 3894        | UGC 6779    | Galaxy  | UMA | 11.6 | 13.4 | 2'   | 11 48.8 | +59 25 | 47  | E3         |    |      | H I 248;P w N3895 at 2 ' ;PA60;comp 3.5';PA284;0.8'X0.0 |
| NGC 3895        | UGC 6785    | Galaxy  | UMA | 13.1 | 13.2 | 1.1' | 11 49.1 | +59 26 | 47  | SBa        |    |      | H II 832;P w NGC 3894 at 2 '                            |
| NGC 3896        | UGC 6781    | Galaxy  | UMA | 12.9 | 13.1 | 1.5' | 11 48.9 | +48 40 | 74  | SBO-a      |    |      | H II 739  |
| NGC 3897        | UGC 6784    | Galaxy  | UMA | 12.9 | 14.2 | 1.9' | 11 49.0 | +35 01 | 107 | SBbc       |    |      | H II 408;comp 1.8';PA34;0.2'X0.15';UGC 6784             |
| <b>NGC 3898</b> | UGC 6787    | Galaxy  | UMA | 10.7 | 13.2 | 3.8' | 11 49.3 | +56 05 | 47  | Sab        |    |      | H I 228;comp 5 ' ;PA60;0.7'X0.12';NGC 3888 15' south    |
| <b>NGC 3899</b> | NGC 3912    | Galaxy  | LEO | 13.4 | -    | 1.5' | 11 50.1 | +26 29 | 147 | SBb        |    |      | see 3912  |
| <b>NGC 3900</b> | UGC 6786    | Galaxy  | LEO | 11.4 | 13   | 3.5' | 11 49.2 | +27 01 | 147 | Sa Ring    |    |      | H I 82  |
| NGC 3901        | UGC 6675    | Galaxy  | CAM | 13.7 | 13.9 | 1.8' | 11 42.8 | +77 22 | 9   | Sc         |    |      | H III 970   |
| NGC 3902        | UGC 6790    | Galaxy  | LEO | 12.8 | 13.5 | 1.6' | 11 49.3 | +26 07 | 147 | SBbc       |    |      | H III 321   |
| NGC 3903        | ESO 378-24  | Galaxy  | CEN | 12.8 | 12.7 | 1.1' | 11 49.1 | -37 31 | 368 | SBc        |    |      |   |
| NGC 3904        | ESO 440-13  | Galaxy  | HYA | 10.9 | 12.6 | 2.7' | 11 49.2 | -29 17 | 368 | Elliptical |    |      | H II 864  |
| NGC 3905        | MCG - 1-30- | Galaxy  | CRT | 12.8 | 13.7 | 1.9' | 11 49.1 | -09 44 | 282 | SBbc       |    |      |   |
| NGC 3906        | UGC 6797    | Galaxy  | UMA | 12.9 | 14   | 1.8' | 11 49.7 | +48 26 | 74  | SBcd       |    |      | H III 715   |
| NGC 3909        | ESO 217-SC  | Opn CL  | CEN | -    | -    | 20'  | 11 50.1 | -48 14 | 401 |            |    |      | Coarse cluster of 10-14 *                               |
| NGC 3910        | UGC 6800    | Galaxy  | LEO | 12.8 | 13.4 | 1.6' | 11 50.0 | +21 20 | 147 | E-SO       |    |      | comps 1.8';PA181;0.35'X0.2';5.1';PA96;0.5'X0.5'         |
| NGC 3911        | UGC 6803    | Galaxy  | LEO | 13.8 | 13.6 | 1'   | 11 50.1 | +24 55 | 147 | SBbc       |    |      | H III 341;P w NGC 3920 at 9.9';PA97                     |
| <b>NGC 3912</b> | NGC 3899    | Galaxy  | LEO | 12.4 | 12.6 | 1.5' | 11 50.1 | +26 29 | 147 | SBb        |    |      | H II 342  |
| NGC 3913        | IC 740      | Galaxy  | UMA | 12.6 | 14.5 | 2.5' | 11 50.6 | +55 21 | 47  | Scd Rin    |    |      | H II 786  |
| NGC 3914        | UGC 6809    | Galaxy  | VIR | 13.2 | 12.6 | 1.1' | 11 50.5 | +06 34 | 192 | SBb        |    |      | H III 90  |
| NGC 3916        | UGC 6819    | Galaxy  | UMA | 13.9 | 13.3 | 1.5' | 11 50.9 | +55 09 | 47  | Sb         |    |      | H II 787;P w NGC 3921 at 4.5';PA151                     |
| NGC 3917        | UGC 6815    | Galaxy  | UMA | 11.8 | 13.7 | 5'   | 11 50.8 | +51 49 | 47  | Sc         |    |      | comp 4.9';PA204;0.3'X0.3';nearly edge on streak         |
| <b>NGC 3918</b> | PK 294+4.1  | Pln Neb | CEN | 8.4  | 5.7  | 12"  | 11 50.3 | -57 11 | 428 | 2b         |    | 15.5 | <b>Blue Planetary</b>                                   |
| NGC 3919        | UGC 6810    | Galaxy  | LEO | 13.3 | 13.1 | 0.9' | 11 50.7 | +20 01 | 147 | Elliptical |    |      |   |
| NGC 3920        | UGC 6803    | Galaxy  | LEO | 13.1 | 12.9 | 1'   | 11 49.4 | +24 56 | 147 | SBbc       |    |      | P w NGC 3911  |
| NGC 3921        | UGC 6823    | Galaxy  | UMA | 12.4 | 13.4 | 2.1' | 11 51.1 | +55 05 | 47  | Sa         |    |      | H II 788;vB core 0.45'X0.35';UGC 6823                   |
| NGC 3922        | NGC 3924    | Galaxy  | UMA | 12.8 | 12.9 | 1.7' | 11 51.2 | +50 09 | 47  | Sa         |    |      | H III 716;comp 4.7';PA60;0.4'X0.2'                      |
| <b>NGC 3923</b> | ESO 440-17  | Galaxy  | HYA | 9.8  | 13.2 | 6.6' | 11 51.0 | -28 48 | 368 | Elliptical |    |      | H I 259   |
| NGC 3928        | UGC 6834    | Galaxy  | UMA | 12.6 | 13.3 | 1.4' | 11 51.8 | +48 41 | 74  | Elliptical |    |      | H II 740;NGC 3932 sf 5'5 is a star                      |
| NGC 3929        | UGC 6832    | Galaxy  | LEO | 14   | 12.2 | 0.6' | 11 51.7 | +21 00 | 147 | Elliptical |    |      |   |
| NGC 3930        | UGC 6833    | Galaxy  | UMA | 12.4 | 14.4 | 3'   | 11 51.8 | +38 01 | 107 | SBc        |    |      | H III 616;comp 3.3';PA75;0.6'X0.4'                      |
| NGC 3931        | NGC 3917A   | Galaxy  | UMA | 13.4 | 13.3 | 1.1' | 11 51.2 | +52 00 | 47  | E-SO       |    |      | H III 769;comp 3.8';PA140;0.45'X0.35'                   |
| NGC 3933        | UGC 6839    | Galaxy  | LEO | 13.6 | 13   | 1.1' | 11 52.0 | +16 49 | 192 | S pec      |    |      | brightest in group                                      |
| NGC 3934        | UGC 6841    | Galaxy  | LEO | 13.5 | 13.4 | 1.1' | 11 52.2 | +16 51 | 192 | Sb         |    |      | NGC 3933 at 3.5';PA224;comp 1.7';PA356;0.4'X0.4'        |
| NGC 3935        | UGC 6843    | Galaxy  | UMA | 13.2 | 12.4 | 1.1' | 11 52.4 | +32 24 | 107 | Sb         |    |      |   |
| NGC 3936        | ESO 504-20  | Galaxy  | HYA | 12   | 12.8 | 3.9' | 11 52.3 | -26 54 | 327 | SBbc       |    |      | Nearly edge-on  |
| NGC 3937        | IC 2968;UGC | Galaxy  | LEO | 12.5 | 13.5 | 1.8' | 11 52.7 | +20 38 | 147 | E-SO       |    |      | H III 389;IC 2958 at 2.8';PA262;0.9'X0.45'              |
| <b>NGC 3938</b> | UGC 6856    | Galaxy  | UMA | 10.4 | 13.8 | 5.1' | 11 52.8 | +44 07 | 74  | Sc         |    |      | H I 203;Fine face on spiral                             |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|------|--|
| NGC 3940        | UGC 6852    | Galaxy | LEO | 12.8 | 13.9 | 1.7' | 11 52.8 | +20 59 | 147 | Elliptical |    |      | H III 380  |
| <b>NGC 3941</b> | UGC 6857    | Galaxy | UMA | 10.3 | 12.5 | 3.5' | 11 52.9 | +36 59 | 107 | SBO        |    |      | H I 173  |
| NGC 3942        | MCG - 2-30- | Galaxy | CRT | 14   | -    | 1.5' | 11 51.5 | -11 26 | 282 | Sc         |    |      |  |
| NGC 3943        | MCG 4-28-   | Galaxy | LEO | 13.3 | 13.3 | 1.1' | 11 52.9 | +20 29 | 147 | S          |    |      |  |
| NGC 3944        | UGC 6859    | Galaxy | LEO | 12.9 | 13.3 | 1.4' | 11 53.1 | +26 12 | 147 | E-SO       |    |      | H III 322  |
| <b>NGC 3945</b> | UGC 6860    | Galaxy | UMA | 10.9 | 13.9 | 6.4' | 11 53.2 | +60 40 | 47  | SBO-a R    |    |      | H I 251  |
| NGC 3947        | UGC 6863    | Galaxy | LEO | 13.1 | 13.6 | 1.4' | 11 53.3 | +20 45 | 147 | SBb        |    |      | comp 1.6';PA232;0.35'X0.15';comp 3 ' ;PA250;0.7'X0.4'  |
| <b>NGC 3949</b> | UGC 6869    | Galaxy | UMA | 11.1 | 12.6 | 2.9' | 11 53.7 | +47 52 | 74  | Sbc        |    |      | H I 202;comp 4.4';PA273;0.3'X0.1'                      |
| NGC 3951        | UGC 6867    | Galaxy | LEO | 13.6 | 12.9 | 1.1' | 11 53.7 | +23 23 | 147 | S pec      |    |      | H III 342;brightest in group                           |
| NGC 3952        | IC 2972     | Galaxy | VIR | 13.1 | 13.1 | 1.6' | 11 53.7 | -04 00 | 237 | Sm         |    |      | H III 612  |
| <b>NGC 3953</b> | UGC 6870    | Galaxy | UMA | 10.1 | 13.4 | 6.9' | 11 53.8 | +52 19 | 47  | SBbc       |    |      | H V 45;comps 3.9';PA190;0.3'X0.1';4.6';PA156;0.4'X0.4' |
| NGC 3954        | UGC 6866    | Galaxy | LEO | 13.6 | 12.5 | 0.7' | 11 53.7 | +20 53 | 147 | Compac     |    |      | H III 381;red;compact                                  |
| NGC 3955        | ESO 504-26  | Galaxy | CRT | 11.9 | 12.9 | 3.1' | 11 54.0 | -23 10 | 327 | Sa         |    |      | H II 623   |
| NGC 3956        | ESO 572-13  | Galaxy | CRT | 12.1 | 13.3 | 3.3' | 11 54.0 | -20 34 | 327 | SBc        |    |      | H III 290;Nearly edge-on spiral                        |
| NGC 3957        | IC 2965     | Galaxy | CRT | 11.8 | 12.5 | 2.9' | 11 54.0 | -19 34 | 327 | Sa         |    |      | H II 294;edge-on lenticular                            |
| NGC 3958        | UGC 6880    | Galaxy | UMA | 13   | 12.8 | 1.3' | 11 54.6 | +58 22 | 47  | SBa        |    |      | P w NGC 3963 @ 8.3';PA3;comp 0.4';PA95;0.1'X0.1'       |
| NGC 3959        | MCG - 1-30- | Galaxy | CRT | 14   | -    | 1.1' | 11 54.6 | -07 45 | 282 | SBa        |    |      |  |
| NGC 3960        | Mel 108     | Opn CL | CEN | 8.3  | -    | 7'   | 11 50.6 | -55 41 | 428 | I 2 m      | 45 | 11.5 |  |
| NGC 3961        | UGC 6885    | Galaxy | DRA | 13.5 | 13.9 | 1.3' | 11 55.0 | +69 20 | 25  | SBa        |    |      | H III 905  |
| <b>NGC 3962</b> | MCG - 2-30- | Galaxy | CRT | 10.7 | 12.6 | 3.4' | 11 54.7 | -13 59 | 282 | Elliptical |    |      | H I 67   |
| NGC 3963        | UGC 6884    | Galaxy | UMA | 11.9 | 13.9 | 2.7' | 11 55.0 | +58 30 | 47  | SBbc Rii   |    |      | H IV 67;beautiful obj w 2 sym arms;in field w Z UMA    |
| NGC 3964        | MCG 5-28-   | Galaxy | LEO | 13.9 | 13.2 | 0.9' | 11 54.9 | +28 16 | 107 | SO         |    |      |  |
| NGC 3968        | UGC 6895    | Galaxy | LEO | 11.8 | 13.4 | 2.7' | 11 55.5 | +11 58 | 192 | SBbc       |    |      | H II 162;NGC 3973 at 2.6';PA48;0.4'X0.2'               |
| NGC 3969        | ESO 572-17  | Galaxy | CRT | 13   | 13   | 1.4' | 11 55.2 | -18 56 | 327 | SBO-a R    |    |      |  |
| NGC 3970        | MCG - 2-30- | Galaxy | CRT | 14   | -    | 1.2' | 11 55.5 | -12 04 | 282 | SO         |    |      |  |
| NGC 3971        | NGC 3984    | Galaxy | UMA | 12.7 | 13.1 | 1.4' | 11 55.6 | +30 00 | 107 | SO         |    |      | H II 724;P w UGC 6905                                  |
| NGC 3972        | UGC 6904    | Galaxy | UMA | 12.3 | 13.7 | 3.7' | 11 55.8 | +55 19 | 47  | SBbc       |    |      | H II 789;NGC 3977 at 5.3';PA37                         |
| NGC 3974        | MCG - 2-31- | Galaxy | CRT | 14   | -    | 1.2' | 11 55.7 | -12 02 | 282 | SBO-a R    |    |      |  |
| NGC 3976        | UGC 6906    | Galaxy | VIR | 11.5 | 13   | 3.4' | 11 56.0 | +06 45 | 192 | SBb        |    |      | H II 132;P w F anon at 4.8';nearly edge on spiral      |
| NGC 3977        | NGC 3980    | Galaxy | UMA | 13.4 | 14.3 | 1.5' | 11 56.1 | +55 23 | 47  | Sab        |    |      | H II 790   |
| NGC 3978        | UGC 6910    | Galaxy | UMA | 12.7 | 13.5 | 1.7' | 11 56.2 | +60 31 | 47  | SBbc       |    |      | comp 2 ' ;PA292;0.6'x0.25';comp 3.8';PA22;0.5'X0.12'   |
| NGC 3981        | ESO 572-20  | Galaxy | CRT | 11.3 | 13.9 | 5.3' | 11 56.1 | -19 54 | 327 | SBbc       |    |      | H III 274;Nearly edge-on spiral                        |
| <b>NGC 3982</b> | UGC 6918    | Galaxy | UMA | 11   | 12.5 | 2.3' | 11 56.5 | +55 07 | 47  | SBb        |    |      | H IV 62  |
| NGC 3983        | UGC 6914    | Galaxy | LEO | 14   | 12.8 | 1.1' | 11 56.4 | +23 52 | 147 | Sa         |    |      | H III 343;comp 4.7';PA122;0.8'X0.15'                   |
| NGC 3984        | NGC 3971    | Galaxy | UMA | 13.5 | 13.7 | 1.4' | 11 55.6 | +30 00 | 107 | SO         |    |      |  |
| NGC 3985        | UGC 6921    | Galaxy | UMA | 12.6 | 12.6 | 1'   | 11 56.7 | +48 20 | 74  | SB         |    |      | H III 707  |
| NGC 3986        | NGC 3966    | Galaxy | UMA | 12.6 | 13.3 | 2.8' | 11 56.7 | +32 01 | 107 | Sa         |    |      | P w IC 2978 at 4.8';NGC 3995 group                     |
| NGC 3987        | UGC 6928    | Galaxy | LEO | 12.9 | 12.7 | 2.2' | 11 57.3 | +25 12 | 147 | Sb         |    |      | NGC 3993 at 4.6';PA55;NGC 3989 at 2.6';PA30            |
| NGC 3988        | MCG 5-28-   | Galaxy | LEO | 13.3 | -    | 0.9' | 11 57.4 | +27 53 | 147 | Elliptical |    |      |  |
| <b>NGC 3990</b> | UGC 6938    | Galaxy | UMA | 12.6 | 12.6 | 1.4' | 11 57.6 | +55 27 | 47  | E-SO       |    |      | H II 791;P w NGC 3998 at 2.9';PA96                     |
| NGC 3991        | UGC 6933    | Galaxy | UMA | 13.1 | 12.4 | 1.3' | 11 57.5 | +32 20 | 107 | Ir Bar     |    |      | NGC 3994 at 3.8'                                       |
| NGC 3993        | UGC 6935    | Galaxy | LEO | 13.7 | 13.4 | 1.6' | 11 57.6 | +25 14 | 147 | Sb         |    |      | 3997 at 2.9';PA53;mult sys w NGC 3987;3989;3997        |
| NGC 3994        | UGC 6936    | Galaxy | UMA | 12.7 | 12   | 0.9' | 11 57.6 | +32 17 | 107 | Scp        |    |      | P w NGC 3995 at 2 ' ;PA242                             |
| NGC 3995        | UGC 6944    | Galaxy | UMA | 12.4 | 13.4 | 2.6' | 11 57.7 | +32 18 | 107 | SB         |    |      | multiple sys w NGC 3991;3994                           |
| NGC 3996        | UGC 6941    | Galaxy | LEO | 13.4 | 12.8 | 0.9' | 11 57.8 | +14 18 | 192 | Sc         |    |      |  |
| NGC 3997        | UGC 6942    | Galaxy | LEO | 13.4 | 13.3 | 1.6' | 11 57.8 | +25 16 | 147 | SBb/P      |    |      | multiple sys w NGC 3987;3989;3993                      |
| <b>NGC 3998</b> | UGC 6946    | Galaxy | UMA | 10.7 | 12.5 | 2.7' | 11 57.9 | +55 27 | 47  | SO         |    |      | H I 229;comp 4.7';PA145;0.3'X0.3'                      |
| NGC 4002        | MCG 4-28-   | Galaxy | LEO | 14   | 12.6 | 0.8' | 11 58.0 | +23 12 | 147 | Sab        |    |      | H III 344  |
| NGC 4003        | NGC 4007    | Galaxy | LEO | 13.3 | 13.4 | 1.5' | 11 58.0 | +23 07 | 147 | SBO        |    |      | UGC 6948;H III 345                                     |
| NGC 4004A       | NGC 4004    | Galaxy | LEO | 14   | -    | 1.8' | 11 58.1 | +27 53 | 147 | Ir         |    |      | H III 354;UGC 6950                                     |
| NGC 4005        | NGC 4007    | Galaxy | LEO | 13.1 | 12.8 | 1.2' | 11 58.2 | +25 07 | 147 | S pec      |    |      |  |
| NGC 4006        | IC 2983     | Galaxy | VIR | 12.6 | 13.3 | 1.6' | 11 58.1 | -02 07 | 237 | Elliptical |    |      |  |
| NGC 4007        | NGC 4005    | Galaxy | LEO | 13.9 | -    | 1.2' | 11 58.2 | +25 07 | 147 | S pec      |    |      | H III 325  |
| NGC 4008        | UGC 6953    | Galaxy | LEO | 12   | 13.3 | 2.4' | 11 58.3 | +28 12 | 107 | Elliptical |    |      | H II 368   |
| NGC 4010        | UGC 6964    | Galaxy | UMA | 12.6 | 13.7 | 4.2' | 11 58.6 | +47 16 | 74  | SBcd       |    |      |  |
| NGC 4012        | UGC 6960    | Galaxy | VIR | 13.4 | 13.4 | 1.9' | 11 58.5 | +10 01 | 192 | Sb         |    |      |  |
| <b>NGC 4013</b> | UGC 6963    | Galaxy | UMA | 11.2 | 12.9 | 4.8' | 11 58.5 | +43 57 | 74  | Sb         |    |      | H II 733;edge on                                       |
| NGC 4014        | NGC 4028    | Galaxy | COM | 12.3 | 13.3 | 2.2' | 11 58.6 | +16 11 | 192 | Sa         |    |      |  |
| NGC 4016        | UGC 6954;A  | Galaxy | COM | 13.3 | 13.4 | 1.5' | 11 58.5 | +27 32 | 147 | SBd        |    |      |  |
| NGC 4017        | UGC 6967    | Galaxy | COM | 12.2 | 13   | 1.8' | 11 58.8 | +27 27 | 147 | SBbc       |    |      | H II 369;UGC 6967;Arp 305b                             |
| NGC 4018        | UGC 6966    | Galaxy | COM | 13.8 | 13   | 1.7' | 11 58.7 | +25 19 | 147 | Sab        |    |      |  |
| NGC 4019        | IC 755      | Galaxy | COM | 14   | -    | 2.4' | 12 01.2 | +14 06 | 193 | SBb        |    |      |  |
| NGC 4020        | UGC 6971    | Galaxy | UMA | 12.7 | 13.3 | 1.9' | 11 58.9 | +30 25 | 107 | SBcd       |    |      | H II 725   |
| NGC 4022        | UGC 6975    | Galaxy | COM | 13   | 13.3 | 1.2' | 11 59.0 | +25 13 | 147 | SO         |    |      | NGC 4005 group   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|--|
| NGC 4023        | UGC 6977    | Galaxy | COM | 13.6 | 12.9 | 0.9' | 11 59.1 | +24 59 | 147 | S pec      |    |    | NGC 4005 group   |
| NGC 4024        | ESO 572-31  | Galaxy | CRV | 11.7 | 12.7 | 1.9' | 11 58.5 | -18 21 | 327 | E-SO Ba    |    |    | H II 295   |
| NGC 4025        | UGC 6982    | Galaxy | UMA | 13.6 | 15   | 2.8' | 11 59.2 | +37 48 | 107 | SBc        |    |    | H III 617  |
| <b>NGC 4026</b> | UGC 6985    | Galaxy | UMA | 10.8 | 12.7 | 4.7' | 11 59.4 | +50 58 | 47  | SO         |    |    | H I 223;edge on lens shape                             |
| <b>NGC 4027</b> | ESO 572-37  | Galaxy | CRV | 11.1 | 13.2 | 3.3' | 11 59.5 | -19 16 | 327 | SBd        |    |    | H II 296   |
| NGC 4028        | NGC 4014    | Galaxy | COM | 13.3 | -    | 2.2' | 11 58.6 | +16 11 | 192 | Sa         |    |    | H III 3  |
| NGC 4029        | UGC 6990    | Galaxy | VIR | 13.5 | 13.2 | 1.2' | 12 00.1 | +08 11 | 193 | SBb        |    |    | comp @ 0.9'  |
| <b>NGC 4030</b> | UGC 6993    | Galaxy | VIR | 10.6 | 13.2 | 4.2' | 12 00.4 | -01 06 | 238 | Sbc        |    |    | H I 121;fine nearly face on spiral                     |
| NGC 4032        | UGC 6995    | Galaxy | COM | 12.3 | 13.4 | 1.9' | 12 00.5 | +20 04 | 148 | Ir         |    |    | H II 404   |
| NGC 4033        | ESO 572-42  | Galaxy | CRV | 11.7 | 12.8 | 2.4' | 12 00.6 | -17 51 | 328 | Elliptical |    |    | H II 508   |
| NGC 4034        | UGC 7006    | Galaxy | DRA | 13.5 | 14.1 | 1.7' | 12 01.5 | +69 19 | 25  | Sc         |    |    | H III 903  |
| NGC 4035        | MCG - 3-31- | Galaxy | CRV | 14   | -    | 1.1' | 12 00.5 | -15 57 | 283 | SBbc       |    |    | H III 279  |
| <b>NGC 4036</b> | UGC 7005    | Galaxy | UMA | 10.7 | 12.7 | 4'   | 12 01.5 | +61 54 | 25  | E6         |    |    | H I 253;NGC 4041 @ 15';spindle shape                   |
| NGC 4037        | UGC 7002    | Galaxy | COM | 11.9 | 13.5 | 2.4' | 12 01.4 | +13 24 | 193 | SBb        |    |    | H III 77   |
| <b>NGC 4038</b> | ESO 572-47  | Galaxy | CRV | 10.3 | 13.1 | 3.4' | 12 01.9 | -18 52 | 328 | Sp         |    |    | <b>Antennae H IV 28;Ringtail Galaxy</b> ;two filaments |
| <b>NGC 4039</b> | ESO 572-48  | Galaxy | CRV | 10.6 | 12.1 | 3.3' | 12 01.9 | -18 53 | 328 | SB         |    |    | <b>Antennae H II 282</b>                               |
| NGC 4040        | UGC 7013    | Galaxy | COM | 13.3 | 14.3 | 1.9' | 12 02.1 | +17 49 | 148 | Elliptical |    |    |  |
| <b>NGC 4041</b> | UGC 7014    | Galaxy | UMA | 11.3 | 13.2 | 2.7' | 12 02.2 | +62 08 | 25  | Sbc        |    |    | H I 252  |
| NGC 4043        | UGC 7015    | Galaxy | VIR | 13.6 | 12.2 | 0.6' | 12 02.4 | +04 20 | 238 | SO         |    |    |  |
| NGC 4044        | UGC 7018    | Galaxy | VIR | 13   | 13.2 | 1.2' | 12 02.5 | -00 13 | 238 | Elliptical |    |    | H III 491  |
| NGC 4045        | NGC 4046    | Galaxy | VIR | 12   | 13.6 | 3.1' | 12 02.7 | +01 59 | 238 | Sba Ring   |    |    | H II 276;Ho 320b @ 1.6';UGC 7021;faint outer arms      |
| NGC 4046        | NGC 4045    | Galaxy | VIR | 12.8 | -    | 3.1' | 12 02.7 | +01 59 | 238 | Sba Ring   |    |    |  |
| NGC 4047        | UGC 7025    | Galaxy | UMA | 12.2 | 12.8 | 1.2' | 12 02.8 | +48 38 | 74  | Sbc        |    |    | H II 741   |
| NGC 4048        | UGC 7023    | Galaxy | COM | 13.6 | 12.1 | 0.6' | 12 02.8 | +18 01 | 148 | S pec      |    |    | Brightest in quadruple system                          |
| NGC 4049        | UGC 7027    | Galaxy | COM | 13.3 | 12.5 | 0.9' | 12 02.9 | +18 45 | 148 | Sd         |    |    | H III 390  |
| NGC 4050        | MCG - 3-31- | Galaxy | CRV | 12.2 | 14.1 | 3'   | 12 02.9 | -16 22 | 283 | SBab       |    |    | H II 509   |
| <b>NGC 4051</b> | UGC 7030    | Galaxy | UMA | 10.2 | 13.3 | 5.3' | 12 03.2 | +44 32 | 74  | SBbc       |    |    | H IV 56;thick spiral arms                              |
| NGC 4057        | NGC 4065    | Galaxy | COM | 13.7 | -    | 1.1' | 12 04.1 | +20 14 | 148 | Elliptical |    |    |  |
| NGC 4058        | UGC 7036    | Galaxy | VIR | 13.1 | 12.6 | 1.2' | 12 03.8 | +03 33 | 238 | Sa         |    |    |  |
| NGC 4061        | NGC 4055    | Galaxy | COM | 13.1 | 13.2 | 1.2' | 12 04.0 | +20 14 | 148 | Elliptical |    |    | H III 394;Compact;p w NGC 4065 @ 1 '                   |
| NGC 4062        | UGC 7045    | Galaxy | UMA | 11.1 | 13.1 | 4'   | 12 04.1 | +31 54 | 107 | SBc        |    |    | H I 174  |
| NGC 4064        | UGC 7054    | Galaxy | COM | 11.4 | 13.5 | 4.6' | 12 04.2 | +18 27 | 148 | SBa        |    |    |  |
| NGC 4065        | NGC 4057    | Galaxy | COM | 12.6 | 12.7 | 1.1' | 12 04.1 | +20 14 | 148 | Elliptical |    |    | H III 395;Brightest in cluster;Very compact            |
| NGC 4066        | UGC 7051    | Galaxy | COM | 12.9 | 13.3 | 1.2' | 12 04.2 | +20 21 | 148 | Elliptical |    |    | NGC 4060 @ 2 ';NGC 4065 @ 6.9';NGC 4070 @ 3.8'         |
| NGC 4067        | UGC 7048    | Galaxy | VIR | 12.5 | 12.8 | 1.3' | 12 04.2 | +10 51 | 193 | Sb         |    |    | H III 37   |
| NGC 4068        | UGC 7047    | Galaxy | UMA | 12.5 | 14.3 | 3.2' | 12 04.0 | +52 35 | 47  | Ir         |    |    | H II 781   |
| NGC 4070        | NGC 4059    | Galaxy | COM | 13.1 | 13.1 | 1'   | 12 04.2 | +20 25 | 148 | Elliptical |    |    | H III 391  |
| NGC 4073        | UGC 7060    | Galaxy | VIR | 11.4 | 13.4 | 3.2' | 12 04.5 | +01 54 | 238 | E1         |    |    | comp superimposed;field of 6 small galaxies 5' south   |
| NGC 4075        | MCG 0-31-   | Galaxy | VIR | 13.5 | 12.9 | 1.2' | 12 04.6 | +02 04 | 238 | Sa         |    |    |  |
| NGC 4076        | UGC 7061    | Galaxy | COM | 13.4 | 12.9 | 0.9' | 12 04.5 | +20 12 | 148 | Sab        |    |    | H III 396;NGC 4065 @ 6.5'                              |
| NGC 4077        | NGC 4140    | Galaxy | VIR | 13.1 | 13.1 | 1.2' | 12 04.6 | +01 47 | 238 | SO         |    |    | H III 258  |
| NGC 4078        | NGC 4107    | Galaxy | VIR | 13.2 | 12.4 | 1.3' | 12 04.8 | +10 36 | 193 | SO         |    |    | NGC 4082 @ 6.6';NGC 4082 @ 7.4';IC 2991 @ 6.7'         |
| NGC 4079        | UGC 7067    | Galaxy | VIR | 12.4 | 13.6 | 2.3' | 12 04.8 | -02 23 | 238 | Sbc        |    |    |  |
| NGC 4080        | UGC 7068    | Galaxy | COM | 13.8 | 13.1 | 1.2' | 12 04.9 | +27 00 | 148 | Ir         |    |    | H III 355  |
| NGC 4081        | UGC 7062    | Galaxy | UMA | 12.9 | 12.6 | 1.5' | 12 04.6 | +64 26 | 25  | Sa         |    |    |  |
| <b>NGC 4085</b> | UGC 7075    | Galaxy | UMA | 12.4 | 13.1 | 2.5' | 12 05.4 | +50 21 | 47  | SBc        |    |    | H I 224;P w NGC 4088;UGC 7075;Ho 326b                  |
| NGC 4086        | UGC 7076    | Galaxy | COM | 13.6 | 13.4 | 1'   | 12 05.5 | +20 15 | 148 | SO         |    |    | NGC 4090 @ 3.8'  |
| NGC 4087        | ESO 505-10  | Galaxy | HYA | 12.1 | 13.4 | 2.1' | 12 05.6 | -26 31 | 328 | E-SO       |    |    | H III 754  |
| <b>NGC 4088</b> | UGC 7081    | Galaxy | UMA | 10.6 | 13.2 | 5.6' | 12 05.6 | +50 32 | 47  | SBbc       |    |    | P w 4085 11' to south;distorted spir arms;UGC 7081     |
| NGC 4089        | MCG 4-29-   | Galaxy | COM | 13.6 | 13   | 0.5' | 12 05.6 | +20 33 | 148 | Elliptical |    |    |  |
| NGC 4090        | IC 2997;UGC | Galaxy | COM | 13.9 | 13.2 | 1.2' | 12 05.5 | +20 18 | 148 | Sab        |    |    |  |
| NGC 4092        | UGC 7087    | Galaxy | COM | 13.2 | 13.1 | 1'   | 12 05.8 | +20 29 | 148 | Sab        |    |    | NGC 4093 @ 2.6'  |
| NGC 4094        | MCG - 2-31- | Galaxy | CRV | 11.8 | 13.7 | 4.1' | 12 05.9 | -14 32 | 283 | SBc        |    |    |  |
| NGC 4095        | MCG 4-29-   | Galaxy | COM | 13.5 | -    | 0.5' | 12 05.9 | +20 34 | 148 | Elliptical |    |    | H III 382  |
| <b>NGC 4096</b> | UGC 7090    | Galaxy | UMA | 10.9 | 13.4 | 6.5' | 12 06.0 | +47 29 | 74  | SBc        |    |    | H I 207;nearly edge on                                 |
| NGC 4097        | UGC 7092    | Galaxy | UMA | 13.4 | 13.1 | 1.2' | 12 06.0 | +36 52 | 107 | SO         |    |    | H III 400  |
| NGC 4100        | UGC 7095    | Galaxy | UMA | 11.2 | 13.5 | 5.4' | 12 06.1 | +49 35 | 74  | Sbc        |    |    | H III 717;nearly edge on spiral                        |
| NGC 4101        | UGC 7093    | Galaxy | COM | 13.5 | 13.1 | 1'   | 12 06.2 | +25 33 | 148 | Sa         |    |    | H III 326  |
| <b>NGC 4102</b> | UGC 7096    | Galaxy | UMA | 11.2 | 12.8 | 3.1' | 12 06.4 | +52 43 | 47  | SBb Ring   |    |    | H I 225  |
| NGC 4104        | UGC 7099    | Galaxy | COM | 12.1 | 13.4 | 2.6' | 12 06.6 | +28 10 | 107 | SBO        |    |    | H II 370   |
| <b>NGC 4105</b> | ESO 440-54  | Galaxy | HYA | 10.6 | 12.5 | 2.8' | 12 06.7 | -29 46 | 368 | Elliptical |    |    | H II 865;Interacting P w NGC 4106                      |
| NGC 4106        | ESO 440-56  | Galaxy | HYA | 11.4 | 12.1 | 2.3' | 12 06.8 | -29 46 | 368 | SBO-a      |    |    | H II 866   |
| NGC 4108        | UGC 7101    | Galaxy | DRA | 12.3 | 13.1 | 1.7' | 12 06.7 | +67 10 | 25  | Sc         |    |    | w NGC 4108A;B  |
| NGC 4108A       | UGC 7088    | Galaxy | DRA | 13.8 | 13.4 | 1.4' | 12 05.8 | +67 15 | 25  | SBbc       |    |    | w NGC 4108;4108B                                       |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES                                     |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 4108B       | UGC 7106    | Galaxy  | DRA | 13.7 | 14   | 1.3' | 12 07.2 | +67 14 | 25  | SBd pec    |    |    | w NGC 4108;4108A                              |
| <b>NGC 4109</b> | MCG 7-25-   | Galaxy  | CVN | 13.9 | 13.7 | 0.7' | 12 06.9 | +43 00 | 74  | Sa         |    |    | near 4111                                     |
| NGC 4110        | UGC 7102    | Galaxy  | COM | 13.7 | 13.5 | 1.3' | 12 07.1 | +18 32 | 148 | SBb        |    |    |   |
| <b>NGC 4111</b> | UGC 7103    | Galaxy  | CVN | 10.7 | 12.2 | 4.6' | 12 07.0 | +43 04 | 74  | Sa         |    |    | H I 195;NGC 4109 @ 4.8';UGC 7103;Ho 333a      |
| NGC 4112        | ESO 321- 6  | Galaxy  | CEN | 12   | 12.3 | 1.6' | 12 07.2 | -40 13 | 401 | SBb        |    |    |   |
| NGC 4114        | MCG - 2-31- | Galaxy  | CRV | 13   | -    | 1.8' | 12 07.2 | -14 11 | 283 | SBa        |    |    | H III 533                                     |
| NGC 4116        | UGC 7111    | Galaxy  | VIR | 12   | 14.1 | 3.8' | 12 07.6 | +02 41 | 238 | SBc        |    |    | NGC 4123 @ 14 ' ;flattened bar shape          |
| NGC 4117        | UGC 7112    | Galaxy  | CVN | 13   | 13.4 | 2.5' | 12 07.8 | +43 08 | 74  | SO         |    |    | H III 708                                     |
| NGC 4119        | NGC 4124    | Galaxy  | VIR | 12.2 | -    | 3.9' | 12 08.2 | +10 23 | 193 | Sa         |    |    | H II 14                                       |
| NGC 4120        | UGC 7121    | Galaxy  | DRA | 13.5 | 13.1 | 1.7' | 12 08.5 | +69 33 | 25  | Scp        |    |    | H III 904                                     |
| <b>NGC 4121</b> | MCG 11-15-  | Galaxy  | DRA | 13.5 | 13.3 | 0.4' | 12 07.9 | +65 07 | 25  | Elliptical |    |    |   |
| NGC 4123        | UGC 7116    | Galaxy  | VIR | 11.4 | 14.1 | 4.3' | 12 08.2 | +02 53 | 238 | SBb        |    |    | H V 4;NGC 4116 @ 14 '                         |
| NGC 4124        | NGC 4119    | Galaxy  | VIR | 11.4 | 13.2 | 3.9' | 12 08.2 | +10 23 | 193 | Sa         |    |    | H I 33  |
| <b>NGC 4125</b> | UGC 7118    | Galaxy  | DRA | 9.7  | 12.9 | 6'   | 12 08.1 | +65 10 | 25  | Elliptical |    |    |   |
| NGC 4126        | UGC 7123    | Galaxy  | COM | 13.4 | 13.1 | 1.1' | 12 08.6 | +16 09 | 193 | SO         |    |    | H III 68                                      |
| NGC 4127        | UGC 7122    | Galaxy  | CAM | 12.6 | 13.7 | 2.5' | 12 08.4 | +76 48 | 9   | Sc         |    |    | H I 279                                       |
| NGC 4128        | UGC 7120    | Galaxy  | DRA | 12   | 12.7 | 2.4' | 12 08.5 | +68 46 | 25  | SO         |    |    | H I 263;Ho 337b @ 2';UGC 7120                 |
| NGC 4129        | NGC 4130    | Galaxy  | VIR | 12.5 | 12.7 | 2.3' | 12 08.9 | -09 02 | 283 | SBab       |    |    | H II 548;Nearly edge on barred spiral         |
| NGC 4130        | NGC 4129    | Galaxy  | VIR | 13.1 | -    | 2.3' | 12 08.9 | -09 02 | 283 | SBab       |    |    |   |
| NGC 4131        | UGC 7126    | Galaxy  | COM | 13.1 | 12.9 | 1.4' | 12 08.8 | +29 18 | 107 | SBO-a      |    |    | H III 356;NGC 4134 group                      |
| NGC 4132        | MCG 5-29-   | Galaxy  | COM | 13.9 | 12.6 | 1.1' | 12 09.0 | +29 15 | 107 | Sa         |    |    | H III 357                                     |
| NGC 4133        | UGC 7127    | Galaxy  | DRA | 12.3 | 13.1 | 1.8' | 12 08.8 | +74 54 | 9   | SBb        |    |    | H I 278                                       |
| NGC 4134        | UGC 7130    | Galaxy  | COM | 12.8 | 13.3 | 2.2' | 12 09.2 | +29 11 | 107 | Sb         |    |    | H II 371;Brightest in group                   |
| NGC 4135        | MCG 7-25-   | Galaxy  | CVN | 13.9 | 13.2 | 0.7' | 12 09.1 | +44 00 | 74  | SBbc       |    |    |   |
| NGC 4136        | UGC 7134    | Galaxy  | COM | 11   | 13.8 | 3.9' | 12 09.3 | +29 56 | 107 | SBc Ring   |    |    | H II 321                                      |
| NGC 4138        | UGC 7139    | Galaxy  | CVN | 11.3 | 12.8 | 2.9' | 12 09.5 | +43 41 | 74  | Sa         |    |    | H I 196                                       |
| NGC 4139        | MCG +00-31  | Galaxy  | VIR | 13.7 | 12.8 | 1'   | 12 04.6 | +01 48 | 238 | SO         |    |    |   |
| NGC 4141        | UGC 7147    | Galaxy  | UMA | 13.7 | 13.7 | 1.3' | 12 09.8 | +58 51 | 47  | SBc        |    |    | H III 795                                     |
| NGC 4142        | UGC 7140    | Galaxy  | UMA | 13.3 | 14.2 | 2.2' | 12 09.5 | +53 06 | 47  | SBcd       |    |    | H III 814                                     |
| <b>NGC 4143</b> | UGC 7142    | Galaxy  | CVN | 10.6 | 11.8 | 2.9' | 12 09.6 | +42 32 | 74  | SBO        |    |    | H IV 54                                       |
| NGC 4144        | UGC 7151    | Galaxy  | UMA | 11.6 | 13.7 | 6.1' | 12 10.0 | +46 27 | 74  | SBc        |    |    | H II 747                                      |
| NGC 4145        | UGC 7154    | Galaxy  | CVN | 11.3 | 14.6 | 5.9' | 12 10.0 | +39 53 | 74  | SBcd       |    |    | H I 169;NGC 4151 @ 29';Ho 342b @ 13';UGC 7154 |
| NGC 4146        | UGC 7163    | Galaxy  | COM | 12.7 | 13.2 | 1.4' | 12 10.3 | +26 26 | 148 | SBab       |    |    | H III 327;SN 1963d                            |
| <b>NGC 4147</b> | NGC 4153    | Glob CL | COM | 10.3 | -    | 4'   | 12 10.1 | +18 33 | 148 | VI         |    |    | H I 19;Stars F                                |
| NGC 4148        | UGC 7158    | Galaxy  | CVN | 13.3 | 13.6 | 1.5' | 12 10.1 | +35 53 | 107 | Sa         |    |    |   |
| NGC 4149        | NGC 4154    | Galaxy  | UMA | 13.2 | 11.9 | 1.3' | 12 10.5 | +58 18 | 47  | S pec      |    |    | H II 802                                      |
| <b>NGC 4150</b> | UGC 7165    | Galaxy  | COM | 11.6 | 13   | 2.3' | 12 10.6 | +30 24 | 107 | SO         |    |    | H I 73  |
| <b>NGC 4151</b> | UGC 7166    | Galaxy  | CVN | 10.8 | 14.2 | 6.8' | 12 10.5 | +39 24 | 74  | SBab Ri    |    |    | P w NGC 4145;NGC 4156 @ 5.2';Ho 345c @ 8.8'   |
| NGC 4152        | UGC 7169    | Galaxy  | COM | 12.2 | 13.5 | 2.3' | 12 10.6 | +16 02 | 193 | SBc        |    |    | H II 83                                       |
| <b>NGC 4153</b> | NGC 4147    | Glob CL | COM | 10.3 | -    | 4.1' | 12 10.1 | +18 33 | 148 | VI         |    |    | H I 11;equals NGC 4147; best possible ID      |
| NGC 4155        | UGC 7172    | Galaxy  | COM | 13.3 | 13.4 | 1.1' | 12 10.8 | +19 02 | 148 | Elliptical |    |    | Brightest in group                            |
| <b>NGC 4156</b> | UGC 7173    | Galaxy  | CVN | 13.2 | 13.5 | 1.3' | 12 10.8 | +39 28 | 74  | SBb        |    |    | H II 642;P w NGC 4151 @ 5.2';Ho 345c @ 7'     |
| NGC 4157        | UGC 7183    | Galaxy  | UMA | 11.4 | 13.6 | 6.7' | 12 11.1 | +50 29 | 47  | SBb        |    |    | H I 208;SN 1937a;1955a;edge on narrow streak  |
| NGC 4158        | UGC 7182    | Galaxy  | COM | 12.1 | 13.2 | 2'   | 12 11.2 | +20 11 | 148 | Sb         |    |    | H II 405                                      |
| NGC 4159        | UGC 7174    | Galaxy  | DRA | 13.4 | 12.8 | 1.3' | 12 10.9 | +76 08 | 9   | Sbc        |    |    | H III 941                                     |
| NGC 4161        | UGC 7191    | Galaxy  | UMA | 12.9 | 12.5 | 1.1' | 12 11.5 | +57 44 | 47  | Sc         |    |    | H II 803                                      |
| NGC 4162        | UGC 7193    | Galaxy  | COM | 12.2 | 13.4 | 2.3' | 12 11.9 | +24 07 | 148 | Sbc        |    |    | H II 353                                      |
| NGC 4163        | NGC 4167    | Galaxy  | CVN | 14   | 15.1 | 1.9' | 12 12.2 | +36 10 | 107 | Ir         |    |    | H III 399                                     |
| NGC 4165        | IC 3035;UGC | Galaxy  | VIR | 13.5 | 13.5 | 1.2' | 12 12.2 | +13 15 | 193 | SBab Ri    |    |    |   |
| NGC 4166        | UGC 7198    | Galaxy  | COM | 13.1 | 13.2 | 1.2' | 12 12.2 | +17 45 | 148 | SBO        |    |    |   |
| NGC 4167        | NGC 4163    | Galaxy  | CVN | 14   | -    | 1.9' | 12 12.2 | +36 10 | 107 | Ir         |    |    |   |
| NGC 4168        | UGC 7203    | Galaxy  | VIR | 11.2 | 13.2 | 2.8' | 12 12.3 | +13 12 | 193 | Elliptical |    |    | H II 105                                      |
| NGC 4169        | UGC 7202    | Galaxy  | COM | 12.2 | 12.6 | 1.8' | 12 12.3 | +29 11 | 107 | SO         |    |    | H III 358;Brightest in group                  |
| NGC 4170        |             | Star    | COM | 13.7 | -    |      | 12 12.2 | +29 10 | 107 |            |    |    | NGC 4169 group                                |
| NGC 4172        | UGC 7205    | Galaxy  | UMA | 13.2 | 13.5 | 1.3' | 12 12.2 | +56 11 | 47  | S pec      |    |    | H II 792                                      |
| NGC 4173        | UGC 7204    | Galaxy  | COM | 13   | 14.2 | 5'   | 12 12.4 | +29 12 | 107 | Scd        |    |    | H II 372; UGC 7204                            |
| NGC 4174        | UGC 7206    | Galaxy  | COM | 13.3 | 11.7 | 0.8' | 12 12.4 | +29 09 | 107 | Sa         |    |    | H III 359;NGC 4169 group                      |
| NGC 4175        | UGC 7211    | Galaxy  | COM | 13.2 | 12.6 | 1.8' | 12 12.5 | +29 10 | 107 | Sbc        |    |    | H III 360;NGC 4169 group                      |
| NGC 4177        | MCG - 2-31- | Galaxy  | CRV | 13   | -    | 1.7' | 12 12.7 | -14 01 | 283 | Sc         |    |    | H III 534                                     |
| NGC 4178        | IC 3042;UGC | Galaxy  | VIR | 11.4 | 13.7 | 5'   | 12 12.8 | +10 52 | 193 | SBcd       |    |    | SN 1963i;nearly edge on                       |
| <b>NGC 4179</b> | UGC 7214    | Galaxy  | VIR | 11   | 12.5 | 4.2' | 12 12.9 | +01 18 | 238 | SO         |    |    | H I 9;edge on spindle shape                   |
| NGC 4180        | NGC 4182    | Galaxy  | VIR | 12.6 | 12.4 | 1.5' | 12 13.1 | +07 02 | 193 | Sab        |    |    | H II 133                                      |
| NGC 4182        | NGC 4180    | Galaxy  | VIR | 13.5 | -    | 1.5' | 12 13.1 | +07 02 | 193 | Sab        |    |    |   |
| NGC 4183        | UGC 7222    | Galaxy  | CVN | 12.3 | 13.7 | 5.3' | 12 13.3 | +43 42 | 74  | Sc         |    |    | H III 697;SN 1968u                            |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|--|
| NGC 4185        | UGC 7225    | Galaxy | COM | 12.1 | 13.7 | 2.6'  | 12 13.4 | +28 31 | 107 | SBbc Rii   |    |    | H II 373   |
| NGC 4186        | UGC 7223;H  | Galaxy | COM | 13.8 | 13.5 | 1'    | 12 14.1 | +14 44 | 193 | Sab        |    |    |  |
| NGC 4187B       |             | Galaxy | CVN | 13.5 | -    | 0.3'  | 12 13.5 | +50 45 | 47  | Compac     |    |    |  |
| NGC 4188        | MCG - 2-31- | Galaxy | CRV | 14   | -    | 0.7'  | 12 14.1 | -12 35 | 283 | Sb         |    |    |  |
| NGC 4189        | IC 3050     | Galaxy | COM | 11.7 | 13.1 | 2.5'  | 12 13.8 | +13 25 | 193 | SBc        |    |    | H II 106   |
| NGC 4190        | UGC 7232    | Galaxy | CVN | 13.3 | 14.2 | 1.7'  | 12 13.7 | +36 38 | 107 | Ir         |    |    | H II 409   |
| NGC 4191        | UGC 7233    | Galaxy | VIR | 12.8 | 12.6 | 1.2'  | 12 13.8 | +07 12 | 193 | SO         |    |    |  |
| NGC 4193        | IC 3051     | Galaxy | VIR | 12.3 | 13   | 2.2'  | 12 13.9 | +13 10 | 193 | SBbc       |    |    | H II 163   |
| NGC 4194        | UGC 7241    | Galaxy | UMA | 12.5 | 13.1 | 1.8'  | 12 14.2 | +54 32 | 47  | Ir Bar     |    |    | H II 867   |
| NGC 4196        | UGC 7245    | Galaxy | COM | 12.8 | 12.8 | 1.2'  | 12 14.5 | +28 25 | 107 | SO         |    |    | H II 374   |
| NGC 4197        | UGC 7247    | Galaxy | VIR | 12.8 | 13.4 | 3.4'  | 12 14.6 | +05 48 | 193 | Sc         |    |    | H II 134   |
| NGC 4198        | UGC 7246    | Galaxy | UMA | 13.6 | 12.9 | 1'    | 12 14.4 | +56 01 | 47  | Sa         |    |    | H II 793   |
| NGC 4200        | UGC 7251    | Galaxy | VIR | 13   | 13.2 | 1.5'  | 12 14.7 | +12 11 | 193 | SO         |    |    | H II 164   |
| NGC 4201        | MCG - 2-31- | Galaxy | VIR | 14   | -    | 0.9'  | 12 14.7 | -11 35 | 283 | SO         |    |    |  |
| NGC 4202        | UGC 7337    | Galaxy | VIR | 13.6 | 13.2 | 1.2'  | 12 18.1 | -01 04 | 238 | Sbc        |    |    |  |
| <b>NGC 4203</b> | UGC 7256    | Galaxy | COM | 10.9 | 13.3 | 3.5'  | 12 15.1 | +33 12 | 107 | E-SO Ba    |    |    | H I 175  |
| NGC 4204        | UGC 7261    | Galaxy | COM | 12.4 | 14.8 | 3.6'  | 12 15.2 | +20 40 | 148 | SBd        |    |    | H III 397  |
| NGC 4205        | UGC 7258    | Galaxy | DRA | 12.9 | 12.7 | 1.7'  | 12 14.9 | +63 47 | 25  | S pec      |    |    |  |
| NGC 4206        | IC 3064     | Galaxy | VIR | 12.1 | 14.1 | 6.4'  | 12 15.3 | +13 01 | 193 | Sbc        |    |    | H II 165;Member Virgo Group                        |
| NGC 4207        | UGC 7268    | Galaxy | VIR | 12.5 | 12.6 | 1.6'  | 12 15.5 | +09 35 | 193 | Scd        |    |    |  |
| NGC 4208        | NGC 4212    | Galaxy | COM | 11.8 | -    | 3.2'  | 12 15.7 | +13 54 | 193 | Sc         |    |    | H II 107   |
| NGC 4210        | UGC 7264    | Galaxy | DRA | 12.5 | 13.6 | 2'    | 12 15.3 | +65 59 | 25  | SBb        |    |    | H III 850;NGC 4221 @ 15.6'                         |
| NGC 4212        | NGC 4208    | Galaxy | COM | 11.2 | 13   | 3.2'  | 12 15.7 | +13 54 | 193 | Sc         |    |    | H II 108   |
| NGC 4213        | UGC 7276    | Galaxy | COM | 12.5 | 13.7 | 1.7'  | 12 15.6 | +23 59 | 148 | Elliptical |    |    | H II 354;Brightest in cluster                      |
| <b>NGC 4214</b> | NGC 4228    | Galaxy | CVN | 9.8  | 14   | 8.4'  | 12 15.6 | +36 20 | 107 | Ir         |    |    | H I 95   |
| NGC 4215        | UGC 7281    | Galaxy | VIR | 12.1 | 12.2 | 1.8'  | 12 15.9 | +06 24 | 193 | Sa         |    |    | H II 135;edge on lens shape                        |
| <b>NGC 4216</b> | UGC 7284    | Galaxy | VIR | 10   | 12.8 | 7.8'  | 12 15.9 | +13 09 | 193 | SBb        |    |    | H I 35;UGC 7284;edge on streak;two other in field  |
| NGC 4217        | UGC 7282    | Galaxy | CVN | 11.2 | 13.3 | 4.8'  | 12 15.8 | +47 05 | 74  | Sb         |    |    | H II 748   |
| NGC 4218        | UGC 7283    | Galaxy | CVN | 12.5 | 12.1 | 0.9'  | 12 15.8 | +48 08 | 74  | Sa         |    |    | H III 718  |
| NGC 4219        | ESO 267-37  | Galaxy | CEN | 11.9 | 13.5 | 4.2'  | 12 16.5 | -43 19 | 401 | Sbc        |    |    |  |
| NGC 4219A       | ESO 267-38  | Galaxy | CEN | 13.7 | 13.2 | 1.3'  | 12 18.0 | -43 32 | 401 | SBc        |    |    |  |
| NGC 4220        | UGC 7290    | Galaxy | CVN | 11.4 | 13.1 | 3.9'  | 12 16.2 | +47 53 | 74  | Sa         |    |    | H I 209;p w NGC 4218 @ 15'                         |
| NGC 4221        | UGC 7288    | Galaxy | DRA | 12.3 | 13.7 | 2'    | 12 16.0 | +66 14 | 25  | SBO-a      |    |    |  |
| NGC 4222        | IC 3087     | Galaxy | COM | 13.3 | 13.6 | 3.1'  | 12 16.4 | +13 18 | 193 | Scd        |    |    | H II 109   |
| NGC 4223        | IC 3102     | Galaxy | VIR | 13   | -    | 2.5'  | 12 17.4 | +06 41 | 193 | Sa         |    |    | H II 137   |
| NGC 4224        | UGC 7292    | Galaxy | VIR | 11.8 | 12.7 | 2.5'  | 12 16.6 | +07 28 | 193 | Sa         |    |    | edge on w equitorial dust lane; 4233 & 4235 nearby |
| NGC 4225        | MCG - 2-31- | Galaxy | CRV | 14   | -    | 0.7'  | 12 16.6 | -12 20 | 283 | Sa         |    |    |  |
| NGC 4226        | UGC 7297    | Galaxy | CVN | 13.5 | 13   | 1'    | 12 16.4 | +47 02 | 74  | Sap        |    |    | Disturbed?;NGC 4226 @ 7.3'                         |
| NGC 4227        | UGC 7296    | Galaxy | CVN | 12.7 | 12.9 | 1.5'  | 12 16.6 | +33 31 | 107 | SBO-a      |    |    | H II 518;P w NGC 4229                              |
| NGC 4228        | NGC 4214    | Galaxy | CVN | 10.2 | -    | 8.4'  | 12 15.6 | +36 20 | 107 | Ir         |    |    |  |
| NGC 4229        | UGC 7299    | Galaxy | CVN | 13.2 | 13   | 1.1'  | 12 16.6 | +33 34 | 107 | Sa         |    |    | H II 519;P w NGC 4227                              |
| NGC 4230        | OCL 874     | Opn CL | CEN | 9.4  | -    | 6'    | 12 17.3 | -55 05 | 428 | IV 2 p     | 15 |    |  |
| NGC 4231        | UGC 7304    | Galaxy | CVN | 13.3 | 13.4 | 1.2'  | 12 16.8 | +47 27 | 74  | Sa         |    |    | H III 719;P w NGC 4232                             |
| NGC 4232        | UGC 7303    | Galaxy | CVN | 13.6 | 13.5 | 1.3'  | 12 16.8 | +47 26 | 74  | SBbc/P     |    |    | H III 720;P w NGC 4231 @ 1.1';disturbed            |
| NGC 4233        | UGC 7311    | Galaxy | VIR | 11.9 | 12.8 | 2.4'  | 12 17.1 | +07 37 | 193 | SBO        |    |    | H II 496;faint extensions N-S                      |
| NGC 4234        | Ho 358a     | Galaxy | VIR | 12.7 | 13.1 | 1.2'  | 12 17.2 | +03 41 | 238 | Ir         |    |    | Ho 358b @ 1.9' is a *                              |
| NGC 4235        | IC 3098     | Galaxy | VIR | 11.6 | 13   | 3.9'  | 12 17.2 | +07 11 | 193 | Sa         |    |    | H II 17;nearly edge on                             |
| <b>NGC 4236</b> | UGC 7306    | Galaxy | DRA | 9.6  | 15   | 22.6' | 12 16.7 | +69 28 | 25  | SBd        |    |    | H V 51;P w Ho 357b @ 9';L;F spiral structure       |
| NGC 4237        | UGC 7315    | Galaxy | COM | 11.6 | 12.6 | 2.1'  | 12 17.2 | +15 19 | 193 | SBbc Rii   |    |    | H II 11  |
| NGC 4238        | UGC 7308    | Galaxy | DRA | 13.6 | 13.3 | 1.8'  | 12 16.9 | +63 25 | 25  | Scd        |    |    | H III 851  |
| NGC 4239        | UGC 7316    | Galaxy | COM | 12.8 | 13.6 | 1.8'  | 12 17.2 | +16 32 | 193 | Elliptical |    |    |  |
| NGC 4240        | NGC 4243    | Galaxy | VIR | 14   | -    | 1.2'  | 12 17.4 | -09 57 | 283 | Elliptical |    |    |  |
| NGC 4241        | IC 3102     | Galaxy | VIR | 11.9 | 13.1 | 1.7'  | 12 18.0 | +06 39 | 193 | SBc        |    |    | H III 480  |
| NGC 4242        | UGC 7323    | Galaxy | CVN | 10.8 | 13.9 | 5.2'  | 12 17.5 | +45 37 | 74  | SBd        |    |    | H III 725  |
| NGC 4243        | NGC 4240    | Galaxy | VIR | 13.7 | -    | 1.2'  | 12 17.4 | -09 57 | 283 | Elliptical |    |    |  |
| <b>NGC 4244</b> | UGC 7322    | Galaxy | CVN | 10.4 | 14   | 15.9' | 12 17.5 | +37 48 | 107 | Sc         |    |    | H V 41   |
| <b>NGC 4245</b> | UGC 7328    | Galaxy | COM | 11.4 | 13.3 | 3.3'  | 12 17.6 | +29 36 | 107 | SBO-a R    |    |    | H I 74   |
| NGC 4246        | IC 3113     | Galaxy | VIR | 12.7 | 13.8 | 2.3'  | 12 18.0 | +07 11 | 193 | Sc         |    |    | H III 91   |
| NGC 4247        | Ho 359c     | Galaxy | VIR | 13.5 | 13.3 | 0.8'  | 12 18.0 | +07 16 | 193 | SBab/P     |    |    |  |
| NGC 4248        | UGC 7335    | Galaxy | CVN | 12.5 | 13.7 | 2.9'  | 12 17.8 | +47 25 | 74  | SBb        |    |    | H II 742   |
| NGC 4250        | UGC 7329    | Galaxy | DRA | 11.8 | 13.6 | 2.3'  | 12 17.4 | +70 48 | 25  | SBO-a      |    |    | H I 264  |
| <b>NGC 4251</b> | UGC 7338    | Galaxy | COM | 10.7 | 12.4 | 3.6'  | 12 18.1 | +28 10 | 107 | SBO Rii    |    |    | H I 89;lens shape                                  |
| NGC 4252        | UGC 7343    | Galaxy | VIR | 14   | 13.3 | 1.3'  | 12 18.5 | +05 34 | 193 | Sb         |    |    |  |
| NGC 4253        | UGC 7344    | Galaxy | COM | 13.1 | 12.7 | 0.9'  | 12 18.4 | +29 49 | 107 | SBa        |    |    | H III 702  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 4255        | UGC 7348    | Galaxy | VIR | 12.8 | 12.3 | 1.3' | 12 18.9 | +04 47 | 238 | SO         |    |    |   |
| NGC 4256        | UGC 7351    | Galaxy | DRA | 11.9 | 13.1 | 4.1' | 12 18.7 | +65 54 | 25  | Sb         |    |    | H II 846;edge-on spindle                              |
| NGC 4257        | MCG 1-31-   | Galaxy | VIR | 14   | 13   | 1'   | 12 19.1 | +05 44 | 193 | Sab        |    |    |   |
| NGC 4259        | UGC 7359    | Galaxy | VIR | 13.6 | 12.7 | 1.1' | 12 19.4 | +05 23 | 238 | SO         |    |    |   |
| NGC 4260        | UGC 7361    | Galaxy | VIR | 11.8 | 13   | 2.4' | 12 19.4 | +06 06 | 193 | SBab       |    |    | H II 138  |
| <b>NGC 4261</b> | UGC 7360    | Galaxy | VIR | 10.4 | 13.3 | 3.8' | 12 19.4 | +05 49 | 193 | E2         |    |    | NGC 4264 @ 3.4';NGC 4257 @ 7.1';UGC 7360;3C270        |
| NGC 4262        | UGC 7365    | Galaxy | COM | 11.6 | 12.7 | 1.8' | 12 19.5 | +14 53 | 193 | E-SO Ba    |    |    | H II 110  |
| NGC 4263        | NGC 4265    | Galaxy | CRV | 14   | -    | 1.2' | 12 19.7 | -12 14 | 283 | Sb         |    |    | H III 535   |
| <b>NGC 4264</b> | UGC 7364    | Galaxy | VIR | 12.8 | 12.4 | 0.9' | 12 19.6 | +05 51 | 193 | SBO-a      |    |    | H II 140;NGC 4261 @ 3.4'                              |
| NGC 4265        | NGC 4263    | Galaxy | CRV | 12.6 | -    | 1.2' | 12 19.7 | -12 14 | 283 | Sb         |    |    |   |
| NGC 4266        | UGC 7368    | Galaxy | VIR | 13.7 | 13.3 | 1.8' | 12 19.7 | +05 32 | 193 | SBa        |    |    |   |
| NGC 4267        | UGC 7373    | Galaxy | VIR | 10.9 | 13.3 | 3'   | 12 19.8 | +12 48 | 193 | E-SO Ba    |    |    | H II 166  |
| <b>NGC 4268</b> | UGC 7371    | Galaxy | VIR | 12.8 | 12.6 | 1.4' | 12 19.8 | +05 17 | 238 | SBO-a      |    |    | near 4273   |
| NGC 4269        | UGC 7372;   | Galaxy | VIR | 12.9 | 12.7 | 1.3' | 12 19.8 | +06 01 | 193 | Sa         |    |    |   |
| NGC 4270        | UGC 7376    | Galaxy | VIR | 12.2 | 12.7 | 2'   | 12 19.8 | +05 28 | 238 | SO         |    |    | H II 568;In group w NGC 4273 & 4281                   |
| NGC 4271        | UGC 7375    | Galaxy | UMA | 12.6 | 13.1 | 1.5' | 12 19.5 | +56 44 | 47  | E-SO       |    |    | H II 804  |
| NGC 4272        | UGC 7378    | Galaxy | COM | 13.1 | 13   | 1'   | 12 19.8 | +30 20 | 107 | Elliptical |    |    | H III 299   |
| <b>NGC 4273</b> | UGC 7380    | Galaxy | VIR | 11.9 | 13.1 | 2.3' | 12 19.9 | +05 21 | 238 | SBc        |    |    | H II 569;SN 1936a;NGC 4277 @ 2 '                      |
| <b>NGC 4274</b> | UGC 7377    | Galaxy | COM | 10.4 | 13.3 | 6.8' | 12 19.8 | +29 37 | 107 | SBab Ri    |    |    | H I 75;Saturn-like inner ring w F outer halo          |
| NGC 4275        | UGC 7382    | Galaxy | COM | 13.1 | 12.3 | 0.8' | 12 19.9 | +27 37 | 148 | Sb         |    |    | H II 376  |
| NGC 4276        | UGC 7385    | Galaxy | VIR | 12.4 | 13.2 | 1.6' | 12 20.1 | +07 41 | 193 | SBc        |    |    |   |
| <b>NGC 4277</b> | MCG 1-32-   | Galaxy | VIR | 13.4 | 13.1 | 1.1' | 12 20.1 | +05 20 | 238 | SBO-a      |    |    | H II 571 , near 4273                                  |
| <b>NGC 4278</b> | UGC 7386    | Galaxy | COM | 10.2 | 13.1 | 4'   | 12 20.1 | +29 17 | 108 | Elliptical |    |    | Triple chain w NGC 4283 @ 3.6';NGC 4286 @ 8.8'        |
| NGC 4279        | MCG - 2-32- | Galaxy | VIR | 14   | -    | 1.1' | 12 20.4 | -11 40 | 283 | Sa         |    |    |   |
| <b>NGC 4281</b> | UGC 7389    | Galaxy | VIR | 11.3 | 12.8 | 3'   | 12 20.4 | +05 23 | 238 | Sa         |    |    | H II 573  |
| NGC 4282        | MCG 1-32-   | Galaxy | VIR | 13.9 | 12.7 | 0.8' | 12 20.4 | +05 34 | 193 | Sa         |    |    |   |
| <b>NGC 4283</b> | UGC 7390    | Galaxy | COM | 12.1 | 12.9 | 1.4' | 12 20.3 | +29 19 | 108 | Elliptical |    |    | Triple chain w NGC 4278 @ 3.6';NGC 4286 @ 5.2'        |
| NGC 4284        | UGC 7393    | Galaxy | UMA | 13.5 | 14.5 | 2.5' | 12 20.2 | +58 06 | 47  | Sbc        |    |    | H III 798;P w NGC 4290                                |
| NGC 4285        | MCG - 2-32- | Galaxy | VIR | 14   | -    | 0.9' | 12 20.7 | -11 39 | 283 | Sa         |    |    |   |
| NGC 4286        | IC 3181     | Galaxy | COM | 13.1 | 13.4 | 1.5' | 12 20.7 | +29 21 | 108 | Sa         |    |    | 3 Chain w NGC 4278 @ 8.8';NGC 4283 @ 5.2';H III 300   |
| NGC 4288        | UGC 7399    | Galaxy | CVN | 12.9 | 14.1 | 2.2' | 12 20.6 | +46 18 | 74  | SBcd       |    |    | H III 726;P w Ho 371b @ 2.2'                          |
| NGC 4289        | UGC 7403    | Galaxy | VIR | 13.9 | 14.1 | 3.9' | 12 21.0 | +03 43 | 238 | Sc         |    |    |   |
| NGC 4290        | UGC 7402    | Galaxy | UMA | 11.8 | 13.1 | 2.2' | 12 20.8 | +58 06 | 47  | SBab Ri    |    |    | H II 805;in field of 70 UMA                           |
| NGC 4291        | UGC 7397    | Galaxy | DRA | 11.5 | 12.7 | 2'   | 12 20.3 | +75 22 | 9   | Elliptical |    |    | H I 275;P w NGC 4319                                  |
| NGC 4292        | UGC 7404;   | Galaxy | VIR | 12.2 | 12.8 | 1.6' | 12 21.3 | +04 36 | 238 | SBO        |    |    | comp (Ho 375b;?NGC 4292A?) @ 2.2'                     |
| <b>NGC 4293</b> | UGC 7405    | Galaxy | COM | 10.4 | 13.1 | 5.5' | 12 21.2 | +18 23 | 148 | SBO-a      |    |    | H V 5;Spiral pattern dim;heavy dust lanes             |
| NGC 4294        | UGC 7407    | Galaxy | VIR | 12.1 | 13.4 | 3.2' | 12 21.3 | +11 31 | 193 | SBc        |    |    | H II 61;NGC 4299 6' east                              |
| NGC 4295        | MCG 5-29-   | Galaxy | COM | 13.6 | -    | 0.6' | 12 21.2 | +28 10 | 108 | SO         |    |    |   |
| NGC 4296        | UGC 7409    | Galaxy | VIR | 12.7 | 12.7 | 1.4' | 12 21.5 | +06 39 | 193 | SBO        |    |    | H III 92  |
| NGC 4298        | UGC 7412    | Galaxy | COM | 11.3 | 13.1 | 3.2' | 12 21.5 | +14 36 | 193 | Sc         |    |    | H II 111  |
| NGC 4299        | UGC 7414    | Galaxy | VIR | 12.5 | 13.5 | 1.7' | 12 21.7 | +11 30 | 193 | SBd        |    |    | H II 62   |
| NGC 4300        | UGC 7413    | Galaxy | VIR | 12.9 | 12.7 | 1.5' | 12 21.7 | +05 23 | 238 | Sa Ring    |    |    | H II 572  |
| NGC 4301        | NGC 4303A   | Galaxy | VIR | 13.6 | 13.2 | 1.6' | 12 22.5 | +04 34 | 238 | SBc        |    |    | NGC 4303 @ 10 '                                       |
| NGC 4302        | UGC 7418    | Galaxy | COM | 11.6 | 13.3 | 5.3' | 12 21.7 | +14 36 | 193 | Sc         |    |    | H II 112;Nearly edge-on spiral w equatorial dust lane |
| NGC 4303A       | NGC 4301    | Galaxy | VIR | 13   | 13.6 | 1.6' | 12 22.5 | +04 34 | 238 | SBc        |    |    |   |
| NGC 4304        | ESO 380-20  | Galaxy | HYA | 11.6 | 13.5 | 2.6' | 12 22.2 | -33 29 | 369 | SBbc       |    |    |   |
| NGC 4305        | UGC 7432;H  | Galaxy | VIR | 12.6 | 13.5 | 2.2' | 12 22.1 | +12 44 | 193 | Sa         |    |    |   |
| NGC 4306        | Ho 381b     | Galaxy | VIR | 12.6 | 13.3 | 1.6' | 12 22.1 | +12 47 | 193 | SBO        |    |    |   |
| NGC 4307        | Ho 380a     | Galaxy | VIR | 12   | 12.9 | 3.5' | 12 22.1 | +09 02 | 193 | Sb         |    |    | spindle shaped edge on                                |
| NGC 4308        | UGC 7426    | Galaxy | COM | 13.4 | 12.8 | 0.8' | 12 21.9 | +30 04 | 108 | Elliptical |    |    |   |
| NGC 4309        | Ho 382a     | Galaxy | VIR | 12.7 | 13.3 | 1.8' | 12 22.2 | +07 09 | 193 | SBO-a      |    |    |   |
| NGC 4310        | NGC 4338    | Galaxy | COM | 12.2 | 13.2 | 2.4' | 12 22.4 | +29 12 | 108 | SBO-a R    |    |    | H II 378  |
| NGC 4312        | UGC 7442    | Galaxy | COM | 11.7 | 13.3 | 4.6' | 12 22.5 | +15 32 | 193 | Sab        |    |    | H II 628  |
| NGC 4313        | UGC 7445    | Galaxy | VIR | 11.6 | 13   | 3.8' | 12 22.6 | +11 48 | 193 | Sab        |    |    | H II 63;spindle shaped edge on                        |
| <b>NGC 4314</b> | UGC 7443    | Galaxy | COM | 10.6 | 13.4 | 3.9' | 12 22.5 | +29 54 | 108 | SBa        |    |    | H I 76  |
| NGC 4316        | UGC 7447    | Galaxy | VIR | 12.9 | 13   | 2.5' | 12 22.7 | +09 20 | 193 | Sc         |    |    |   |
| NGC 4318        | UGC 7446    | Galaxy | VIR | 13.3 | 12.1 | 0.7' | 12 22.7 | +08 12 | 193 | Elliptical |    |    |   |
| NGC 4319        | UGC 7429    | Galaxy | DRA | 11.9 | 13.8 | 2.8' | 12 21.7 | +75 19 | 9   | SBab       |    |    | H I 276;NGC 4291 @ 7.4'                               |
| NGC 4320        | UGC 7452    | Galaxy | VIR | 13.8 | 13.1 | 1'   | 12 23.0 | +10 33 | 193 | Sb         |    |    | NGC 4325 @ 4.9'                                       |
| <b>NGC 4322</b> | NGC 4323    | Star   | COM | 13.9 | 13.6 |      | 12 22.7 | +15 54 | 193 |            |    |    | NGC 4321 @ 5.2' , near <b>M100</b>                    |
| NGC 4324        | Ho 388a     | Galaxy | VIR | 11.6 | 12.8 | 2.9' | 12 23.1 | +05 15 | 238 | Sa Ring    |    |    | Ho 388b @ 1.1' is a *                                 |
| NGC 4325        | NGC 4368    | Galaxy | VIR | 13.3 | 12.6 | 1'   | 12 23.1 | +10 37 | 193 | Elliptical |    |    |   |
| NGC 4326        | UGC 7454    | Galaxy | VIR | 13.3 | 13.7 | 1.4' | 12 23.2 | +06 04 | 193 | SBab       |    |    | H II 141;NGC 4339 group;NGC 4339 @ 5.7'               |
| NGC 4328        | MCG 3-32-   | Galaxy | COM | 13   | 13.5 | 1.4' | 12 23.3 | +15 49 | 193 | E-SO       |    |    | H II 84   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| NGC 4329        | MCG - 2-32- | Galaxy  | CRV | 14   | -    | 1.1'  | 12 23.3 | -12 34 | 283 | Elliptical |    |      |  |
| NGC 4330        | UGC 7456    | Galaxy  | VIR | 12.4 | 13.7 | 4.5'  | 12 23.3 | +11 22 | 193 | Sc         |    |      |  |
| NGC 4332        | UGC 7453    | Galaxy  | DRA | 12.2 | 13.3 | 2.1'  | 12 22.8 | +65 51 | 25  | SBa        |    |      | H II 847   |
| NGC 4333        | MCG 1-32-   | Galaxy  | VIR | 13.6 | 12.9 | 0.8'  | 12 23.4 | +06 02 | 193 | SBab       |    |      | H II 142   |
| NGC 4334        | UGC 7458    | Galaxy  | VIR | 13   | 13.8 | 2.2'  | 12 23.4 | +07 28 | 193 | SBab       |    |      |  |
| NGC 4335        | UGC 7455    | Galaxy  | UMA | 12.4 | 13.5 | 1.9'  | 12 23.0 | +58 27 | 47  | Elliptical |    |      | H II 806;SN 1955e                                      |
| NGC 4336        | IC 3254     | Galaxy  | COM | 12.5 | 13   | 2'    | 12 23.5 | +19 26 | 148 | SBO-a      |    |      | H II 406   |
| NGC 4337        | OCL 878     | Opn CL  | CRU | 8.9  | -    | 3.5'  | 12 24.1 | -58 07 | 428 | II 3 p     |    | 10.5 |  |
| NGC 4339        | UGC 7461    | Galaxy  | VIR | 11.4 | 13.2 | 2.3'  | 12 23.6 | +06 05 | 193 | Elliptical |    |      | Brightest of 3;NGC 4333 @ 4 ' ;NGC 4326 @ 5.7'         |
| <b>NGC 4340</b> | UGC 7467    | Galaxy  | COM | 11.2 | 13.5 | 3.1'  | 12 23.6 | +16 43 | 193 | SBO-a R    |    |      | H II 85;Theta struct;NGC 4350 @ 5.7';comp @ 2.3'       |
| NGC 4341        | IC 3260     | Galaxy  | VIR | 13.2 | 13   | 1.7'  | 12 23.9 | +07 06 | 193 | SBO        |    |      | based on UGC and Zwicky;H III 95                       |
| NGC 4342        | IC 3256     | Galaxy  | VIR | 12.5 | 12.1 | 1.2'  | 12 23.7 | +07 03 | 193 | SO         |    |      | H III 96;edge on lenticular;4 F galaxies north         |
| NGC 4343        | UGC 7465    | Galaxy  | VIR | 12.1 | 12.6 | 2.3'  | 12 23.6 | +06 57 | 193 | Sb         |    |      | H III 94;based on UGC and Zwicky                       |
| NGC 4344        | UGC 7468    | Galaxy  | COM | 12.3 | 13.3 | 1.4'  | 12 23.6 | +17 32 | 148 | SBO        |    |      | H III 31;Ho 390b @ 1.7' is a *                         |
| <b>NGC 4346</b> | UGC 7463    | Galaxy  | CVN | 11.1 | 12.6 | 3.2'  | 12 23.5 | +47 00 | 74  | SBO        |    |      | H I 210  |
| NGC 4348        | MCG 0-32-   | Galaxy  | VIR | 12.5 | 13.3 | 3.2'  | 12 23.9 | -03 27 | 238 | Sbc        |    |      | H II 625;Spindle shaped edge on                        |
| <b>NGC 4350</b> | UGC 7473    | Galaxy  | COM | 11   | 12.5 | 2.9'  | 12 24.0 | +16 42 | 193 | SO         |    |      | H II 86;NGC 4340 @ 5.6';lenticular                     |
| NGC 4351        | NGC 4354    | Galaxy  | VIR | 12.6 | 13.6 | 2'    | 12 24.0 | +12 12 | 193 | SBab/P     |    |      |  |
| NGC 4352        | UGC 7475    | Galaxy  | VIR | 12.6 | 13.2 | 2'    | 12 24.1 | +11 13 | 193 | SO         |    |      | H II 64  |
| NGC 4353        | IC 3266     | Galaxy  | VIR | 13.6 | 13.2 | 0.9'  | 12 24.0 | +07 47 | 193 | Ir Bar     |    |      |  |
| NGC 4354        | NGC 4351    | Galaxy  | VIR | 13   | -    | 2'    | 12 24.0 | +12 12 | 193 | SBab/P     |    |      |  |
| NGC 4356        | IC 3273     | Galaxy  | VIR | 13.3 | 13.6 | 2.8'  | 12 24.2 | +08 32 | 193 | Sc         |    |      | H III 481  |
| NGC 4357        | NGC 4381    | Galaxy  | CVN | 12.4 | 13.9 | 3.7'  | 12 24.0 | +48 47 | 74  | Sbc        |    |      |  |
| NGC 4359        | UGC 7483    | Galaxy  | COM | 12.7 | 13.7 | 3.5'  | 12 24.2 | +31 31 | 108 | Sbc        |    |      | H III 648  |
| NGC 4360A       | NGC 4360    | Galaxy  | VIR | 13.9 | -    | 1.5'  | 12 24.4 | +09 18 | 193 | Elliptical |    |      |  |
| <b>NGC 4361</b> | ESO 573-PN  | Pln Neb | CRV | 10.9 | 11.1 | 80"   | 12 24.5 | -18 47 | 328 | 3a(2)      |    | 13.3 | H I 65;PK294+43.1                                      |
| NGC 4363        | ZWG 352. 3  | Galaxy  | DRA | 13.5 | 14.1 | 1.5'  | 12 23.5 | +74 57 | 9   | Sb         |    |      | H III 938  |
| <b>NGC 4365</b> | UGC 7488    | Galaxy  | VIR | 9.6  | 13.4 | 6.5'  | 12 24.5 | +07 19 | 193 | Elliptical |    |      | H I 30;NGC 4370 @ 10 '                                 |
| NGC 4369        | UGC 7489    | Galaxy  | CVN | 11.7 | 13.1 | 2.4'  | 12 24.6 | +39 23 | 75  | Sa         |    |      | H I 166  |
| NGC 4370        | UGC 7492    | Galaxy  | VIR | 12.6 | 12.5 | 1.3'  | 12 24.9 | +07 27 | 193 | Sa         |    |      | H II 144;NGC 4365 @ 10 '                               |
| <b>NGC 4371</b> | UGC 7493    | Galaxy  | VIR | 10.8 | 13.1 | 4'    | 12 24.9 | +11 42 | 193 | SBO-a R    |    |      | H I 22   |
| NGC 4373        | ESO 322- 6  | Galaxy  | CEN | 10.9 | 13.1 | 3.6'  | 12 25.3 | -39 46 | 402 | E-SO Ba    |    |      |  |
| NGC 4373A       | ESO 322- 8  | Galaxy  | CEN | 11.6 | 12.3 | 2.6'  | 12 25.6 | -39 19 | 402 | SO         |    |      |  |
| NGC 4375        | UGC 7496    | Galaxy  | COM | 12.8 | 13.2 | 1.4'  | 12 25.0 | +28 33 | 108 | SBab/P     |    |      | H II 379   |
| NGC 4376        | UGC 7498    | Galaxy  | VIR | 13.4 | 13.4 | 1.4'  | 12 25.3 | +05 44 | 193 | Ir         |    |      | H II 530;possibly 49' north of NGC 4378                |
| NGC 4377        | UGC 7501    | Galaxy  | COM | 11.9 | 12.7 | 1.7'  | 12 25.2 | +14 46 | 193 | E-SO       |    |      | H I 12   |
| NGC 4378        | UGC 7497    | Galaxy  | VIR | 11.7 | 13.8 | 2.5'  | 12 25.3 | +04 55 | 238 | Sa         |    |      | H I 123;possibly 49' south of NGC 4376                 |
| NGC 4379        | UGC 7502    | Galaxy  | COM | 11.7 | 12.8 | 2'    | 12 25.2 | +15 36 | 193 | E-SO       |    |      | H II 87  |
| NGC 4380        | UGC 7503    | Galaxy  | VIR | 11.7 | 13.6 | 3.2'  | 12 25.4 | +10 01 | 193 | Sab        |    |      | spiral pattern amorphous                               |
| NGC 4381        | NGC 4357    | Galaxy  | CVN | 13.2 | -    | 3.7'  | 12 24.0 | +48 47 | 74  | Sbc        |    |      | H II 743   |
| NGC 4383        | UGC 7507    | Galaxy  | COM | 12.1 | 12.7 | 2'    | 12 25.4 | +16 28 | 193 | Sa         |    |      | comp @ 2.6'  |
| NGC 4384        | UGC 7506    | Galaxy  | UMA | 13   | 13.2 | 1.3'  | 12 25.2 | +54 30 | 47  | Sap        |    |      |  |
| NGC 4385        | UGC 7515    | Galaxy  | VIR | 12.5 | 13.6 | 2.1'  | 12 25.7 | +00 34 | 238 | SBO-a      |    |      | SS VIR in field  |
| NGC 4386        | UGC 7491    | Galaxy  | DRA | 11.7 | 12.9 | 2.6'  | 12 24.5 | +75 32 | 9   | SBO        |    |      | H I 277  |
| NGC 4387        | UGC 7517    | Galaxy  | VIR | 12.1 | 12.8 | 1.7'  | 12 25.7 | +12 49 | 193 | Elliptical |    |      | H II 167;NGC 4374 @ 10.5'                              |
| <b>NGC 4388</b> | UGC 7520    | Galaxy  | VIR | 11   | 13   | 5.6'  | 12 25.8 | +12 40 | 193 | Sb         |    |      | H II 168;edge on lens shape;16' SE from <b>M 84</b>    |
| NGC 4389        | UGC 7514    | Galaxy  | CVN | 11.7 | 12.9 | 2.6'  | 12 25.6 | +45 41 | 75  | SB/P       |    |      | H II 749;Peculiar                                      |
| NGC 4390        | IC 3319-20  | Galaxy  | VIR | 12.6 | 13.3 | 1.6'  | 12 25.8 | +10 28 | 193 | SBbc       |    |      | H III 39   |
| NGC 4391        | UGC 7511    | Galaxy  | DRA | 12.7 | 12.9 | 1.1'  | 12 25.3 | +64 56 | 25  | E-SO       |    |      | H III 852  |
| NGC 4393        | UGC 7521    | Galaxy  | COM | 12.1 | 14.4 | 3.2'  | 12 25.9 | +27 34 | 148 | SBcd       |    |      | H III 361  |
| <b>NGC 4394</b> | UGC 7523    | Galaxy  | COM | 10.9 | 13.4 | 3.4'  | 12 25.9 | +18 13 | 148 | SBab       |    |      | H II 55;P w NGC 4382 @ 7.8'                            |
| <b>NGC 4395</b> | UGC 7524    | Galaxy  | CVN | 10.2 | 15.4 | 12.3' | 12 25.8 | +33 33 | 108 | SB Ring    |    |      | H V 29 , several NGC nebulae inside                    |
| NGC 4396        | Ho 400a     | Galaxy  | COM | 12.6 | 13.7 | 3.3'  | 12 26.0 | +15 40 | 193 | Scd        |    |      | Ho 400b @ 6.2' is a dble *                             |
| <b>NGC 4399</b> | MCG 6-27-   | Neb+Gx  | CVN | -    | -    |       | 12 25.7 | +33 31 | 108 | E+*        |    |      | An HII region within the GALXY NGC 4395 on the SW side |
| <b>NGC 4400</b> | MCG 6-27-   | Neb+Gx  | CVN | -    | -    |       | 12 25.9 | +33 31 | 108 | E+*        |    |      | An HII region within the GALXY NGC 4395 on the SE side |
| <b>NGC 4401</b> | MCG 6-27-   | Neb+Gx  | CVN | -    | -    |       | 12 26.0 | +33 32 | 108 | E+*        |    |      | An HII region within the GALXY NGC 4395 on the SE side |
| NGC 4402        | Ho 403d     | Galaxy  | VIR | 11.8 | 13.2 | 3.6'  | 12 26.1 | +13 07 | 193 | Sb         |    |      | NGC 4406 @ 10 ' ;edge on w dust lane;10 N from M 86    |
| NGC 4403        | MCG - 1-32- | Galaxy  | VIR | 14   | -    | 1.9'  | 12 26.2 | -07 41 | 283 | Sab        |    |      | H III 755  |
| NGC 4404        | MCG - 1-32- | Galaxy  | VIR | 14   | -    | 1.2'  | 12 26.3 | -07 41 | 283 | E-SO       |    |      | H III 756  |
| NGC 4405        | IC 788      | Galaxy  | COM | 12   | 12.6 | 1.6'  | 12 26.1 | +16 11 | 193 | Sa         |    |      | H II 88  |
| NGC 4407        | NGC 4413    | Galaxy  | VIR | 12.7 | -    | 2.3'  | 12 26.5 | +12 37 | 193 | SBab R     |    |      |  |
| NGC 4408        | ZWG 158.10  | Galaxy  | COM | 13.8 | -    | 0.4'  | 12 26.3 | +27 52 | 148 | Elliptical |    |      |  |
| NGC 4409        | NGC 4420    | Galaxy  | VIR | 12.8 | -    | 2'    | 12 27.0 | +02 30 | 238 | SBbc       |    |      | H III 17   |
| NGC 4410A       | NGC 4410-1  | Galaxy  | VIR | 12.8 | 12.7 | 0.5'  | 12 26.5 | +09 01 | 193 | Sab pec    |    |      | Double system w NGC 4410B @ 0.3';contact               |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|---|
| NGC 4410B       | NGC 4410-2  | Galaxy | VIR | 13.9 | 12.2 | 0.5'  | 12 26.5 | +09 01 | 193 | Sbc        |    |    | Double system w NGC 4410A @ 0.3';contact                    |
| NGC 4411A       | NGC 4411-1  | Galaxy | VIR | 12.7 | 14.1 | 2'    | 12 26.5 | +08 52 | 193 | SBd        |    |    | NGC 4411B @ 4.3   |
| NGC 4411B       | NGC 4411-2  | Galaxy | VIR | 12.3 | 14.2 | 2.5'  | 12 26.8 | +08 53 | 193 | SBd        |    |    | NGC 4411A @ 4.3'  |
| NGC 4412        | UGC 7536    | Galaxy | VIR | 12.4 | 12.8 | 1.4'  | 12 26.6 | +03 58 | 238 | SB/P       |    |    | H II 34   |
| NGC 4413        | NGC 4407    | Galaxy | VIR | 12.3 | 13.5 | 2.3'  | 12 26.5 | +12 37 | 193 | SBab Rii   |    |    | H II 169;12' ESE from NGC 4388                              |
| <b>NGC 4414</b> | UGC 7539    | Galaxy | COM | 10.1 | 12.1 | 3.6'  | 12 26.5 | +31 13 | 108 | Sc         |    |    | H I 77  |
| NGC 4415        | UGC 7540    | Galaxy | VIR | 12.1 | 12.5 | 1.4'  | 12 26.7 | +08 26 | 193 | Sa         |    |    | H III 482   |
| NGC 4416        | UGC 7541    | Galaxy | VIR | 12.4 | 13.3 | 1.7'  | 12 26.8 | +07 55 | 193 | SBc        |    |    |   |
| NGC 4417        | NGC 4437    | Galaxy | VIR | 11.1 | 12.6 | 3.3'  | 12 26.8 | +09 35 | 193 | SBO        |    |    | comp @ 2.8';H II 155;edge on lens shape                     |
| NGC 4418        | NGC 4355    | Galaxy | VIR | 13.1 | 13   | 1.5'  | 12 26.9 | -00 53 | 238 | Sa         |    |    | H III 492   |
| <b>NGC 4419</b> | UGC 7551    | Galaxy | COM | 11.2 | 12.4 | 3.3'  | 12 26.9 | +15 03 | 193 | SBa        |    |    | H II 113  |
| NGC 4420        | NGC 4409    | Galaxy | VIR | 12.1 | 12.7 | 2'    | 12 27.0 | +02 30 | 238 | SBbc       |    |    | H II 23   |
| NGC 4421        | UGC 7554    | Galaxy | COM | 11.6 | 13.3 | 2.7'  | 12 27.0 | +15 28 | 193 | SBO-a      |    |    | H II 89   |
| NGC 4423        | UGC 7556    | Galaxy | VIR | 13.5 | 13.2 | 2.3'  | 12 27.2 | +05 53 | 193 | Sd         |    |    | H III 145   |
| NGC 4424        | UGC 7561    | Galaxy | VIR | 11.7 | 13.6 | 3.5'  | 12 27.2 | +09 25 | 193 | SBa        |    |    | SN 1895a;comp @ 0.6';NGC 4417 11' NW                        |
| NGC 4425        | UGC 7562    | Galaxy | VIR | 11.8 | 12.9 | 2.8'  | 12 27.2 | +12 44 | 193 | SBO-a      |    |    | H II 170;lens shaped;19' SE from M86                        |
| NGC 4428        | MCG - 1-32- | Galaxy | VIR | 12.6 | 13   | 1.7'  | 12 27.5 | -08 10 | 283 | SBc        |    |    | Compact spiral;P w NGC 4433 @ 7'                            |
| <b>NGC 4429</b> | UGC 7568    | Galaxy | VIR | 10   | 12.8 | 5.8'  | 12 27.4 | +11 06 | 193 | Sa         |    |    | H II 65;oval w large outer ring                             |
| NGC 4430        | UGC 7566    | Galaxy | VIR | 12   | 13.5 | 2.3'  | 12 27.4 | +06 16 | 193 | SBb/P      |    |    | H II 146;NGC 4432 @ 2.4'                                    |
| NGC 4431        | UGC 7569    | Galaxy | VIR | 12.9 | 13.5 | 1.7'  | 12 27.5 | +12 17 | 193 | SO         |    |    | NGC 4440 group;NGC 4436 @ 3.8';NGC 4440 @ 6.4'              |
| NGC 4432        | UGC 7570    | Galaxy | VIR | 14   | 13.4 | 0.9'  | 12 27.6 | +06 14 | 193 | SBbc       |    |    | P w NGC 4430  |
| NGC 4433        | MCG - 1-32- | Galaxy | VIR | 12.7 | 13.4 | 2.2'  | 12 27.6 | -08 17 | 283 | SBbc       |    |    |   |
| NGC 4434        | UGC 7571    | Galaxy | VIR | 12.1 | 12.9 | 1.4'  | 12 27.6 | +08 09 | 193 | Elliptical |    |    | H II 497  |
| <b>NGC 4435</b> | UGC 7575    | Galaxy | VIR | 10.8 | 12.5 | 3'    | 12 27.7 | +13 05 | 193 | SBO        |    |    | <b>Markarian's chain</b> ;NGC 4438 @ 4.3' SSE               |
| NGC 4436        | UGC 7573    | Galaxy | VIR | 13   | 13   | 1.5'  | 12 27.7 | +12 19 | 193 | SO         |    |    | H II 172;NGC 4440 @ 3.3';NGC 4431 @ 3.5'                    |
| <b>NGC 4437</b> | NGC 4517    | Galaxy | VIR | 11.2 | -    | 10.2' | 12 32.8 | +00 07 | 239 | Sc         |    |    | NGC Copying error , see 4517                                |
| <b>NGC 4438</b> | UGC 7574    | Galaxy | VIR | 10.2 | 13.6 | 8.5'  | 12 27.8 | +13 00 | 193 | Sa         |    |    | <b>Markarian's chain</b> ;NGC 4435 @ 4.4';long filaments    |
| NGC 4440        | UGC 7581    | Galaxy | VIR | 11.7 | 12.7 | 1.8'  | 12 27.9 | +12 18 | 193 | SBa        |    |    | H II 173;Brightest of 3;NGC 4436 @ 3.6';NGC 4431 @ 6        |
| NGC 4441        | UGC 7572    | Galaxy | DRA | 12.7 | 14.8 | 3.2'  | 12 27.3 | +64 48 | 25  | SBO-a      |    |    | H II 848  |
| <b>NGC 4442</b> | UGC 7583    | Galaxy | VIR | 10.4 | 12.6 | 4.5'  | 12 28.1 | +09 48 | 193 | SBO        |    |    | H II 156  |
| NGC 4444        | ESO 268-10  | Galaxy | CEN | 12.3 | 14   | 2.5'  | 12 28.6 | -43 16 | 402 | SBbc Rii   |    |    |   |
| NGC 4445        | IC 793      | Galaxy | VIR | 12.8 | 12.9 | 2.6'  | 12 28.3 | +09 26 | 193 | Sab        |    |    |   |
| NGC 4446        | UGC 7586    | Galaxy | COM | 13.9 | 13.7 | 1.1'  | 12 28.1 | +13 55 | 193 | Sc         |    |    | NGC 4447 @ 1.6';one arm bridges to NGC 4447                 |
| NGC 4447        | MCG 2-32-   | Galaxy | COM | 13.9 | 13.2 | 0.9'  | 12 28.2 | +13 54 | 193 | SBO Rii    |    |    | NGC 4446 @ 1.6';one arm bridges to NGC 4446                 |
| <b>NGC 4448</b> | UGC 7591    | Galaxy | COM | 11.1 | 12.8 | 3.6'  | 12 28.3 | +28 37 | 108 | SBab Rii   |    |    | H I 91  |
| <b>NGC 4449</b> | UGC 7592    | Galaxy | CVN | 9.6  | 13   | 6.2'  | 12 28.2 | +44 06 | 75  | Ir         |    |    | H I 213   |
| <b>NGC 4450</b> | UGC 7594    | Galaxy | COM | 10.1 | 13.2 | 5.4'  | 12 28.5 | +17 05 | 148 | Sab        |    |    | H II 56   |
| NGC 4451        | UGC 7600    | Galaxy | VIR | 12.5 | 12.7 | 1.5'  | 12 28.7 | +09 16 | 193 | Sb         |    |    |   |
| NGC 4452        | UGC 7601    | Galaxy | VIR | 12   | 12.4 | 2.7'  | 12 28.7 | +11 45 | 193 | SO         |    |    | H I 23;cigar shaped edge on                                 |
| NGC 4454        | UGC 7606    | Galaxy | VIR | 11.9 | 13   | 1.9'  | 12 28.8 | -01 56 | 238 | SBO-a R    |    |    | H II 180;comp @ 2 '   |
| NGC 4455        | UGC 7603    | Galaxy | COM | 12.3 | 13   | 2.6'  | 12 28.7 | +22 49 | 148 | SBcd       |    |    | H II 355;Nearly edge-on spiral                              |
| NGC 4456        | ESO 441-30  | Galaxy | HYA | 13.3 | 12.8 | 1.2'  | 12 27.9 | -30 06 | 369 | Sbc        |    |    |   |
| NGC 4457        | UGC 7609    | Galaxy | VIR | 10.9 | 12.7 | 2.6'  | 12 29.0 | +03 34 | 238 | SBO-a R    |    |    | H II 35   |
| <b>NGC 4458</b> | UGC 7610    | Galaxy | VIR | 12.1 | 13.2 | 1.6'  | 12 29.0 | +13 15 | 193 | Elliptical |    |    | <b>Markarian's chain</b> ;NGC 4461 @ 3.7' , near <b>M84</b> |
| <b>NGC 4459</b> | UGC 7614    | Galaxy | COM | 10.4 | 12.7 | 4'    | 12 29.0 | +13 59 | 193 | Sa         |    |    | H I 161;comp @ 2.2';NGC 4468 @ 8.5';NGC 4474 @ 13           |
| NGC 4460        | UGC 7611    | Galaxy | CVN | 11.3 | 12.8 | 4.2'  | 12 28.8 | +44 52 | 75  | SBO-a      |    |    | H I 212   |
| <b>NGC 4461</b> | UGC 7613    | Galaxy | VIR | 11.2 | 12.8 | 3.4'  | 12 29.0 | +13 11 | 193 | SBO-a      |    |    | <b>Markarian's chain</b> ;NGC 4458 @ 3.7' , near <b>m84</b> |
| NGC 4462        | ESO 506-13  | Galaxy | CRV | 11.9 | 13.2 | 3.1'  | 12 29.4 | -23 10 | 328 | SBab Rii   |    |    | H III 764   |
| NGC 4464        | UGC 7619    | Galaxy | VIR | 12.5 | 12.2 | 0.9'  | 12 29.4 | +08 09 | 193 | Sab        |    |    | H III 483   |
| NGC 4466        | Ho 412a     | Galaxy | VIR | 13.5 | 12.8 | 1.1'  | 12 29.5 | +07 42 | 193 | Sab        |    |    | Ho 412b @ 2.1' is a *                                       |
| NGC 4467        | Ho 413c     | Galaxy | VIR | 13.8 | 13.9 | 0.4'  | 12 29.5 | +08 00 | 193 | Elliptical |    |    | NGC 4472 @ 4.2'   |
| NGC 4468        | UGC 7628    | Galaxy | COM | 12.8 | 13.1 | 1.4'  | 12 29.5 | +14 03 | 193 | E-SO       |    |    | H II 630;NGC 4474 @ 5.6'                                    |
| NGC 4469        | UGC 7622    | Galaxy | VIR | 11.2 | 12.8 | 3.4'  | 12 29.5 | +08 45 | 193 | SBO-a      |    |    | H II 157;edge on w box shaped central section               |
| NGC 4470        | NGC 4610    | Galaxy | VIR | 12.1 | 12.2 | 1.3'  | 12 29.6 | +07 49 | 193 | Sa         |    |    | H II 18   |
| <b>NGC 4473</b> | UGC 7631    | Galaxy | COM | 10.2 | 12.8 | 4.2'  | 12 29.8 | +13 26 | 193 | Elliptical |    |    | <b>Markarian's chain</b>                                    |
| NGC 4474        | UGC 7634    | Galaxy | COM | 11.5 | 12.7 | 2.4'  | 12 29.9 | +14 04 | 193 | SO         |    |    | H II 117;spindle shaped                                     |
| NGC 4475        | UGC 7632    | Galaxy | COM | 13.6 | 14   | 1.7'  | 12 29.8 | +27 15 | 148 | SBbc Rii   |    |    | H III 362   |
| <b>NGC 4476</b> | UGC 7637    | Galaxy | VIR | 12.2 | 12.8 | 1.8'  | 12 30.0 | +12 21 | 193 | E4         |    |    | H II 123;NGC 4478 @ 4.5'                                    |
| <b>NGC 4477</b> | UGC 7638    | Galaxy | COM | 10.4 | 13.1 | 3.7'  | 12 30.0 | +13 38 | 193 | SBO        |    |    | <b>Markarian's chain</b> ;NGC 4479 @ 5.3'                   |
| <b>NGC 4478</b> | UGC 7645    | Galaxy | VIR | 11.4 | 12.7 | 1.8'  | 12 30.3 | +12 20 | 193 | E1         |    |    | H II 124;NGC 4476 @ 4.5';NGC 4486 @ 8.6'                    |
| NGC 4479        | UGC 7646    | Galaxy | COM | 12.4 | 13.1 | 1.6'  | 12 30.3 | +13 35 | 193 | SBO        |    |    | H II 116  |
| NGC 4480        | UGC 7647    | Galaxy | VIR | 12.4 | 13.4 | 2.2'  | 12 30.4 | +04 15 | 238 | SBc        |    |    |   |
| NGC 4482        | IC 3427     | Galaxy | VIR | 12.7 | 13.2 | 1.7'  | 12 30.2 | +10 47 | 193 | Elliptical |    |    | H III 40  |
| NGC 4483        | UGC 7649    | Galaxy | VIR | 12.2 | 12.4 | 1.6'  | 12 30.7 | +09 01 | 193 | SBO-a      |    |    |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|--|
| NGC 4484        | MCG - 2-32- | Galaxy | VIR | 14   | -    | 1.6'  | 12 28.9 | -11 39 | 283 | Sc         |    |    |  |
| <b>NGC 4485</b> | UGC 7648    | Galaxy | CVN | 11.9 | 13.2 | 2.4'  | 12 30.5 | +41 42 | 75  | Ir         |    |    | H I 197;disrupted;P w NGC 4490 @ 3.5'              |
| NGC 4486A       | UGC 7658    | Galaxy | VIR | 11.2 | -    | 0.8'  | 12 31.0 | +12 16 | 193 | Elliptical |    |    | NGC 4486 @ 7.5'                                    |
| NGC 4486B       | I Zw 38     | Galaxy | VIR | 13.4 | 12.2 | 0.6'  | 12 30.5 | +12 29 | 193 | Elliptical |    |    | NGC 4486 @ 7.3'                                    |
| NGC 4487        | MCG - 1-32- | Galaxy | VIR | 10.9 | 13.4 | 4'    | 12 31.1 | -08 03 | 283 | SBc        |    |    | H II 776;Coarse structured spiral                  |
| NGC 4488        | UGC 7653    | Galaxy | VIR | 12.2 | 13.9 | 3.8'  | 12 30.9 | +08 22 | 193 | SBO-a      |    |    | H III 484  |
| NGC 4489        | UGC 7655    | Galaxy | COM | 12   | 13   | 1.7'  | 12 30.9 | +16 46 | 193 | Elliptical |    |    | H II 91;P w NGC 4498 @ 12.6'                       |
| <b>NGC 4490</b> | UGC 7651    | Galaxy | CVN | 9.8  | 12.9 | 6.4'  | 12 30.6 | +41 39 | 75  | SBcd       |    |    | H I 198;disrupted;P w NGC 4485 @ 3.5'              |
| NGC 4491        | UGC 7657    | Galaxy | VIR | 12.6 | 12.8 | 1.6'  | 12 31.0 | +11 29 | 193 | SBa        |    |    | H III 41;IC 3446 @ 6.4'                            |
| NGC 4492        | IC 3438     | Galaxy | VIR | 12.6 | 13.5 | 1.7'  | 12 31.0 | +08 05 | 193 | Sa         |    |    | H II 499   |
| <b>NGC 4494</b> | UGC 7662    | Galaxy | COM | 9.8  | 12.9 | 4.5'  | 12 31.4 | +25 46 | 148 | Elliptical |    |    | H I 83   |
| NGC 4495        | UGC 7663    | Galaxy | COM | 13.1 | 13.1 | 1.4'  | 12 31.4 | +29 08 | 108 | Sab        |    |    | H III 301  |
| NGC 4496A       | NGC 4496    | Galaxy | VIR | 11.4 | 14   | 3.9'  | 12 31.7 | +03 56 | 238 | SBc        |    |    | H II 36  |
| NGC 4496B       | NGC 4505    | Galaxy | VIR | 13.3 | -    | 0.6'  | 12 31.7 | +03 56 | 238 | Ir         |    |    | H II 36  |
| NGC 4497        | IC 3452     | Galaxy | VIR | 12.5 | 13   | 1.9'  | 12 31.5 | +11 37 | 193 | SBO-a      |    |    | H III 42   |
| NGC 4498        | UGC 7669    | Galaxy | COM | 12.2 | 13.7 | 3'    | 12 31.7 | +16 51 | 193 | SBc        |    |    | H III 69;P w NGC 4489 @ 12.6';comp @ 4.5'          |
| NGC 4499        | ESO 322-22  | Galaxy | CEN | 13.2 | 14   | 1.8'  | 12 32.1 | -39 59 | 402 | SBbc       |    |    |  |
| NGC 4500        | UGC 7667    | Galaxy | UMA | 12.5 | 12.9 | 1.6'  | 12 31.4 | +57 58 | 48  | SBa        |    |    | H I 234  |
| NGC 4502        | UGC 7677    | Galaxy | COM | 13.9 | 13.2 | 1.1'  | 12 32.1 | +16 41 | 194 | SBc        |    |    | H II 92  |
| NGC 4503        | UGC 7680    | Galaxy | VIR | 11.1 | 12.9 | 3.5'  | 12 32.1 | +11 11 | 194 | SBO        |    |    | H II 66  |
| NGC 4504        | MCG - 1-32- | Galaxy | VIR | 11.2 | 13.7 | 4.3'  | 12 32.3 | -07 34 | 284 | SBc        |    |    | H II 771   |
| NGC 4505        | NGC 4496    | Galaxy | VIR | 11.9 | -    | 3.9'  | 12 31.7 | +03 56 | 238 | SBc        |    |    |  |
| NGC 4506        | UGC 7682    | Galaxy | COM | 12.7 | 13.2 | 1.6'  | 12 32.2 | +13 25 | 194 | SBa        |    |    | H II 631   |
| NGC 4507        | ESO 322-29  | Galaxy | CEN | 12.1 | 12.8 | 1.6'  | 12 35.6 | -39 55 | 402 | SBab Rii   |    |    |  |
| NGC 4509        | UGC 7704    | Galaxy | CVN | 13.5 | 12.7 | 0.8'  | 12 33.1 | +32 06 | 108 | Sab pec    |    |    | sf of 2  |
| NGC 4510        | UGC 7679    | Galaxy | DRA | 13   | 13.3 | 1.5'  | 12 31.8 | +64 14 | 25  | Elliptical |    |    |  |
| NGC 4512        | NGC 4521    | Galaxy | DRA | 13.8 | 14.8 | 2.5'  | 12 32.8 | +63 56 | 25  | Sa         |    |    | P w NGC 4521 @ 4.1' nf                             |
| NGC 4513        | UGC 7683    | Galaxy | DRA | 13   | 13.1 | 1.4'  | 12 32.0 | +66 20 | 25  | SO         |    |    |  |
| NGC 4514        | UGC 7693    | Galaxy | COM | 13.2 | 13.3 | 1.2'  | 12 32.7 | +29 43 | 108 | Sbc        |    |    | H III 302  |
| NGC 4515        | UGC 7701    | Galaxy | COM | 12.3 | 12.6 | 1.4'  | 12 33.1 | +16 16 | 194 | E-SO       |    |    | H II 93  |
| NGC 4516        | UGC 7703    | Galaxy | COM | 12.8 | 13.1 | 1.8'  | 12 33.1 | +14 34 | 194 | SBab       |    |    | H III 78   |
| <b>NGC 4517</b> | NGC 4437    | Galaxy | VIR | 10.4 | 13.3 | 10.2' | 12 32.8 | +00 07 | 239 | Sc         |    |    | 4517A @ 17 ' ;long narrow streak w dust patches    |
| NGC 4517A       | R 80; UGC   | Galaxy | VIR | 12.5 | 14.9 | 4'    | 12 32.5 | +00 23 | 239 | SBd        |    |    | NGC 4517 @ 17 ' ; given as R 80 in Burnham's       |
| NGC 4519        | UGC 7709    | Galaxy | VIR | 11.8 | 13.9 | 2.9'  | 12 33.5 | +08 39 | 194 | SBcd Rii   |    |    | H II 158   |
| NGC 4520        | IC 799      | Galaxy | VIR | 13.9 | -    | 1.4'  | 12 33.8 | -07 23 | 284 | E-SO       |    |    | H II 757   |
| NGC 4521        | NGC 4512    | Galaxy | DRA | 12.2 | 12.4 | 2.5'  | 12 32.8 | +63 56 | 25  | Sa         |    |    | H II 849;P w NGC 4512                              |
| NGC 4522        | UGC 7711    | Galaxy | VIR | 12.3 | 13.6 | 3.6'  | 12 33.7 | +09 10 | 194 | SBc        |    |    | edge on spiral                                     |
| NGC 4524        | MCG - 2-32- | Galaxy | CRV | 14   | -    | 1.3'  | 12 33.9 | -12 02 | 284 | Sbc        |    |    |  |
| NGC 4525        | UGC 7714    | Galaxy | COM | 12.2 | 13.4 | 2.6'  | 12 33.9 | +30 17 | 108 | SBc        |    |    | H II 325   |
| <b>NGC 4526</b> | NGC 4560    | Galaxy | VIR | 9.7  | 12.7 | 7'    | 12 34.0 | +07 42 | 194 | SBO        |    |    | H I 31;lenticular;between two 7th mag stars        |
| <b>NGC 4527</b> | UGC 7721    | Galaxy | VIR | 10.5 | 13.1 | 5.9'  | 12 34.1 | +02 39 | 239 | SBbc       |    |    | H II 37;SN 1915a;NGC 4536 @ 29                     |
| NGC 4528        | UGC 7722    | Galaxy | VIR | 12.1 | 12.5 | 1.6'  | 12 34.1 | +11 19 | 194 | SBO        |    |    | H II 67  |
| NGC 4530        |             | Star   | CVN | 4.3  | -    |       | 12 33.8 | +41 21 | 75  |            |    |    |  |
| NGC 4531        | UGC 7729    | Galaxy | VIR | 11.4 | 13.3 | 3.1'  | 12 34.3 | +13 05 | 194 | SBO-a      |    |    | H II 175   |
| NGC 4532        | UGC 7726    | Galaxy | VIR | 11.9 | 13   | 2.7'  | 12 34.3 | +06 28 | 194 | Ir?        |    |    | H II 147;tadpole shaped br portion to north        |
| NGC 4533        | UGC 7725    | Galaxy | VIR | 13.8 | 13.5 | 2.1'  | 12 34.4 | +02 19 | 239 | Scd        |    |    | NGC 4536 @ 8.2'                                    |
| NGC 4534        | UGC 7723    | Galaxy | CVN | 12.3 | 14   | 2.6'  | 12 34.1 | +35 31 | 108 | Sd         |    |    | H II 410   |
| <b>NGC 4535</b> | UGC 7727    | Galaxy | VIR | 10   | 13.7 | 6.9'  | 12 34.3 | +08 12 | 194 | SBc        |    |    | H II 500;Ho 420b @ 5 ' ;S-shaped spiral            |
| <b>NGC 4536</b> | UGC 7732    | Galaxy | VIR | 10.6 | 13.9 | 7.1'  | 12 34.4 | +02 11 | 239 | SBbc       |    |    | NGC 4533 @ 8.2';high tilt spiral w long curvd arms |
| NGC 4539        | UGC 7735    | Galaxy | COM | 12   | 13.5 | 3.3'  | 12 34.6 | +18 12 | 149 | SBa        |    |    |  |
| NGC 4540        | UGC 7742    | Galaxy | COM | 11.7 | 12.8 | 2.1'  | 12 34.8 | +15 33 | 194 | SBc        |    |    | H II 94;IC 3528 (Ho 421b) @ 1.5' nf;comp @ 4.3'    |
| NGC 4541        | UGC 7749    | Galaxy | VIR | 13   | 13   | 1.6'  | 12 35.2 | -00 13 | 239 | SBbc       |    |    | H III 493  |
| NGC 4544        | UGC 7756    | Galaxy | VIR | 13   | 13.1 | 2'    | 12 35.6 | +03 02 | 239 | SBO-a      |    |    |  |
| NGC 4545        | UGC 7747    | Galaxy | DRA | 12.3 | 13.6 | 2.5'  | 12 34.6 | +63 31 | 25  | SBc        |    |    | H II 850   |
| <b>NGC 4546</b> | MCG - 1-32- | Galaxy | VIR | 10.3 | 11.9 | 3.3'  | 12 35.5 | -03 48 | 239 | E-SO Ba    |    |    | H I 160  |
| <b>NGC 4550</b> | UGC 7757    | Galaxy | VIR | 11.7 | 12.8 | 3.3'  | 12 35.5 | +12 13 | 194 | SBO        |    |    | H I 36;NGC 4551 @ 3 '                              |
| <b>NGC 4551</b> | UGC 7759    | Galaxy | VIR | 12   | 13.1 | 1.8'  | 12 35.6 | +12 16 | 194 | Elliptical |    |    | H I 37;NGC 4550 @ 3 '                              |
| NGC 4553        | ESO 322-30  | Galaxy | CEN | 12.2 | 12.9 | 2.4'  | 12 36.1 | -39 26 | 402 | SBO-a R    |    |    |  |
| NGC 4555        | IC 3454     | Galaxy | COM | 12.1 | 13.3 | 1.4'  | 12 35.7 | +26 31 | 149 | Elliptical |    |    | H II 343   |
| NGC 4556        | UGC 7765    | Galaxy | COM | 13.1 | 13.3 | 1.2'  | 12 35.8 | +26 55 | 149 | Elliptical |    |    | H II 380   |
| <b>NGC 4559</b> | UGC 7766    | Galaxy | COM | 10   | 14   | 11'   | 12 36.0 | +27 58 | 149 | SBc        |    |    | H I 92;SN 1941a;multi arm spiral                   |
| <b>NGC 4560</b> | NGC 4526    | Galaxy | VIR | 10.6 | -    | 7'    | 12 34.0 | +07 42 | 194 | SBO        |    |    | H I 119 , see 4526                                 |
| NGC 4561        | IC 3569     | Galaxy | COM | 12.5 | 13   | 1.5'  | 12 36.1 | +19 19 | 149 | SBcd       |    |    | H II 407   |
| NGC 4562        | NGC 4565A   | Galaxy | COM | 13.5 | 14.1 | 2.4'  | 12 35.6 | +25 51 | 149 | SBcd       |    |    |  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|--|
| NGC 4564        | UGC 7773    | Galaxy | VIR | 11.1 | 12.9 | 3.2'  | 12 36.4 | +11 26 | 194 | E6         |    |    | H II 68;11' N from NGC 4567-8                          |
| <b>NGC 4565</b> | UGC 7772    | Galaxy | COM | 9.6  | 13.3 | 14.9' | 12 36.3 | +25 59 | 149 | Sb         |    |    | <b>Needle</b> ;NGC 4562 @ 13.4';classic edge-on galaxy |
| NGC 4566        | UGC 7769    | Galaxy | UMA | 13.1 | 13   | 1.3'  | 12 36.0 | +54 13 | 48  | Sbc        |    |    | H III 880  |
| <b>NGC 4567</b> | UGC 7777    | Galaxy | VIR | 11.3 | 13.1 | 3.1'  | 12 36.5 | +11 15 | 194 | Sbc        |    |    | <b>Siamese Twins</b> H IV 8;NGC 4568 @ 1.2             |
| <b>NGC 4568</b> | UGC 7776    | Galaxy | VIR | 10.8 | 13.1 | 4.6'  | 12 36.6 | +11 14 | 194 | Sbc        |    |    | <b>Siamese Twins</b> ;;NGC 4567 @ 1.2';overlaps 4567;  |
| <b>NGC 4570</b> | UGC 7785    | Galaxy | VIR | 10.9 | 12.4 | 3.7'  | 12 36.9 | +07 15 | 194 | SO         |    |    | H I 32;lens shaped;in field of R VIR                   |
| NGC 4571        | IC 3588     | Galaxy | COM | 11.3 | 13.8 | 3.7'  | 12 36.9 | +14 13 | 194 | Sc         |    |    | comp @ 4.6';NGC 4548 @ 27 ' ;H III 602                 |
| NGC 4573        | ESO 268-26  | Galaxy | CEN | 13   | 14.6 | 2.5'  | 12 37.7 | -43 37 | 402 | SBO-a R    |    |    |  |
| NGC 4574        | ESO 380-49  | Galaxy | CEN | 13   | 13.6 | 1.8'  | 12 37.7 | -35 31 | 369 | SBc        |    |    |  |
| NGC 4575        | ESO 322-36  | Galaxy | CEN | 12.6 | 13.4 | 2'    | 12 37.9 | -40 32 | 402 | SBbc       |    |    |  |
| NGC 4576        | UGC 7792    | Galaxy | VIR | 13.5 | 13.2 | 1.2'  | 12 37.6 | +04 22 | 239 | SBbc       |    |    |  |
| NGC 4577        | UGC 7821    | Galaxy | VIR | 13   | -    | 1.8'  | 12 39.2 | +06 00 | 194 |            |    |    | H III 13   |
| NGC 4578        | UGC 7793    | Galaxy | VIR | 11.5 | 13.7 | 3.1'  | 12 37.5 | +09 33 | 194 | SO         |    |    | H II 15;Ho 429b @ 3.5'                                 |
| NGC 4580        | UGC 7794    | Galaxy | VIR | 11.8 | 13   | 2.1'  | 12 37.8 | +05 22 | 239 | SBab R     |    |    | H I 124  |
| NGC 4581        | UGC 7801    | Galaxy | VIR | 12.5 | 13.3 | 1.9'  | 12 38.1 | +01 29 | 239 | Elliptical |    |    |  |
| NGC 4584        | UGC 7803    | Galaxy | VIR | 12.9 | 13.1 | 1.4'  | 12 38.3 | +13 07 | 194 | SBa        |    |    |  |
| NGC 4585        | MCG 5-30-   | Galaxy | COM | 14   | 12.5 | 0.7'  | 12 38.2 | +28 56 | 108 | SBb        |    |    |  |
| NGC 4586        | UGC 7804    | Galaxy | VIR | 11.7 | 13.3 | 3.8'  | 12 38.5 | +04 19 | 239 | Sa Ring    |    |    | H I 125  |
| NGC 4587        | UGC 7805    | Galaxy | VIR | 13.5 | 12.7 | 1.1'  | 12 38.6 | +02 39 | 239 | SO         |    |    |  |
| NGC 4589        | UGC 7797    | Galaxy | DRA | 10.7 | 13   | 3.4'  | 12 37.4 | +74 11 | 9   | Elliptical |    |    | H I 273;P w NGC 4572 @ 7.5';NGC 4648 @ 22'             |
| NGC 4591        | UGC 7821    | Galaxy | VIR | 13   | 13.1 | 1.6'  | 12 39.2 | +06 01 | 194 | Sab        |    |    | H III 504  |
| NGC 4592        | UGC 7819    | Galaxy | VIR | 11.7 | 13.9 | 6.8'  | 12 39.3 | -00 32 | 239 | Sd         |    |    | H II 31  |
| NGC 4593        | MCG 1-132-  | Galaxy | VIR | 10.9 | 13.4 | 3.7'  | 12 39.7 | -05 21 | 239 | SBab       |    |    | Extended central mass w extensive outer arms;4602 nr   |
| NGC 4595        | UGC 7826    | Galaxy | COM | 12.1 | 12.7 | 1.7'  | 12 39.9 | +15 18 | 194 | SBb        |    |    | H II 632   |
| <b>NGC 4596</b> | UGC 7828    | Galaxy | VIR | 10.4 | 13   | 4'    | 12 39.9 | +10 11 | 194 | SBO-a      |    |    | H I 24;NGC 4608 @ 19 ' ;disc w projecting ansae        |
| NGC 4597        | MCG 1-132-  | Galaxy | VIR | 12.1 | 14.1 | 3.8'  | 12 40.2 | -05 48 | 284 | SBc        |    |    | H II 636;Reversed Z structure                          |
| NGC 4598        | UGC 7829    | Galaxy | VIR | 12.7 | 13.1 | 1.4'  | 12 40.2 | +08 23 | 194 | SBO        |    |    | H III 105  |
| NGC 4599        | UGC 7833    | Galaxy | VIR | 12.6 | 12.8 | 1.7'  | 12 40.4 | +01 12 | 239 | Sa         |    |    | H III 509  |
| NGC 4600        | UGC 7832    | Galaxy | VIR | 12.7 | 12.6 | 1.2'  | 12 40.4 | +03 07 | 239 | SO         |    |    | H II 577   |
| NGC 4601        | ESO 322-50  | Galaxy | CEN | 13.5 | 13.3 | 1.7'  | 12 40.8 | -40 54 | 402 | SBO-a      |    |    |  |
| NGC 4602        | MCG 1-132-  | Galaxy | VIR | 11.5 | 12.9 | 3'    | 12 40.6 | -05 08 | 239 | SBbc       |    |    | H II 184;IC 804 @ 10 '                                 |
| NGC 4603        | ESO 322-52  | Galaxy | CEN | 11.6 | 13.7 | 2.3'  | 12 40.9 | -40 59 | 402 | SBc        |    |    | S shaped spiral  |
| NGC 4603A       | ESO 322-44  | Galaxy | CEN | 13.5 | 13.6 | 1.9'  | 12 39.6 | -40 44 | 402 | SBc        |    |    |  |
| NGC 4603C       | ESO 322-49  | Galaxy | CEN | 13.1 | 12.6 | 1.7'  | 12 40.7 | -40 46 | 402 | SO         |    |    |  |
| NGC 4603D       | ESO 322-55  | Galaxy | CEN | 13.2 | 13.6 | 1.5'  | 12 42.1 | -40 49 | 402 | SBcd       |    |    |  |
| <b>NGC 4605</b> | UGC 7831    | Galaxy | UMA | 10.3 | 12.9 | 5.9'  | 12 40.0 | +61 36 | 26  | SBc/P      |    |    | H I 254  |
| NGC 4606        | UGC 7839    | Galaxy | VIR | 11.8 | 13.5 | 3.3'  | 12 41.0 | +11 55 | 194 | SBa        |    |    | H III 43;NGC 4607 @ 4 '                                |
| NGC 4607        | Ho 436b     | Galaxy | VIR | 12.8 | 13.4 | 2.9'  | 12 41.2 | +11 53 | 194 | SBb        |    |    | NGC 4606 @ 4 '   |
| NGC 4608        | UGC 7842    | Galaxy | VIR | 11   | 13.2 | 3.3'  | 12 41.2 | +10 09 | 194 | SBO        |    |    | H II 69;NGC 4596 @ 19 '                                |
| NGC 4610        | NGC 4470    | Galaxy | VIR | 13.1 | -    | 1.3'  | 12 29.6 | +07 49 | 193 | Sa         |    |    | H II 19  |
| NGC 4612        | UGC 7850    | Galaxy | VIR | 10.9 | 12.5 | 2.7'  | 12 41.5 | +07 19 | 194 | SBO Rin    |    |    | H II 148   |
| NGC 4614        | UGC 7851    | Galaxy | COM | 13.3 | 12.9 | 0.9'  | 12 41.5 | +26 03 | 149 | SBO-a      |    |    | NGC 4615 group;NGC 4615 @ 2.4';NGC 4613 @ 2.8'         |
| NGC 4615        | UGC 7852    | Galaxy | COM | 13.1 | 13.2 | 1.6'  | 12 41.6 | +26 04 | 149 | Sc Ring    |    |    | Brightest in group;NGC 4613 @ 2.1';NGC 4614 @ 2.4'     |
| NGC 4616        | ESO 322-56  | Galaxy | CEN | 13.4 | 13.1 | 0.9'  | 12 42.3 | -40 39 | 402 | Elliptical |    |    |  |
| NGC 4617        | UGC 7847    | Galaxy | CVN | 13.2 | 13.6 | 2.9'  | 12 41.1 | +50 24 | 48  | Sb         |    |    | H II 744   |
| <b>NGC 4618</b> | IC 3667     | Galaxy | CVN | 10.8 | 13.5 | 4.2'  | 12 41.6 | +41 09 | 75  | SB         |    |    | H I 178;P w NGC 4625 @ 8.3'                            |
| NGC 4619        | UGC 7856    | Galaxy | CVN | 12.7 | 13.1 | 1.3'  | 12 41.7 | +35 04 | 108 | SBb/P      |    |    | H II 411   |
| NGC 4620        | UGC 7859    | Galaxy | VIR | 12.2 | 13.2 | 1.8'  | 12 42.0 | +12 57 | 194 | SO         |    |    |  |
| NGC 4622        | ESO 322-57  | Galaxy | CEN | 12.2 | 13.2 | 1.7'  | 12 42.6 | -40 45 | 402 | Sa         |    |    |  |
| NGC 4622A       | ESO 322-64  | Galaxy | CEN | 13.5 | 12.1 | 0.6'  | 12 43.8 | -40 43 | 402 | E-SO Ba    |    |    |  |
| NGC 4622B       | ESO 322-64  | Galaxy | CEN | 13.9 | 13.5 | 1.1'  | 12 43.8 | -40 43 | 402 | SO         |    |    |  |
| NGC 4623        | UGC 7862    | Galaxy | VIR | 12.2 | 12.6 | 2.2'  | 12 42.2 | +07 41 | 194 | SBO-a      |    |    | H II 149   |
| <b>NGC 4624</b> | NGC 4664    | Galaxy | VIR | 11.2 | -    | 3.5'  | 12 45.1 | +03 03 | 239 | SBO-a      |    |    | see 4665   |
| NGC 4625        | IC 3675     | Galaxy | CVN | 12.4 | 13.8 | 2.3'  | 12 41.9 | +41 16 | 75  | SB pec     |    |    | P w NGC 4618 @ 8.3';H II 660                           |
| NGC 4626        | MCG 1-132-  | Galaxy | VIR | 14   | -    | 1.4'  | 12 42.4 | -07 03 | 284 | Sbc        |    |    | H II 772   |
| NGC 4627        | UGC 7860    | Galaxy | CVN | 12.4 | 14.1 | 2.2'  | 12 42.0 | +32 34 | 108 | Elliptical |    |    | H II 659;P w NGC 4631 @ 2.5'                           |
| NGC 4628        | MCG 1-132-  | Galaxy | VIR | 14   | -    | 1.7'  | 12 42.4 | -06 58 | 284 | Sb         |    |    | H II 773   |
| NGC 4629        | UGC 7869    | Galaxy | VIR | 14   | -    | 1.4'  | 12 42.5 | -01 21 | 239 | S          |    |    |  |
| NGC 4630        | UGC 7871    | Galaxy | VIR | 12.6 | 13.4 | 1.7'  | 12 42.5 | +03 57 | 239 | Ir         |    |    | H II 532   |
| <b>NGC 4631</b> | UGC 7865    | Galaxy | CVN | 9.2  | 13.1 | 15.2' | 12 42.1 | +32 32 | 108 | SBcd       |    |    | H V 42;P w NGC 4627 @ 2.5'                             |
| NGC 4632        | UGC 7870    | Galaxy | VIR | 11.7 | 12.9 | 3'    | 12 42.5 | -00 05 | 239 | Sc         |    |    | H I 14   |
| NGC 4633        | IC 3688;UGC | Galaxy | COM | 13.1 | 13.6 | 2'    | 12 42.6 | +14 21 | 194 | SBd        |    |    | NGC 4634 @ 3.5'  |
| NGC 4634        | UGC 7875    | Galaxy | COM | 12.4 | 12.8 | 2.5'  | 12 42.7 | +14 18 | 194 | SBc        |    |    | H III 603;NGC 4633 @ 3.5'                              |
| NGC 4635        | UGC 7876    | Galaxy | COM | 12.6 | 13.6 | 1.9'  | 12 42.6 | +19 57 | 149 | SBcd       |    |    |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|--|
| <b>NGC 4636</b> | NGC 4624?   | Galaxy | VIR | 9.5  | 13.1 | 5.9'  | 12 42.8 | +02 41 | 239 | Elliptical |    |    | H II 38  |
| NGC 4638        | NGC 4667    | Galaxy | VIR | 11.2 | 12.3 | 2.4'  | 12 42.8 | +11 27 | 194 | E5         |    |    | H II 70;NGC 4637 @ 1.5' sf;stubby lens shape       |
| NGC 4639        | UGC 7884    | Galaxy | VIR | 11.5 | 13.2 | 2.9'  | 12 42.9 | +13 15 | 194 | SBbc Rim   |    |    | H II 125;comp 2.9';NGC 4654 @ 17.5'                |
| NGC 4641        | UGC 7889    | Galaxy | VIR | 13.2 | 13.3 | 1.2'  | 12 43.1 | +12 03 | 194 | SO         |    |    |  |
| NGC 4642        | UGC 7893    | Galaxy | VIR | 12.9 | 12.9 | 1.9'  | 12 43.3 | -00 39 | 239 | Sbc        |    |    | H III 494;NGC 4653 @ 9.6'                          |
| <b>NGC 4643</b> | UGC 7895    | Galaxy | VIR | 10.8 | 12.7 | 3.1'  | 12 43.3 | +01 59 | 239 | SBO-a      |    |    | H I 10;Saturn-like central mass w projecting ansae |
| NGC 4644        | NGC 4644A   | Galaxy | UMA | 13.9 | 13.5 | 1.6'  | 12 42.7 | +55 09 | 48  | SBb/P      |    |    | H II 794;NGC 4686 group                            |
| NGC 4645        | ESO 322-66  | Galaxy | CEN | 11.8 | 12.9 | 2.2'  | 12 44.2 | -41 45 | 402 | Elliptical |    |    |  |
| NGC 4645A       | ESO 322-59  | Galaxy | CEN | 12.2 | 13   | 2.8'  | 12 43.1 | -41 22 | 402 | SBO        |    |    |  |
| NGC 4645B       | ESO 322-60  | Galaxy | CEN | 12.1 | 12.3 | 1.9'  | 12 43.5 | -41 22 | 402 | SBO        |    |    |  |
| NGC 4646        | UGC 7892    | Galaxy | UMA | 13.4 | 11.4 | 0.6'  | 12 42.9 | +54 51 | 48  | SO         |    |    | NGC 4686 group                                     |
| NGC 4647        | UGC 7896    | Galaxy | VIR | 11.3 | 13.2 | 2.9'  | 12 43.5 | +11 35 | 194 | SBc Ring   |    |    | H III 144;NGC 4649 @ 2.5'                          |
| NGC 4648        | UGC 7868    | Galaxy | DRA | 12   | 13.4 | 1.8'  | 12 41.7 | +74 25 | 9   | Ellip Ring |    |    | H I 274;P w NGC 4589 @ 22'                         |
| NGC 4650        | ESO 322-67  | Galaxy | CEN | 11.6 | 13.9 | 3.2'  | 12 44.3 | -40 44 | 402 | SBO-a      |    |    |  |
| NGC 4650A       | ESO 322-69  | Galaxy | CEN | 12.9 | 13   | 1.6'  | 12 44.8 | -40 43 | 402 | Sa         |    |    |  |
| NGC 4651        | UGC 7901    | Galaxy | COM | 10.8 | 13.2 | 4'    | 12 43.7 | +16 24 | 194 | Scp        |    |    | H II 12  |
| NGC 4653        | UGC 7900    | Galaxy | VIR | 12.2 | 14.4 | 3.4'  | 12 43.9 | -00 34 | 239 | SBc        |    |    | H III 662;NGC 4642 @ 9.6';NGC 4666 @ 20 '          |
| <b>NGC 4654</b> | IC 3708     | Galaxy | VIR | 10.5 | 13.2 | 5'    | 12 43.9 | +13 08 | 194 | SBc Ring   |    |    | H II 126   |
| <b>NGC 4656</b> | UGC 7907    | Galaxy | CVN | 10.5 | 14.5 | 15.3' | 12 44.0 | +32 10 | 108 | SB         |    |    | H I 176;NGC 4657 superimposed                      |
| <b>NGC 4657</b> |             | Galaxy | CVN | 10.6 | -    | 1.1'  | 12 44.1 | +32 13 | 108 | Ir         |    |    | H I 177;superimposed on NGC 4656                   |
| NGC 4658        | MCG - 2-33- | Galaxy | VIR | 12.5 | 13   | 2.1'  | 12 44.6 | -10 05 | 284 | SBbc       |    |    | H II 558   |
| NGC 4659        | UGC 7915    | Galaxy | COM | 12.1 | 12.8 | 1.8'  | 12 44.5 | +13 30 | 194 | Sa         |    |    | H II 127   |
| <b>NGC 4660</b> | UGC 7914    | Galaxy | VIR | 11.2 | 12.6 | 2.1'  | 12 44.5 | +11 11 | 194 | E5         |    |    | H II 71;comp 5.5';25' SSE from <b>M60</b>          |
| NGC 4661        | NGC 4650B   | Galaxy | CEN | 13.5 | 12.7 | 1.2'  | 12 45.2 | -40 50 | 402 | E-SO       |    |    |  |
| NGC 4662        | UGC 7917    | Galaxy | CVN | 12.7 | 13.8 | 1.9'  | 12 44.4 | +37 07 | 108 | SBbc       |    |    | H II 643   |
| NGC 4663        | IC 811      | Galaxy | VIR | 14   | -    | 1.1'  | 12 44.8 | -10 12 | 284 | SBO        |    |    |  |
| <b>NGC 4664</b> | NGC 4624    | Galaxy | VIR | 11.2 | -    | 3.5'  | 12 45.1 | +03 03 | 239 | SBO-a      |    |    | H II 39 , see 4665                                 |
| <b>NGC 4665</b> | NGC 4624    | Galaxy | VIR | 10.5 | 13.1 | 3.5'  | 12 45.1 | +03 03 | 239 | SBO-a      |    |    | H I 142 , same as 4624, 4664                       |
| <b>NGC 4666</b> | UGC 7926    | Galaxy | VIR | 10.7 | 12.5 | 4.5'  | 12 45.1 | -00 28 | 239 | SBc        |    |    | H I 15;NGC 4668 @ 7.3';NGC 4653 @ 20 'edge on      |
| NGC 4667        | NGC 4638    | Galaxy | VIR | 12.1 | -    | 2.4'  | 12 42.8 | +11 27 | 194 | E-SO       |    |    |  |
| NGC 4668        | UGC 7931    | Galaxy | VIR | 13.1 | 13.1 | 1.4'  | 12 45.5 | -00 32 | 239 | SBcd       |    |    | H III 663;NGC 4666 @ 7.3'                          |
| NGC 4669        | UGC 7925    | Galaxy | UMA | 13.2 | 12.3 | 1.5'  | 12 44.8 | +54 53 | 48  | Sb         |    |    | NGC 4686 group                                     |
| NGC 4670        | UGC 7930    | Galaxy | COM | 12.7 | 13   | 1.4'  | 12 45.3 | +27 08 | 149 | SBO-a      |    |    | H III 328;P w NGC 4673 @ 5.6'                      |
| NGC 4672        | ESO 322-73  | Galaxy | CEN | 13.2 | 13.2 | 2.2'  | 12 46.3 | -41 42 | 402 | Sa         |    |    |  |
| NGC 4673        | UGC 7933    | Galaxy | COM | 12.9 | 12.7 | 1'    | 12 45.6 | +27 04 | 149 | Elliptical |    |    | H III 329;P w NGC 4670 @ 5.6'                      |
| NGC 4677        | ESO 322-78  | Galaxy | CEN | 12.8 | 12.9 | 1.6'  | 12 47.0 | -41 35 | 402 | SBO-a      |    |    |  |
| NGC 4679        | ESO 322-82  | Galaxy | CEN | 12.4 | 13.2 | 1.6'  | 12 47.5 | -39 34 | 402 | SBc        |    |    |  |
| NGC 4680        | MCG - 2-33- | Galaxy | VIR | 13   | -    | 1.5'  | 12 46.9 | -11 38 | 284 | S          |    |    |  |
| NGC 4681        | ESO 268-40  | Galaxy | CEN | 12.6 | 13   | 1.4'  | 12 47.5 | -43 20 | 402 | Sab        |    |    |  |
| NGC 4682        | MCG - 2-33- | Galaxy | VIR | 12.1 | 13.3 | 2.5'  | 12 47.3 | -10 04 | 284 | SBc        |    |    | H III 523  |
| NGC 4683        | ESO 322-83  | Galaxy | CEN | 12.7 | 12.8 | 1.3'  | 12 47.7 | -41 32 | 402 | E-SO Bar   |    |    |  |
| NGC 4684        | UGC 7951    | Galaxy | VIR | 11.4 | 12.4 | 2.8'  | 12 47.3 | -02 44 | 239 | SBO-a      |    |    | H II 181;vB elongated foreshortened nucleus        |
| NGC 4685        | UGC 7954    | Galaxy | COM | 12.6 | 12.9 | 1.6'  | 12 47.2 | +19 28 | 149 | E-SO       |    |    | H III 398  |
| NGC 4686        | UGC 7946    | Galaxy | UMA | 12.6 | 12.6 | 2'    | 12 46.7 | +54 32 | 48  | Sa         |    |    | H II 795;Brightest in group                        |
| NGC 4687        | UGC 7958    | Galaxy | CVN | 13.2 | 12.9 | 0.7'  | 12 47.4 | +35 21 | 108 | Elliptical |    |    |  |
| NGC 4688        | UGC 7961    | Galaxy | VIR | 11.9 | 14.1 | 3.5'  | 12 47.8 | +04 20 | 239 | SBc        |    |    | H III 543;Ho 462a @ 6.8'                           |
| <b>NGC 4689</b> | UGC 7965    | Galaxy | COM | 10.9 | 13.7 | 4.7'  | 12 47.8 | +13 46 | 194 | Sbc        |    |    | H II 128   |
| NGC 4690        | UGC 7964    | Galaxy | VIR | 12.9 | 12.7 | 1.2'  | 12 47.9 | -01 39 | 239 | E-SO       |    |    | H III 664  |
| NGC 4691        | MCG 0-33-   | Galaxy | VIR | 11.1 | 12.9 | 2.7'  | 12 48.2 | -03 20 | 239 | SBO-a      |    |    | H II 182   |
| NGC 4692        | IC 823      | Galaxy | COM | 12.6 | 13.1 | 1.1'  | 12 47.9 | +27 13 | 149 | Ellip Ring |    |    | H II 381   |
| NGC 4693        | UGC 7962    | Galaxy | DRA | 13.4 | 13.4 | 2.4'  | 12 47.2 | +71 11 | 26  | Scd        |    |    | H III 906  |
| NGC 4694        | UGC 7969    | Galaxy | VIR | 11.4 | 13   | 3.3'  | 12 48.2 | +10 59 | 194 | SBO        |    |    | H II 72  |
| NGC 4695        | UGC 7966    | Galaxy | UMA | 13.4 | 12.9 | 1.1'  | 12 47.5 | +54 22 | 48  | SBbc       |    |    | H II 796;NGC 4686 group                            |
| NGC 4696        | ESO 322-91  | Galaxy | CEN | 10.4 | 13.3 | 4.7'  | 12 48.8 | -41 19 | 402 | Elliptical |    |    |  |
| NGC 4696A       | ESO 322-77  | Galaxy | CEN | 13.7 | 13.2 | 1.3'  | 12 46.9 | -41 30 | 402 | SBb        |    |    |  |
| NGC 4696B       | ESO 322-81  | Galaxy | CEN | 12.7 | 12.5 | 1.2'  | 12 47.4 | -41 14 | 402 | E-SO       |    |    |  |
| NGC 4696C       | ESO 322-87  | Galaxy | CEN | 13.8 | 13.2 | 1.8'  | 12 48.0 | -40 49 | 402 | Sb         |    |    |  |
| NGC 4696D       | ESO 322-88  | Galaxy | CEN | 13   | 12.2 | 1.6'  | 12 48.4 | -41 43 | 402 | SBO        |    |    |  |
| NGC 4696E       | ESO 322-90  | Galaxy | CEN | 13.5 | 13.7 | 1.5'  | 12 48.4 | -40 56 | 402 | SBO        |    |    |  |
| <b>NGC 4697</b> | MCG - 1-33- | Galaxy | VIR | 9.2  | 13.1 | 6.2'  | 12 48.6 | -05 48 | 284 | Elliptical |    |    | H I 39   |
| <b>NGC 4698</b> | UGC 7970    | Galaxy | VIR | 10.6 | 12.9 | 4'    | 12 48.4 | +08 29 | 194 | Sab        |    |    | H I 8  |
| <b>NGC 4699</b> | MCG - 1-33- | Galaxy | VIR | 9.5  | 11.9 | 3.8'  | 12 49.0 | -08 40 | 284 | SBb        |    |    | H I 129  |
| NGC 4700        | MCG - 2-33- | Galaxy | VIR | 11.9 | 12.4 | 3'    | 12 49.1 | -11 25 | 284 | SBc        |    |    | H III 524;edge on spiral                           |
| NGC 4701        | UGC 7975    | Galaxy | VIR | 12.4 | 14.2 | 3.1'  | 12 49.2 | +03 23 | 239 | Sc         |    |    | H II 578   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER        | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|--------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|---|
| NGC 4704        | UGC 7972     | Galaxy | CVN | 13.7 | 13.6 | 1'    | 12 48.8 | +41 55 | 75  | SBbc/P     |    |    | H II 662  |
| NGC 4705        | MCG - 1-33-  | Galaxy | VIR | 14   | -    | 3.1'  | 12 49.4 | -05 12 | 239 | SBbc       |    |    | H III 610   |
| NGC 4706        | ESO 323- 1   | Galaxy | CEN | 12.9 | 12.5 | 1.3'  | 12 49.9 | -41 17 | 402 | SBO        |    |    |   |
| NGC 4707        | UGC 7971     | Galaxy | CVN | 12.9 | 14.4 | 2.2'  | 12 48.4 | +51 10 | 48  | Sm         |    |    | H III 815   |
| NGC 4708        | MCG - 2-33-  | Galaxy | VIR | 14   | -    | 1.2'  | 12 49.7 | -11 06 | 284 | SBab Ri    |    |    | H III 722   |
| NGC 4709        | ESO 323- 3   | Galaxy | CEN | 10.9 | 12.6 | 2.3'  | 12 50.1 | -41 23 | 402 | Elliptical |    |    |   |
| NGC 4710        | UGC 7980     | Galaxy | COM | 11   | 12.8 | 4.9'  | 12 49.6 | +15 10 | 194 | Sa         |    |    | H II 95;equatorial dust lane                          |
| NGC 4711        | IC 3804      | Galaxy | CVN | 13.4 | 13.5 | 1.3'  | 12 48.8 | +35 20 | 108 | SBb        |    |    | H II 412  |
| NGC 4712        | UGC 7977;H   | Galaxy | COM | 12.8 | 13.7 | 2.3'  | 12 49.6 | +25 28 | 149 | Sbc        |    |    | NGC 4725 @ 12 '                                       |
| NGC 4713        | UGC 7985     | Galaxy | VIR | 11.7 | 13.2 | 2.9'  | 12 50.0 | +05 19 | 239 | SBcd       |    |    | H I 140   |
| NGC 4714        | MCG - 2-33-  | Galaxy | CRV | 14   | -    | 1.6'  | 12 50.3 | -13 20 | 284 | E-SO       |    |    | H III 536   |
| NGC 4715        | UGC 7986     | Galaxy | COM | 13.1 | 14.2 | 1.8'  | 12 50.0 | +27 49 | 149 | Sa         |    |    |   |
| NGC 4719        | UGC 7987     | Galaxy | CVN | 13.2 | 13.6 | 1.4'  | 12 50.1 | +33 10 | 108 | SBb        |    |    | H III 424   |
| NGC 4722        | IC 3833      | Galaxy | CRV | 13   | -    | 1.8'  | 12 51.5 | -13 20 | 284 | Sa         |    |    |   |
| <b>NGC 4725</b> | UGC 7989     | Galaxy | COM | 9.4  | 14   | 10.4' | 12 50.4 | +25 30 | 149 | SBab Ri    |    |    | H I 84;P w NGC 4712 @ 12 '                            |
| NGC 4726        | IC 3834      | Galaxy | CRV | 14   | -    | 0.7'  | 12 50.8 | -14 16 | 284 | SO         |    |    |   |
| NGC 4727        | MCG - 2-33-  | Galaxy | CRV | 13   | -    | 1.6'  | 12 51.0 | -14 20 | 284 | SBbc       |    |    | H II 298  |
| NGC 4728        | NGC 4728A    | Galaxy | COM | 13.5 | 13.9 | 0.8'  | 12 50.5 | +27 26 | 149 | Elliptical |    |    |   |
| NGC 4729        | ESO 323-16   | Galaxy | CEN | 12.3 | 13.1 | 1.5'  | 12 51.8 | -41 08 | 402 | Elliptical |    |    | Herschel's position was approximate only              |
| NGC 4730        | ESO 323-17   | Galaxy | CEN | 12.9 | 12.9 | 1.2'  | 12 52.0 | -41 09 | 402 | E-SO       |    |    |   |
| NGC 4731        | MCG - 1-33-  | Galaxy | VIR | 11.5 | 14.6 | 6.3'  | 12 51.0 | -06 24 | 284 | SBc/P      |    |    | H I 41;Open structured spiral                         |
| NGC 4732        | UGC 7988     | Galaxy | UMA | 13.9 | 13.5 | 1.2'  | 12 50.1 | +52 51 | 48  | Elliptical |    |    | H II 814  |
| NGC 4733        | UGC 7997     | Galaxy | VIR | 11.9 | 12.2 | 1.5'  | 12 51.1 | +10 55 | 194 | Elliptical |    |    | H II 73;Ho 473b @ 0.9' is a *                         |
| NGC 4734        | UGC 7998     | Galaxy | VIR | 13.5 | 13.2 | 1'    | 12 51.2 | +04 51 | 239 | Sc         |    |    |   |
| NGC 4738        | UGC 7999     | Galaxy | COM | 13.4 | 12.8 | 2.1'  | 12 51.1 | +28 47 | 108 | Sc         |    |    |   |
| NGC 4739        | MCG - 1-33-  | Galaxy | VIR | 14   | -    | 1.4'  | 12 51.6 | -08 25 | 284 | Elliptical |    |    | H III 515   |
| NGC 4741        | UGC 8000     | Galaxy | CVN | 13.7 | 13.5 | 1.4'  | 12 51.0 | +47 40 | 75  | Sc         |    |    | H III 721   |
| NGC 4742        | MCG - 2-33-  | Galaxy | VIR | 11.3 | 12.8 | 2.3'  | 12 51.8 | -10 27 | 284 | E3         |    |    | H I 133;Group w NGC 4760 & 4781                       |
| NGC 4743        | ESO 323-21   | Galaxy | CEN | 13   | 12.4 | 1.4'  | 12 52.3 | -41 23 | 402 | SO         |    |    |   |
| NGC 4744        | ESO 323-22   | Galaxy | CEN | 12.6 | 13.3 | 2.1'  | 12 52.3 | -41 04 | 402 | SBO-a      |    |    |   |
| NGC 4746        | UGC 8007     | Galaxy | VIR | 12.6 | 14   | 4'    | 12 51.9 | +12 05 | 194 | Sb         |    |    |   |
| NGC 4747        | UGC 8005     | Galaxy | COM | 12.4 | 13.7 | 3.3'  | 12 51.8 | +25 46 | 149 | SBcd       |    |    | H II 344;P w NGC 4725 @ 24 ';filam to NE              |
| NGC 4749        | UGC 8006     | Galaxy | DRA | 13.5 | 12.9 | 1.7'  | 12 51.2 | +71 38 | 26  | Sb         |    |    | H III 907   |
| NGC 4750        | UGC 7994     | Galaxy | DRA | 11.2 | 12.5 | 2.1'  | 12 50.1 | +72 52 | 9   | Sap        |    |    | H IV 78;Dark ring surrounds nucl                      |
| NGC 4751        | ESO 323-29   | Galaxy | CEN | 11.8 | 13   | 3'    | 12 52.8 | -42 40 | 402 | E-SO       |    |    |   |
| <b>NGC 4753</b> | UGC 8009     | Galaxy | VIR | 9.9  | 12.9 | 5.1'  | 12 52.4 | -01 12 | 239 | SO         |    |    | H I 16;SN 1965i                                       |
| <b>NGC 4754</b> | UGC 8010     | Galaxy | VIR | 10.6 | 13.1 | 4.4'  | 12 52.3 | +11 19 | 194 | SBO        |    |    | H I 25;P w NGC 4762 11' to NW                         |
| NGC 4756        | MCG - 2-33-  | Galaxy | CRV | 12.4 | 13.1 | 1.7'  | 12 52.9 | -15 25 | 284 | E-SO       |    |    | H III 281   |
| NGC 4758        | UGC 8014     | Galaxy | COM | 13.1 | 13.8 | 3'    | 12 52.7 | +15 51 | 194 | SB/P       |    |    | H III 70  |
| NGC 4760        | MCG - 2-33-  | Galaxy | VIR | 11.4 | 12.8 | 2'    | 12 53.1 | -10 30 | 284 | Elliptical |    |    |   |
| NGC 4761        | MCG - 1-33-  | Galaxy | VIR | 13.8 | 11.6 | 0.8'  | 12 53.2 | -09 12 | 284 | Elliptical |    |    |   |
| <b>NGC 4762</b> | UGC 8016     | Galaxy | VIR | 10.3 | 13   | 8.6'  | 12 52.9 | +11 14 | 194 | SBO        |    |    | H II 75;NGC 4754 @ 10.5';thick streak w tufts at ends |
| NGC 4763        | MCG - 3-33-  | Galaxy | CRV | 12.6 | 12.9 | 1.6'  | 12 53.5 | -17 00 | 284 | SBa        |    |    | H III 489   |
| NGC 4765        | UGC 8018     | Galaxy | VIR | 13   | 12.8 | 1.1'  | 12 53.2 | +04 28 | 239 | Sa         |    |    | H III 544   |
| NGC 4767        | ESO 323-36   | Galaxy | CEN | 11.5 | 12.7 | 2.6'  | 12 53.9 | -39 43 | 402 | Elliptical |    |    |   |
| NGC 4767B       | ESO 323-41   | Galaxy | CEN | 13.1 | 13.3 | 1.3'  | 12 54.7 | -39 51 | 402 | SBc        |    |    |   |
| NGC 4770        | MCG - 1-33-  | Galaxy | VIR | 14   | -    | 1.5'  | 12 53.5 | -09 33 | 284 | Sa         |    |    | H III 525   |
| NGC 4771        | UGC 8020     | Galaxy | VIR | 12.3 | 13.4 | 3.8'  | 12 53.3 | +01 16 | 239 | Scd        |    |    | H II 535;edge on                                      |
| NGC 4772        | UGC 8021     | Galaxy | VIR | 11   | 12.8 | 3.1'  | 12 53.5 | +02 10 | 239 | Sa         |    |    | H II 24   |
| NGC 4775        | MCG - 1-33-  | Galaxy | VIR | 11.1 | 12.5 | 2.2'  | 12 53.8 | -06 37 | 284 | Scd        |    |    | H II 186;Compact face on spiral                       |
| NGC 4776        | NGC 4759-1   | Galaxy | VIR | 13   | -    | 1.9'  | 12 53.1 | -09 12 | 284 | SO         |    |    |   |
| NGC 4778        | NGC 4759-2   | Galaxy | VIR | 12.5 | -    | 1.7'  | 12 53.1 | -09 12 | 284 | Sa         |    |    |   |
| NGC 4779        | UGC 8022     | Galaxy | VIR | 12.4 | 13.7 | 2.1'  | 12 53.8 | +09 43 | 194 | SBbc       |    |    | H III 106   |
| NGC 4780        | MCG - 1-33-  | Galaxy | VIR | 14   | -    | 1.8'  | 12 54.1 | -08 37 | 284 | SBc        |    |    |   |
| <b>NGC 4781</b> | MCG - 2-33-  | Galaxy | VIR | 11.1 | 12.8 | 3.4'  | 12 54.4 | -10 32 | 284 | SBcd       |    |    | H I 134;Coarse spiral                                 |
| NGC 4782        | MCG - 2-33-  | Galaxy | CRV | 11.7 | 12.9 | 2.3'  | 12 54.6 | -12 34 | 284 | EO         |    |    | H I 135;Contact P w NGC 4783                          |
| NGC 4783        | 3C278;H I 13 | Galaxy | CRV | 11.5 | 12.8 | 2.3'  | 12 54.6 | -12 34 | 284 | EO         |    |    | P w NGC 4782 @ 0.7'                                   |
| NGC 4785        | ESO 219- 4   | Galaxy | CEN | 12.4 | 12.9 | 2'    | 12 53.5 | -48 45 | 402 | Sb         |    |    |   |
| NGC 4786        | MCG - 1-33-  | Galaxy | VIR | 11.7 | 12.4 | 1.6'  | 12 54.5 | -06 52 | 284 | E2         |    |    | H II 187;NGC 4775 18' to SE                           |
| NGC 4789        | UGC 8028     | Galaxy | COM | 12.1 | 13.1 | 1.9'  | 12 54.3 | +27 04 | 149 | SO         |    |    | H II 345;P w NGC 4789A @ 5 ' ;NGC 4787 @ 3 '          |
| NGC 4789A       | UGC 8024     | Galaxy | COM | 13.6 | 15.5 | 3.1'  | 12 54.1 | +27 09 | 149 | Ir Bar     |    |    | P w NGC 4789 @ 5 '                                    |
| NGC 4790        | MCG - 2-33-  | Galaxy | VIR | 12.1 | 12.6 | 1.5'  | 12 54.9 | -10 15 | 284 | SBc        |    |    | H II 560  |
| NGC 4793        | UGC 8033     | Galaxy | COM | 11.6 | 13   | 2.9'  | 12 54.7 | +28 56 | 108 | SBc        |    |    | H I 93  |
| NGC 4794        | MCG - 2-33-  | Galaxy | CRV | 14   | -    | 1.7'  | 12 55.2 | -12 37 | 284 | SBa        |    |    | H II 538  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|--|
| NGC 4795        | UGC 8037    | Galaxy | VIR | 12.1 | 13.1 | 1.6' | 12 55.0 | +08 04 | 194 | SBO-a      |    |    | H II 21;NGC 4796 superimposed;NGC 4791 @ 4.8'                |
| NGC 4796        | NPM1G +08   | Galaxy | VIR | 13.5 | -    | 0.4' | 12 55.1 | +08 04 | 194 | Compac     |    |    | NGC 4791 @ 4.8'  |
| NGC 4798        | NGC 4797    | Galaxy | COM | 13.2 | 13.1 | 1'   | 12 54.9 | +27 25 | 149 | E-SO Ri    |    |    | H II 382   |
| NGC 4799        | UGC 8043    | Galaxy | VIR | 13.3 | 12.9 | 1.3' | 12 55.3 | +02 54 | 239 | Sc         |    |    | H III 548  |
| <b>NGC 4800</b> | UGC 8035    | Galaxy | CVN | 11.5 | 12   | 1.6' | 12 54.6 | +46 32 | 75  | Sb         |    |    | H I 211  |
| NGC 4802        | NGC 4804    | Galaxy | CRV | 12   | -    | 2.4' | 12 55.8 | -12 03 | 284 | SO         |    |    |  |
| NGC 4804        | NGC 4802    | Galaxy | CRV | 12.6 | -    | 2.4' | 12 55.8 | -12 03 | 284 | SO         |    |    | H IV 40  |
| NGC 4806        | ESO 443-12  | Galaxy | HYA | 12.7 | 12.7 | 1.2' | 12 56.2 | -29 30 | 369 | SB Ring    |    |    |  |
| NGC 4808        | UGC 8054    | Galaxy | VIR | 11.7 | 12.8 | 2.4' | 12 55.8 | +04 18 | 239 | Sc         |    |    | H I 141  |
| NGC 4809        | Ho 486a     | Galaxy | VIR | 13.7 | 14.1 | 1.7' | 12 54.8 | +02 39 | 239 | Ir         |    |    | north comp NGC 4810 @ 0.8'                                   |
| NGC 4810        | UGC 8034;H  | Galaxy | VIR | 13.7 | 14   | 1.4' | 12 54.9 | +02 38 | 239 | Ir         |    |    | south comp. NGC 4809 @ 0.8'                                  |
| NGC 4811        | ESO 323-47  | Galaxy | CEN | 13   | 13.1 | 1.3' | 12 56.9 | -41 48 | 402 | SBO-a      |    |    |  |
| NGC 4812        | ESO 323-48  | Galaxy | CEN | 13.1 | 12.1 | 1.2' | 12 56.9 | -41 49 | 402 | SO         |    |    |  |
| NGC 4814        | UGC 8051    | Galaxy | UMA | 12   | 14   | 3.3' | 12 55.4 | +58 21 | 48  | SB/P       |    |    | H I 243  |
| NGC 4816        | UGC 8057    | Galaxy | COM | 12.8 | 13.1 | 1.3' | 12 56.2 | +27 45 | 149 | E-SO       |    |    |  |
| NGC 4818        | MCG - 1-33- | Galaxy | VIR | 11.1 | 13   | 3.4' | 12 56.8 | -08 32 | 284 | SBab       |    |    | H II 549   |
| NGC 4819        | UGC 8060    | Galaxy | COM | 13.2 | 13.1 | 0.9' | 12 56.5 | +26 59 | 149 | SBa        |    |    | H II 346;P w NGC 4821 @ 1.8'                                 |
| NGC 4822        | MCG - 2-33- | Galaxy | VIR | 14   | -    | 1.2' | 12 57.1 | -10 46 | 284 | E-SO       |    |    |  |
| NGC 4825        | MCG - 2-33- | Galaxy | VIR | 11.7 | 12.5 | 2'   | 12 57.2 | -13 40 | 284 | E-SO       |    |    | H II 563   |
| NGC 4827        | UGC 8065    | Galaxy | COM | 12.9 | 13.4 | 1.4' | 12 56.7 | +27 11 | 149 | E-SO Ba    |    |    | H II 384   |
| NGC 4830        | ESO 575-37  | Galaxy | VIR | 12.1 | 12.8 | 1.8' | 12 57.5 | -19 42 | 329 | E-SO Ba    |    |    |  |
| NGC 4831        | ESO 507-55  | Galaxy | HYA | 12.4 | 12.6 | 1.7' | 12 57.6 | -27 18 | 329 | E-SO Ba    |    |    |  |
| NGC 4832        | ESO 323-51  | Galaxy | CEN | 12.2 | 13   | 1.8' | 12 57.8 | -39 46 | 402 | SO         |    |    |  |
| NGC 4835        | ESO 269-19  | Galaxy | CEN | 11.6 | 12.8 | 4.3' | 12 58.1 | -46 16 | 402 | SBbc       |    |    |  |
| NGC 4835A       | ESO 269-15  | Galaxy | CEN | 13.3 | 13.2 | 2.5' | 12 57.2 | -46 23 | 402 | Sc         |    |    |  |
| NGC 4836        | MCG - 2-33- | Galaxy | VIR | 13   | -    | 1.4' | 12 57.6 | -12 45 | 284 | Scd        |    |    |  |
| NGC 4838        | MCG - 2-33- | Galaxy | VIR | 13   | -    | 1.7' | 12 57.9 | -13 04 | 284 | SB Ring    |    |    |  |
| NGC 4839        | UGC 8070    | Galaxy | COM | 12.1 | 14.3 | 4'   | 12 57.4 | +27 30 | 149 | Elliptical |    |    | H II 386;NGC 4842 @ 2.6';comp. superimposed @ 0.4'           |
| NGC 4840        | MCG 5-31-   | Galaxy | COM | 13.7 | 12.9 | 0.7' | 12 57.5 | +27 37 | 149 | Elliptical |    |    | H II 385   |
| NGC 4841A       | NGC 4841-1  | Galaxy | COM | 12.8 | 13.8 | 1.7' | 12 57.5 | +28 29 | 108 | Elliptical |    |    | H II 387;separation from NGC 4841B is 0.7'                   |
| NGC 4841B       | NGC 4841-2  | Galaxy | COM | 12.6 | 13.9 | 1.3' | 12 57.6 | +28 29 | 108 | E pec      |    |    | separation from NGC 4841A is 0.7'                            |
| NGC 4843        | MCG 0-33-   | Galaxy | VIR | 13   | 12.8 | 2.1' | 12 58.0 | -03 37 | 239 | Sa         |    |    | H III 613  |
| <b>NGC 4845</b> | UGC 8078    | Galaxy | VIR | 11.2 | 13.1 | 4.9' | 12 58.0 | +01 35 | 239 | Sab        |    |    | H II 536;edge on w dust lane                                 |
| NGC 4846        | UGC 8079    | Galaxy | CVN | 13.5 | 13   | 1.3' | 12 57.8 | +36 22 | 108 | SBbc       |    |    |  |
| NGC 4848        | UGC 8082    | Galaxy | COM | 13.7 | 13.3 | 1.6' | 12 58.1 | +28 15 | 108 | SBc        |    |    |  |
| NGC 4849        | IC 3935;UGC | Galaxy | COM | 12.9 | 13.6 | 1.9' | 12 58.2 | +26 24 | 149 | SO         |    |    | P w IC 838 (=Ho 495b) @ 1.9'                                 |
| NGC 4852        | Dunlop 311  | Opn CL | CEN | 8.9  | -    | 11'  | 13 00.1 | -59 37 | 429 | II 2 p     | 60 |    |  |
| NGC 4853        | UGC 8092;I  | Galaxy | COM | 13.6 | 13   | 0.8' | 12 58.6 | +27 36 | 149 | E-SO Ri    |    |    |  |
| NGC 4854        | MCG 5-31-   | Galaxy | COM | 13.9 | -    | 1.2' | 12 58.8 | +27 40 | 149 | SBO        |    |    |  |
| NGC 4855        | MCG - 2-33- | Galaxy | VIR | 14   | -    | 1.7' | 12 59.3 | -13 14 | 284 | E-SO       |    |    |  |
| <b>NGC 4856</b> | MCG - 2-33- | Galaxy | VIR | 10.5 | 12.1 | 3.9' | 12 59.4 | -15 03 | 284 | SBO-a      |    |    | H I 68   |
| NGC 4857        | UGC 8077    | Galaxy | DRA | 13.8 | 13.5 | 1.3' | 12 57.3 | +70 12 | 26  | SBb        |    |    | H III 908  |
| NGC 4859        | UGC 8097    | Galaxy | COM | 13.6 | 13.4 | 1.3' | 12 59.0 | +26 49 | 149 | Sa         |    |    |  |
| NGC 4860        | MCG 5-31-   | Galaxy | COM | 13.5 | 14.1 | 0.9' | 12 59.1 | +28 07 | 108 | Elliptical |    |    |  |
| NGC 4861        | IC 3961     | Galaxy | CVN | 12.3 | 14.1 | 3.3' | 12 59.0 | +34 51 | 108 | SB         |    |    | N 4861 is B emission path SW of IC 3961;Comb m=13            |
| NGC 4864        | MCG 5-31-   | Galaxy | COM | 13.6 | 11.8 | 0.6' | 12 59.2 | +27 59 | 149 | Elliptical |    |    |  |
| NGC 4865        | UGC 8100    | Galaxy | COM | 13.7 | 12.8 | 0.9' | 12 59.3 | +28 05 | 108 | Elliptical |    |    |  |
| <b>NGC 4866</b> | UGC 8102    | Galaxy | VIR | 11.2 | 13.4 | 6.4' | 12 59.5 | +14 10 | 194 | Sa         |    |    | H I 162;UGC 8091 @ 11.8';lens shaped                         |
| NGC 4868        | UGC 8099    | Galaxy | CVN | 12.2 | 13   | 1.5' | 12 59.2 | +37 19 | 108 | Sab        |    |    | H II 644;P w NGC 4914 @ 18.6'                                |
| NGC 4869        | MCG 5-31-   | Galaxy | COM | 13.8 | 13.1 | 0.7' | 12 59.4 | +27 55 | 149 | Elliptical |    |    | H II 388   |
| NGC 4874        | UGC 8103    | Galaxy | COM | 11.7 | 13.1 | 2.4' | 12 59.6 | +27 58 | 149 | Elliptical |    |    | NGC 4889 @ 7.2';2nd Brightest in <b>Coma cluster</b>         |
| NGC 4877        | MCG - 2-33- | Galaxy | VIR | 13   | -    | 2.2' | 13 00.4 | -15 17 | 284 | Sab        |    |    | H II 299   |
| NGC 4880        | UGC 8109    | Galaxy | VIR | 11.4 | 13.5 | 3.1' | 13 00.2 | +12 29 | 194 | SBO-a      |    |    | H III 83;Ho 497b @ 1.7' is a *                               |
| NGC 4881        | UGC 8106    | Galaxy | COM | 13.6 | 13.5 | 0.9' | 13 00.0 | +28 15 | 108 | Elliptical |    |    |  |
| <b>NGC 4884</b> | NGC 4889    | Galaxy | COM | 12.5 | -    | 2.8' | 13 00.1 | +27 59 | 149 | Elliptical |    |    | see 4889   |
| <b>NGC 4886</b> | NGC 4882    | Galaxy | COM | 13.9 | 14   | 0.7' | 13 00.1 | +27 59 | 149 | Elliptical |    |    | near 4889  |
| NGC 4887        | MCG - 2-33- | Galaxy | VIR | 14   | -    | 1.1' | 13 00.7 | -14 40 | 284 | Sa         |    |    |  |
| NGC 4888        | NGC 4879    | Galaxy | VIR | 12.8 | -    | 1.1' | 13 00.6 | -06 05 | 284 | S pec      |    |    | H II 778   |
| <b>NGC 4889</b> | NGC 4884    | Galaxy | COM | 11.5 | 13.3 | 2.8' | 13 00.1 | +27 59 | 149 | Elliptical |    |    | B in <b>Coma cluster</b> ;NGC 4872 @ 0.8' sp; 4886 @ 1.1' np |
| NGC 4890        | MCG - 1-33- | Galaxy | VIR | 14   | -    | 0.9' | 13 00.6 | -04 36 | 239 | Sm         |    |    | H III 614  |
| NGC 4891        |             | Star   | VIR | 12.6 | -    |      | 13 00.8 | -13 26 | 284 |            |    |    | Star 2' np NGC 4897  |
| NGC 4892        | UGC 8108    | Galaxy | COM | 13.9 | 12.7 | 1.3' | 13 00.1 | +26 54 | 149 | SO         |    |    | H II 390   |
| NGC 4895        | UGC 8113    | Galaxy | COM | 13.2 | 13.2 | 1.8' | 13 00.3 | +28 12 | 109 | SO         |    |    |  |
| NGC 4896        | UGC 8117    | Galaxy | COM | 13.9 | 13.2 | 1'   | 13 00.5 | +28 21 | 109 | SO Pec     |    |    |  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|--------|-----|------|------|-------|---------|--------|-----|------------|----|----|---|
| NGC 4897        | MCG - 2-33- | Galaxy | VIR | 11.8 | 13.6 | 2.7'  | 13 00.9 | -13 27 | 284 | SBbc       |    |    |   |
| <b>NGC 4898</b> | MCG 5-31-   | Galaxy | COM | 13.5 | -    | 0.4'  | 13 00.3 | +27 57 | 149 | Ep         |    |    | near 4889   |
| NGC 4899        | MCG - 2-33- | Galaxy | VIR | 11.9 | 13.2 | 2.3'  | 13 00.9 | -13 57 | 284 | SBc        |    |    | H II 300  |
| <b>NGC 4900</b> | UGC 8116    | Galaxy | VIR | 11.4 | 12.9 | 2.2'  | 13 00.7 | +02 30 | 239 | SBc        |    |    | H I 143   |
| <b>NGC 4902</b> | MCG - 2-33- | Galaxy | VIR | 10.9 | 13.1 | 2.9'  | 13 01.0 | -14 31 | 284 | SBb        |    |    | H I 69;Theta shaped center;triskelion arm pattern |
| NGC 4903        | ESO 443-30  | Galaxy | CEN | 13   | 13.6 | 1.6'  | 13 01.4 | -30 56 | 370 | SBc        |    |    |   |
| NGC 4904        | UGC 8121    | Galaxy | VIR | 12   | 13.1 | 2.2'  | 13 01.0 | -00 02 | 239 | SBc        |    |    | H II 517  |
| NGC 4905        | ESO 443-31  | Galaxy | CEN | 13.2 | 13.8 | 1.4'  | 13 01.5 | -30 52 | 370 | SBO-a      |    |    |   |
| NGC 4907        | MCG 5-31-   | Galaxy | COM | 13.6 | 13.5 | 1.1'  | 13 00.8 | +28 09 | 109 | SBb        |    |    |   |
| NGC 4908        | MCG 5-31-   | Galaxy | COM | 13.6 | 13.6 | 0.9'  | 13 00.9 | +28 03 | 109 | Elliptical |    |    |   |
| NGC 4909        | ESO 269-35  | Galaxy | CEN | 12.6 | 13.8 | 1.9'  | 13 02.0 | -42 46 | 402 | Sa Ring    |    |    |   |
| <b>NGC 4910</b> | UGC 8078    | Galaxy | VIR | 12.1 | -    | 5'    | 12 58.0 | +01 35 | 239 | Sb         |    |    | H V 3 , see 4845                                  |
| NGC 4911        | UGC 8128    | Galaxy | COM | 12.8 | 13.3 | 1.5'  | 13 00.9 | +27 47 | 149 | SBbc       |    |    | H II 392  |
| NGC 4914        | UGC 8125    | Galaxy | CVN | 11.6 | 13.6 | 3.5'  | 13 00.7 | +37 19 | 109 | Elliptical |    |    | H II 645;P w NGC 4868                             |
| NGC 4915        | MCG - 1-33- | Galaxy | VIR | 12.1 | 12.9 | 1.6'  | 13 01.5 | -04 33 | 239 | Elliptical |    |    | H IV 47;NGC 4918 @ 6.3'                           |
| NGC 4917        | UGC 8130    | Galaxy | CVN | 13.8 | 14.1 | 1.5'  | 13 00.9 | +47 13 | 75  | SBb        |    |    |   |
| NGC 4920        | MCG - 2-33- | Galaxy | VIR | 14   | -    | 1'    | 13 02.1 | -11 23 | 284 | Ir Bar     |    |    |   |
| NGC 4921        | UGC 8134    | Galaxy | COM | 12.2 | 13.9 | 2.4'  | 13 01.4 | +27 53 | 149 | SBab       |    |    | H II 393;SN 1959b                                 |
| NGC 4923        | MCG 5-31-   | Galaxy | COM | 13.7 | 13.1 | 0.8'  | 13 01.5 | +27 51 | 149 | E-SO Ba    |    |    | H II 394  |
| NGC 4924        | MCG - 2-33- | Galaxy | VIR | 14   | -    | 1.3'  | 13 02.2 | -14 58 | 284 | SBO-a      |    |    |   |
| NGC 4925        | MCG - 1-33- | Galaxy | VIR | 14   | -    | 1'    | 13 02.1 | -07 43 | 284 | SO         |    |    | H II 779  |
| NGC 4926        | UGC 8142    | Galaxy | COM | 13   | 13.1 | 1.1'  | 13 01.9 | +27 37 | 149 | E-SO       |    |    | NGC 4926A is 3.4' nf                              |
| NGC 4927        | MCG 5-31-   | Galaxy | COM | 13.7 | -    | 0.6'  | 13 02.0 | +28 00 | 109 | E-SO Ba    |    |    | H III 364   |
| NGC 4928        | MCG - 1-33- | Galaxy | VIR | 12.5 | 12.6 | 1.1'  | 13 03.0 | -08 05 | 284 | Sbc        |    |    | H II 190  |
| NGC 4929        | MCG 5-31-   | Galaxy | COM | 13.4 | 13.5 | 1'    | 13 02.7 | +28 03 | 109 | Elliptical |    |    |   |
| NGC 4930        | ESO 323-74  | Galaxy | CEN | 11.1 | 14   | 4.4'  | 13 04.1 | -41 25 | 402 | SBbc Ring  |    |    |   |
| NGC 4931        | UGC 8154    | Galaxy | COM | 13.5 | 13.4 | 1.6'  | 13 03.0 | +28 02 | 109 | SO         |    |    |   |
| NGC 4932        | UGC 8150    | Galaxy | CVN | 13.6 | 14.2 | 1.5'  | 13 02.6 | +50 26 | 48  | Sc         |    |    | H III 818   |
| NGC 4933A       | NGC 4933    | Galaxy | VIR | 11.7 | 12.3 | 2'    | 13 03.9 | -11 30 | 284 | Sa         |    |    | H II 191  |
| NGC 4935        | UGC 8159    | Galaxy | COM | 13   | 13.1 | 1.2'  | 13 03.4 | +14 23 | 194 | SBb        |    |    | Similar to NGC 210                                |
| NGC 4936        | ESO 443-47  | Galaxy | CEN | 10.8 | 12.8 | 3.2'  | 13 04.3 | -30 32 | 370 | Elliptical |    |    |   |
| NGC 4939        | MCG - 2-33- | Galaxy | VIR | 11.3 | 14.1 | 5.1'  | 13 04.2 | -10 20 | 285 | Sbc        |    |    | H II 561;Well defined spiral                      |
| NGC 4940        | ESO 269-42  | Galaxy | CEN | 13.1 | 13.2 | 1.2'  | 13 05.0 | -47 14 | 402 | Sa         |    |    |   |
| NGC 4941        | MCG - 1-33- | Galaxy | VIR | 11.1 | 13   | 3.5'  | 13 04.2 | -05 33 | 285 | SBab       |    |    | H I 40  |
| NGC 4942        | IC 4136     | Galaxy | VIR | 14   | -    | 1.7'  | 13 04.3 | -07 39 | 285 | SBcd       |    |    | H III 761   |
| NGC 4944        | UGC 8167    | Galaxy | COM | 12.9 | 12.7 | 1.5'  | 13 03.8 | +28 11 | 109 | Sab        |    |    | H II 395;comp. @ 1.1'                             |
| <b>NGC 4945</b> | Dunlop 411  | Galaxy | CEN | 8.6  | 13.1 | 19.8' | 13 05.4 | -49 28 | 402 | SBc        |    |    | Nearly edge-on                                    |
| NGC 4945A       | ESO 219-28  | Galaxy | CEN | 12.5 | 13.7 | 2.5'  | 13 06.6 | -49 42 | 402 | SB         |    |    |   |
| NGC 4946        | ESO 269-45  | Galaxy | CEN | 12.4 | 13.1 | 1.6'  | 13 05.5 | -43 36 | 402 | Elliptical |    |    |   |
| NGC 4947        | IC 3974     | Galaxy | CEN | 11.8 | 12.9 | 2.4'  | 13 05.3 | -35 20 | 370 | SBab       |    |    |   |
| NGC 4948        | IC 4156     | Galaxy | VIR | 14   | -    | 2'    | 13 04.9 | -07 57 | 285 | SBd        |    |    |   |
| NGC 4948A       | MCG - 1-33- | Galaxy | VIR | 13.4 | 13.9 | 1.5'  | 13 05.1 | -08 10 | 285 | SBd        |    |    |   |
| NGC 4950        | ESO 269-47  | Galaxy | CEN | 13.9 | 13.3 | 0.8'  | 13 05.6 | -43 30 | 402 | SBO        |    |    |   |
| NGC 4951        | MCG - 1-33- | Galaxy | VIR | 11.9 | 13.2 | 3.3'  | 13 05.1 | -06 30 | 285 | SBc        |    |    | H II 188;Nearly edge on                           |
| NGC 4952        | NGC 4962    | Galaxy | COM | 12.4 | 13.1 | 1.3'  | 13 05.0 | +29 07 | 109 | Elliptical |    |    | H II 396  |
| NGC 4953        | ESO 382- 8  | Galaxy | CEN | 13.1 | 12.9 | 1.2'  | 13 06.2 | -37 35 | 370 | Sa         |    |    |   |
| NGC 4955        | ESO 443-62  | Galaxy | HYA | 12.2 | 13.1 | 1.9'  | 13 06.1 | -29 45 | 370 | Elliptical |    |    |   |
| NGC 4956        | UGC 8177    | Galaxy | CVN | 12.4 | 13.1 | 1.5'  | 13 05.0 | +35 11 | 109 | SO         |    |    | H II 413  |
| NGC 4957        | UGC 8178    | Galaxy | COM | 13   | 13.2 | 1.2'  | 13 05.2 | +27 34 | 150 | Elliptical |    |    | H II 397;P w NGC 4961 @ 12.5'                     |
| <b>NGC 4958</b> | MCG - 1-33- | Galaxy | VIR | 10.7 | 12.3 | 3.9'  | 13 05.8 | -08 01 | 285 | SBO        |    |    | H I 130;Lenticular                                |
| NGC 4960        | NGC 4961    | Galaxy | COM | 13.8 | -    | 1.6'  | 13 05.8 | +27 44 | 150 | SBc        |    |    |   |
| NGC 4961        | NGC 4960    | Galaxy | COM | 13.6 | 14.1 | 1.6'  | 13 05.8 | +27 44 | 150 | SBc        |    |    | H II 398;P w NGC 4957 @ 12.5'                     |
| NGC 4962        | NGC 4952    | Galaxy | COM | 13.6 | -    | 1.3'  | 13 05.0 | +29 07 | 109 | Elliptical |    |    | H III 303   |
| NGC 4963        | UGC 8190    | Galaxy | CVN | 13.2 | 12.7 | 0.8'  | 13 05.9 | +41 43 | 75  | S          |    |    | H II 663  |
| NGC 4964        | UGC 8184    | Galaxy | UMA | 13.2 | 12.5 | 1.1'  | 13 05.4 | +56 19 | 48  | SO         |    |    | H III 779   |
| NGC 4965        | ESO 443-70  | Galaxy | HYA | 12.1 | 13.8 | 2.4'  | 13 07.2 | -28 14 | 370 | SBcd       |    |    |   |
| NGC 4966        | UGC 8194    | Galaxy | COM | 13.3 | 12.4 | 1'    | 13 06.3 | +29 04 | 109 | SBab Ring  |    |    | H III 304   |
| NGC 4968        | ESO 508- 6  | Galaxy | HYA | 12.8 | 13.1 | 1.9'  | 13 07.1 | -23 41 | 330 | SBO        |    |    |   |
| NGC 4970        | IC 4196     | Galaxy | HYA | 12.2 | 12.8 | 1.8'  | 13 07.6 | -24 01 | 330 | SO         |    |    | H III 765   |
| NGC 4971        | MCG 5-31-   | Galaxy | COM | 13.4 | 13.4 | 1'    | 13 06.9 | +28 33 | 109 | SBO Ring   |    |    |   |
| NGC 4973        | IC 847      | Galaxy | UMA | 13.3 | -    | 0.5'  | 13 05.5 | +53 41 | 48  | Elliptical |    |    | H III 781   |
| NGC 4976        | ESO 219-29  | Galaxy | CEN | 10   | 13.1 | 5.1'  | 13 08.6 | -49 30 | 402 | Elliptical |    |    |   |
| NGC 4977        | UGC 8196    | Galaxy | UMA | 13.3 | 14.1 | 1.5'  | 13 06.1 | +55 39 | 48  | Sb         |    |    | H III 780   |
| NGC 4978        | UGC 8212    | Galaxy | COM | 13.1 | 13.2 | 1.5'  | 13 07.8 | +18 25 | 150 | Sa         |    |    |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 4979        | IC 4198     | Galaxy  | COM | 13.8 | 13.4 | 1'   | 13 07.7 | +24 49 | 150 | SB/P       |    |    | P w 4202 @ 13 ' ;H III 346                                    |
| NGC 4980        | ESO 443-75  | Galaxy  | HYA | 12.6 | 12.7 | 1.6' | 13 09.2 | -28 39 | 370 | SBa        |    |    |   |
| NGC 4981        | MCG - 1-34- | Galaxy  | VIR | 11.3 | 13   | 2.8' | 13 08.8 | -06 47 | 285 | SBbc Ring  |    |    | H II 189  |
| NGC 4983        | MCG 5-31-   | Galaxy  | COM | 13.9 | 13.5 | 1.1' | 13 08.5 | +28 19 | 109 | SBO-a      |    |    | H III 365   |
| NGC 4984        | MCG - 2-34- | Galaxy  | VIR | 11.3 | 13.1 | 3'   | 13 09.0 | -15 31 | 285 | SBO-a      |    |    | H II 301  |
| NGC 4985        | UGC 8218    | Galaxy  | CVN | 13.7 | 14   | 1.3' | 13 08.2 | +41 41 | 75  | SO         |    |    | H III 654   |
| NGC 4986        | UGC 8221    | Galaxy  | CVN | 13.2 | 13.6 | 1.7' | 13 08.4 | +35 12 | 109 | SBb        |    |    | H III 401   |
| NGC 4987        | UGC 8216    | Galaxy  | CVN | 13.4 | 13.2 | 1.2' | 13 08.0 | +51 56 | 48  | Elliptical |    |    | H II 815  |
| NGC 4988        | ESO 269-55  | Galaxy  | CEN | 12.8 | 12.5 | 1.7' | 13 09.9 | -43 06 | 402 | Sa         |    |    |   |
| NGC 4989        | MCG - 1-34- | Galaxy  | VIR | 14   | -    | 1.6' | 13 09.3 | -05 24 | 240 | SO         |    |    | H II 185  |
| NGC 4992        | UGC 8232    | Galaxy  | VIR | 13.4 | 13.1 | 1.2' | 13 09.1 | +11 38 | 195 | Sa         |    |    |   |
| NGC 4993        | NGC 4994    | Galaxy  | HYA | 12.3 | 12.6 | 1.3' | 13 09.8 | -23 23 | 330 | E-SO Ba    |    |    | H III 766   |
| <b>NGC 4994</b> | NGC 4993    | Galaxy  | HYA | 13.3 | -    | 1.3' | 13 09.8 | -23 23 | 330 | E-SO B     |    |    | near 4889   |
| <b>NGC 4995</b> | MCG - 1-34- | Galaxy  | VIR | 11.1 | 12.5 | 2.4' | 13 09.7 | -07 50 | 285 | SBb        |    |    | H I 42;Dense spiral   |
| NGC 4996        | UGC 8235    | Galaxy  | VIR | 12.6 | 13.5 | 1.8' | 13 09.5 | +00 51 | 240 | SBO-a      |    |    |   |
| NGC 4997        | MCG - 3-34- | Galaxy  | VIR | 13   | -    | 1.4' | 13 09.9 | -16 31 | 285 | E-SO       |    |    |   |
| NGC 4999        | UGC 8236    | Galaxy  | VIR | 11.8 | 13.4 | 2.3' | 13 09.6 | +01 40 | 240 | SBb        |    |    | H II 537  |
| NGC 5000        | UGC 8241    | Galaxy  | COM | 13.2 | 14   | 1.7' | 13 09.8 | +28 54 | 109 | SBbc       |    |    | <b>M 51</b> case?;vF cond at tip of spir arm at 0.9;165;or *? |
| NGC 5002        | UGC 8254    | Galaxy  | CVN | 13.9 | 14.3 | 1.7' | 13 10.6 | +36 38 | 109 | SB         |    |    | compact   |
| NGC 5004A       | UGC 8260    | Galaxy  | COM | 13.7 | 13.6 | 1.4' | 13 11.0 | +29 38 | 109 | SO Ring    |    |    | H III 305;late spiral;brightest of 3;UGC 8260                 |
| <b>NGC 5005</b> | UGC 8256    | Galaxy  | CVN | 9.8  | 12.7 | 5.8' | 13 10.9 | +37 03 | 109 | SBbc       |    |    | H I 96;P w NGC 5033;eBN in B lens;sev knotty arms             |
| NGC 5006        | ESO 576- 6  | Galaxy  | VIR | 12.3 | 13.5 | 2'   | 13 11.8 | -19 16 | 330 | SBO-a R    |    |    |   |
| NGC 5007        | UGC 8240    | Galaxy  | UMA | 13.3 | 12.4 | 0.9' | 13 09.2 | +62 10 | 26  | E-SO       |    |    | H III 848;In group w UGC 8214;8234 and 8237                   |
| NGC 5010        | MCG - 3-34- | Galaxy  | VIR | 14   | -    | 1.3' | 13 12.4 | -15 48 | 285 | Sa         |    |    |   |
| NGC 5011        | ESO 269-65  | Galaxy  | CEN | 11.4 | 13.1 | 2.5' | 13 12.9 | -43 06 | 403 | E1         |    |    |   |
| NGC 5011A       | ESO 269-63  | Galaxy  | CEN | 13.6 | 13.8 | 1.6' | 13 12.2 | -43 19 | 403 | SB Ring    |    |    |   |
| NGC 5012        | UGC 8270    | Galaxy  | COM | 12.2 | 13.7 | 2.9' | 13 11.6 | +22 55 | 150 | SBc Ring   |    |    | H I 85;P w UGC 8290   |
| NGC 5014        | UGC 8271    | Galaxy  | CVN | 12.9 | 12.7 | 1.6' | 13 11.5 | +36 17 | 109 | Sa         |    |    | H II 414  |
| NGC 5015        | MCG - 1-34- | Galaxy  | VIR | 13   | -    | 1.9' | 13 12.4 | -04 20 | 240 | SB Ring    |    |    | H II 637  |
| NGC 5016        | UGC 8279    | Galaxy  | COM | 12.8 | 13.5 | 1.7' | 13 12.1 | +24 06 | 150 | SBbc       |    |    | sBN;weak bar;sev knotty filam arms w many branches            |
| NGC 5017        | MCG - 3-34- | Galaxy  | VIR | 12.6 | 13.4 | 1.8' | 13 12.9 | -16 46 | 285 | E2         |    |    | H III 669   |
| NGC 5018        | ESO 576-10  | Galaxy  | VIR | 10.8 | 13   | 3.4' | 13 13.0 | -19 31 | 330 | Elliptical |    |    | H II 746  |
| NGC 5019        | UGC 8288    | Galaxy  | VIR | 13.5 | 12.7 | 0.8' | 13 12.7 | +04 44 | 240 | SB/P       |    |    | H III 545;Many blue patches along the arms                    |
| NGC 5020        | UGC 8289    | Galaxy  | VIR | 11.7 | 13.9 | 3.1' | 13 12.7 | +12 36 | 195 | SBbc Ring  |    |    | H II 129  |
| NGC 5021        | UGC 8284    | Galaxy  | CVN | 13.4 | 13.4 | 1.5' | 13 12.1 | +46 12 | 76  | SBb        |    |    |   |
| NGC 5022        | MCG - 3-34- | Galaxy  | VIR | 12.9 | 12.6 | 2.5' | 13 13.5 | -19 33 | 330 | Sb         |    |    |   |
| NGC 5023        | UGC 8286    | Galaxy  | CVN | 12.3 | 13.9 | 5.8' | 13 12.2 | +44 02 | 76  | Sc         |    |    | H II 664  |
| NGC 5025        | UGC 8292    | Galaxy  | CVN | 13.4 | 13.5 | 2'   | 13 12.7 | +31 48 | 109 | Sb         |    |    | H III 649   |
| NGC 5026        | ESO 269-73  | Galaxy  | CEN | 11.5 | 13.4 | 3.3' | 13 14.2 | -42 58 | 403 | SBa        |    |    |   |
| NGC 5027        | UGC 8297    | Galaxy  | VIR | 13.4 | 13.6 | 1.2' | 13 13.3 | +06 04 | 195 | SBb        |    |    |   |
| NGC 5028        | MCG - 2-34- | Galaxy  | VIR | 14   | -    | 1.6' | 13 13.8 | -13 03 | 285 | E6         |    |    |   |
| NGC 5029        | UGC 8293    | Galaxy  | CVN | 13.1 | 13.8 | 1.7' | 13 12.6 | +47 04 | 76  | Elliptical |    |    |   |
| NGC 5030        | MCG - 3-34- | Galaxy  | VIR | 14   | -    | 1.7' | 13 13.9 | -16 30 | 285 | SBO-a      |    |    |   |
| NGC 5031        | MCG - 3-34- | Galaxy  | VIR | 14   | -    | 1.7' | 13 14.1 | -16 07 | 285 | Sa         |    |    |   |
| NGC 5032A       | NGC 5032    | Galaxy  | COM | 13.6 | -    | 2.1' | 13 13.5 | +27 48 | 150 | SBb        |    |    | H III 367   |
| <b>NGC 5033</b> | UGC 8307    | Galaxy  | CVN | 10.2 | 14.4 | 9.8' | 13 13.5 | +36 36 | 109 | Sc         |    |    | P w NGC 5005;svBN in B bulge w spir patt of dk lanes          |
| NGC 5034        | UGC 8295    | Galaxy  | UMI | 13.2 | 12.6 | 0.9' | 13 12.3 | +70 39 | 26  | Sc         |    |    | H III 909   |
| NGC 5035        | MCG - 3-34- | Galaxy  | VIR | 12.8 | 13.2 | 1.4' | 13 14.8 | -16 30 | 285 | SBO-a R    |    |    |   |
| NGC 5037        | MCG - 3-34- | Galaxy  | VIR | 12.2 | 12.6 | 2'   | 13 15.0 | -16 35 | 285 | Sa         |    |    | H II 510;Nearly edge on;13' SSW of NGC 5044                   |
| NGC 5038        | MCG - 3-34- | Galaxy  | VIR | 14   | -    | 1.5' | 13 15.0 | -15 57 | 285 | SO         |    |    |   |
| NGC 5041        | UGC 8319    | Galaxy  | COM | 13.4 | 14.2 | 1.7' | 13 14.5 | +30 42 | 109 | Sc         |    |    |   |
| NGC 5042        | ESO 508-31  | Galaxy  | HYA | 11.8 | 14.1 | 4.2' | 13 15.5 | -23 59 | 330 | SBc        |    |    |   |
| NGC 5044        | MCG - 3-34- | Galaxy  | VIR | 10.8 | 13.2 | 2.6' | 13 15.4 | -16 23 | 285 | E0         |    |    | H II 511;NGC 5037 and two other F galaxies in field           |
| NGC 5047        | MCG - 3-34- | Galaxy  | VIR | 13   | -    | 2.7' | 13 15.8 | -16 31 | 285 | SO         |    |    | H III 670   |
| NGC 5048        | ESO 443-87  | Galaxy  | HYA | 12.7 | 12.8 | 1.5' | 13 16.1 | -28 25 | 370 | E-SO       |    |    |   |
| NGC 5049        | MCG - 3-34- | Galaxy  | VIR | 13   | 13   | 1.8' | 13 16.0 | -16 24 | 285 | SO         |    |    | H II 512  |
| NGC 5050        | UGC 8329    | Galaxy  | VIR | 13.7 | 12.7 | 1.1' | 13 15.7 | +02 53 | 240 | Sa         |    |    |   |
| NGC 5051        | ESO 444- 1  | Galaxy  | HYA | 13.2 | 12.9 | 1.4' | 13 16.3 | -28 17 | 370 | SBbc       |    |    |   |
| NGC 5052        | UGC 8330    | Galaxy  | COM | 13.2 | 13.3 | 1.3' | 13 15.6 | +29 41 | 109 | SBO-a R    |    |    |   |
| <b>NGC 5053</b> | GCL 23      | Glob CL | COM | 9.8  | -    | 8.9' | 13 16.5 | +17 42 | 150 | XI         |    |    | H VI 7;Low surf brightness;1 deg sf <b>M 53</b>               |
| <b>NGC 5054</b> | MCG - 3-34- | Galaxy  | VIR | 10.9 | 13.7 | 5.1' | 13 17.0 | -16 38 | 285 | Sbc        |    |    | H II 513;Three branch spiral                                  |
| NGC 5056        | UGC 8337    | Galaxy  | COM | 13.1 | 13.6 | 1.8' | 13 16.2 | +30 57 | 109 | Sc         |    |    | H III 306;Brightest in cluster;NGC 5057 @ 6 ' ;PA35           |
| NGC 5057        | UGC 8342    | Galaxy  | COM | 13   | 13.5 | 1.3' | 13 16.5 | +31 02 | 109 | SO Ring    |    |    | H III 307   |
| NGC 5060        | UGC 8351    | Galaxy  | VIR | 13.3 | 13.1 | 1.1' | 13 17.3 | +06 02 | 195 | SBb        |    |    |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER           | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-----------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 5061        | ESO 508-38      | Galaxy  | HYA | 10.4 | 12.9 | 3.5'  | 13 18.1 | -26 50 | 330 | E2         |    |      | H I 138   |
| NGC 5062        | ESO 382-35      | Galaxy  | CEN | 12.2 | 12.6 | 2.3'  | 13 18.4 | -35 28 | 370 | SO         |    |      |   |
| NGC 5063        | ESO 382-36      | Galaxy  | CEN | 12.4 | 13.8 | 2.3'  | 13 18.4 | -35 21 | 370 | Sa Ring    |    |      |   |
| NGC 5064        | ESO 220- 2      | Galaxy  | CEN | 12.1 | 13.1 | 2.4'  | 13 19.0 | -47 55 | 403 | Sb         |    |      |   |
| NGC 5065        | UGC 8356        | Galaxy  | COM | 13.6 | 13.4 | 1.3'  | 13 17.5 | +31 06 | 109 | SBcd       |    |      | H III 308   |
| NGC 5066        | NGC 5069        | Galaxy  | VIR | 14   | -    | 0.7'  | 13 18.5 | -10 14 | 285 | Sa         |    |      |   |
| <b>NGC 5068</b> | ESO 576-29      | Galaxy  | VIR | 10   | 14   | 7.3'  | 13 18.9 | -21 02 | 330 | SBc        |    |      | H II 312;Coarse spiral;NGC 5087 in field                |
| NGC 5072        | NGC 5070        | Galaxy  | VIR | 14   | -    | 1'    | 13 19.2 | -12 32 | 285 | E-SO       |    |      |   |
| NGC 5073        | MCG - 2-34-     | Galaxy  | VIR | 13   | -    | 3.4'  | 13 19.3 | -14 51 | 285 | SBc        |    |      | H III 282   |
| NGC 5074        | MCG 5-31-       | Galaxy  | CVN | 14   | 13.4 | 0.7'  | 13 18.4 | +31 28 | 109 | Sb         |    |      | H III 309   |
| NGC 5076        | MCG - 2-34-     | Galaxy  | VIR | 13   | -    | 1.3'  | 13 19.5 | -12 44 | 285 | Sa         |    |      | H III 117   |
| NGC 5077        | MCG - 2-34-     | Galaxy  | VIR | 11.4 | 12.5 | 1.9'  | 13 19.5 | -12 39 | 285 | E3         |    |      | H II 193;NGC 5088 and two other F galaxies in field     |
| <b>NGC 5078</b> | ESO 508-48      | Galaxy  | HYA | 11   | 13   | 19.5' | 13 19.8 | -27 25 | 330 | Sa         |    |      | H II 566;Dust lane;Nearly edge-on                       |
| NGC 5079        | MCG - 2-34-     | Galaxy  | VIR | 12   | -    | 1.5'  | 13 19.6 | -12 42 | 285 | SBbc/P     |    |      | H III 118   |
| NGC 5081        | UGC 8366        | Galaxy  | COM | 13   | 13.5 | 2.2'  | 13 19.1 | +28 30 | 109 | SBb        |    |      | Comp superimp at 0.9'                                   |
| NGC 5082        | ESO 269-89      | Galaxy  | CEN | 12.8 | 13.2 | 1.5'  | 13 20.7 | -43 42 | 403 | SBO Ring   |    |      |   |
| NGC 5084        | ESO 576-33      | Galaxy  | VIR | 10.5 | 13.4 | 10.6' | 13 20.3 | -21 50 | 330 | SO         |    |      | H II 313  |
| NGC 5085        | ESO 508-50      | Galaxy  | HYA | 11.3 | 13.6 | 3.5'  | 13 20.3 | -24 26 | 330 | Sc         |    |      | H II 780  |
| NGC 5087        | ESO 576-35      | Galaxy  | VIR | 11.4 | 12.8 | 2.5'  | 13 20.4 | -20 37 | 330 | E4         |    |      | H III 724   |
| NGC 5088        | MCG - 2-34-     | Galaxy  | VIR | 12.4 | 13   | 2.7'  | 13 20.3 | -12 34 | 285 | Sbc        |    |      | 13' ENE from NGC 5077                                   |
| NGC 5089        | UGC 8371        | Galaxy  | COM | 13   | 13.3 | 1.7'  | 13 19.7 | +30 15 | 109 | SBc        |    |      | H II 327;Peculiar;dif irr outer disc;prob twisted plane |
| NGC 5090        | ESO 270- 2      | Galaxy  | CEN | 11.6 | 13.7 | 2.7'  | 13 21.2 | -43 42 | 403 | E2         |    |      |   |
| NGC 5090A       | ESO 269-84      | Galaxy  | CEN | 13   | 12.9 | 1.7'  | 13 19.3 | -43 39 | 403 | SO         |    |      |   |
| NGC 5090B       | ESO 269-88      | Galaxy  | CEN | 13.2 | 13.6 | 1.9'  | 13 20.3 | -43 52 | 403 | SBb        |    |      |   |
| NGC 5091        | ESO 270- 4      | Galaxy  | CEN | 13.1 | 12.7 | 1.8'  | 13 21.3 | -43 43 | 403 | Sb         |    |      |   |
| NGC 5092        | UGC 8376        | Galaxy  | COM | 13.3 | 13.3 | 1'    | 13 19.9 | +23 00 | 150 | Elliptical |    |      |   |
| NGC 5093        | UGC 8373        | Galaxy  | CVN | 13.7 | 13.5 | 1.4'  | 13 19.6 | +40 23 | 76  | Sa         |    |      | H III 633   |
| NGC 5094        | MCG - 2-34-     | Galaxy  | VIR | 14   | -    | 1.1'  | 13 20.8 | -14 05 | 285 | S          |    |      | H III 539   |
| NGC 5095        | UGC 8381        | Galaxy  | VIR | 13.7 | 12.8 | 1.2'  | 13 20.6 | -02 17 | 240 | Sa         |    |      |   |
| NGC 5101        | ESO 508-58      | Galaxy  | HYA | 10.6 | 13.9 | 5.7'  | 13 21.8 | -27 26 | 330 | SBO-a R    |    |      | H II 567  |
| <b>NGC 5102</b> | ESO 382-50      | Galaxy  | CEN | 9.6  | 13   | 8.6'  | 13 22.0 | -36 38 | 370 | E-SO       |    |      | 17' nf lota CEN   |
| NGC 5103        | UGC 8388        | Galaxy  | CVN | 12.6 | 12.8 | 1.4'  | 13 20.5 | +43 05 | 76  | Pec        |    |      | acicular? main body w arc-shaped filaments;poss rings   |
| NGC 5104        | UGC 8391        | Galaxy  | VIR | 13.7 | 12.7 | 1.2'  | 13 21.4 | +00 21 | 240 | Sa         |    |      |   |
| NGC 5105        | MCG - 2-34-     | Galaxy  | VIR | 11.8 | 12.8 | 2'    | 13 21.8 | -13 12 | 285 | SBc        |    |      |   |
| NGC 5107        | UGC 8396        | Galaxy  | CVN | 13.2 | 12.9 | 1.7'  | 13 21.4 | +38 32 | 109 | SBcd       |    |      | H III 619;P w NGC 5112 at 13'                           |
| NGC 5109        | NGC 5113        | Galaxy  | UMA | 12.8 | 12.4 | 1.7'  | 13 20.9 | +57 39 | 48  | Sbc        |    |      | H II 826;NGC 5113 at 5' nf                              |
| NGC 5111        | NGC 5110        | Galaxy  | VIR | 13   | -    | 2'    | 13 22.9 | -12 58 | 285 | E-SO       |    |      | H III 119   |
| NGC 5112        | UGC 8403        | Galaxy  | CVN | 12.1 | 14.6 | 4'    | 13 21.9 | +38 44 | 109 | SBc        |    |      | H II 646;P w NGC 5107 at 13'                            |
| NGC 5114        | ESO 444-24      | Galaxy  | CEN | 12.4 | 12.9 | 1.8'  | 13 24.0 | -32 21 | 370 | E-SO Ba    |    |      |   |
| NGC 5115        | UGC 8408        | Galaxy  | VIR | 13.6 | 13.4 | 1.4'  | 13 23.0 | +13 57 | 195 | SBc        |    |      |   |
| NGC 5116        | UGC 8410        | Galaxy  | COM | 12.7 | 13   | 2'    | 13 22.9 | +26 59 | 150 | SBc        |    |      | H III 368;vsBN v narrow bar 2 main filam branch arms    |
| NGC 5117        | UGC 8411        | Galaxy  | CVN | 13.2 | 13.9 | 2.2'  | 13 22.9 | +28 19 | 109 | SBc        |    |      |   |
| NGC 5118        | IC 4236         | Galaxy  | VIR | 13.7 | 13   | 0.8'  | 13 23.5 | +06 24 | 195 | SBc        |    |      | H III 925   |
| NGC 5119        | MCG - 2-34-     | Galaxy  | VIR | 14   | -    | 1.3'  | 13 24.0 | -12 17 | 285 | S pec      |    |      |   |
| NGC 5121        | ESO 382-57      | Galaxy  | CEN | 11.5 | 12.5 | 1.9'  | 13 24.8 | -37 41 | 370 | Sa         |    |      |   |
| NGC 5122        | MCG - 2-34-     | Galaxy  | VIR | 14   | -    | 0.9'  | 13 24.2 | -10 39 | 285 | S pec      |    |      |   |
| NGC 5123        | UGC 8415        | Galaxy  | CVN | 12.8 | 13.1 | 1.3'  | 13 23.2 | +43 05 | 76  | Sc         |    |      | H II 666  |
| NGC 5124        | IC 4233         | Galaxy  | CEN | 12.1 | 12.6 | 2.2'  | 13 24.8 | -30 19 | 370 | Elliptical |    |      |   |
| NGC 5125        | UGC 8421        | Galaxy  | VIR | 12.4 | 13.1 | 1.7'  | 13 24.0 | +09 43 | 195 | Sb         |    |      | np of 2   |
| NGC 5126        | ESO 444-28      | Galaxy  | CEN | 13.1 | 12.3 | 1.4'  | 13 24.9 | -30 20 | 370 | Sa         |    |      |   |
| NGC 5127        | UGC 8419        | Galaxy  | CVN | 11.9 | 13.9 | 2.3'  | 13 23.8 | +31 34 | 109 | E2p        |    |      | H II 328;S cond in halo;spiral;2nd brightest in cluster |
| <b>NGC 5128</b> | Dunlop 482      | Galaxy  | CEN | 6.8  | 13.5 | 27.6' | 13 25.5 | -43 01 | 403 | SO         |    |      | <b>Centaurus A</b> , Dark central band;radio source     |
| NGC 5129        | UGC 8423        | Galaxy  | VIR | 12.1 | 13   | 1.7'  | 13 24.2 | +13 59 | 195 | Elliptical |    |      | H II 653;double syst;total m=15.6;brightest in cluster  |
| NGC 5130        | MCG - 2-34-     | Galaxy  | VIR | 14   | -    | 0.9'  | 13 24.5 | -10 13 | 285 | S          |    |      |   |
| NGC 5131        | UGC 8422        | Galaxy  | CVN | 13.5 | 13   | 2.1'  | 13 24.0 | +30 59 | 109 | Sa         |    |      |   |
| NGC 5132        | UGC 8428        | Galaxy  | VIR | 12.9 | 13.1 | 1.3'  | 13 24.5 | +14 06 | 195 | SBO-a      |    |      |   |
| NGC 5134        | ESO 576-52      | Galaxy  | VIR | 11.3 | 12.8 | 2.9'  | 13 25.3 | -21 08 | 330 | SBb Ring   |    |      | H II 314;Oval w hazy arm pattern                        |
| NGC 5135        | ESO 444-32      | Galaxy  | HYA | 12.1 | 13.6 | 2.4'  | 13 25.7 | -29 50 | 370 | SBab       |    |      |   |
| NGC 5138        | OCL 902         | Opn CL  | CEN | 7.6  | -    | 8'    | 13 27.3 | -59 02 | 429 | II 2 p     | 40 | 10.3 |   |
| <b>NGC 5139</b> | <b>Omeg Cen</b> | Glob CL | CEN | 3.9  | -    | 36.3' | 13 26.8 | -47 29 | 403 | VIII       |    |      | Stars mags 11....;finest globular;magnificent object    |
| NGC 5140        | ESO 382-65      | Galaxy  | CEN | 11.8 | 13   | 2.1'  | 13 26.4 | -33 52 | 370 | SB0        |    |      |   |
| NGC 5141        | UGC 8433        | Galaxy  | CVN | 12.8 | 13   | 1.3'  | 13 24.9 | +36 23 | 109 | SO         |    |      | H III 402;P w NGC 5142 at 2.3'                          |
| NGC 5142        | UGC 8435        | Galaxy  | CVN | 13.3 | 12.6 | 1'    | 13 25.0 | +36 24 | 109 | SO         |    |      | H III 403;NGC 5143 at 2.3' n;pec?                       |
| NGC 5144A       | UGC 8420        | Galaxy  | UMI | 13.1 | 13   | 1.2'  | 13 22.9 | +70 31 | 26  | Scp        |    |      | blue post-eruptive distorted spir w conds and jets      |



## 7000 DSO List (sorted by name)

| NAME      | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 5145  | UGC 8439    | Galaxy | CVN | 12.3 | 13.6 | 2'   | 13 25.2 | +43 16 | 76  | Sb         |    |    | H II 667;extensive F outer disc                               |
| NGC 5146  | MCG - 2-34- | Galaxy | VIR | 14   | -    | 1.9' | 13 26.6 | -12 19 | 285 | E-SO       |    |    | H III 115   |
| NGC 5147  | UGC 8443    | Galaxy | VIR | 11.8 | 12.9 | 1.9' | 13 26.3 | +02 06 | 240 | SBd        |    |    | H II 25;Diff bar;no N;b * super                               |
| NGC 5149  | UGC 8444    | Galaxy | CVN | 12.9 | 13.1 | 1.6' | 13 26.2 | +35 56 | 109 | SBbc Rir   |    |    | H III 404;P w NGC 5154 at 6.1'                                |
| NGC 5150  | ESO 444-43  | Galaxy | HYA | 12.6 | 12.7 | 1.3' | 13 27.6 | -29 34 | 370 | SBbc       |    |    |   |
| NGC 5152  | ESO 444-44  | Galaxy | HYA | 12.5 | 12.6 | 2.1' | 13 27.9 | -29 37 | 370 | SBb        |    |    |   |
| NGC 5153  | ESO 444-45  | Galaxy | HYA | 11.8 | 13   | 2'   | 13 27.9 | -29 37 | 370 | Elliptical |    |    |   |
| NGC 5154  | UGC 8447    | Galaxy | CVN | 13.8 | 14.2 | 1.3' | 13 26.5 | +36 01 | 109 | Sc         |    |    | H III 405   |
| NGC 5156  | ESO 220-13  | Galaxy | CEN | 11.7 | 13.2 | 2.5' | 13 28.7 | -48 55 | 403 | SBab       |    |    |   |
| NGC 5157  | UGC 8455    | Galaxy | CVN | 13.3 | 13.3 | 1.3' | 13 27.3 | +32 02 | 109 | SBa        |    |    | H III 651;hints of eF outer disc                              |
| NGC 5158  | UGC 8459    | Galaxy | COM | 12.8 | 13.1 | 1.3' | 13 27.8 | +17 47 | 150 | SBab       |    |    |   |
| NGC 5161  | ESO 383- 4  | Galaxy | CEN | 11.2 | 13.8 | 5.6' | 13 29.2 | -33 11 | 370 | Sc         |    |    |   |
| NGC 5163  | UGC 8453    | Galaxy | UMA | 13.6 | 13.4 | 1.1' | 13 26.9 | +52 45 | 48  | Elliptical |    |    | H III 821   |
| NGC 5164  | UGC 8458    | Galaxy | UMA | 13.7 | 13.4 | 1'   | 13 27.2 | +55 29 | 48  | SBb        |    |    | H III 784;comp at 4' PA 281                                   |
| NGC 5169  | UGC 8465    | Galaxy | CVN | 13.5 | 14.2 | 2.1' | 13 28.2 | +46 40 | 76  | SBbc       |    |    | P w NGC 5173 at 5'  |
| NGC 5170  | MCG - 3-34- | Galaxy | VIR | 11.1 | 13.3 | 8.2' | 13 29.8 | -17 58 | 330 | Sc         |    |    | H V 22;Edge on spiral w some dark lanes                       |
| NGC 5171  | UGC 8476    | Galaxy | VIR | 12.8 | 12.5 | 1.1' | 13 29.4 | +11 44 | 195 | E-SO       |    |    | in a dense part of the cl                                     |
| NGC 5172  | UGC 8477    | Galaxy | COM | 11.9 | 13.7 | 3.4' | 13 29.3 | +17 03 | 150 | SBbc       |    |    | spir;sBN;main knotty arms;poor res                            |
| NGC 5173  | UGC 8468    | Galaxy | CVN | 12.1 | 13.3 | 1'   | 13 28.4 | +46 36 | 76  | E0         |    |    | H III 672;P w NGC 5173 at 5'5                                 |
| NGC 5174  | NGC 5162    | Galaxy | VIR | 13.7 | -    | 3.2' | 13 29.4 | +11 00 | 195 | Sc         |    |    | H III 45;CGCG 'dbl nebula' is incorrect;* superimp            |
| NGC 5175  |             | Star   | VIR | 13.7 | -    |      | 13 29.4 | +11 00 | 195 |            |    |    |   |
| NGC 5178  | UGC 8478    | Galaxy | VIR | 13.8 | 12.9 | 0.9' | 13 29.5 | +11 37 | 195 | Sa Ring    |    |    |   |
| NGC 5180  | UGC 8479    | Galaxy | COM | 13   | 13.2 | 1.4' | 13 29.4 | +16 50 | 195 | SO         |    |    | H III 71;vB core in F ext halo;double system                  |
| NGC 5182  | ESO 444-62  | Galaxy | HYA | 12.4 | 13.2 | 1.9' | 13 30.7 | -28 09 | 370 | SBbc       |    |    |   |
| NGC 5183  | UGC 8485    | Galaxy | VIR | 12.7 | 13   | 1.9' | 13 30.1 | -01 43 | 240 | Sb         |    |    | H II 679;P w NGC 5184 at 3.7'                                 |
| NGC 5184  | UGC 8487    | Galaxy | VIR | 12.6 | 13.3 | 2'   | 13 30.2 | -01 40 | 240 | Sbc Ring   |    |    | H II 680;P w NGC 5183   |
| NGC 5185  | UGC 8488    | Galaxy | VIR | 13.3 | 13.4 | 1.8' | 13 30.0 | +13 25 | 195 | Sb         |    |    | H III 642;P w NGC 5181 at 8.4'PA 216                          |
| NGC 5187  | MCG 5-32-   | Galaxy | CVN | 13.4 | 13.2 | 1.3' | 13 29.8 | +31 08 | 109 | Sb Ring    |    |    | H III 652   |
| NGC 5188  | MCG - 6-30- | Galaxy | CEN | 12.1 | 13.3 | 3'   | 13 31.5 | -34 48 | 370 | SBbc/P     |    |    |   |
| NGC 5190  | UGC 8500    | Galaxy | COM | 13.2 | 12.8 | 1'   | 13 30.6 | +18 08 | 150 | SBb        |    |    |   |
| NGC 5193  | ESO 383-15  | Galaxy | CEN | 11.6 | 12.8 | 1.9' | 13 31.9 | -33 14 | 370 | E2         |    |    |   |
| NGC 5193A | ESO 383-14  | Galaxy | CEN | 14   | -    | 1.3' | 13 31.8 | -33 14 | 370 | SO         |    |    |   |
| NGC 5196  | ZWG 17. 2   | Galaxy | VIR | 14   | 13.1 | 0.8' | 13 31.3 | -01 37 | 240 | E-SO       |    |    |   |
| NGC 5198  | UGC 8499    | Galaxy | CVN | 11.8 | 13.2 | 2'   | 13 30.2 | +46 40 | 76  | E2         |    |    | H II 689;red E w compact core;vB vS diff N;in lens            |
| NGC 5201  | UGC 8480    | Galaxy | UMA | 13.1 | 13.5 | 1.7' | 13 29.3 | +53 05 | 48  | S Ring     |    |    | complex spir pattern in centr reg;2 asym outer arms           |
| NGC 5203  | MCG - 1-35- | Galaxy | VIR | 14   | -    | 1.8' | 13 32.2 | -08 47 | 285 | E-SO       |    |    | H III 507   |
| NGC 5204  | UGC 8490    | Galaxy | UMA | 11.3 | 14.1 | 5'   | 13 29.6 | +58 25 | 48  | Sm         |    |    | H IV 63; <b>M 101</b> group;no def N;BM;highly res irreg arms |
| NGC 5205  | UGC 8501    | Galaxy | UMA | 12.2 | 13.9 | 3.1' | 13 30.1 | +62 31 | 26  | Sb         |    |    | NGC 5218 group  |
| NGC 5206  | ESO 220-18  | Galaxy | CEN | 10.6 | 13.2 | 3.8' | 13 33.7 | -48 09 | 403 | E-SO Ba    |    |    |   |
| NGC 5207  | UGC 8518    | Galaxy | VIR | 13.2 | 13.6 | 1.7' | 13 32.2 | +13 53 | 195 | Sb         |    |    | H III 643   |
| NGC 5208  | UGC 8519    | Galaxy | VIR | 13.1 | 12.9 | 1.7' | 13 32.5 | +07 19 | 195 | SO         |    |    | H III 9;early spir;NGC 5209 at 3.7'                           |
| NGC 5209  | UGC 8522    | Galaxy | VIR | 13   | 13.3 | 1.2' | 13 32.7 | +07 20 | 195 | Elliptical |    |    | H III 10;compact;NGC 5210 at 9.7'                             |
| NGC 5210  | UGC 8523    | Galaxy | VIR | 12.9 | 13.3 | 1.3' | 13 32.8 | +07 10 | 195 | Sa         |    |    | H III 99;sharp edge   |
| NGC 5211  | UGC 8530    | Galaxy | VIR | 12.3 | 13.4 | 2.1' | 13 33.1 | -01 02 | 240 | SBab       |    |    | similar to NGC 210  |
| NGC 5213  | UGC 8552    | Galaxy | VIR | 13.7 | 13.2 | 0.9' | 13 34.7 | +04 08 | 240 | SBb        |    |    | streamer or disturbed arm southeastw from n part              |
| NGC 5214  | UGC 8531    | Galaxy | CVN | 13.6 | 13.5 | 0.8' | 13 32.8 | +41 52 | 76  | Sc         |    |    | H III 656;nf of 2   |
| NGC 5215  | ESO 383-29  | Galaxy | CEN | 12.9 | 12.8 | 1.2' | 13 35.1 | -33 29 | 370 | SO         |    |    | Double galaxy with 5215A; 0.7" 14.2 mag 30 "to west           |
| NGC 5216  | UGC 8528    | Galaxy | UMA | 12.6 | 14   | 1'   | 13 32.1 | +62 42 | 26  | E0p        |    |    | Arch plume ; bridge to N 5218; <b>Keenan's system</b>         |
| NGC 5216A | UGC 8571    | Galaxy | UMA | 14   | -    | 1.2' | 13 34.7 | +62 00 | 26  | S          |    |    |   |
| NGC 5217  | UGC 8546    | Galaxy | COM | 12.6 | 13.4 | 1.5' | 13 34.1 | +17 51 | 150 | Elliptical |    |    | brightest in group w at least 6 galaxies                      |
| NGC 5218  | UGC 8529    | Galaxy | UMA | 12.3 | 13.1 | 1.8' | 13 32.2 | +62 46 | 26  | SBb/P      |    |    | H II 842;Long bridge;plume Seyfert;P w NGC 5216               |
| NGC 5219  | NGC 5244    | Galaxy | CEN | 13.3 | -    | 1.7' | 13 38.7 | -45 51 | 403 | Sb         |    |    | 2m30s;3' Error in NGC position                                |
| NGC 5220  | ESO 383-36  | Galaxy | CEN | 12.2 | 12.6 | 2.4' | 13 35.9 | -33 27 | 370 | Sa         |    |    |   |
| NGC 5221  | UGC 8559    | Galaxy | VIR | 13   | 13.6 | 2.4' | 13 34.9 | +13 50 | 195 | Sb Ring    |    |    | broad streamers from s side;prob distort by 5222 ,5.4'        |
| NGC 5223  | UGC 8553    | Galaxy | CVN | 13   | 13.7 | 1.5' | 13 34.4 | +34 41 | 109 | E1         |    |    | Brightest in subgroup in CGCG;NGC 5228 at 5.7'                |
| NGC 5225  | UGC 8540    | Galaxy | CVN | 13.5 | 12.4 | 0.7' | 13 33.3 | +51 29 | 49  | S          |    |    | H III 822   |
| NGC 5227  | UGC 8566    | Galaxy | VIR | 13.1 | 14   | 1.8' | 13 35.4 | +01 25 | 240 | SBb        |    |    | H III 928   |
| NGC 5228  | UGC 8556    | Galaxy | CVN | 13.3 | 13.1 | 1'   | 13 34.6 | +34 47 | 109 | E-SO       |    |    | H III 408;NGC 5223 Group                                      |
| NGC 5229  | UGC 8550    | Galaxy | CVN | 13.7 | 14.2 | 3.3' | 13 34.0 | +47 55 | 76  | SBcd       |    |    |   |
| NGC 5230  | UGC 8573    | Galaxy | VIR | 12.1 | 13.5 | 2.1' | 13 35.5 | +13 40 | 195 | SBc        |    |    | brst in group;disturbed by 5222 @ 9.5';well def spiral        |
| NGC 5231  | UGC 8574    | Galaxy | VIR | 13.4 | 13.3 | 1.1' | 13 35.8 | +03 00 | 240 | SBa        |    |    | alm stell   |
| NGC 5232  | MCG - 1-35- | Galaxy | VIR | 13   | -    | 1.5' | 13 36.1 | -08 30 | 286 | Sa         |    |    |   |
| NGC 5233  | UGC 8568    | Galaxy | CVN | 13.9 | 13   | 1.1' | 13 35.2 | +34 41 | 109 | Sab        |    |    | H III 425;NGC 5223 Group                                      |
| NGC 5234  | ESO 220-24  | Galaxy | CEN | 13   | 12.9 | 1.3' | 13 37.5 | -49 50 | 403 | SBO-a R    |    |    |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 5237        | ESO 270-22  | Galaxy  | CEN | 12.5 | 13.6 | 2'   | 13 37.6 | -42 51 | 403 | Elliptical |    |      |   |
| NGC 5238        | UGC 8565    | Galaxy  | CVN | 13.4 | 14.2 | 1.5' | 13 34.7 | +51 37 | 49  | Sd         |    |      | pair of blue post-eruptive Sc's w compact nuclei        |
| NGC 5239        | UGC 8589    | Galaxy  | BOO | 12.8 | 13.9 | 1.8' | 13 36.4 | +07 22 | 196 | SBbc       |    |      | H III 101;dif irr annex n;disrupted spir arm?           |
| NGC 5240        | UGC 8587    | Galaxy  | CVN | 13.1 | 14.1 | 1.9' | 13 35.9 | +35 35 | 109 | SBc        |    |      | H III 409   |
| NGC 5243        | UGC 8592    | Galaxy  | CVN | 13.1 | 12.5 | 1.5' | 13 36.3 | +38 21 | 109 | Sbc        |    |      | H III 620   |
| NGC 5244        | NGC 5219    | Galaxy  | CEN | 12.5 | 12.3 | 1.7' | 13 38.7 | -45 51 | 403 | Sb         |    |      |   |
| NGC 5246        | UGC 8612    | Galaxy  | VIR | 13.6 | 13.3 | 1'   | 13 37.5 | +04 06 | 241 | SBb        |    |      |   |
| <b>NGC 5247</b> | ESO 577-14  | Galaxy  | VIR | 10   | 13.4 | 5.4' | 13 38.0 | -17 53 | 331 | SBbc       |    |      | H II 297;Fine S-shaped double arm spiral                |
| <b>NGC 5248</b> | UGC 8616    | Galaxy  | BOO | 10.3 | 13.8 | 5.9' | 13 37.5 | +08 53 | 196 | SBbc       |    |      | H I 34;eBN in vB lens w many dk lanes                   |
| NGC 5249        | UGC 8618    | Galaxy  | BOO | 12.9 | 13.4 | 1.6' | 13 37.6 | +15 58 | 196 | SO         |    |      | H III 72  |
| NGC 5250        | UGC 8594    | Galaxy  | UMA | 13   | 12.7 | 1'   | 13 36.1 | +51 14 | 49  | SO         |    |      | H II 817  |
| NGC 5251        | MCG 5-32-   | Galaxy  | BOO | 13.8 | 12.9 | 0.7' | 13 37.4 | +27 25 | 151 | Sa         |    |      | H III 369   |
| NGC 5252        | UGC 8622    | Galaxy  | VIR | 13   | 13.1 | 1.4' | 13 38.3 | +04 33 | 241 | SO         |    |      | H III 505;15mag comp at 7' PA 126                       |
| NGC 5253        | ESO 445- 4  | Galaxy  | CEN | 10.4 | 12.8 | 4.6' | 13 39.9 | -31 39 | 370 | S pec      |    |      | H II 638;SN in 1895 & 1975                              |
| NGC 5254        | MCG - 2-35- | Galaxy  | VIR | 13   | -    | 2.9' | 13 39.6 | -11 30 | 286 | Sc         |    |      |   |
| NGC 5256        | UGC 8632    | Galaxy  | UMA | 13.2 | 13.3 | 1.2' | 13 38.3 | +48 17 | 76  | Sab        |    |      | post-eruptive pair of compacts;w ext plumes;jets;halo   |
| NGC 5257        | UGC 8641    | Galaxy  | VIR | 12.9 | 13.3 | 1.6' | 13 39.9 | +00 50 | 241 | SBb/P      |    |      | H II 895;P w NGC 5258;disrupted bridge                  |
| NGC 5258        | UGC 8645    | Galaxy  | VIR | 12.9 | 13.4 | 1.5' | 13 40.0 | +00 50 | 241 | SBb        |    |      | galaxies w appearance of fission;adj loops;B lens       |
| NGC 5260        | ESO 509-92  | Galaxy  | HYA | 12.9 | 13.6 | 1.6' | 13 40.3 | -23 52 | 331 | SBbc       |    |      |   |
| NGC 5262        | UGC 8606    | Galaxy  | UMI | 13.8 | 13.5 | 1.2' | 13 35.6 | +75 02 | 10  | E-SO       |    |      | P w UGC 8595  |
| NGC 5263        | UGC 8648    | Galaxy  | CVN | 13.3 | 12.6 | 1.6' | 13 39.9 | +28 24 | 109 | Sc         |    |      | H III 370;Small faint comp 3' in PA 120                 |
| NGC 5264        | ESO 445-12  | Galaxy  | HYA | 12   | 13.3 | 2.6' | 13 41.6 | -29 55 | 371 | Ir+        |    |      |   |
| NGC 5266        | ESO 220-33  | Galaxy  | CEN | 11.1 | 13   | 3.3' | 13 43.0 | -48 10 | 403 | E-SO       |    |      |   |
| NGC 5266A       | ESO 220-30  | Galaxy  | CEN | 12   | 14   | 3.1' | 13 40.6 | -48 21 | 403 | SBc        |    |      |   |
| NGC 5267        | UGC 8655    | Galaxy  | CVN | 13.5 | 13   | 1.4' | 13 40.7 | +38 48 | 110 | SBb        |    |      |   |
| NGC 5270        | UGC 8673    | Galaxy  | VIR | 13.5 | 13.3 | 1.1' | 13 42.2 | +04 16 | 241 | SBb        |    |      | pec;double system?                                      |
| NGC 5271        | MCG 5-32-   | Galaxy  | CVN | 14   | 13.3 | 0.9' | 13 41.7 | +30 07 | 110 | Sba Ring   |    |      |   |
| <b>NGC 5273</b> | UGC 8675    | Galaxy  | CVN | 11.6 | 13.6 | 2.7' | 13 42.1 | +35 39 | 110 | SO         |    |      | H I 98;P w NGC 5276;diff Nuc w 2 weak dark patches      |
| <b>NGC 5276</b> | UGC 8680    | Galaxy  | CVN | 13.8 | 12.9 | 0.9' | 13 42.4 | +35 37 | 110 | SBb        |    |      | P w NGC 5273 at 3';vB bar or lens                       |
| NGC 5278        | UGC 8677    | Galaxy  | UMA | 13.6 | -    | 0.8' | 13 41.7 | +55 40 | 49  | SB/P       |    |      | pair of blue dbl intercon Sc's w cross-jets;Arp 239     |
| NGC 5280        | MCG 5-32-   | Galaxy  | CVN | 13.6 | 13   | 0.8' | 13 42.9 | +29 52 | 110 | Elliptical |    |      |   |
| NGC 5282        | UGC 8687    | Galaxy  | CVN | 13.2 | 13.6 | 1.4' | 13 43.4 | +30 04 | 110 | Ellip Ring |    |      | B core;dif asym env ext eastw                           |
| NGC 5283        | UGC 8672    | Galaxy  | DRA | 13.2 | 13.1 | 1.1' | 13 41.1 | +67 40 | 26  | SO         |    |      | Seyfert   |
| NGC 5284        | ESO 133-?4  | Opn CL  | CEN | 10   | -    | 30'  | 13 47.4 | -59 09 | 430 |            |    |      |   |
| NGC 5285        | ZWG 17. 65  | Galaxy  | VIR | 13.9 | 13.2 | 0.8' | 13 44.4 | +02 07 | 241 | Elliptical |    |      |   |
| <b>NGC 5286</b> | Dunlop 388  | Glob CL | CEN | 7.4  | -    | 9.1' | 13 46.4 | -51 22 | 430 | V          |    |      | close to a bright star                                  |
| NGC 5289        | UGC 8699    | Galaxy  | CVN | 13   | 13.1 | 1.6' | 13 45.1 | +41 30 | 76  | SBab       |    |      | H II 668;B centr reg surrounded by a B ring             |
| NGC 5290        | UGC 8700    | Galaxy  | CVN | 12.5 | 13.6 | 3.7' | 13 45.3 | +41 43 | 76  | Sbc        |    |      | B bulge part hidden by dk lane & asym abs Poss edgewi   |
| NGC 5292        | ESO 445-31  | Galaxy  | CEN | 11.9 | 12.9 | 1.8' | 13 47.7 | -30 56 | 371 | Sab        |    |      |   |
| NGC 5293        | UGC 8710    | Galaxy  | BOO | 13.1 | 14.1 | 1.8' | 13 46.9 | +16 16 | 196 | Sc         |    |      | vsBN;2 main filam arms w some knots and branch.         |
| NGC 5297        | UGC 8709    | Galaxy  | CVN | 11.8 | 13.8 | 5.7' | 13 46.4 | +43 52 | 76  | SBc        |    |      | H I 180;P w NGC 5296 at 1'6;vsBN;B lens w knotty arms   |
| NGC 5298        | ESO 445-39  | Galaxy  | CEN | 13.1 | 12.9 | 1.4' | 13 48.6 | -30 26 | 371 | SBb        |    |      |   |
| NGC 5300        | UGC 8727    | Galaxy  | VIR | 11.4 | 13.8 | 3.8' | 13 48.3 | +03 57 | 241 | SBc Ring   |    |      | H II 533;face on spiral                                 |
| NGC 5301        | UGC 8711    | Galaxy  | CVN | 12.7 | 13.9 | 4'   | 13 46.4 | +46 06 | 76  | SBc        |    |      | B bulge part obs by dk lane;vSN or no def N; 2 arms     |
| NGC 5302        | ESO 445-43  | Galaxy  | CEN | 12.1 | 12.6 | 1.7' | 13 48.8 | -30 31 | 371 | SBO-a      |    |      |   |
| NGC 5303A       | NGC 5303    | Galaxy  | CVN | 12.9 | -    | 0.9' | 13 47.8 | +38 18 | 110 | Sc         |    |      | H III 681;hints of 2 short jets or streamers on sf side |
| NGC 5304        | ESO 445-52  | Galaxy  | CEN | 12.6 | 13   | 1.5' | 13 50.0 | -30 35 | 371 | E4         |    |      |   |
| NGC 5305        | UGC 8729    | Galaxy  | CVN | 13.6 | 14   | 1.5' | 13 47.9 | +37 50 | 110 | SBb        |    |      | H III 621;P w UGC 8724                                  |
| NGC 5306        | MCG - 1-35- | Galaxy  | VIR | 12.1 | 12.4 | 1.4' | 13 49.2 | -07 13 | 286 | SO         |    |      | H II 306  |
| NGC 5307        | PK 312+10.1 | Pln Neb | CEN | 12.1 | 7.8  | 15"  | 13 51.1 | -51 12 | 430 | 3          |    | 14.7 |   |
| NGC 5308        | UGC 8722    | Galaxy  | UMA | 11.4 | 12.3 | 3.7' | 13 47.0 | +60 58 | 49  | SO         |    |      | H I 255;slightly asym;vBN;diamond-shaped                |
| NGC 5311        | UGC 8735    | Galaxy  | CVN | 12.3 | 14.1 | 2.6' | 13 48.9 | +39 59 | 76  | Sa         |    |      | H II 710  |
| NGC 5313        | UGC 8744    | Galaxy  | CVN | 12   | 12.7 | 1.7' | 13 49.7 | +39 59 | 76  | Sb         |    |      | H II 711  |
| NGC 5314        | MCG 12-13-  | Galaxy  | UMI | 13.7 | -    | 1'   | 13 46.2 | +70 20 | 26  | S          |    |      |   |
| <b>NGC 5317</b> | NGC 5364    | Galaxy  | VIR | 11.2 | -    | 6.1' | 13 56.2 | +05 01 | 241 | SBc/P      |    |      | see 5364  |
| NGC 5318        | UGC 8751    | Galaxy  | CVN | 13.5 | -    | 1.5' | 13 50.6 | +33 42 | 110 | SBO        |    |      | H III 423;NGC 5321 4.7' sf;Brightest in group           |
| NGC 5320        | UGC 8749    | Galaxy  | CVN | 12.1 | 13.9 | 3.6' | 13 50.3 | +41 22 | 76  | SBc        |    |      | H II 669  |
| <b>NGC 5322</b> | UGC 8745    | Galaxy  | UMA | 10.2 | 13.6 | 6'   | 13 49.2 | +60 11 | 49  | E2         |    |      | H I 256;B diff. N;smooth neb                            |
| NGC 5323        | UGC 8719    | Galaxy  | UMI | 13.5 | 12.8 | 1.4' | 13 45.6 | +76 50 | 10  | Sab        |    |      | H II 899;compact; sev F galaxies nearby                 |
| NGC 5324        | MCG - 1-35- | Galaxy  | VIR | 11.7 | 13.3 | 2.3' | 13 52.1 | -06 04 | 286 | Sc         |    |      | H II 307  |
| NGC 5326        | UGC 8764    | Galaxy  | CVN | 11.9 | 12.7 | 2.2' | 13 50.8 | +39 34 | 76  | Sab        |    |      | H II 712  |
| NGC 5327        | UGC 8768    | Galaxy  | VIR | 12.6 | 13.6 | 1.9' | 13 52.1 | -02 12 | 241 | SBb        |    |      | H II 685;Brightest in group;both comps are 15 mag       |
| NGC 5328        | ESO 445-67  | Galaxy  | HYA | 11.6 | 12.5 | 1.8' | 13 52.9 | -28 29 | 371 | E2         |    |      | H III 923   |
| NGC 5329        | UGC 8771    | Galaxy  | VIR | 12.4 | 13   | 1.3' | 13 52.2 | +02 20 | 241 | Elliptical |    |      | H III 549;vB core;several vF comps within 10'           |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 5330        | ESO 445-68  | Galaxy  | HYA | 13.8 | 11.6 | 0.5' | 13 53.0 | -28 28 | 371 | Elliptical |    |    |   |
| NGC 5332        | UGC 8773    | Galaxy  | BOO | 12.9 | 12.6 | 0.9' | 13 52.1 | +16 58 | 196 | E-SO       |    |    |   |
| NGC 5333        | ESO 221-17  | Galaxy  | CEN | 11.9 | -    | 1.9' | 13 54.4 | -48 31 | 403 | SBO        |    |    |   |
| NGC 5334        | IC 4338     | Galaxy  | VIR | 11.3 | 13.9 | 4.1' | 13 52.9 | -01 07 | 241 | SBc        |    |    | Low surf bright;H III 665                               |
| NGC 5335        | UGC 8791    | Galaxy  | VIR | 12.8 | 13.9 | 2.1' | 13 52.9 | +02 49 | 241 | SBb        |    |    |   |
| NGC 5336        | UGC 8785    | Galaxy  | CVN | 12.8 | 13.3 | 1.4' | 13 52.2 | +43 15 | 76  | Sc         |    |    | H II 670  |
| NGC 5337        | UGC 8789    | Galaxy  | CVN | 12.5 | 12.7 | 1.7' | 13 52.4 | +39 41 | 76  | S pec      |    |    | H III 698   |
| NGC 5338        | UGC 8800    | Galaxy  | VIR | 12.4 | 13.6 | 2.5' | 13 53.4 | +05 12 | 241 | SBO        |    |    | v lg grp of S F galaxies nr mbrs of CGCG cl             |
| NGC 5339        | MCG - 1-35- | Galaxy  | VIR | 12   | -    | 1.9' | 13 54.0 | -07 56 | 286 | SBa        |    |    |   |
| NGC 5341        | UGC 8792    | Galaxy  | CVN | 13.2 | 12.6 | 1.3' | 13 52.5 | +37 49 | 110 | SBd        |    |    |   |
| NGC 5342        | UGC 8776    | Galaxy  | UMA | 13.5 | 12.5 | 1.1' | 13 51.4 | +59 52 | 49  | SO         |    |    | H III 849   |
| NGC 5343        | MCG - 1-35- | Galaxy  | VIR | 14   | -    | 1.5' | 13 54.2 | -07 35 | 286 | E-SO       |    |    | H II 308  |
| NGC 5345        | UGC 8820    | Galaxy  | VIR | 12.4 | 13.2 | 1.6' | 13 54.2 | -01 26 | 241 | Sa         |    |    | H II 686  |
| NGC 5346        | UGC 8804    | Galaxy  | CVN | 13.8 | 14.2 | 2'   | 13 53.0 | +39 35 | 76  | Sc         |    |    |   |
| NGC 5347        | UGC 8805    | Galaxy  | CVN | 12.6 | 13.4 | 1.6' | 13 53.3 | +33 29 | 110 | SBbc       |    |    | H II 424  |
| NGC 5348        | UGC 8821    | Galaxy  | VIR | 13.1 | 13.6 | 3.5' | 13 54.2 | +05 14 | 241 | SBbc       |    |    |   |
| <b>NGC 5350</b> | UGC 8810    | Galaxy  | CVN | 11.3 | 13.3 | 3.2' | 13 53.4 | +40 22 | 76  | SBbc       |    |    | H II 713;NGC 5353 at 5';vsvBN in B bar;2 knotty arms    |
| NGC 5351        | UGC 8809    | Galaxy  | CVN | 12.1 | 13.6 | 2.9' | 13 53.5 | +37 55 | 110 | SBb Ring   |    |    | H II 697;P w NGC 5349;sBN w knotty arms                 |
| NGC 5352        | UGC 8812    | Galaxy  | CVN | 13   | 13.1 | 1.2' | 13 53.6 | +36 08 | 110 | E-SO       |    |    | H II 415  |
| <b>NGC 5353</b> | UGC 8813    | Galaxy  | CVN | 11   | 11.8 | 2.8' | 13 53.4 | +40 17 | 76  | SO         |    |    | P w NGC 5354 at 1.3' n;vsBN;lens: diamond shaped        |
| <b>NGC 5354</b> | UGC 8814    | Galaxy  | CVN | 11.4 | 11.9 | 2.2' | 13 53.4 | +40 18 | 76  | SO         |    |    | H II 715;similar to N 1316;P w NGC 5353 contact         |
| <b>NGC 5355</b> | UGC 8819    | Galaxy  | CVN | 13.1 | 12.8 | 1.2' | 13 53.8 | +40 20 | 76  | SO         |    |    | H III 699 near 5654                                     |
| NGC 5356        | UGC 8831    | Galaxy  | VIR | 12.6 | 13.5 | 2.9' | 13 55.0 | +05 20 | 241 | SBbc       |    |    | H III 506   |
| NGC 5357        | ESO 445-78  | Galaxy  | CEN | 12   | 12.8 | 1.6' | 13 56.0 | -30 21 | 371 | E0         |    |    |   |
| NGC 5358        | UGC 8826    | Galaxy  | CVN | 13.6 | 12.3 | 1.1' | 13 54.0 | +40 17 | 76  | Sa         |    |    |   |
| NGC 5360        | UGC 8838    | Galaxy  | VIR | 13.3 | 13.8 | 1.6' | 13 55.6 | +04 59 | 241 | SBO-a      |    |    | P w NGC 5364 at 8'                                      |
| NGC 5361        | MCG 7-29-   | Galaxy  | CVN | 13.8 | 12.6 | 0.8' | 13 54.6 | +38 27 | 110 | S pec      |    |    | H III 682   |
| NGC 5362        | UGC 8835    | Galaxy  | CVN | 12.3 | 13.1 | 2.2' | 13 54.9 | +41 19 | 76  | Sb         |    |    | H II 671;short streamer s or superimp comp?             |
| <b>NGC 5363</b> | UGC 8847    | Galaxy  | VIR | 10.1 | 12.5 | 4.6' | 13 56.1 | +05 15 | 241 | Sa         |    |    | H I 6;P w NGC 5364 at 14.5' 2 B dif N in contact        |
| <b>NGC 5364</b> | NGC 5317    | Galaxy  | VIR | 10.5 | 14.1 | 6.1' | 13 56.2 | +05 01 | 241 | SBc/P      |    |    | H II 534;sBN in smooth cent w dk matter                 |
| NGC 5365        | ESO 271- 8  | Galaxy  | CEN | 11.4 | 13.1 | 3'   | 13 57.8 | -43 56 | 403 | SBO Ring   |    |    |   |
| NGC 5365A       | ESO 271- 6  | Galaxy  | CEN | 12.8 | 12.9 | 2.6' | 13 56.7 | -44 01 | 403 | SBb        |    |    |   |
| NGC 5365B       | ESO 271- 9  | Galaxy  | CEN | 13.2 | 12.4 | 1.6' | 13 58.7 | -43 58 | 403 | Sab        |    |    |   |
| NGC 5366        | MCG 0-36-   | Galaxy  | VIR | 13.7 | 12.6 | 0.7' | 13 56.4 | -00 15 | 241 | Sa         |    |    |   |
| NGC 5367        | ESO 325-N*  | Brn Neb | CEN | -    | -    | 4'   | 13 57.7 | -39 59 | 403 | R          |    |    | Double neb incl IC 4347                                 |
| NGC 5368        | UGC 8834    | Galaxy  | UMA | 13   | 12.4 | 0.9' | 13 54.5 | +54 20 | 49  | SBab       |    |    | H III 786   |
| NGC 5370        | UGC 8832    | Galaxy  | UMA | 13.1 | 13.3 | 1.1' | 13 54.2 | +60 41 | 49  | SBO Ring   |    |    | H II 843  |
| <b>NGC 5371</b> | NGC 5390    | Galaxy  | CVN | 10.6 | 13.4 | 4.2' | 13 55.7 | +40 28 | 76  | SBbc       |    |    | vsB diff N;weak bar;sev knotty filam reg arms           |
| NGC 5372        | UGC 8843    | Galaxy  | UMA | 13.2 | 11.5 | 0.6' | 13 54.8 | +58 40 | 49  | Pec        |    |    | H III 809;Peculiar                                      |
| NGC 5374        | UGC 8874    | Galaxy  | VIR | 12.5 | 13.3 | 1.6' | 13 57.5 | +06 06 | 196 | SBbc       |    |    | H II 889  |
| NGC 5375        | NGC 5396    | Galaxy  | CVN | 11.5 | 13.7 | 3.3' | 13 56.9 | +29 10 | 110 | SBab       |    |    |   |
| NGC 5376        | UGC 8852    | Galaxy  | UMA | 12.1 | 13.1 | 2.1' | 13 55.3 | +59 30 | 49  | SBab       |    |    | H I 238;sBN;weak bar                                    |
| NGC 5377        | UGC 8863    | Galaxy  | CVN | 11.3 | 13.4 | 3.5' | 13 56.3 | +47 14 | 76  | SBa        |    |    | H I 187   |
| NGC 5378        | UGC 8869    | Galaxy  | CVN | 12.5 | 14.2 | 2.7' | 13 56.8 | +37 48 | 110 | SBa        |    |    | P w NGC 5380 at 11'                                     |
| NGC 5379        | UGC 8860    | Galaxy  | UMA | 12.9 | 13.5 | 2.1' | 13 55.6 | +59 45 | 49  | SBO-a      |    |    | H I 239;P w NGC 5389 at 4.1' f vsBN                     |
| NGC 5380        | UGC 8870    | Galaxy  | CVN | 12.3 | 13.3 | 1.9' | 13 56.9 | +37 37 | 110 | Sa         |    |    | H II 698;P w NGC 5378 at 11'                            |
| NGC 5381        | OCL 915     | Opn CL  | CEN | 12   | -    | 14'  | 14 00.7 | -59 35 | 430 | II 2 p     | 50 |    |   |
| NGC 5382        | UGC 8885    | Galaxy  | VIR | 12.6 | 13   | 1.5' | 13 58.2 | +06 15 | 196 | SO         |    |    | H III 546;P w NGC 5386 at 5.2';sev comps nr             |
| NGC 5383        | UGC 8875    | Galaxy  | CVN | 11.4 | 13.6 | 2.6' | 13 57.1 | +41 51 | 76  | SBb        |    |    | eBN w complex str;weak bar & lens w dk lanes;2 arms     |
| NGC 5384        | UGC 8886    | Galaxy  | VIR | 13.1 | 13.1 | 1.5' | 13 58.2 | +06 31 | 196 | SO         |    |    |   |
| NGC 5386        | UGC 8890    | Galaxy  | VIR | 13.2 | 12.1 | 1'   | 13 58.4 | +06 20 | 196 | Sa         |    |    | H III 547;P w NGC 5382                                  |
| NGC 5387        | UGC 8891    | Galaxy  | VIR | 13.9 | 13.1 | 1.6' | 13 58.4 | +06 04 | 196 | Sbc        |    |    |   |
| NGC 5389        | UGC 8866    | Galaxy  | UMA | 12   | 13.1 | 3.6' | 13 56.1 | +59 44 | 49  | SBO-a      |    |    | P w NGC 5379;vBN w strong dk lane on one side           |
| NGC 5390        | NGC 5371    | Galaxy  | CVN | 11.3 | -    | 4.2' | 13 55.7 | +40 28 | 76  | SBbc       |    |    |   |
| NGC 5392        | MCG 0-36-   | Galaxy  | VIR | 13.4 | 13.3 | 1.2' | 13 59.4 | -03 13 | 241 | Sa         |    |    | H III 666   |
| NGC 5393        | ESO 445-87  | Galaxy  | HYA | 13.1 | 12.4 | 0.9' | 14 00.5 | -28 53 | 371 | Sa         |    |    |   |
| NGC 5394        | UGC 8898    | Galaxy  | CVN | 13   | 13.4 | 1.7' | 13 58.6 | +37 27 | 110 | SBb/P      |    |    | H I 191;P w NGC 5395 contact pair;distorted;eBN or *    |
| NGC 5395        | UGC 8900    | Galaxy  | CVN | 11.4 | 12.9 | 2.7' | 13 58.6 | +37 25 | 110 | Sbc        |    |    | H I 190;spir galax w lg high surf brightn comps on arms |
| NGC 5396        | NGC 5375    | Galaxy  | CVN | 12.8 | -    | 3.3' | 13 56.9 | +29 10 | 110 | SBab       |    |    | H III 125   |
| NGC 5397        | ESO 384-31  | Galaxy  | CEN | 12.7 | 13   | 1.4' | 14 01.2 | -33 57 | 371 | E-SO Ba    |    |    |   |
| NGC 5398        | ESO 384-32  | Galaxy  | CEN | 12.3 | 13.8 | 2.8' | 14 01.4 | -33 04 | 371 | SBdmp      |    |    |   |
| NGC 5399        | UGC 8912    | Galaxy  | CVN | 13.8 | 12.6 | 1.2' | 13 59.5 | +34 46 | 110 | Sbc        |    |    | H III 411   |
| NGC 5400        | MCG 0-36-   | Galaxy  | VIR | 12.9 | 13.2 | 1.5' | 14 00.6 | -02 51 | 241 | E-SO       |    |    | H III 667   |
| NGC 5401        | UGC 8916    | Galaxy  | CVN | 13.7 | 12.8 | 1.5' | 13 59.7 | +36 14 | 110 | Sa         |    |    | H III 412   |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|--|
| NGC 5402        | UGC 8903    | Galaxy  | UMA | 13.7 | 12.6 | 1.3' | 13 58.3 | +59 49 | 49  | S pec      |    |    | H III 810  |
| NGC 5403        | UGC 8919    | Galaxy  | CVN | 13.6 | 14.5 | 3.1' | 13 59.8 | +38 11 | 110 | SBb        |    |    | H III 683;strong slightly asym abs feature;sp of 2   |
| NGC 5405        | UGC 8928    | Galaxy  | BOO | 13.4 | 12.8 | 0.8' | 14 01.2 | +07 42 | 196 | Sc         |    |    |  |
| NGC 5406        | UGC 8925    | Galaxy  | CVN | 12.3 | 13.3 | 1.9' | 14 00.3 | +38 55 | 110 | SBbc       |    |    | H II 699   |
| NGC 5407        | UGC 8930    | Galaxy  | CVN | 13.1 | 13.4 | 1.4' | 14 00.8 | +39 09 | 77  | Elliptical |    |    | H III 684  |
| NGC 5408        | PK 317+19.1 | Pln Neb | CEN | 12.2 | -    | 114" | 14 03.4 | -41 23 | 404 | V          |    |    |  |
| NGC 5409        | UGC 8938    | Galaxy  | BOO | 13.3 | 13.8 | 1.7' | 14 01.8 | +09 29 | 196 | SBb        |    |    |  |
| NGC 5410        | UGC 8931    | Galaxy  | CVN | 13   | 13.1 | 1.5' | 14 00.9 | +40 59 | 77  | SB Ring    |    |    | asym;ecc bar;blue patches along edge;P w UGC 8932    |
| NGC 5411        | UGC 8940    | Galaxy  | BOO | 13.3 | 13.3 | 1.4' | 14 02.0 | +08 56 | 196 | E-SO       |    |    | sf of 2  |
| NGC 5412        | UGC 8905    | Galaxy  | UMI | 13.4 | 13.5 | 1.2' | 13 57.2 | +73 37 | 10  | E-SO       |    |    | sev faint comp in field                              |
| NGC 5413        | UGC 8901    | Galaxy  | DRA | 13.2 | 13.3 | 1.1' | 13 57.9 | +64 55 | 27  | Elliptical |    |    |  |
| NGC 5414        | UGC 8942    | Galaxy  | BOO | 13.8 | -    | 1'   | 14 02.1 | +09 56 | 196 | Pec        |    |    | Br of 3;vB main body w asym env streamer southeast   |
| NGC 5416        | UGC 8944    | Galaxy  | BOO | 13.3 | 13.3 | 1.4' | 14 02.2 | +09 26 | 196 | Sc         |    |    | H III 56;chaotic spir pattern                        |
| NGC 5417        | UGC 8943    | Galaxy  | BOO | 13   | 12.7 | 1.5' | 14 02.2 | +08 02 | 196 | Sa         |    |    | H III 11   |
| NGC 5418        | UGC 8944    | Galaxy  | BOO | 13.4 | 12.7 | 1.1' | 14 02.3 | +07 41 | 196 | SBbc       |    |    | only bar vis on PA prints                            |
| NGC 5419        | ESO 384-39  | Galaxy  | CEN | 10.9 | 13.7 | 4.1' | 14 03.6 | -33 59 | 371 | E4         |    |    |  |
| NGC 5420        | MCG - 2-36- | Galaxy  | VIR | 13   | -    | 1.4' | 14 04.0 | -14 37 | 286 | Sb         |    |    |  |
| NGC 5422        | UGC 8935    | Galaxy  | UMA | 11.8 | 12.8 | 3.5' | 14 00.7 | +55 10 | 49  | Sa         |    |    | H I 230;svBN w B lens;listed as N 5423 prob misprint |
| NGC 5423        | UGC 8952    | Galaxy  | BOO | 12.8 | 13.1 | 1.5' | 14 02.8 | +09 20 | 196 | E-SO       |    |    | NGC 5431 at 4.8' PA 75;sev comps <15mag near         |
| NGC 5424        | UGC 8956    | Galaxy  | BOO | 13.1 | 13.7 | 1.6' | 14 02.9 | +09 25 | 196 | SO         |    |    |  |
| NGC 5425        | UGC 8933    | Galaxy  | UMA | 13.6 | 13.5 | 1.9' | 14 00.8 | +48 27 | 77  | Scd        |    |    |  |
| <b>NGC 5426</b> | MCG - 1-36- | Galaxy  | VIR | 12.1 | 13.6 | 3'   | 14 03.4 | -06 04 | 286 | Sc         |    |    | H II 309;P w NGC 5427                                |
| <b>NGC 5427</b> | MCG - 1-36- | Galaxy  | VIR | 11.4 | 13.3 | 2.9' | 14 03.4 | -06 02 | 286 | SBc        |    |    | H II 310;Face on spiral;P w NGC 5426 @ 2.8' south    |
| NGC 5430        | UGC 8937    | Galaxy  | UMA | 11.9 | 12.8 | 2.3' | 14 00.8 | +59 20 | 49  | SBb        |    |    | H II 827;svBN in B lens w B rim;*superp 22" from N   |
| NGC 5431        | MCG 2-36-   | Galaxy  | BOO | 13.8 | 12.7 | 0.8' | 14 03.1 | +09 22 | 196 | S pec      |    |    |  |
| NGC 5433        | UGC 8954    | Galaxy  | CVN | 13.6 | 12.9 | 1.6' | 14 02.6 | +32 31 | 110 | Sd         |    |    | H III 653;3rd of 3                                   |
| NGC 5436        | UGC 8971    | Galaxy  | BOO | 13.9 | 12.9 | 1.1' | 14 03.7 | +09 34 | 196 | Sa         |    |    | NGC 5437 at 3.4' PA 154                              |
| NGC 5440        | UGC 8963    | Galaxy  | CVN | 12.3 | 13.6 | 3.1' | 14 03.0 | +34 45 | 110 | Sa         |    |    | H II 416;NGC 5444 Group;Comp 5' PA 154               |
| NGC 5443        | UGC 8958    | Galaxy  | UMA | 12.3 | 13.2 | 2.7' | 14 02.2 | +55 49 | 49  | SBb        |    |    | H II 799   |
| NGC 5444        | UGC 8974    | Galaxy  | CVN | 11.9 | 13.6 | 2.5' | 14 03.4 | +35 08 | 110 | E1         |    |    | H II 417;P w NGC 5445 at 6.6';Brightest in group     |
| NGC 5445        | UGC 8976    | Galaxy  | CVN | 13   | 12.9 | 1.5' | 14 03.5 | +35 01 | 110 | SO         |    |    | H III 413;NGC 5444 Group                             |
| <b>NGC 5447</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 02.5 | +54 17 | 49  | E+*        |    |    | H III 787;knot on the arm of NGC 5457 = <b>M 101</b> |
| NGC 5448        | UGC 8969    | Galaxy  | UMA | 11   | 13   | 3.8' | 14 02.8 | +49 10 | 77  | SBa        |    |    | H II 691;vBN w F bar                                 |
| <b>NGC 5449</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 02.5 | +54 20 | 49  | E+*        |    |    | knot on the arm of NGC 5457 = <b>M 101</b>           |
| <b>NGC 5450</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 02.5 | +54 16 | 49  | E+*        |    |    | knot on the arm of NGC 5457 = <b>M 101</b>           |
| <b>NGC 5451</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 02.6 | +54 22 | 49  | E+*        |    |    | knot on the arm of NGC 5457 = <b>M 101</b>           |
| NGC 5452        | UGC 8867    | Galaxy  | UMI | 13.3 | 14.3 | 2'   | 13 54.4 | +78 13 | 10  | SBcd       |    |    | H III 947  |
| <b>NGC 5453</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 02.9 | +54 18 | 49  | E+*        |    |    | knot on the arm of NGC 5457 = <b>M 101</b>           |
| NGC 5454        | UGC 8997    | Galaxy  | BOO | 12.7 | 13.6 | 1.8' | 14 04.8 | +14 23 | 196 | SO         |    |    | P w UGC 8996 15.5mag 1.7"x0.2'                       |
| <b>NGC 5455</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 03.0 | +54 14 | 49  | E+*        |    |    | knot on the arm of NGC 5457 = <b>M 101</b>           |
| NGC 5456        | UGC 9004    | Galaxy  | BOO | 12.9 | 12.9 | 1.2' | 14 05.0 | +11 52 | 196 | SO         |    |    |  |
| <b>NGC 5458</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 03.2 | +54 18 | 49  | E+*        |    |    | knot on the arm of NGC 5457 = <b>M 101</b>           |
| NGC 5459        | UGC 9005    | Galaxy  | BOO | 13.1 | 13.1 | 1.1' | 14 05.0 | +13 08 | 196 | SO         |    |    |  |
| NGC 5460        | OCL 925     | Opn CL  | CEN | 5.6  | -    | 25'  | 14 07.5 | -48 21 | 404 | II 3 m     | 40 | 8  |  |
| <b>NGC 5461</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 03.7 | +54 19 | 49  | E+*        |    |    | H III 788;knot on the arm of NGC 5457 = <b>M 101</b> |
| <b>NGC 5462</b> |             | Neb+Gx  | UMA | -    | -    |      | 14 03.9 | +54 22 | 49  | E+*        |    |    | H III 789;knot on the arm of NGC 5457 = <b>M 101</b> |
| NGC 5463A       | NGC 5463    | Galaxy  | BOO | 14   | -    | 1.2' | 14 06.2 | +09 21 | 196 | S pec      |    |    |  |
| NGC 5464        | ESO 446-11  | Galaxy  | HYA | 13   | 12.9 | 1.3' | 14 07.1 | -30 01 | 371 | Ir+        |    |    |  |
| <b>NGC 5466</b> | GCL 27      | Glob CL | BOO | 9.1  | -    | 9.2' | 14 05.5 | +28 32 | 110 | XII        |    |    | H VI 9   |
| NGC 5468        | MCG - 1-36- | Galaxy  | VIR | 12.5 | 14.4 | 2.4' | 14 06.6 | -05 27 | 241 | SBc        |    |    | H III 286;svB elong N or bar;* nr = NGC 5467         |
| NGC 5470        | UGC 9020    | Galaxy  | VIR | 13.4 | 13.2 | 2.5' | 14 06.5 | +06 02 | 196 | Sb         |    |    |  |
| <b>NGC 5473</b> | UGC 9011    | Galaxy  | UMA | 11.4 | 12.8 | 2.2' | 14 04.7 | +54 54 | 49  | E2         |    |    | H I 231;svBN;sh. bar;F lens;in field of <b>M 101</b> |
| <b>NGC 5474</b> | UGC 9013    | Galaxy  | UMA | 10.8 | 13.9 | 5'   | 14 05.0 | +53 40 | 49  | Sc         |    |    | low surf. bright;smooth part res cent w vsFN;asym    |
| NGC 5475        | UGC 9016    | Galaxy  | UMA | 12.6 | 12.5 | 1.9' | 14 05.2 | +55 45 | 49  | Sa         |    |    | H II 800   |
| NGC 5476        | MCG - 1-36- | Galaxy  | VIR | 14   | -    | 1.5' | 14 08.1 | -06 06 | 287 | Sd         |    |    | H III 287  |
| NGC 5477        | UGC 9018    | Galaxy  | UMA | 14   | 14.7 | 1.6' | 14 05.6 | +54 28 | 49  | Sm         |    |    | H III 790  |
| NGC 5478        | UGC 9034    | Galaxy  | VIR | 13.6 | 13.2 | 1.1' | 14 08.1 | -01 42 | 242 | SBbc       |    |    | H III 762  |
| NGC 5480        | UGC 9026    | Galaxy  | UMA | 12.1 | 12.7 | 1.6' | 14 06.4 | +50 43 | 49  | Sc         |    |    | P w NGC 5481 at 3.2;svBN;sev filam branch;arms poor  |
| NGC 5481        | UGC 9029    | Galaxy  | UMA | 12.3 | 13.3 | 1.4' | 14 06.7 | +50 43 | 49  | E-SO       |    |    | H II 693;P w NGC 5480                                |
| NGC 5482        | UGC 9038    | Galaxy  | BOO | 12.9 | 12.9 | 1.2' | 14 08.5 | +08 56 | 197 | SO         |    |    | H III 59   |
| NGC 5483        | ESO 271-19  | Galaxy  | CEN | 11.2 | 13.8 | 3.9' | 14 10.4 | -43 20 | 404 | SBc        |    |    |  |
| NGC 5485        | UGC 9033    | Galaxy  | UMA | 11.4 | 12.9 | 2.8' | 14 07.2 | +55 00 | 49  | SO         |    |    | P w NGC 5484 at 3'9;NGC 5486 at 6';sBN in B lens     |
| NGC 5486        | UGC 9036    | Galaxy  | UMA | 13.3 | 14   | 1.5' | 14 07.4 | +55 06 | 49  | Sm         |    |    | H II 801;P w NGC 5485 at 6'                          |
| NGC 5488        | IC 4375     | Galaxy  | CEN | 11.9 | 13.1 | 3.4' | 14 08.0 | -33 19 | 371 | SBbc       |    |    |  |

## 7000 DSO List (sorted by name)

| NAME      | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 5489  | ESO 271-21  | Galaxy | CEN | 12.2 | 12.5 | 1.5' | 14 12.0 | -46 05 | 404 | Sa         |    |    |   |
| NGC 5490  | NGC 5490A   | Galaxy | BOO | 12.1 | 13.8 | 2.5' | 14 10.0 | +17 33 | 152 | E2         |    |    | H III 32;Brightest in group;sev 15m comps within 10'      |
| NGC 5490A | NGC 5490    | Galaxy | BOO | 13   | -    | 2.5' | 14 10.0 | +17 33 | 152 | Elliptical |    |    |   |
| NGC 5490C | MCG 3-36-   | Galaxy | BOO | 13.9 | 13.6 | 1.1' | 14 10.1 | +17 37 | 152 | Sbc        |    |    | At 5' nf NGC 5490;7' s of IC 983                          |
| NGC 5491A | UGC 9072    | Galaxy | VIR | 13.9 | -    | 1.4' | 14 11.0 | +06 22 | 197 | Sb         |    |    | H II 890;s of 2;contact pr;UGC 9072                       |
| NGC 5492  | UGC 9065    | Galaxy | BOO | 12.8 | 13.2 | 2.4' | 14 10.6 | +19 37 | 152 | SB/P       |    |    | H II 876;asym spindle;spir                                |
| NGC 5493  | MCG - 1-36- | Galaxy | VIR | 11.4 | 12.1 | 1.7' | 14 11.5 | -05 03 | 242 | SO         |    |    | vB diff N in B diamond-shaped lens;F nearly circular      |
| NGC 5494  | ESO 446-25  | Galaxy | CEN | 11.9 | 13.3 | 2.3' | 14 12.4 | -30 39 | 371 | Sc         |    |    |   |
| NGC 5495  | ESO 511-10  | Galaxy | HYA | 12.8 | 13.2 | 1.5' | 14 12.4 | -27 07 | 332 | SBc        |    |    |   |
| NGC 5496  | UGC 9079    | Galaxy | VIR | 12.1 | 13.5 | 4.7' | 14 11.6 | -01 10 | 242 | SBcd       |    |    | edge on w streaky dust lanes                              |
| NGC 5498  | UGC 9075    | Galaxy | BOO | 13.6 | 13.3 | 1'   | 14 11.1 | +25 42 | 152 | E-SO       |    |    |   |
| NGC 5499  | UGC 9074    | Galaxy | BOO | 13.5 | 12.7 | 0.9' | 14 10.8 | +35 55 | 110 | Sa         |    |    |   |
| NGC 5500  | UGC 9070    | Galaxy | BOO | 13.3 | 13.1 | 1'   | 14 10.3 | +48 33 | 77  | Elliptical |    |    | H III 674   |
| NGC 5501  | MCG 0-36-   | Galaxy | VIR | 13.5 | 13.2 | 1.1' | 14 12.3 | +01 16 | 242 | Sa         |    |    |   |
| NGC 5504A | NGC 5504    | Galaxy | BOO | 13.9 | -    | 1.3' | 14 12.3 | +15 50 | 197 | SBbc       |    |    | Brightest in group  |
| NGC 5505  | UGC 9092    | Galaxy | BOO | 13.2 | 12.8 | 1'   | 14 12.5 | +13 18 | 197 | SBa        |    |    |   |
| NGC 5506  | MCG 0-36-   | Galaxy | VIR | 11.9 | 12.7 | 2.7' | 14 13.2 | -03 12 | 242 | Sap        |    |    | H II 687;P w NGC 5507 at 4'                               |
| NGC 5507  | MCG 0-36-   | Galaxy | VIR | 12.5 | 12.8 | 1.6' | 14 13.3 | -03 09 | 242 | SBO        |    |    | H IV 49;P w NGC 5506 at 4'                                |
| NGC 5508  | UGC 9094    | Galaxy | BOO | 13.1 | 14.1 | 2'   | 14 12.5 | +24 38 | 152 | SO         |    |    | H I 255   |
| NGC 5510  | ESO 579- 3  | Galaxy | VIR | 14   | -    | 1.4' | 14 13.6 | -17 59 | 332 | Ir Bar     |    |    |   |
| NGC 5513  | UGC 9099    | Galaxy | BOO | 12.6 | 13.3 | 1.9' | 14 13.1 | +20 25 | 152 | SO         |    |    | H II 877  |
| NGC 5514  | UGC 9102    | Galaxy | BOO | 12.7 | 13.6 | 1.4' | 14 13.6 | +07 40 | 197 | Sab        |    |    | Double contact system is distorted w plumes               |
| NGC 5515  | UGC 9096    | Galaxy | BOO | 12.9 | 12.6 | 1.3' | 14 12.6 | +39 19 | 77  | Sab        |    |    | H III 685   |
| NGC 5516  | ESO 221-34  | Galaxy | CEN | 12   | 12.7 | 1.8' | 14 15.9 | -48 07 | 404 | E-SO       |    |    |   |
| NGC 5517  | UGC 9100    | Galaxy | BOO | 13.8 | 13.4 | 1'   | 14 12.9 | +35 43 | 110 | Sa         |    |    |   |
| NGC 5519  | NGC 5570    | Galaxy | BOO | 13.1 | 13.4 | 1.6' | 14 14.3 | +07 31 | 197 | Sa         |    |    | P w NGC 5514  |
| NGC 5520  | UGC 9097    | Galaxy | BOO | 12.4 | 13.1 | 2'   | 14 12.4 | +50 21 | 49  | Sb         |    |    | H III 676   |
| NGC 5521  | UGC 9122    | Galaxy | VIR | 13.7 | 12.3 | 0.6' | 14 15.4 | +04 24 | 242 | S pec      |    |    |   |
| NGC 5522  | UGC 9116    | Galaxy | BOO | 13.5 | 13   | 1.8' | 14 14.8 | +15 09 | 197 | Sb         |    |    | H III 644   |
| NGC 5523  | UGC 9119    | Galaxy | BOO | 12.1 | 13.8 | 4.7' | 14 14.9 | +25 19 | 152 | Sc         |    |    | H III 134;BM;no def N;many filam knotty arms              |
| NGC 5525  | UGC 9124    | Galaxy | BOO | 12.8 | 13   | 1.5' | 14 15.7 | +14 17 | 197 | SO         |    |    | strong absorption along edge                              |
| NGC 5529  | UGC 9127    | Galaxy | BOO | 11.9 | 13.5 | 6'   | 14 15.6 | +36 14 | 110 | Sc         |    |    | H III 414;dwarf irreg;v poor res.;almost exactly edgewise |
| NGC 5530  | ESO 272- 3  | Galaxy | LUP | 11.1 | 13.2 | 4.2' | 14 18.5 | -43 23 | 404 | SBbc       |    |    |   |
| NGC 5532A | NGC 5532    | Galaxy | BOO | 13.3 | -    | 1.6' | 14 16.9 | +10 48 | 197 | SO         |    |    | P w NGC 5531 at 5.2';S0 w S comp superimp ssf center      |
| NGC 5533  | UGC 9133    | Galaxy | BOO | 11.8 | 13.6 | 3.1' | 14 16.1 | +35 21 | 110 | Sab        |    |    | H II 418;vBN weak irreg out arms                          |
| NGC 5534  | MCG - 1-36- | Galaxy | VIR | 12.3 | 12.4 | 1.4' | 14 17.7 | -07 25 | 287 | SBab       |    |    |   |
| NGC 5536  | UGC 9136    | Galaxy | BOO | 13.5 | 13.1 | 0.9' | 14 16.4 | +39 30 | 77  | SBa        |    |    | one-armed spiral w massive bar;P w NGC 5541 at 5.5'       |
| NGC 5541  | UGC 9139    | Galaxy | BOO | 12.8 | 11.8 | 0.8' | 14 16.5 | +39 35 | 77  | S pec      |    |    | H III 732;sev galaxies near                               |
| NGC 5544  | UGC 9142    | Galaxy | BOO | 13.2 | -    | 0.9' | 14 17.0 | +36 34 | 110 | SBO-a      |    |    | H II 419;P w NGC 5545;disturbed;Arp 199                   |
| NGC 5545  | UGC 9143    | Galaxy | BOO | 14   | -    | 1'   | 14 17.1 | +36 34 | 110 | Sbc        |    |    | B cent lens (or bar);2 main B arms;in front of N 5544     |
| NGC 5546  | UGC 9148    | Galaxy | BOO | 12.3 | 12.6 | 1.3' | 14 18.2 | +07 34 | 197 | Elliptical |    |    | H III 551;NGC 5543 at 3.5'                                |
| NGC 5548  | UGC 9149    | Galaxy | BOO | 12.6 | 13.1 | 1.5' | 14 18.0 | +25 08 | 152 | Sa Ring    |    |    | H II 194;Seyfert;slightly asym;eBN;F spir patt in lens    |
| NGC 5549  | UGC 9156    | Galaxy | VIR | 12.9 | 13   | 1.6' | 14 18.6 | +07 23 | 197 | SO         |    |    | H III 552   |
| NGC 5550  | UGC 9154    | Galaxy | BOO | 13.1 | 12.8 | 1.2' | 14 18.5 | +12 53 | 197 | Sb Ring    |    |    |   |
| NGC 5556  | ESO 446-50  | Galaxy | HYA | 11.8 | 14.4 | 4.1' | 14 20.6 | -29 15 | 372 | SBcd       |    |    |   |
| NGC 5557  | UGC 9161    | Galaxy | BOO | 11   | 12.6 | 2.4' | 14 18.4 | +36 30 | 110 | E1         |    |    | H I 99;BN;no struct                                       |
| NGC 5559  | UGC 9166    | Galaxy | BOO | 14   | 13.3 | 1.4' | 14 19.2 | +24 48 | 152 | SBb        |    |    | H III 347   |
| NGC 5560  | UGC 9172    | Galaxy | VIR | 12.4 | 13.2 | 3.6' | 14 20.1 | +04 00 | 242 | SBb/P      |    |    | bar: extends of arms;distort by 5566                      |
| NGC 5562  | UGC 9174    | Galaxy | BOO | 13.5 | 12.6 | 0.7' | 14 20.2 | +10 16 | 197 | S          |    |    |   |
| NGC 5566  | UGC 9175    | Galaxy | VIR | 10.6 | 13.3 | 6.6' | 14 20.3 | +03 56 | 242 | SBab Ri    |    |    | H I 144;double galaxy                                     |
| NGC 5569  | UGC 9176    | Galaxy | VIR | 13.2 | 14   | 1.7' | 14 20.5 | +03 59 | 242 | SBc        |    |    | vsN in B sh bar;F poor;res. arms. Near 5566               |
| NGC 5574  | UGC 9181    | Galaxy | VIR | 12.4 | 12.7 | 1.5' | 14 20.9 | +03 14 | 242 | SBO        |    |    | H I 145;svBN;diff lens w less flatten envel , near 5576   |
| NGC 5575  | NGC 5578    | Galaxy | VIR | 13.3 | 12.9 | 0.9' | 14 21.0 | +06 12 | 197 | SO         |    |    |   |
| NGC 5576  | UGC 9183    | Galaxy | VIR | 11   | 13.2 | 3'   | 14 21.1 | +03 16 | 242 | E2         |    |    | triple group w NGC 5574 at 2.9' and NGC 5577 at 10.3'     |
| NGC 5577  | UGC 9187    | Galaxy | VIR | 12.3 | 13.4 | 3.2' | 14 21.2 | +03 26 | 242 | Sbc Ring   |    |    | sBN;v fine arms;NGC 5576 group                            |
| NGC 5579  | UGC 9180    | Galaxy | BOO | 13.6 | 14.5 | 1.9' | 14 20.4 | +35 11 | 111 | Sc         |    |    | Arp 69;asym 3-armed spir;one arm broken;                  |
| NGC 5582  | UGC 9188    | Galaxy | BOO | 11.6 | 13.3 | 2.8' | 14 20.7 | +39 42 | 77  | Elliptical |    |    | H II 754  |
| NGC 5583  | UGC 9196    | Galaxy | BOO | 13.4 | 12.4 | 0.8' | 14 21.7 | +13 14 | 197 | S          |    |    | vB main body  |
| NGC 5584  | UGC 9201    | Galaxy | VIR | 11.4 | 13.5 | 3.4' | 14 22.4 | -00 23 | 242 | SBc        |    |    | sh. B bar in lens;sev. part. res. branch filam arms       |
| NGC 5585  | UGC 9179    | Galaxy | UMA | 10.7 | 13.9 | 5.8' | 14 19.8 | +56 44 | 49  | SBcd       |    |    | H I 235;M 101 group                                       |
| NGC 5587  | UGC 9202    | Galaxy | BOO | 12.5 | 13.2 | 2.6' | 14 22.2 | +13 55 | 197 | Sa         |    |    | H III 110   |
| NGC 5589  | NGC 5588    | Galaxy | BOO | 13.3 | 13.3 | 1.1' | 14 21.4 | +35 16 | 111 | SBa        |    |    | H III 416;P w NGC 5590 at 4.8'                            |
| NGC 5590  | NGC 5580    | Galaxy | BOO | 12.3 | 13.5 | 1.8' | 14 21.6 | +35 12 | 111 | SO         |    |    | H III 417;P w NGC 5589                                    |
| NGC 5592  | ESO 446-58  | Galaxy | HYA | 12.8 | 12.8 | 1.5' | 14 23.9 | -28 41 | 372 | SBbc       |    |    | H III 924   |

## 7000 DSO List (sorted by name)

| NAME      | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs  | SAC NOTES  |
|-----------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|-----|--|
| NGC 5593  | OCL 926     | Opn CL  | LUP | -    | -    | 8'   | 14 25.7 | -54 48 | 430 | III 1 p    | 15 | 7.8 |  |
| NGC 5595  | MCG - 3-37- | Galaxy  | LIB | 12   | 13   | 2.4' | 14 24.2 | -16 43 | 287 | SBc        |    |     | H III 121  |
| NGC 5596  | UGC 9208    | Galaxy  | BOO | 13.4 | 13.1 | 1.1' | 14 22.5 | +37 07 | 111 | SO         |    |     | H III 418  |
| NGC 5597  | MCG - 3-37- | Galaxy  | LIB | 12   | 13.2 | 2.1' | 14 24.5 | -16 46 | 287 | SBc Ring   |    |     | H III 122  |
| NGC 5598  | UGC 9209    | Galaxy  | BOO | 13   | 13.4 | 1.6' | 14 22.5 | +40 19 | 77  | SO         |    |     | H III 733;5603 group                                     |
| NGC 5599  | UGC 9218    | Galaxy  | VIR | 13.6 | 13.1 | 1.4' | 14 23.8 | +06 35 | 197 | Sb         |    |     | H III 927  |
| NGC 5600  | UGC 9220    | Galaxy  | BOO | 12.1 | 12.7 | 1.5' | 14 23.8 | +14 38 | 197 | Sc         |    |     | H II 177;vB core or N;asym outer arms                    |
| NGC 5602  | UGC 9210    | Galaxy  | BOO | 12.7 | 12.6 | 1.5' | 14 22.3 | +50 30 | 49  | Sa         |    |     | H II 694   |
| NGC 5603A | NGC 5603    | Galaxy  | BOO | 14   | -    | 1.1' | 14 23.0 | +40 23 | 77  | SO         |    |     | H III 734;Brightest in group;P w UGC 9216                |
| NGC 5604  | MCG 0-37-   | Galaxy  | VIR | 12.8 | 13.3 | 1.9' | 14 24.7 | -03 13 | 242 | Sa         |    |     | H III 668  |
| NGC 5605  | MCG - 2-37- | Galaxy  | LIB | 12.3 | 13   | 1.5' | 14 25.1 | -13 10 | 287 | SBc        |    |     | H III 120  |
| NGC 5606  | OCL 922     | Opn CL  | CEN | 7.7  | -    | 3'   | 14 27.8 | -59 38 | 430 | I 1 p      | 15 | 7.9 |  |
| NGC 5607  | UGC 9189    | Galaxy  | UMI | 13.4 | 12.9 | 0.9' | 14 19.4 | +71 35 | 27  | S pec      |    |     | H II 331;Peculiar  |
| NGC 5608  | UGC 9219    | Galaxy  | BOO | 13.4 | 14.6 | 2.6' | 14 23.3 | +41 47 | 77  | Irp+       |    |     | H II 673;hints of spir pattern?;ecc nucl                 |
| NGC 5610  | UGC 9230    | Galaxy  | BOO | 13.2 | 13.4 | 2'   | 14 24.4 | +24 37 | 152 | SBab       |    |     | H III 136  |
| NGC 5611  | UGC 9227    | Galaxy  | BOO | 12.6 | 12.3 | 1.3' | 14 24.1 | +33 03 | 111 | SO         |    |     | comp at 3' pa 10   |
| NGC 5614  | UGC 9226    | Galaxy  | BOO | 11.7 | 13.3 | 2.4' | 14 24.1 | +34 52 | 111 | Sab        |    |     | NGC 5614 superimp;P w NGC 5613 at 2' PA 351;disturb      |
| NGC 5616  | UGC 9231    | Galaxy  | BOO | 13.8 | 13.6 | 2.1' | 14 24.3 | +36 28 | 111 | SBbc       |    |     | H III 419;2 or 3 conds in n part;asym                    |
| NGC 5618  | UGC 9250    | Galaxy  | VIR | 13.4 | 13.9 | 1.6' | 14 27.2 | -02 16 | 242 | SBc        |    |     | H III 763  |
| NGC 5619A | NGC 5619    | Galaxy  | VIR | 14   | -    | 2.2' | 14 27.3 | +04 48 | 242 | Sb         |    |     |  |
| NGC 5622  | UGC 9248    | Galaxy  | BOO | 13.2 | 13.6 | 1.7' | 14 26.2 | +48 34 | 77  | Sb         |    |     | H III 677  |
| NGC 5623  | UGC 9260    | Galaxy  | BOO | 12.5 | 13.1 | 1.6' | 14 27.1 | +33 15 | 111 | Elliptical |    |     | H II 329   |
| NGC 5624  | UGC 9256    | Galaxy  | BOO | 13.1 | 12.8 | 1.1' | 14 26.6 | +51 35 | 49  | S pec      |    |     | Peculiar?  |
| NGC 5626  | ESO 447- 8  | Galaxy  | HYA | 13   | 12.9 | 1.2' | 14 29.8 | -29 45 | 372 | Sa         |    |     |  |
| NGC 5627  | UGC 9280    | Galaxy  | BOO | 12.9 | 13.4 | 1.7' | 14 28.6 | +11 23 | 197 | SO         |    |     | brightest in subgroup                                    |
| NGC 5628  | UGC 9278    | Galaxy  | BOO | 13.3 | 13.1 | 1.1' | 14 28.4 | +17 55 | 152 | Elliptical |    |     |  |
| NGC 5629  | UGC 9281    | Galaxy  | BOO | 12.1 | 13.2 | 1.8' | 14 28.3 | +25 51 | 152 | SO         |    |     | Brightest in group, incl IC 1018 and IC 1019 both 15 mag |
| NGC 5630  | UGC 9270    | Galaxy  | BOO | 13.1 | 13.4 | 2.2' | 14 27.6 | +41 15 | 77  | Sd         |    |     | H II 674   |
| NGC 5631  | UGC 9261    | Galaxy  | UMA | 11.5 | 12.5 | 2'   | 14 26.6 | +56 35 | 49  | SO         |    |     | vB diff N w F dk crescent on one side;                   |
| NGC 5633  | UGC 9271    | Galaxy  | BOO | 12.4 | 13.3 | 2.1' | 14 27.5 | +46 09 | 77  | Sb         |    |     | H I 185;neutral Sb                                       |
| NGC 5634  | GCL 28      | Glob CL | VIR | 9.5  | -    | 4.9' | 14 29.6 | -05 59 | 287 | IV         |    |     | H I 70;11 mag star on E edge                             |
| NGC 5635  | UGC 9283    | Galaxy  | BOO | 12.5 | 13.4 | 2.3' | 14 28.5 | +27 25 | 152 | Sb         |    |     | H III 132  |
| NGC 5636  | UGC 9304    | Galaxy  | VIR | 12.7 | 13.7 | 1.6' | 14 29.7 | +03 16 | 242 | SBO-a R    |    |     | H II 580;NGC 5638 group;vsBN;F bar                       |
| NGC 5637  | UGC 9293    | Galaxy  | BOO | 13.8 | 12.7 | 0.9' | 14 29.0 | +23 11 | 152 | Scd        |    |     | H II 357;slightly asym;high surf brightn                 |
| NGC 5638  | UGC 9308    | Galaxy  | VIR | 11.2 | 13.2 | 2.3' | 14 29.7 | +03 14 | 242 | E1         |    |     | UGC 9308;P w NGC 5636 at 2';Brightest in cluster         |
| NGC 5641  | UGC 9300    | Galaxy  | BOO | 12.2 | 13.3 | 2.4' | 14 29.3 | +28 49 | 111 | SBab       |    |     |  |
| NGC 5642  | UGC 9301    | Galaxy  | BOO | 12.6 | 13.6 | 1.8' | 14 29.2 | +30 02 | 111 | Elliptical |    |     | H III 126;f of 2   |
| NGC 5643  | ESO 272-16  | Galaxy  | LUP | 10   | 13   | 4.7' | 14 32.7 | -44 11 | 404 | SBc        |    |     |  |
| NGC 5644  | UGC 9321    | Galaxy  | BOO | 12.5 | 13.2 | 1.5' | 14 30.4 | +11 56 | 197 | SO         |    |     | P w NGC 5647 at 4.1';Brightest in cluster                |
| NGC 5645  | UGC 9328    | Galaxy  | VIR | 12.5 | 13.8 | 2.6' | 14 30.7 | +07 16 | 197 | SBcd       |    |     | H II 150;B bar: sev. knotty arms w some branch.;asym.    |
| NGC 5648  | NGC 5649    | Galaxy  | BOO | 13.1 | 12.7 | 1.1' | 14 30.5 | +14 01 | 197 | Sbc        |    |     | P w NGC 5649 at 5.5'                                     |
| NGC 5649  | NGC 5648    | Galaxy  | BOO | 13.2 | 13.1 | 1.1' | 14 30.5 | +14 01 | 197 | Sbc        |    |     | H III 645  |
| NGC 5650  | NGC 5652    | Galaxy  | VIR | 13.5 | -    | 2'   | 14 31.0 | +05 59 | 197 | SBc        |    |     |  |
| NGC 5652  | NGC 5650    | Galaxy  | VIR | 12.5 | 13.4 | 2'   | 14 31.0 | +05 59 | 197 | Sbc        |    |     | H II 891   |
| NGC 5653  | UGC 9318    | Galaxy  | BOO | 12.2 | 12.9 | 1.7' | 14 30.2 | +31 13 | 111 | Sb Ring    |    |     | H II 330;vBN;B knotty arms                               |
| NGC 5654  | UGC 9319    | Galaxy  | BOO | 12.9 | 13.3 | 1.5' | 14 30.0 | +36 22 | 111 | SBO-a      |    |     | H III 420;Peculiar double nucleus                        |
| NGC 5655  | UGC 9333    | Galaxy  | BOO | 14   | -    | 1.1' | 14 30.9 | +13 58 | 197 | Sc         |    |     |  |
| NGC 5656  | UGC 9332    | Galaxy  | BOO | 11.8 | 12.8 | 1.9' | 14 30.4 | +35 19 | 111 | Sab        |    |     | H II 421   |
| NGC 5657  | UGC 9335    | Galaxy  | BOO | 13.3 | 13.5 | 1.8' | 14 30.7 | +29 11 | 111 | SBb        |    |     |  |
| NGC 5659  | UGC 9342    | Galaxy  | BOO | 13.9 | 13.4 | 1.6' | 14 31.1 | +25 21 | 152 | Sb         |    |     |  |
| NGC 5660  | UGC 9325    | Galaxy  | BOO | 11.9 | 13.9 | 2.7' | 14 29.8 | +49 37 | 77  | SBc        |    |     | H II 695;Irrl;P w NGC 5676 at 30.5'                      |
| NGC 5661  | UGC 9346    | Galaxy  | VIR | 13.3 | 13   | 1.5' | 14 32.0 | +06 15 | 197 | SBb        |    |     | H II 892;nf of 2;UGC 9345 at 6.5' 15.4 mag               |
| NGC 5662  | OCL 928     | Opn CL  | CEN | 5.5  | -    | 29'  | 14 35.6 | -56 37 | 431 | II 3 m     | 70 | 7   |  |
| NGC 5665  | UGC 9352    | Galaxy  | BOO | 12   | 12.8 | 2.1' | 14 32.4 | +08 05 | 197 | SBc        |    |     | H II 27;Arp 49;peculiar br cond in arms                  |
| NGC 5666  | UGC 9360    | Galaxy  | BOO | 12.8 | 12.4 | 0.9' | 14 33.2 | +10 31 | 197 | Compac     |    |     |  |
| NGC 5667  | UGC 9344    | Galaxy  | DRA | 12.5 | 13   | 1.7' | 14 30.4 | +59 28 | 50  | SBc        |    |     | H II 807   |
| NGC 5668  | UGC 9363    | Galaxy  | VIR | 11.5 | 13.9 | 3.2' | 14 33.4 | +04 27 | 242 | Scd Rin    |    |     | vs not vB N;BM;many part.res.irreg.branch.arms.          |
| NGC 5669  | UGC 9353    | Galaxy  | BOO | 11.3 | 13.8 | 4.2' | 14 32.7 | +09 54 | 197 | SBc        |    |     | H II 79;short bright bar                                 |
| NGC 5670  | ESO 272-19  | Galaxy  | LUP | 12   | 12.6 | 2.3' | 14 35.6 | -45 58 | 404 | SO         |    |     |  |
| NGC 5671  | UGC 9297    | Galaxy  | UMI | 13.3 | 13.9 | 1.7' | 14 27.7 | +69 42 | 27  | SBb        |    |     | H III 882;2 unequal arms;bent in opposite directions?    |
| NGC 5672  | UGC 9354    | Galaxy  | BOO | 13.5 | 12.6 | 0.8' | 14 32.6 | +31 40 | 111 | Sb         |    |     | H III 310;appears acircular;dif in blue;v red            |
| NGC 5673  | UGC 9347    | Galaxy  | BOO | 12.1 | 12.4 | 2.4' | 14 31.5 | +49 57 | 77  | SBc        |    |     | H II 696;P w IC 1029 at 9.7' PA 290 2.8'X0.5' 14mag      |
| NGC 5674  | UGC 9369    | Galaxy  | VIR | 13   | 13   | 1.1' | 14 33.9 | +05 27 | 242 | SBc Ring   |    |     | H II 893   |
| NGC 5675  | UGC 9357    | Galaxy  | BOO | 12.7 | 13.6 | 2.8' | 14 32.7 | +36 18 | 111 | SBb        |    |     | H II 422   |



7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| <b>NGC 5676</b> | UGC 9366    | Galaxy  | BOO | 11.2 | 13.2 | 3.9' | 14 32.8 | +49 27 | 77  | Sbc        |    |    | H I 189;N 5660 at 30' IC 1029 at 26';Many B knotty filam  |
| NGC 5677        | UGC 9378    | Galaxy  | BOO | 13.7 | 13   | 0.9' | 14 34.2 | +25 28 | 152 | Sbc        |    |    | H III 283;slightly asym;high surf brightn.                |
| NGC 5678        | UGC 9358    | Galaxy  | DRA | 11.3 | 13   | 3.3' | 14 32.1 | +57 55 | 50  | SBb        |    |    | H I 237;complex patt of dark lanes smooth outer arms;     |
| NGC 5680        | ZWG 19. 68  | Galaxy  | VIR | 13.7 | 13.3 | 0.9' | 14 35.7 | -00 01 | 242 | E-SO       |    |    |   |
| NGC 5684        | UGC 9402    | Galaxy  | BOO | 12.7 | 13.3 | 1.5' | 14 35.8 | +36 33 | 111 | SO         |    |    | H III 421;sev faint comp in field;all 15 mag and fainter  |
| NGC 5685        | UGC 9403    | Galaxy  | BOO | 13.3 | 13.6 | 1.2' | 14 36.3 | +29 54 | 111 | Elliptical |    |    |   |
| NGC 5687        | UGC 9395    | Galaxy  | BOO | 11.8 | 13.1 | 2.5' | 14 34.9 | +54 29 | 50  | Sa         |    |    | H II 808;B diff N;eF envel                                |
| NGC 5688        | ESO 272-22  | Galaxy  | LUP | 11.9 | 14.1 | 3.8' | 14 39.6 | -45 01 | 404 | SBc        |    |    |   |
| <b>NGC 5689</b> | UGC 9399    | Galaxy  | BOO | 11.9 | 13   | 3.3' | 14 35.5 | +48 44 | 77  | SBO-a      |    |    | H I 188;diff Nucl in B bulge w strong dk lane on one side |
| NGC 5690        | UGC 9416    | Galaxy  | VIR | 11.8 | 13   | 3.4' | 14 37.7 | +02 17 | 242 | Sc Ring    |    |    | H II 582;BM no def N;sev arms w dk lanes;vB*at3'          |
| NGC 5691        | UGC 9420    | Galaxy  | VIR | 12.3 | 13.2 | 2'   | 14 37.9 | -00 24 | 242 | SBap       |    |    | vB bar or core;one smooth;massive outer whorls;           |
| NGC 5692        | UGC 9427    | Galaxy  | VIR | 12.9 | 12   | 0.9' | 14 38.3 | +03 25 | 242 | Pec        |    |    |   |
| NGC 5693        | UGC 9406    | Galaxy  | BOO | 13.5 | 14.4 | 1.8' | 14 36.2 | +48 35 | 77  | SBcd Ring  |    |    | one main knotty arm;strong asym; NGC 5689 at 11'          |
| <b>NGC 5694</b> | GCL 29      | Glob CL | HYA | 10.2 | -    | 3.6' | 14 39.6 | -26 32 | 332 | VII        |    |    | H II 196;Rich w eF stars;distant globular                 |
| NGC 5695        | UGC 9421    | Galaxy  | BOO | 12.8 | 13.2 | 1.5' | 14 37.4 | +36 34 | 111 | SBa        |    |    | H II 423  |
| NGC 5696        | UGC 9415    | Galaxy  | BOO | 13   | 14.1 | 2'   | 14 37.0 | +41 50 | 77  | Sbc        |    |    | H II 648  |
| NGC 5697        | IC 4471     | Galaxy  | BOO | 13.7 | 12.5 | 0.9' | 14 36.5 | +41 41 | 77  | Sb         |    |    | B wedge-shaped main body in asym disc                     |
| NGC 5698        | UGC 9419    | Galaxy  | BOO | 13   | 13.5 | 1.8' | 14 37.2 | +38 27 | 111 | SBb        |    |    | H II 700  |
| NGC 5701        | UGC 9436    | Galaxy  | VIR | 10.9 | 13.8 | 4.7' | 14 39.2 | +05 22 | 242 | SBO-a R    |    |    | H II 575;Several vF;vS comps in field                     |
| NGC 5702        | UGC 9434    | Galaxy  | BOO | 13.3 | 13.1 | 1.1' | 14 38.9 | +20 30 | 152 | SO         |    |    | H III 894;comp 5.4' PA 254 0.6'X0.3'                      |
| NGC 5704        | NGC 5708    | Galaxy  | BOO | 13.9 | -    | 1.6' | 14 38.3 | +40 27 | 77  | Sd         |    |    | H II 649  |
| NGC 5705        | UGC 9447    | Galaxy  | VIR | 12.7 | 14.3 | 3'   | 14 39.8 | -00 43 | 242 | SBcd       |    |    | NGC 5713 at 26.5' PA 12                                   |
| NGC 5707        | UGC 9428    | Galaxy  | BOO | 12.5 | 12.6 | 2.5' | 14 37.5 | +51 34 | 50  | Sab        |    |    | comp 1.5' PA 26   |
| NGC 5708        | NGC 5704    | Galaxy  | BOO | 13.4 | 13.2 | 1.6' | 14 38.3 | +40 27 | 77  | Sd         |    |    | B patches;prob. v late spir                               |
| NGC 5709        | NGC 5703    | Galaxy  | BOO | 13.6 | 13.1 | 1.6' | 14 38.8 | +30 27 | 111 | SBa        |    |    | NGC 5706 at 2.1' PA 311 0.4'X0.3' m=15.7;* superimp       |
| NGC 5710        | UGC 9440    | Galaxy  | BOO | 13   | 13.3 | 1.2' | 14 39.3 | +20 03 | 152 | Elliptical |    |    | H III 895;P w NGC 5711 at 3.5' PA 155                     |
| NGC 5711        | UGC 9445    | Galaxy  | BOO | 13.9 | 13.1 | 1'   | 14 39.4 | +19 59 | 152 | SBa        |    |    | P w NGC 5710  |
| NGC 5713        | UGC 9451    | Galaxy  | VIR | 11.2 | 13.1 | 2.9' | 14 40.2 | -00 17 | 243 | SBbc       |    |    | H I 182;NGC 5713 group;NGC 5719 at 11.5' interact?        |
| NGC 5714        | UGC 9431    | Galaxy  | BOO | 13.4 | 13.5 | 3.2' | 14 38.2 | +46 38 | 77  | Sc         |    |    | H III 675;NGC 5717 at 4.8' nf 0.9'X0.5' m=15.4            |
| NGC 5715        | OCL 929     | Opn CL  | CIR | 9.8  | -    | 6'   | 14 43.5 | -57 35 | 431 | II 2 m     | 30 | 11 |   |
| NGC 5716        | MCG - 3-37- | Galaxy  | LIB | 13   | -    | 1.9' | 14 41.1 | -17 29 | 333 | SBc        |    |    | H III 671   |
| NGC 5718        | UGC 9459    | Galaxy  | VIR | 12.9 | 13.3 | 1.5' | 14 40.7 | +03 28 | 243 | E-SO       |    |    | H III 550;P w IC 1042 contact pair                        |
| NGC 5719        | UGC 9462    | Galaxy  | VIR | 12.2 | 13.5 | 3.2' | 14 40.9 | -00 19 | 243 | SBab/P     |    |    | vBN in bar strong dk lanes on lens and on near side       |
| NGC 5720        | UGC 9439    | Galaxy  | BOO | 13.4 | 14.4 | 2.1' | 14 38.6 | +50 49 | 50  | Sb         |    |    |   |
| NGC 5725        | UGC 9466    | Galaxy  | VIR | 13.6 | 13.3 | 1.2' | 14 41.0 | +02 11 | 243 | SBcd       |    |    |   |
| NGC 5726        | ESO 580-G0  | Galaxy  | LIB | 12.8 | 13.1 | 1.3' | 14 42.9 | -18 27 | 333 | SO pec     |    |    |   |
| NGC 5727        | UGC 9465    | Galaxy  | BOO | 13.7 | 14.6 | 2.3' | 14 40.4 | +33 59 | 111 | Sd         |    |    |   |
| NGC 5728        | MCG - 3-37- | Galaxy  | LIB | 11.4 | 13.1 | 3.2' | 14 42.4 | -17 15 | 333 | SBab       |    |    | H I 184   |
| NGC 5729        | MCG - 1-37- | Galaxy  | LIB | 13   | -    | 2.6' | 14 42.1 | -09 01 | 288 | Sb         |    |    | H III 508   |
| NGC 5731        | UGC 9460    | Galaxy  | BOO | 13.1 | 12.4 | 1.6' | 14 40.2 | +42 47 | 77  | Sbc        |    |    | H III 658   |
| NGC 5732        | UGC 9467    | Galaxy  | BOO | 13.5 | 13.3 | 1.4' | 14 40.6 | +38 38 | 111 | Sbc        |    |    | H III 686   |
| NGC 5733        | MCG 0-38-   | Galaxy  | VIR | 14   | 13   | 1'   | 14 42.8 | -00 21 | 243 | Sc         |    |    |   |
| NGC 5734        | ESO 580-16  | Galaxy  | LIB | 12.7 | 13   | 1.5' | 14 45.2 | -20 52 | 333 | SO         |    |    |   |
| NGC 5735        | UGC 9481    | Galaxy  | BOO | 12.3 | 13.8 | 2.4' | 14 42.6 | +28 44 | 111 | SBbc Ring  |    |    | H III 133   |
| NGC 5737        | UGC 9488    | Galaxy  | BOO | 13.5 | 13.4 | 1.3' | 14 43.2 | +18 53 | 153 | SBb        |    |    | H III 896   |
| NGC 5738        | MCG 0-38-   | Galaxy  | VIR | 13.9 | 12.4 | 1'   | 14 43.9 | +01 36 | 243 | SO         |    |    |   |
| NGC 5739        | UGC 9486    | Galaxy  | BOO | 12.1 | 13.6 | 1.9' | 14 42.5 | +41 51 | 77  | SBO-a      |    |    | H I 171;slightly asym;main body 1.5'X1.4'                 |
| NGC 5740        | UGC 9493    | Galaxy  | VIR | 11.9 | 13.3 | 2.8' | 14 44.4 | +01 41 | 243 | SBb Ring   |    |    | H II 538;P w NGC 5746 at 18.4' PA 26;vBN;weak bar         |
| NGC 5742        | MCG - 2-38- | Galaxy  | LIB | 14   | -    | 1.3' | 14 45.6 | -11 49 | 288 | SO         |    |    |   |
| NGC 5743        | ESO 580-17  | Galaxy  | LIB | 13   | 12.4 | 1.4' | 14 45.2 | -20 55 | 333 | Sb         |    |    |   |
| NGC 5745        | MCG - 2-38- | Galaxy  | LIB | 14   | -    | 1.7' | 14 45.0 | -13 57 | 288 | Sa         |    |    |   |
| <b>NGC 5746</b> | UGC 9499    | Galaxy  | VIR | 10.3 | 12.6 | 6.9' | 14 44.9 | +01 57 | 243 | SBb        |    |    | H I 126;vsBN in B cent.bulge;NGC 5740 at 18';edge on      |
| NGC 5749        | OCL 930     | Opn CL  | LUP | 8.8  | -    | 10'  | 14 48.9 | -54 30 | 431 | IV 1 p     | 30 |    |   |
| NGC 5750        | UGC 9512    | Galaxy  | VIR | 11.6 | 13.2 | 3.2' | 14 46.2 | -00 13 | 243 | SBO-a R    |    |    | H I 183;seBN in diff inner lens;broad diff bar w dk lane  |
| NGC 5751        | UGC 9498    | Galaxy  | BOO | 13.2 | 13.2 | 1.5' | 14 43.8 | +53 24 | 50  | Sc         |    |    | H II 809  |
| NGC 5756        | MCG - 2-38- | Galaxy  | LIB | 12.3 | 12.9 | 2.3' | 14 47.6 | -14 51 | 288 | SBbc       |    |    |   |
| NGC 5757        | ESO 580-33  | Galaxy  | LIB | 11.9 | 13   | 2.1' | 14 47.8 | -19 05 | 333 | SBb        |    |    | H III 690   |
| NGC 5758        | UGC 9524    | Galaxy  | BOO | 13.5 | 13.1 | 1.1' | 14 47.0 | +13 40 | 198 | E-SO       |    |    | comp 15mag;npp of 2                                       |
| NGC 5760        | UGC 9531    | Galaxy  | BOO | 13.3 | 13.2 | 1.5' | 14 47.7 | +18 30 | 153 | Sa         |    |    | H III 885;IC 4507 at 2.8' PA 183 0.8'X0.4' m=15.7         |
| NGC 5761        | ESO 580-39  | Galaxy  | LIB | 12.4 | 12.5 | 1.3' | 14 49.1 | -20 23 | 333 | SO         |    |    | GALXY @ 14 48.4 -20 10 fits descr but 14 47.7 -20 16 b    |
| NGC 5762        | UGC 9535    | Galaxy  | BOO | 12.7 | 13.3 | 1.5' | 14 48.7 | +12 27 | 198 | S pec      |    |    | B main body;comp 3.2';*RA in UGC disagrees w CGCG         |
| NGC 5764        | OCL 934     | Opn CL  | LUP | 12.6 | -    | 2'   | 14 53.5 | -52 40 | 431 | II 2 p     | 12 |    |   |
| NGC 5766        | ESO 580-50  | Galaxy  | LIB | 13.4 | 12.9 | 1.1' | 14 53.2 | -21 24 | 333 | SBbc       |    |    |   |
| NGC 5768        | UGC 9564    | Galaxy  | LIB | 12.5 | 13.4 | 1.8' | 14 52.1 | -02 32 | 243 | Scp        |    |    | H III 373;sBN;sev knotty branch arms;poor res             |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs  | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|-----|--|
| NGC 5770        | UGC 9575    | Galaxy  | VIR | 12.3 | 12.9 | 1.7' | 14 53.2 | +03 58 | 243 | SBO        |     |     | H II 576;comp 2 ' ;PA178;0.9'X0.5';v dif;dwarf             |
| NGC 5771        | MCG 5-35-   | Galaxy  | BOO | 13.6 | 12.8 | 0.8' | 14 52.2 | +29 51 | 111 | Elliptical |     |     | H III 129  |
| NGC 5772        | UGC 9566    | Galaxy  | BOO | 12.8 | 13.8 | 2.1' | 14 51.6 | +40 36 | 78  | Sb         |     |     | vBN 0.5'X0.35';poor res                                    |
| NGC 5773        | UGC 9571    | Galaxy  | BOO | 13.5 | 13   | 0.8' | 14 52.5 | +29 48 | 111 | Sa         |     |     | H III 130;Main body 0.4'X0.4';P w NGC 5771                 |
| NGC 5774        | UGC 9576    | Galaxy  | VIR | 12.1 | 14.2 | 3'   | 14 53.7 | +03 35 | 243 | SBcd       |     |     | P w NGC 5775 at 4.5' PA 123                                |
| NGC 5775        | UGC 9579    | Galaxy  | VIR | 11.4 | 12.8 | 4'   | 14 54.0 | +03 33 | 243 | SBc        |     |     | IC1070 @ 4';0.7X0.25;m=15.4;strong dk lane;edge on         |
| NGC 5777        | UGC 9568    | Galaxy  | DRA | 13.3 | 13.5 | 3.1' | 14 51.3 | +58 59 | 50  | Sb         |     |     | H III 806;P w UGC 9570 at 2.8' PA 125                      |
| NGC 5778        | NGC 5825    | Galaxy  | BOO | 13.8 | 13.8 | 1.2' | 14 54.5 | +18 39 | 153 | Elliptical |     |     |  |
| NGC 5780        | MCG 5-35-   | Galaxy  | BOO | 14   | 12.7 | 0.9' | 14 54.4 | +28 56 | 111 | Sab        |     |     |  |
| NGC 5781        | MCG - 3-38- | Galaxy  | LIB | 14   | -    | 1.4' | 14 56.7 | -17 15 | 333 | SBb        |     |     |  |
| NGC 5783        | NGC 5785    | Galaxy  | BOO | 12.8 | 14.4 | 2.9' | 14 53.5 | +52 05 | 50  | SBc        |     |     |  |
| NGC 5784        | UGC 9592    | Galaxy  | BOO | 12.4 | 13.6 | 1.9' | 14 54.3 | +42 33 | 78  | SO         |     |     | UGC 9585 at 4.4';PA274 -- UGC 9585 m=16 : 1.1'X0.5'        |
| NGC 5785        | NGC 5783    | Galaxy  | BOO | 13.6 | -    | 2.9' | 14 53.5 | +52 05 | 50  | SBc        |     |     |  |
| NGC 5786        | ESO 327-37  | Galaxy  | CEN | 12   | -    | 2.3' | 14 58.9 | -42 01 | 405 | SBbc       |     |     |  |
| NGC 5787        | UGC 9599    | Galaxy  | BOO | 13.1 | 12.8 | 0.9' | 14 55.3 | +42 30 | 78  | Compac     |     |     | sharply delineated neutral ellip. disc compact;ellip.halo. |
| NGC 5789        | UGC 9615    | Galaxy  | BOO | 13.7 | 13.1 | 0.9' | 14 56.6 | +30 14 | 111 | SBd        |     |     | v patchy spir;B cond on sf edge; 5798 at 21' PA139         |
| NGC 5790        | UGC 9624    | Galaxy  | BOO | 13.6 | 13.2 | 0.9' | 14 57.6 | +08 17 | 198 | Sa Ring    |     |     |  |
| NGC 5791        | ESO 581- 7  | Galaxy  | LIB | 11.7 | 13   | 2.5' | 14 58.8 | -19 16 | 333 | Sa         |     |     | H III 691  |
| NGC 5792        | UGC 9631    | Galaxy  | LIB | 11.3 | 13.8 | 6.8' | 14 58.4 | -01 05 | 243 | SBb        |     |     | H II 683;vsBN in broad diff bar w strong dk lane           |
| NGC 5793        | MCG - 3-38- | Galaxy  | LIB | 13.2 | 13   | 1.7' | 14 59.4 | -16 42 | 288 | Sb         |     |     |  |
| NGC 5794        | UGC 9610    | Galaxy  | BOO | 13.4 | 13.2 | 1'   | 14 55.9 | +49 44 | 78  | S          |     |     | B core in vF halo;no S0;comp 4.8';PA185;5797 at 5.3'       |
| NGC 5795        | UGC 9617    | Galaxy  | BOO | 13.8 | 12.7 | 1.6' | 14 56.3 | +49 24 | 78  | Sc         |     |     |  |
| NGC 5796        | NGC 5816    | Galaxy  | LIB | 11.6 | 13.2 | 2.8' | 14 59.4 | -16 37 | 288 | E0         |     |     |  |
| NGC 5797        | UGC 9619    | Galaxy  | BOO | 12.8 | 12.3 | 1.1' | 14 56.4 | +49 42 | 78  | Sa         |     |     | H III 678  |
| NGC 5798        | UGC 9628    | Galaxy  | BOO | 13.1 | 13.3 | 1.4' | 14 57.6 | +29 58 | 111 | Ir Bar     |     |     | H III 131;P w NGC 5789                                     |
| NGC 5800        | ESO 223-SO  | Opn CL  | LUP | -    | -    |      | 15 01.8 | -51 55 | 431 |            |     |     |  |
| NGC 5804        | UGC 9627    | Galaxy  | BOO | 13.1 | 13.3 | 1.2' | 14 57.1 | +49 40 | 78  | SBb        |     |     | NGC 5797 at 7.1';sev small faint comps w in 10'            |
| NGC 5806        | UGC 9645    | Galaxy  | VIR | 11.7 | 13.3 | 3.2' | 15 00.0 | +01 53 | 243 | SBb        |     |     | n NGC 5846 group;eBN in B lens;NGC 5813 21' SE             |
| NGC 5809        | MCG - 2-38- | Galaxy  | LIB | 14   | -    | 1.4' | 15 00.9 | -14 10 | 288 | Sa         |     |     |  |
| NGC 5810        | ESO 581-18  | Galaxy  | LIB | 13.2 | 13   | 1.2' | 15 02.7 | -17 52 | 333 | SBb        |     |     |  |
| NGC 5811        | MCG 0-38-   | Galaxy  | VIR | 14   | 13.5 | 1'   | 15 00.5 | +01 37 | 243 | SBm        |     |     | In NGC 5846 group. B bar: 0.3'X0 8';F asym loop            |
| NGC 5812        | MCG - 1-38- | Galaxy  | LIB | 11.2 | 12.6 | 2.3' | 15 00.9 | -07 27 | 288 | E1         |     |     | H I 71   |
| <b>NGC 5813</b> | UGC 9655    | Galaxy  | VIR | 10.5 | 13.2 | 4'   | 15 01.2 | +01 42 | 243 | E1         |     |     | In NGC 5846 group;P w NGC 5814 at 5';NGC 8506, 21'         |
| <b>NGC 5814</b> | MCG 0-38-   | Galaxy  | VIR | 13.8 | 12.8 | 0.9' | 15 01.4 | +01 38 | 243 | Sab        |     |     |  |
| NGC 5815        | MCG - 3-38- | Galaxy  | LIB | 14   | -    | 0.8' | 15 00.5 | -16 50 | 288 | Sb         |     |     |  |
| NGC 5818        | UGC 9643    | Galaxy  | BOO | 13.7 | 13.6 | 1.2' | 14 59.0 | +49 49 | 78  | SO         |     |     |  |
| NGC 5819        | NGC 5808    | Galaxy  | UMI | 13.5 | 13.2 | 0.9' | 14 54.0 | +73 08 | 10  | SBbc       |     |     | H III 311;comp 3.2';PA130;0.6X0.3;UGC 9609                 |
| NGC 5820        | UGC 9642    | Galaxy  | BOO | 12.4 | 12.9 | 2.2' | 14 58.7 | +53 53 | 50  | SO         |     |     | H II 756;Asym env;F streamer off SE end;D* Sh 191 8' E     |
| <b>NGC 5822</b> | OCL 937     | Opn CL  | LUP | 6.5  | -    | 40'  | 15 04.4 | -54 24 | 431 | II 1 r     | 150 | 10  |  |
| <b>NGC 5823</b> | OCL 936     | Opn CL  | CIR | 7.9  | -    | 10'  | 15 05.5 | -55 36 | 431 | III 2 m    | 100 | 9.7 |  |
| <b>NGC 5824</b> | NGC 5834    | Glob CL | LUP | 9.1  | -    | 6.2' | 15 04.0 | -33 04 | 373 | I          |     |     |  |
| NGC 5827        | UGC 9662    | Galaxy  | BOO | 13   | 12.8 | 1.1' | 15 01.9 | +25 58 | 153 | S pec      |     |     | disturbed;sml F cond at np edge;disturbing comp?           |
| NGC 5829        | IC 4526     | Galaxy  | BOO | 13.4 | 14.4 | 1.7' | 15 02.7 | +23 20 | 153 | Sc         |     |     | sf of 2;interacting w comp at 1.4' PA 320 .5X0.4           |
| NGC 5831        | UGC 9678    | Galaxy  | VIR | 11.5 | 12.9 | 2.1' | 15 04.1 | +01 13 | 243 | Ep         |     |     | H II 540   |
| NGC 5832        | UGC 9649    | Galaxy  | UMI | 12.1 | 14.2 | 3.6' | 14 57.8 | +71 41 | 27  | SBb        |     |     | H II 332;unusul obj;bar and spir pattern very blue         |
| <b>NGC 5834</b> | ESO 387-SO  | Glob CL | LUP | 9.1  | -    | 6.2' | 15 04.0 | -33 04 | 373 | I          |     |     | same name for 5824   |
| NGC 5836        | UGC 9664    | Galaxy  | UMI | 13.9 | 13.9 | 1.2' | 14 59.5 | +73 54 | 10  | SBb Ring   |     |     | H III 312;VII Zw 576                                       |
| NGC 5838        | UGC 9692    | Galaxy  | VIR | 10.9 | 12.8 | 3.7' | 15 05.4 | +02 06 | 243 | Sa         |     |     | H II 542;In NGC 5846 grp;P w NGC 5848 at 18'               |
| NGC 5839        | UGC 9693    | Galaxy  | VIR | 12.7 | 13   | 1.3' | 15 05.5 | +01 38 | 243 | SO         |     |     | H II 541;NGC 5846 group                                    |
| NGC 5843        | ESO 387- 4  | Galaxy  | LUP | 12.3 | 13   | 1.9' | 15 07.5 | -36 20 | 373 | SBb        |     |     |  |
| NGC 5845        | UGC 9700    | Galaxy  | VIR | 12.5 | 11.5 | 0.7' | 15 06.0 | +01 38 | 243 | E3         |     |     | H III 511;NGC 5846 group                                   |
| <b>NGC 5846</b> | UGC 9706    | Galaxy  | VIR | 10   | 13   | 4'   | 15 06.5 | +01 36 | 243 | E0         |     |     | Brightest in group; NGC 5846A at 1';NGC 5850 near          |
| NGC 5846A       | MCG 0-38-   | Galaxy  | VIR | 13.8 | -    | 0.5' | 15 06.5 | +01 36 | 243 | E2         |     |     |  |
| NGC 5848        | NGC 5841    | Galaxy  | VIR | 13.8 | 12.7 | 1.1' | 15 06.6 | +02 00 | 243 | Sa         |     |     |  |
| <b>NGC 5850</b> | UGC 9715    | Galaxy  | VIR | 10.8 | 13.6 | 4.5' | 15 07.1 | +01 33 | 243 | SBab       |     |     | H II 543;In NGC 5846 group;vBN w bar                       |
| NGC 5851        | UGC 9714    | Galaxy  | BOO | 14   | 12.6 | 1'   | 15 06.9 | +12 51 | 198 | Sc         |     |     | H III 886;In triple group w NGC 5852(brightest)            |
| NGC 5852        | MCG 2-38-   | Galaxy  | BOO | 13.5 | 12.9 | 1.1' | 15 06.9 | +12 51 | 198 | S          |     |     | H III 887  |
| NGC 5854        | UGC 9726    | Galaxy  | VIR | 11.9 | 12.6 | 2.7' | 15 07.8 | +02 34 | 243 | SBO-a      |     |     | H II 544;In NGC 5846 group                                 |
| NGC 5856        |             | Star    | BOO | 6    | -    |      | 15 07.3 | +18 27 | 153 |            |     |     | H IV 71  |
| NGC 5857        | UGC 9724    | Galaxy  | BOO | 13.1 | 12.6 | 1.2' | 15 07.5 | +19 36 | 153 | SBb        |     |     | P w NGC 5859;many S galxys near;vsvBN in B lens            |
| NGC 5858        | MCG - 2-39- | Galaxy  | LIB | 14   | -    | 2'   | 15 08.8 | -11 13 | 288 | E6         |     |     |  |
| NGC 5859        | UGC 9728    | Galaxy  | BOO | 12.4 | 13.4 | 3'   | 15 07.6 | +19 35 | 153 | SBbc       |     |     | H II 752;P w NGC 5857 at 2 '                               |
| NGC 5861        | MCG - 2-39- | Galaxy  | LIB | 11.6 | 13.2 | 3'   | 15 09.3 | -11 19 | 288 | SBc Ring   |     |     | H II 192   |
| NGC 5863        | ESO 581-22  | Galaxy  | LIB | 12.8 | 13.3 | 1.4' | 15 10.8 | -18 26 | 333 | SB Ring    |     |     |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class    | ns  | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|----------|-----|------|--|
| NGC 5864        | UGC 9740    | Galaxy  | VIR | 11.8 | 12.6 | 2.5'  | 15 09.6 | +03 03 | 243 | SBO      |     |      | H II 585;in NGC 5846 group sB diff N in B lens;w blobs;p |
| NGC 5865        | NGC 5868    | Galaxy  | VIR | 13.5 | -    | 1.1'  | 15 09.8 | +00 32 | 243 | E-SO     |     |      | H II 684;P w NGC 5868 at 3.6' PA 0                       |
| NGC 5868        | NGC 5865    | Galaxy  | VIR | 13.4 | 13.4 | 1.1'  | 15 09.8 | +00 32 | 243 | E-SO     |     |      |  |
| NGC 5869        | UGC 9742    | Galaxy  | VIR | 11.9 | 13.2 | 2.3'  | 15 09.8 | +00 28 | 243 | SO       |     |      | H II 545   |
| NGC 5870        | NGC 5826    | Galaxy  | DRA | 13.9 | 13.9 | 1.2'  | 15 06.6 | +55 29 | 50  | SO       |     |      |  |
| NGC 5872        | MCG - 2-39- | Galaxy  | LIB | 14   | -    | 1.5'  | 15 10.9 | -11 29 | 288 | SO       |     |      |  |
| NGC 5873        | PK 331+16.1 | Pln Neb | LUP | 12   | 6.5  | 3"    | 15 12.8 | -38 08 | 373 | 2        |     | 15.5 |  |
| NGC 5874        | UGC 9736    | Galaxy  | BOO | 12.4 | 13.7 | 2.3'  | 15 07.9 | +54 45 | 50  | SBbc     |     |      |  |
| NGC 5875        | UGC 9745    | Galaxy  | BOO | 12.4 | 13.5 | 2.3'  | 15 09.2 | +52 32 | 50  | Sb       |     |      | H II 755;comp 3.1';PA190;0.3'X0.2';F;dif                 |
| NGC 5875A       | UGC 9741    | Galaxy  | BOO | 14   | -    | 0.6'  | 15 08.6 | +52 18 | 50  | S pec    |     |      |  |
| NGC 5876        | UGC 9747    | Galaxy  | BOO | 12.7 | 13.7 | 2.4'  | 15 09.5 | +54 30 | 50  | SBab     |     |      |  |
| NGC 5878        | MCG - 2-39- | Galaxy  | LIB | 11.5 | 13.1 | 3.2'  | 15 13.8 | -14 16 | 289 | Sb       |     |      | H III 736  |
| NGC 5879        | UGC 9753    | Galaxy  | DRA | 11.6 | 13.3 | 3.9'  | 15 09.8 | +57 00 | 50  | Sbc      |     |      | H II 757;vsBN;many filam knotty arms;poor res            |
| NGC 5882        | PK 327+10.1 | Pln Neb | LUP | 10.5 | 6.3  | 7"    | 15 16.8 | -45 39 | 405 |          |     | 13.4 |  |
| NGC 5885        | MCG - 2-39- | Galaxy  | LIB | 11.8 | 14.2 | 3.9'  | 15 15.1 | -10 05 | 289 | SB Ring  |     |      | H III 116  |
| NGC 5887        | UGC 9779    | Galaxy  | SER | 13.4 | 13.4 | 1.2'  | 15 14.7 | +01 09 | 244 | Sa       |     |      | UGC 9782 at 3.8' PA 50;comp 5 ' PA 239 0.5X0.1           |
| NGC 5888        | UGC 9771    | Galaxy  | BOO | 13.4 | 13.3 | 1.3'  | 15 13.1 | +41 16 | 78  | SBbc     |     |      | H III 659;NGC 5886 at 4.6' sp m=15.1                     |
| NGC 5890        | MCG - 3-39- | Galaxy  | LIB | 14   | -    | 1.6'  | 15 17.9 | -17 35 | 334 | Sa       |     |      |  |
| NGC 5891        | MCG - 2-39- | Galaxy  | LIB | 14   | -    | 0.8'  | 15 16.2 | -11 30 | 289 | Sbc      |     |      |  |
| NGC 5892        | F703        | Galaxy  | LIB | 11.7 | 14   | 3.6'  | 15 13.8 | -15 28 | 289 | SBcd     |     |      | Same position as Fath 703 in Burnham's F;S;R;BM 12.8     |
| NGC 5893        | UGC 9774    | Galaxy  | BOO | 13.1 | 13.4 | 1.2'  | 15 13.6 | +41 58 | 78  | SBb      |     |      | H II 678;NGC 5895-6 at 4'3.vF bridge;total m=15.5        |
| NGC 5894        | UGC 9768    | Galaxy  | DRA | 12.9 | 13   | 3'    | 15 11.7 | +59 48 | 50  | SBm      |     |      | H II 763   |
| <b>NGC 5897</b> | GCL 33      | Glob CL | LIB | 8.4  | -    | 8.7"  | 15 17.4 | -21 01 | 334 | XI       |     |      | H VI 19  |
| NGC 5898        | ESO 514- 2  | Galaxy  | LIB | 11.4 | 13   | 2.6'  | 15 18.2 | -24 06 | 334 | E1p      |     |      | H III 138  |
| NGC 5899        | UGC 9789    | Galaxy  | BOO | 11.7 | 13   | 3.3'  | 15 15.1 | +42 03 | 78  | SBc      |     |      | H II 650;vsBN;sev knotty branch arms;strong asym         |
| NGC 5900        | UGC 9790    | Galaxy  | BOO | 14   | 13.7 | 1.4'  | 15 15.1 | +42 13 | 78  | Sb       |     |      | nGC 5899 at 9' NGC 5901(=Ho 702b) at 1' may be a *       |
| NGC 5903        | ESO 514- 4  | Galaxy  | LIB | 11.2 | 13.1 | 3.2'  | 15 18.6 | -24 04 | 334 | E1       |     |      | H III 139  |
| NGC 5905        | UGC 9797    | Galaxy  | DRA | 11.7 | 14.1 | 3.8'  | 15 15.4 | +55 31 | 50  | SBb      |     |      | H II 758;P w NGC 5908 at 13'                             |
| NGC 5906        |             | Galaxy  | DRA | -    | -    |       | 15 15.9 | +56 20 | 50  | E+*      |     |      | Part of NGC 5907   |
| <b>NGC 5907</b> | NGC 5906    | Galaxy  | DRA | 10.3 | 13.3 | 11.8' | 15 15.9 | +56 20 | 50  | Sc       |     |      | vs bulge nearly hidden by strong dk lane; SN 1940a       |
| NGC 5908        | UGC 9805    | Galaxy  | DRA | 11.8 | 13.2 | 3.3'  | 15 16.7 | +55 25 | 50  | Sb       |     |      | vsBN in B bulge;strong dk lane;P w NGC 5905              |
| NGC 5909        | UGC 9778    | Galaxy  | UMI | 13.7 | 12.9 | 1.1'  | 15 11.5 | +75 23 | 11  | Sbc      |     |      | H III 943;Error in CGCG 5909=5912;* superimp             |
| NGC 5910        | MCG 4-36-   | Galaxy  | SER | 13.6 | 13.1 | 0.6'  | 15 19.4 | +20 54 | 154 | E-SO     |     |      | H II 400;Triple system                                   |
| NGC 5912        | MCG 13-11-  | Galaxy  | UMI | 13.7 | -    | 1.2'  | 15 11.7 | +75 23 | 11  | E-SO     |     |      | H III 944;Error in CGCG; MCG +13-11-011                  |
| NGC 5913        | UGC 9818    | Galaxy  | SER | 13.2 | 13.3 | 1.6'  | 15 20.9 | -02 35 | 244 | SB Ring  |     |      | broad complex bar;smooth disc outside;no spir arms       |
| NGC 5915        | MCG - 2-39- | Galaxy  | LIB | 12.3 | 13   | 1.6'  | 15 21.6 | -13 06 | 289 | SBab     |     |      |  |
| NGC 5916        | MCG - 2-39- | Galaxy  | LIB | 14   | -    | 2.3'  | 15 21.6 | -13 10 | 289 | SBap     |     |      |  |
| NGC 5918        | UGC 9817    | Galaxy  | BOO | 13.2 | 13.5 | 1.9'  | 15 19.4 | +45 53 | 78  | Sc       |     |      | 3 patches in disc may be superimp **                     |
| NGC 5920        | UGC 9822    | Galaxy  | SER | 13.6 | 13.4 | 1.1'  | 15 21.9 | +07 43 | 199 | SO       |     |      |  |
| NGC 5921        | UGC 9824    | Galaxy  | SER | 10.8 | 13.9 | 4.8'  | 15 21.9 | +05 04 | 244 | SBbc     |     |      | H I 148;eBN in B bar                                     |
| NGC 5923        | UGC 9823    | Galaxy  | BOO | 13.1 | 14.2 | 1.8'  | 15 21.2 | +41 44 | 78  | SBbc     |     |      |  |
| NGC 5925        | OCL 938     | Opn CL  | NOR | 8.4  | -    | 20'   | 15 27.4 | -54 32 | 431 | III 1 m  | 120 |      |  |
| NGC 5926        | MCG 2-39-   | Galaxy  | SER | 13.5 | 13   | 0.9'  | 15 23.4 | +12 43 | 199 | S pec    |     |      |  |
| <b>NGC 5927</b> | GCL 35      | Glob CL | LUP | 8    | -    | 12'   | 15 28.0 | -50 40 | 431 | VIII     |     |      |  |
| NGC 5928        | UGC 9847    | Galaxy  | SER | 12.2 | 13.5 | 2.2'  | 15 26.0 | +18 04 | 154 | SO       |     |      | H II 874;P w UGC 9841                                    |
| NGC 5929        | UGC 9851    | Galaxy  | BOO | 13   | -    | 0.9'  | 15 26.1 | +41 40 | 78  | Sab pec  |     |      | conn. P w NGC 5930 @ 0'5. Faint I syst. at 5'5 nf        |
| NGC 5930        | UGC 9852    | Galaxy  | BOO | 13   | -    | 1.8'  | 15 26.1 | +41 41 | 78  | SBb/P    |     |      | H II 651;conn w NGC 5929                                 |
| NGC 5934        | UGC 9862    | Galaxy  | BOO | 13.8 | 11.9 | 0.7'  | 15 28.2 | +42 56 | 78  | S pec    |     |      | interact;comp @ 4.7';PA 354;m=15.7                       |
| NGC 5936        | UGC 9867    | Galaxy  | SER | 12.5 | 13   | 1.3'  | 15 30.0 | +12 59 | 199 | SBb Ring |     |      | H II 130;Bright bar w star superimp                      |
| NGC 5937        | MCG 0-40-   | Galaxy  | SER | 12.3 | 12.9 | 1.9'  | 15 30.8 | -02 50 | 244 | Sb       |     |      | H II 401   |
| NGC 5939        | UGC 9854    | Galaxy  | UMI | 13   | 11.9 | 0.9'  | 15 24.8 | +68 44 | 28  | Sbc      |     |      | comp at 8.2' PA 225 0.5X0.3 m=15.5                       |
| NGC 5940        | UGC 9876    | Galaxy  | SER | 13.4 | 12.8 | 0.8'  | 15 31.3 | +07 27 | 199 | SBab     |     |      |  |
| NGC 5943        | UGC 9870    | Galaxy  | BOO | 13.2 | 13.7 | 1.3'  | 15 29.7 | +42 47 | 78  | SO       |     |      |  |
| NGC 5945        | UGC 9871    | Galaxy  | BOO | 12.8 | 14.2 | 2.1'  | 15 29.7 | +42 55 | 78  | SBab     |     |      |  |
| <b>NGC 5946</b> | IC 4550     | Glob CL | NOR | 8.4  | -    | 7.1'  | 15 35.5 | -50 40 | 432 | IX       |     |      |  |
| NGC 5947        | UGC 9877    | Galaxy  | BOO | 13.7 | 13.9 | 1.2'  | 15 30.6 | +42 43 | 78  | SBbc     |     |      | prob member of clust                                     |
| NGC 5949        | UGC 9866    | Galaxy  | DRA | 12   | 12.8 | 2.2'  | 15 28.0 | +64 46 | 28  | Sbc      |     |      | H II 906;vsBN;many B knotty arms                         |
| NGC 5950        | UGC 9884    | Galaxy  | BOO | 13.7 | 13.8 | 1.5'  | 15 31.5 | +40 26 | 78  | Sb       |     |      |  |
| NGC 5951        | UGC 9895    | Galaxy  | SER | 12.7 | 13.7 | 3.6'  | 15 33.7 | +15 00 | 199 | SBc      |     |      | H II 654;=Ho 713a. (Ho 713b at 1'5 ia a *)               |
| NGC 5953        | UGC 9903    | Galaxy  | SER | 13.3 | -    | 2'    | 15 34.5 | +15 12 | 199 | Sa       |     |      | H II 178;P w NGC 5954 at 8';distorted contact pair       |
| NGC 5954        | UGC 9904    | Galaxy  | SER | 13.7 | -    | 1.1'  | 15 34.6 | +15 12 | 199 | SBc/P    |     |      | H II 179;P w NGC 5953;F extension from comp              |
| NGC 5956        | UGC 9908    | Galaxy  | SER | 12.3 | 13.2 | 1.6'  | 15 35.0 | +11 45 | 199 | Sc       |     |      |  |
| NGC 5957        | UGC 9915    | Galaxy  | SER | 11.7 | 13.7 | 3.1'  | 15 35.4 | +12 03 | 199 | SBb      |     |      | Weak   |
| NGC 5958        | UGC 9909    | Galaxy  | CRB | 12.6 | 12.5 | 1'    | 15 34.8 | +28 39 | 112 | Sc       |     |      | H II 399;Peculiar?                                       |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 5959        | MCG - 3-40- | Galaxy  | LIB | 14   | -    | 2'   | 15 37.4 | -16 36 | 289 | Elliptical |    |      |   |
| NGC 5962        | UGC 9926    | Galaxy  | SER | 11.3 | 13.2 | 3'   | 15 36.5 | +16 36 | 199 | Sc         |    |      | H II 96;svBN w B arcs;knotty B;many filam             |
| NGC 5963        | UGC 9906    | Galaxy  | DRA | 12.5 | 14.7 | 3.3' | 15 33.5 | +56 34 | 51  | Sc         |    |      | H II 761;vB main body 0.7X0.45;NGC 5965 at 9.1'       |
| NGC 5964        | IC 4551     | Galaxy  | SER | 12   | 14.7 | 4.1' | 15 37.6 | +05 58 | 199 | SBcd       |    |      | narrow bar w low surf brightness arms                 |
| NGC 5965        | UGC 9914    | Galaxy  | DRA | 11.7 | 13   | 4.7' | 15 34.0 | +56 41 | 51  | Sb         |    |      | H II 762;P w NGC 5963                                 |
| NGC 5966        | UGC 9923    | Galaxy  | BOO | 12.2 | 12.9 | 1.8' | 15 35.9 | +39 46 | 78  | Elliptical |    |      | H III 634;IC 4563 at 4' nf spir m=15.1                |
| NGC 5968        | ESO 450- 5  | Galaxy  | LUP | 12.2 | 13.6 | 2.1' | 15 40.0 | -30 33 | 373 | SBab       |    |      |   |
| NGC 5970        | UGC 9943    | Galaxy  | SER | 11.5 | 13.3 | 3'   | 15 38.5 | +12 11 | 199 | SBc        |    |      | H II 76;vsBN in vB bar                                |
| NGC 5971        | UGC 9929    | Galaxy  | DRA | 13.8 | 13.6 | 1.6' | 15 35.6 | +56 28 | 51  | Sa         |    |      | NGC 5969 at 6.4' p 0.5'X0.3'                          |
| NGC 5972        | UGC 9946    | Galaxy  | SER | 13.6 | 13.1 | 1'   | 15 38.9 | +17 02 | 154 | Sa         |    |      |   |
| NGC 5977        | UGC 9967    | Galaxy  | SER | 13.4 | 13.6 | 1.2' | 15 40.6 | +17 08 | 154 | SBO        |    |      | comp 4 ' PA 82 0.6X0.35 early spir                    |
| NGC 5978        | MCG - 2-40- | Galaxy  | LIB | 14   | -    | 0.8' | 15 42.5 | -13 14 | 289 | Sa         |    |      |   |
| NGC 5980        | UGC 9974    | Galaxy  | SER | 12.6 | 12.7 | 1.9' | 15 41.5 | +15 47 | 199 | Sc         |    |      | H II 655;P w IC 1133                                  |
| NGC 5981        | UGC 9948    | Galaxy  | DRA | 13   | 13.1 | 2.7' | 15 37.9 | +59 23 | 51  | Sbc        |    |      | In triple group w N 5982;N 5985;5976;m=15.7           |
| <b>NGC 5982</b> | UGC 9961    | Galaxy  | DRA | 11.1 | 12.9 | 3'   | 15 38.7 | +59 21 | 51  | E3p        |    |      | H II 764;vBN;NGC 5985 at 6.2';PA290                   |
| NGC 5983        | UGC 9983    | Galaxy  | SER | 13.4 | 13.4 | 1'   | 15 42.8 | +08 14 | 199 | Elliptical |    |      |   |
| NGC 5984        | UGC 9987    | Galaxy  | SER | 12.5 | 13.2 | 2.9' | 15 42.9 | +14 14 | 199 | SBcd       |    |      | H II 656;P w UGC 9991;bright narrow bar               |
| NGC 5985        | UGC 9969    | Galaxy  | DRA | 11.1 | 14   | 5.4' | 15 39.6 | +59 20 | 51  | SBb Ring   |    |      | H II 766;Brightest of 3                               |
| <b>NGC 5986</b> | Dunlop 552  | Glob CL | LUP | 7.6  | -    | 9.8' | 15 46.1 | -37 47 | 374 | VII        |    |      |   |
| NGC 5987        | UGC 9971    | Galaxy  | DRA | 11.7 | 13.4 | 4.2' | 15 39.9 | +58 05 | 51  | Sb         |    |      | H II 765  |
| NGC 5988        | UGC 9998    | Galaxy  | SER | 13.8 | 13.9 | 1.2' | 15 44.6 | +10 18 | 200 | SBc Ring   |    |      |   |
| NGC 5989        | UGC 9985    | Galaxy  | DRA | 13.1 | 12.7 | 0.9' | 15 41.5 | +59 45 | 51  | Sc         |    |      | H III 738   |
| NGC 5990        | UGC 10024   | Galaxy  | SER | 12.4 | 12.6 | 1.6' | 15 46.3 | +02 25 | 245 | Sa         |    |      | H II 425;v late spir;m = 15.7                         |
| NGC 5992        | UGC 10003   | Galaxy  | BOO | 13.7 | 13   | 0.9' | 15 44.4 | +41 05 | 79  | Sab        |    |      | H III 635;P w NGC 5993                                |
| NGC 5993        | UGC 10007   | Galaxy  | BOO | 13.1 | 13   | 1.2' | 15 44.5 | +41 07 | 79  | SBb        |    |      | H III 636;P w NGC 5992                                |
| NGC 5994        | UGC 10033;  | Galaxy  | SER | 13.2 | -    | 0.4' | 15 46.9 | +17 52 | 155 | SBbc       |    |      | Spiral distorted;P w NGC 5996                         |
| NGC 5995        | MCG - 2-40- | Galaxy  | LIB | 14   | -    | 0.9' | 15 48.4 | -13 45 | 290 | Sa         |    |      |   |
| NGC 5996        | UGC 10033   | Galaxy  | SER | 12.8 | 13.1 | 1.7' | 15 47.0 | +17 53 | 155 | Sc         |    |      | H II 97   |
| NGC 5999        | OCL 946     | Opn CL  | NOR | 9    | -    | 3'   | 15 52.1 | -56 28 | 432 | I 3 m      | 40 | 12   |   |
| NGC 6000        | ESO 450-20  | Galaxy  | SCO | 12.2 | 13.3 | 1.9' | 15 49.8 | -29 23 | 374 | SBbc       |    |      |   |
| NGC 6003        | UGC 10048   | Galaxy  | SER | 13.4 | 13   | 0.9' | 15 49.4 | +19 02 | 155 | SO         |    |      |   |
| NGC 6004        | UGC 10056   | Galaxy  | SER | 12.3 | 13.4 | 1.8' | 15 50.4 | +18 56 | 155 | SBc        |    |      | sev F gals near                                       |
| NGC 6005        | OCL 945     | Opn CL  | NOR | 10.7 | -    | 3'   | 15 55.8 | -57 26 | 432 | I 2 p      | 35 | 11.8 |   |
| NGC 6007        | UGC 10079   | Galaxy  | SER | 13.2 | 13.8 | 1.7' | 15 53.4 | +11 58 | 200 | Sc Ring    |    |      | P w NGC 6006 at 6'                                    |
| NGC 6008        | NGC 6008A   | Galaxy  | SER | 13   | 13.6 | 1.4' | 15 52.9 | +21 06 | 155 | SBb        |    |      | Disturbed ?;np of 2                                   |
| NGC 6008A       | NGC 6008    | Galaxy  | SER | 14   | -    | 1.4' | 15 52.9 | +21 06 | 155 | SBb        |    |      | np of 2   |
| NGC 6010        | UGC 10081   | Galaxy  | SER | 12.6 | 12.4 | 2'   | 15 54.3 | +00 33 | 245 | Sa         |    |      | H II 583  |
| NGC 6011        | UGC 10047   | Galaxy  | UMI | 13.5 | 13.8 | 2'   | 15 46.5 | +72 10 | 28  | Sb         |    |      | H III 313   |
| NGC 6012        | UGC 10083   | Galaxy  | SER | 12   | 13.1 | 2.1' | 15 54.2 | +14 36 | 200 | SBab       |    |      | H II 657  |
| NGC 6013        | UGC 10080   | Galaxy  | HER | 13.6 | 13.5 | 1.4' | 15 52.9 | +40 39 | 79  | SBb        |    |      |   |
| NGC 6014        | IC 4586     | Galaxy  | SER | 12.2 | 13.2 | 1.7' | 15 56.0 | +05 56 | 200 | SO         |    |      |   |
| NGC 6015        | UGC 10075   | Galaxy  | DRA | 11.1 | 13.6 | 5.4' | 15 51.4 | +62 18 | 28  | Sc         |    |      | H III 739;Was descr= vF;pL;R;vgbM until update 2;5;89 |
| NGC 6017        | UGC 10098   | Galaxy  | SER | 13.1 | 12.3 | 0.8' | 15 57.3 | +06 00 | 200 | S          |    |      |   |
| NGC 6018        | UGC 10101   | Galaxy  | SER | 13.4 | 13.3 | 1.4' | 15 57.5 | +15 52 | 200 | Sa         |    |      | H III 646;P w NGC 6021;UGC 10101                      |
| NGC 6020        | IC 1148     | Galaxy  | SER | 12.7 | 13.1 | 1.4' | 15 57.1 | +22 24 | 155 | E3         |    |      |   |
| NGC 6021        | UGC 10102   | Galaxy  | SER | 13.1 | 13.1 | 1.4' | 15 57.5 | +15 57 | 200 | E5         |    |      | H III 73;P w NGC 6018                                 |
| NGC 6023        | UGC 10106   | Galaxy  | SER | 13.1 | 13.4 | 1.4' | 15 57.8 | +16 19 | 200 | E3         |    |      | Brightest in group                                    |
| NGC 6026        | PK 341+13.1 | Pln Neb | LUP | 12.5 | 12.3 | 54"  | 16 01.4 | -34 33 | 374 | 4          |    | 13.3 | Ring shape  |
| NGC 6027A       | UGC 10116   | Galaxy  | SER | 13.9 | 12.5 | 0.7' | 15 59.2 | +20 45 | 155 | Sa         |    |      |   |
| NGC 6027E       | UGC 10116   | Galaxy  | SER | 13.4 | 12.1 | 0.8' | 15 59.2 | +20 46 | 155 | SO         |    |      |   |
| NGC 6028        | NGC 6046    | Galaxy  | HER | 13.5 | 13.8 | 1.3' | 16 01.5 | +19 22 | 155 | Sa Ring    |    |      |   |
| NGC 6030        | UGC 10139   | Galaxy  | HER | 12.8 | 12.5 | 1.2' | 16 01.9 | +17 57 | 155 | SO         |    |      | sev comps w in 10'                                    |
| NGC 6031        | OCL 951     | Opn CL  | NOR | 8.5  | -    | 2'   | 16 07.6 | -54 01 | 432 | I 2 p      | 20 | 10.9 | In Nor OB1?   |
| NGC 6032        | UGC 10148   | Galaxy  | HER | 13.5 | 13.4 | 1.6' | 16 03.0 | +20 57 | 155 | SBb        |    |      | P w NGC 6035 6' PA 127                                |
| NGC 6033        | UGC 10159   | Galaxy  | SER | 13.7 | 13.6 | 1.1' | 16 04.5 | -02 07 | 245 | Sbc        |    |      |   |
| NGC 6034        | MCG 3-41-   | Galaxy  | HER | 13.5 | 13.4 | 1'   | 16 03.5 | +17 12 | 155 | Elliptical |    |      |   |
| NGC 6035        | UGC 10154   | Galaxy  | HER | 13.5 | 13.1 | 0.9' | 16 03.4 | +20 53 | 155 | SBc        |    |      |   |
| NGC 6036        | UGC 10163   | Galaxy  | SER | 13.4 | 12.3 | 1.1' | 16 04.5 | +03 52 | 245 | Sa         |    |      | P w NGC 6037 at 3' PA 183                             |
| NGC 6037        | MCG 1-41-   | Galaxy  | SER | 14   | 12.9 | 0.7' | 16 04.5 | +03 49 | 245 | Sab        |    |      |   |
| NGC 6038        | UGC 10149   | Galaxy  | CRB | 13.5 | 13.6 | 1.1' | 16 02.7 | +37 22 | 113 | Sc         |    |      | H III 622   |
| NGC 6041        | UGC 10170   | Galaxy  | HER | 13.7 | -    | 1.3' | 16 04.6 | +17 43 | 155 | SBO        |    |      | IC 1170 superimposed                                  |
| NGC 6042        | NGC 6039    | Galaxy  | HER | 13.9 | 13.3 | 0.8' | 16 04.7 | +17 42 | 155 | E-SO       |    |      |   |
| NGC 6045        | UGC 10177   | Galaxy  | HER | 13.9 | 12.8 | 1.3' | 16 05.1 | +17 45 | 155 | SBc        |    |      | P w NGC 6047 at 2' PA 173                             |
| NGC 6047        | MCG 3-41-   | Galaxy  | HER | 13.5 | 13.4 | 1.1' | 16 05.2 | +17 44 | 155 | EO         |    |      |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|-----------------|------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|---|
| NGC 6048        | UGC 10124  | Galaxy  | UMI | 12.3 | 13.7 | 2.2' | 15 57.5 | +70 41 | 28  | E2         |     |      | H II 873;np of 2;UGC 10124                              |
| NGC 6051        | IC 4588    | Galaxy  | SER | 13.1 | 13.2 | 1.3' | 16 04.9 | +23 56 | 155 | E4         |     |      | sev comps   |
| NGC 6052        | NGC 6064-1 | Galaxy  | HER | 13   | 12.4 | 0.8' | 16 05.2 | +20 32 | 155 | Pec        |     |      | H III 140;Double system                                 |
| NGC 6055        | UGC 10191  | Galaxy  | HER | 13.7 | 13   | 1'   | 16 05.5 | +18 10 | 155 | SBO-a R    |     |      | P w NGC 6057 at 2' PA 82                                |
| NGC 6056        | IC 1176    | Galaxy  | HER | 13.9 | 12.9 | 0.9' | 16 05.5 | +17 58 | 155 | SBO-a      |     |      |   |
| NGC 6058        | PK 64+48.1 | Pln Neb | HER | 13   | 10.8 | 25"  | 16 04.4 | +40 41 | 79  | 3(2)       |     | 13.9 | H III 637;PK64+48.1                                     |
| NGC 6060        | UGC 10196  | Galaxy  | HER | 13.1 | 13.8 | 2'   | 16 05.9 | +21 29 | 155 | SBbc       |     |      |   |
| NGC 6061        | UGC 10199  | Galaxy  | HER | 13.6 | 13.3 | 1'   | 16 06.3 | +18 15 | 155 | SO         |     |      |   |
| NGC 6062        | UGC 10202  | Galaxy  | HER | 13.6 | 13.5 | 1.2' | 16 06.4 | +19 47 | 155 | SBbc       |     |      | nf of 2   |
| NGC 6063        | UGC 10210  | Galaxy  | SER | 13.1 | 13.3 | 1.7' | 16 07.2 | +07 59 | 200 | Sc         |     |      |   |
| <b>NGC 6067</b> | OCL 953    | Opn CL  | NOR | 5.6  | -    | 13'  | 16 13.2 | -54 13 | 432 | I 2 r      | 100 | 8.3  | Fine field  |
| NGC 6068        | UGC 10126  | Galaxy  | UMI | 12.8 | 12.4 | 1'   | 15 55.4 | +79 00 | 11  | SBbc       |     |      | H III 973;nf of 2;distorted;UGC 10126                   |
| NGC 6068A       | MCG 13-11  | Galaxy  | UMI | 14   | 11.8 | 0.9' | 15 54.8 | +78 59 | 11  | SO         |     |      | p @ 2'  |
| NGC 6070        | UGC 10230  | Galaxy  | SER | 11.8 | 13.7 | 3.6' | 16 10.0 | +00 43 | 245 | Sc         |     |      | H III 553;vF background of 6 galaxys                    |
| NGC 6071        | MCG 12-15  | Galaxy  | UMI | 14   | 13.6 | 0.8' | 16 02.1 | +70 25 | 28  | E-SO       |     |      | H III 883   |
| NGC 6072        | PK 342+0.1 | Pln Neb | SCO | 14   | 11.7 | 50"  | 16 13.0 | -36 14 | 374 | 3a         |     | 17.5 |   |
| NGC 6073        | UGC 10235  | Galaxy  | HER | 13.5 | 13.2 | 1.3' | 16 10.2 | +16 42 | 200 | Sc         |     |      | H III 74  |
| NGC 6077        | UGC 10254  | Galaxy  | CRB | 13.3 | 13.5 | 1.2' | 16 11.2 | +26 55 | 155 | Elliptical |     |      |   |
| NGC 6079        | IC 1200    | Galaxy  | DRA | 12.7 | 13.1 | 1.4' | 16 04.5 | +69 40 | 28  | Elliptical |     |      | H III 884;P w IC 1201 at 7' PA 126                      |
| NGC 6080        | UGC 10268  | Galaxy  | SER | 14   | -    | 1.2' | 16 13.0 | +02 11 | 245 | Sab        |     |      |   |
| NGC 6081        | IC 1202    | Galaxy  | HER | 13.1 | 13   | 1.8' | 16 12.9 | +09 52 | 200 | SO         |     |      |   |
| NGC 6084        | UGC 10291  | Galaxy  | HER | 13.9 | 13.1 | 1'   | 16 14.3 | +17 45 | 155 | Sab        |     |      |   |
| NGC 6085        | UGC 10269  | Galaxy  | CRB | 13   | 13.6 | 1.5' | 16 12.6 | +29 22 | 113 | Sa         |     |      | P w NGC 6086  |
| NGC 6086        | UGC 10270  | Galaxy  | CRB | 12.8 | 13.5 | 1.7' | 16 12.6 | +29 29 | 113 | E2         |     |      | P w NGC 6085  |
| NGC 6087        | OCL 948    | Opn CL  | NOR | 5.4  | -    | 12'  | 16 18.8 | -57 56 | 432 | I 2 p      | 40  | 7.9  | Var* S Nor invl   |
| NGC 6088A       | MCG 10-23  | Galaxy  | DRA | 14   | -    | 0.4' | 16 10.7 | +57 28 | 51  | Sbc        |     |      | H III 812;Double system                                 |
| NGC 6090        | UGC 10267  | Galaxy  | DRA | 14   | -    | 0.6' | 16 11.7 | +52 27 | 51  | Sab        |     |      | In chain of galaxies                                    |
| NGC 6092        |            | 2 Stars | CRB | 13.2 | -    |      | 16 14.1 | +28 08 | 113 |            |     |      |   |
| NGC 6094        | UGC 10228  | Galaxy  | UMI | 13.2 | 14.1 | 1.8' | 16 06.6 | +72 30 | 11  | SO         |     |      | H III 314   |
| NGC 6095        | UGC 10265  | Galaxy  | DRA | 12.6 | 13.6 | 1.8' | 16 11.2 | +61 16 | 28  | E-SO       |     |      |   |
| NGC 6100        | UGC 10307  | Galaxy  | SER | 13   | 13.7 | 1.8' | 16 16.9 | +00 50 | 246 | Sa         |     |      |   |
| NGC 6102        | UGC 10300  | Galaxy  | CRB | 13.8 | 13.6 | 1.2' | 16 15.6 | +28 10 | 113 | Sc         |     |      |   |
| NGC 6103        | UGC 10302  | Galaxy  | CRB | 13.8 | 12.5 | 0.7' | 16 15.7 | +31 58 | 113 | Sbc        |     |      | H III 888   |
| NGC 6104        | UGC 10309  | Galaxy  | CRB | 13.2 | 12.5 | 0.8' | 16 16.5 | +35 42 | 113 | Sba Ring   |     |      | H III 688;Peculiar ring shape;p of 2;UGC 10309          |
| NGC 6106        | UGC 10328  | Galaxy  | HER | 12.2 | 13.4 | 2.4' | 16 18.8 | +07 25 | 201 | Sc         |     |      | H II 151;UGC 10328                                      |
| NGC 6107        | UGC 10311  | Galaxy  | CRB | 13.8 | 13.2 | 0.9' | 16 17.3 | +34 54 | 113 | Elliptical |     |      | P w NGC 6105 at 3' PA 238;sev other galaxies near       |
| NGC 6109        | UGC 10316  | Galaxy  | CRB | 12.7 | 12.7 | 1'   | 16 17.7 | +35 00 | 113 | SO         |     |      |   |
| NGC 6111        | MCG 11-20  | Galaxy  | DRA | 14   | -    | 0.7' | 16 14.4 | +63 16 | 29  | Elliptical |     |      |   |
| NGC 6112        | MCG 6-36   | Galaxy  | CRB | 13.9 | 12.4 | 0.5' | 16 18.0 | +35 07 | 113 | Elliptical |     |      |   |
| NGC 6115        | Ru 118     | Opn CL  | NOR | 11   | -    | 3'   | 16 24.4 | -51 57 | 432 | I 2 p      | 20  | 10.9 |   |
| <b>NGC 6118</b> | UGC 10350  | Galaxy  | SER | 11.7 | 13.9 | 4.7' | 16 21.8 | -02 17 | 246 | Sc         |     |      | H II 402;Low surface brightness                         |
| NGC 6120        | UGC 10343  | Galaxy  | CRB | 13.8 | 12.2 | 0.6' | 16 19.8 | +37 46 | 113 | Sd         |     |      | H III 623;Peculiar;P w NGC 6119;UGC 10343               |
| NGC 6123        | UGC 10333  | Galaxy  | DRA | 13.8 | 12   | 0.8' | 16 17.3 | +61 56 | 29  | Sa         |     |      |   |
| <b>NGC 6124</b> | Dunlop 514 | Opn CL  | SCO | 5.8  | -    | 29'  | 16 25.3 | -40 39 | 407 | II 3 m     | 100 | 8.7  |   |
| NGC 6125        | NGC 6127   | Galaxy  | DRA | 13   | -    | 1.4' | 16 19.2 | +57 59 | 51  | Elliptical |     |      | H II 810  |
| NGC 6126        | UGC 10353  | Galaxy  | CRB | 13.6 | 13.1 | 0.8' | 16 21.5 | +36 23 | 114 | SO         |     |      |   |
| NGC 6127        | NGC 6125   | Galaxy  | DRA | 12   | 12.7 | 1.4' | 16 19.2 | +57 59 | 51  | Elliptical |     |      |   |
| NGC 6128        | NGC 6125   | Galaxy  | DRA | 13   | -    | 1.4' | 16 19.2 | +57 59 | 51  | Elliptical |     |      |   |
| NGC 6130        | UGC 10347  | Galaxy  | DRA | 13.5 | 13   | 1'   | 16 19.6 | +57 37 | 51  | SBbc       |     |      |   |
| NGC 6131A       | NGC 6131   | Galaxy  | CRB | 14   | -    | 1'   | 16 21.9 | +38 56 | 114 | SBc        |     |      |   |
| NGC 6132        | UGC 10363  | Galaxy  | HER | 13.6 | 13.1 | 1.5' | 16 23.6 | +11 47 | 201 | Sab        |     |      |   |
| <b>NGC 6134</b> | OCL 968    | Opn CL  | NOR | 7.2  | -    | 7'   | 16 27.8 | -49 09 | 407 | II 3 m     |     | 9.3  |   |
| NGC 6137A       | NGC 6137   | Galaxy  | CRB | 14   | -    | 1.9' | 16 23.1 | +37 55 | 114 | Elliptical |     |      | H III 624;sf of 2;sev 15..16 mag galxs in 20';UGC 10364 |
| NGC 6139        | GCL 43     | Glob CL | SCO | 9.2  | -    | 5.5' | 16 27.7 | -38 51 | 375 | II         |     |      |   |
| NGC 6140        | UGC 10359  | Galaxy  | DRA | 11.3 | 14.8 | 6.3' | 16 21.0 | +65 23 | 29  | SBc/P      |     |      | H III 740   |
| NGC 6142        | UGC 10366  | Galaxy  | CRB | 13.8 | 13.6 | 2'   | 16 23.4 | +37 15 | 114 | Sb         |     |      | H III 892   |
| NGC 6143        | UGC 10358  | Galaxy  | DRA | 13.1 | 12.9 | 1'   | 16 21.7 | +55 05 | 51  | SBbc       |     |      | H II 811  |
| <b>NGC 6144</b> | GCL 42     | Glob CL | SCO | 9.1  | -    | 6.2' | 16 27.2 | -26 01 | 336 | XI         |     |      | H VI 10   |
| NGC 6146        | UGC 10379  | Galaxy  | HER | 12.5 | 12.7 | 1.3' | 16 25.2 | +40 54 | 80  | Elliptical |     |      | H III 638;Sev comps incl NGC 6145 @ 4' PA 335           |
| NGC 6149        | UGC 10391  | Galaxy  | HER | 13.5 | 13.2 | 1.1' | 16 27.4 | +19 36 | 156 | SO         |     |      |   |
| NGC 6150A       | NGC 6150   | Galaxy  | HER | 14   | -    | 1'   | 16 25.8 | +40 29 | 80  | Elliptical |     |      | H III 639   |
| NGC 6152        | OCL 961    | Opn CL  | NOR | 8.1  | -    | 25'  | 16 32.8 | -52 39 | 433 | II 2 m     | 70  | 11   |   |
| NGC 6153        | PK 341+5.1 | Pln Neb | SCO | 11.5 | 8.7  | 25"  | 16 31.5 | -40 15 | 407 | 4          |     | 15.6 |   |
| NGC 6154        | UGC 10382  | Galaxy  | HER | 12.7 | 14.1 | 2.1' | 16 25.5 | +49 50 | 80  | SBa        |     |      | H III 680   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|--|
| NGC 6155        | UGC 10385   | Galaxy  | HER | 12.2 | 12.3 | 1.3' | 16 26.1 | +48 22 | 80  | Sc         |    |      | H II 690   |
| NGC 6158        | MCG 7-34-   | Galaxy  | HER | 13.7 | -    | 1.1' | 16 27.7 | +39 23 | 80  | E-SO       |    |      | H II 647   |
| NGC 6160        | UGC 10400   | Galaxy  | HER | 13.2 | 14.3 | 1.8' | 16 27.7 | +40 56 | 80  | E2         |    |      | H II 652   |
| NGC 6162        | UGC 10353   | Galaxy  | HER | 13.6 | 13   | 0.9' | 16 28.4 | +32 51 | 114 | SO         |    |      | Brightest of 3   |
| NGC 6164        | PK 336-0.1  | Brn Neb | NOR | -    | -    | 60"  | 16 33.7 | -48 05 | 407 | 3b         |    | 6.8  | np condensation in PK 336-0.1 an emission nebula           |
| NGC 6165        | PK 336-0.1  | Brn Neb | NOR | -    | -    | 60"  | 16 34.1 | -48 09 | 407 | 3b         |    | 6.8  | sf condensation in PK 336-0.1 an emission nebula           |
| NGC 6166        | UGC 10409   | Galaxy  | HER | 11.8 | 12.9 | 2.2' | 16 28.6 | +39 33 | 80  | E2p        |    |      | H II 875;Center of cluster;many vF galaxies near           |
| NGC 6167        | Harvard 11  | Opn CL  | NOR | 6.7  | -    | 8'   | 16 34.6 | -49 46 | 407 | II 3 m     |    | 7.4  |  |
| NGC 6169        | OCL 984     | Opn CL  | NOR | 6.6  | -    | 12'  | 16 34.1 | -44 03 | 407 |            | 40 |      | Mu Nor cluster. In Ara OB1                                 |
| NGC 6172        | UGC 10352   | Galaxy  | OPH | 12.8 | 12.8 | 1'   | 16 22.2 | -01 31 | 246 | Elliptical |    |      |  |
| NGC 6173        | UGC 10421   | Galaxy  | HER | 12.1 | 13.2 | 1.9' | 16 29.8 | +40 49 | 80  | E3         |    |      | H III 640  |
| NGC 6174        |             | Galaxy  | HER | -    | -    | 0.4' | 16 29.5 | +40 52 | 80  |            |    |      |  |
| NGC 6177        | UGC 10428   | Galaxy  | HER | 13.6 | 14.2 | 1.7' | 16 30.6 | +35 03 | 114 | SBb        |    |      | H III 890;P w NGC 6179 at 3' PA 31                         |
| NGC 6178        | OCL 980     | Opn CL  | SCO | 7.2  | -    | 4'   | 16 35.8 | -45 39 | 407 | I 3 p      | 12 | 8.4  |  |
| NGC 6181        | UGC 10439   | Galaxy  | HER | 11.9 | 12.8 | 2.5' | 16 32.3 | +19 50 | 156 | SBc        |    |      | H II 753;UGC 10439   |
| NGC 6182        | UGC 10424   | Galaxy  | DRA | 13.5 | 13.4 | 1.7' | 16 29.6 | +55 31 | 51  | Sa         |    |      | H III 813  |
| NGC 6185        | UGC 10444   | Galaxy  | HER | 13.3 | 13.3 | 1.2' | 16 33.3 | +35 21 | 114 | Sa         |    |      |  |
| NGC 6186        | UGC 10448   | Galaxy  | HER | 12.9 | 13.4 | 1.5' | 16 34.4 | +21 32 | 156 | SBa        |    |      |  |
| NGC 6188        | ESO 226-EN  | Brn Neb | ARA | -    | -    | 20'  | 16 40.1 | -48 40 | 407 | E+R        |    |      | NGC 6193 and triple* h 4876 incl                           |
| NGC 6189        | NGC 6191    | Galaxy  | DRA | 12.7 | 13.1 | 1.9' | 16 31.7 | +59 38 | 52  | SBc        |    |      |  |
| NGC 6190        | UGC 10443   | Galaxy  | DRA | 12.6 | 13.1 | 1.4' | 16 32.1 | +58 26 | 52  | Sc         |    |      |  |
| NGC 6191        | NGC 6189    | Galaxy  | DRA | 13.3 | -    | 1.9' | 16 31.7 | +59 38 | 52  | SBc        |    |      |  |
| <b>NGC 6192</b> | OCL 988     | Opn CL  | SCO | 8.5  | -    | 9'   | 16 40.4 | -43 22 | 407 | I 2 p      | 60 | 11   |  |
| <b>NGC 6193</b> | OCL 975     | Opn CL  | ARA | 5.2  | -    | 15'  | 16 41.3 | -48 46 | 407 | II 3 p n   | 14 | 5.7  | In Ara OB1;30* mags 6...                                   |
| NGC 6195        | UGC 10469   | Galaxy  | HER | 13   | 13.4 | 1.5' | 16 36.5 | +39 02 | 80  | Sb         |    |      | H III 893  |
| NGC 6196        | IC 4615     | Galaxy  | HER | 12.9 | 13.7 | 1.3' | 16 37.9 | +36 04 | 114 | E-SO       |    |      | In a group   |
| NGC 6198        | UGC 10467   | Galaxy  | DRA | 13.6 | 13.2 | 1'   | 16 35.5 | +57 29 | 52  | Elliptical |    |      |  |
| NGC 6200        | OCL 978     | Opn CL  | ARA | 7.4  | -    | 12'  | 16 44.1 | -47 28 | 407 | III 2 m    | 40 | 9.2  | In Ara OB2   |
| <b>NGC 6204</b> | OCL 982     | Opn CL  | ARA | 8.2  | -    | 5'   | 16 46.2 | -47 01 | 407 | I 2 p      | 45 | 9.8  | In Ara OB2   |
| NGC 6206        | IC 1227     | Galaxy  | DRA | 13.6 | 12.7 | 0.7' | 16 40.1 | +58 37 | 52  | SO         |    |      |  |
| <b>NGC 6207</b> | UGC 10521   | Galaxy  | HER | 11.6 | 12.9 | 3'   | 16 43.1 | +36 50 | 114 | Sc         |    |      | H II 701;No def nucl;B * nr center;30' NE from <b>M 13</b> |
| NGC 6208        | OCL 964     | Opn CL  | ARA | 7.2  | -    | 18'  | 16 49.5 | -53 44 | 433 | II 1 m     | 60 | 10   |  |
| <b>NGC 6210</b> | PK 43+37.1  | Pln Neb | HER | 9.7  | 5.9  | 20"  | 16 44.5 | +23 48 | 156 | 2(3b)      |    | 12.5 |  |
| NGC 6211        | UGC 10516   | Galaxy  | DRA | 12.6 | 13.3 | 1.6' | 16 41.5 | +57 47 | 52  | SBO        |    |      | Brightest in chain of 4 incl NGC 6213 at 2' nf             |
| NGC 6215        | ESO 137-46  | Galaxy  | ARA | 11.5 | 12.8 | 2.2' | 16 51.1 | -59 00 | 433 | Sc         |    |      |  |
| NGC 6215A       | ESO 138- 4  | Galaxy  | ARA | 13.4 | 13   | 1.5' | 16 52.8 | -58 57 | 433 | Sb         |    |      |  |
| NGC 6216        | NGC 6222    | Opn CL  | SCO | 10.1 | -    | 4'   | 16 49.4 | -44 44 | 407 | II 2 p     | 40 | 12   |  |
| <b>NGC 6217</b> | UGC 10470   | Galaxy  | UMI | 11.2 | 13.2 | 3.3' | 16 32.6 | +78 12 | 11  | SBbc Rii   |    |      | H I 280;Narrow filaments;Arp 185;UGC 10470                 |
| NGC 6220        | UGC 10541   | Galaxy  | OPH | 13.7 | 13.9 | 1.7' | 16 47.2 | -00 17 | 246 | Sab        |    |      |  |
| NGC 6221        | ESO 138- 3  | Galaxy  | ARA | 9.9  | 12.1 | 3.9' | 16 52.8 | -59 13 | 433 | SBc        |    |      |  |
| <b>NGC 6222</b> | NGC 6216    | Opn CL  | SCO | 10   | -    | 4'   | 16 49.4 | -44 44 | 407 |            |    |      |  |
| NGC 6223        | UGC 10527   | Galaxy  | DRA | 11.9 | 14.1 | 3.5' | 16 43.1 | +61 35 | 29  | E-SO       |    |      |  |
| NGC 6224        | UGC 10555   | Galaxy  | HER | 13.5 | 13.1 | 0.9' | 16 48.3 | +06 19 | 202 | E-SO       |    |      | P w NGC 6225 at 5' PA 173                                  |
| NGC 6225        | UGC 10556   | Galaxy  | HER | 13.8 | 12.9 | 0.9' | 16 48.4 | +06 13 | 202 | E-SO       |    |      | P w NGC 6224;several vF galaxies in field                  |
| NGC 6226        | UGC 10532   | Galaxy  | DRA | 14   | -    | 0.8' | 16 43.4 | +61 59 | 29  | S pec      |    |      |  |
| NGC 6227        | ESO 332-**5 | Opn CL  | SCO | 5    | -    | 18'  | 16 51.6 | -41 13 | 407 |            |    |      | Includes a 5th mag star                                    |
| NGC 6228        | UGC 10558   | Galaxy  | HER | 13.9 | 13.3 | 1.1' | 16 48.0 | +26 13 | 156 | Sb Ring    |    |      | Peculiar disturbed by comp nf                              |
| <b>NGC 6229</b> | GCL 47      | Glob CL | HER | 9.4  | -    | 3.8' | 16 47.0 | +47 32 | 80  | IV         |    |      | H IV 50;Wm.  |
| <b>NGC 6231</b> | Dunlop 520  | Opn CL  | SCO | 2.6  | -    | 15'  | 16 54.2 | -41 49 | 407 | I 3 r n    | 93 | 4.7  | <b>Table of Scorpius</b>                                   |
| NGC 6232        | UGC 10537   | Galaxy  | DRA | 12.5 | 13.4 | 1.6' | 16 43.3 | +70 38 | 29  | SBa        |    |      |  |
| NGC 6233        | UGC 10573   | Galaxy  | HER | 13.3 | 13.5 | 1.4' | 16 50.3 | +23 35 | 157 | SO         |    |      |  |
| <b>NGC 6235</b> | GCL 48      | Glob CL | OPH | 8.9  | -    | 1.9' | 16 53.4 | -22 11 | 337 | X          |    |      | H II 584   |
| NGC 6236        | UGC 10546   | Galaxy  | DRA | 11.9 | 13.5 | 2.9' | 16 44.6 | +70 47 | 29  | SBc        |    |      |  |
| NGC 6239        | UGC 10577   | Galaxy  | HER | 12.4 | 13.5 | 2.4' | 16 50.1 | +42 44 | 80  | SBb        |    |      | H III 727;bright bar;UGC 10577                             |
| NGC 6240        | IC 4625     | Galaxy  | OPH | 12.9 | 13.7 | 2.1' | 16 53.0 | +02 24 | 247 | Irp        |    |      | Strongly peculiar w loop and plume                         |
| <b>NGC 6242</b> | OCL 1001    | Opn CL  | SCO | 6.4  | -    | 9'   | 16 55.6 | -39 28 | 407 | I 3 m      |    | 7.3  |  |
| NGC 6244        | UGC 10568   | Galaxy  | DRA | 13.5 | 12.7 | 1.6' | 16 48.1 | +62 12 | 29  | SBa        |    |      | NGC 6238 at 6'   |
| NGC 6246        | UGC 10580   | Galaxy  | DRA | 13.6 | 13.4 | 1.5' | 16 49.9 | +55 33 | 52  | SBb        |    |      |  |
| NGC 6246A       | UGC 10584   | Galaxy  | DRA | 13.4 | 14.9 | 2.2' | 16 50.2 | +55 23 | 52  | SBc/P      |    |      |  |
| NGC 6247        | UGC 10572   | Galaxy  | DRA | 13.5 | -    | 1'   | 16 48.3 | +62 59 | 29  | Pec        |    |      |  |
| NGC 6248        | UGC 10564   | Galaxy  | DRA | 13.1 | 14.4 | 3.1' | 16 46.4 | +70 21 | 29  | SBcd       |    |      |  |
| NGC 6249        | OCL 994     | Opn CL  | SCO | 8.2  | -    | 6'   | 16 57.7 | -44 49 | 407 | II 1 p     | 30 | 9.8  |  |
| NGC 6250        | OCL 991     | Opn CL  | ARA | 5.9  | -    | 10'  | 16 57.9 | -45 56 | 407 | IV 3 p     | 60 | 7.6  |  |
| NGC 6251        | UGC 10501   | Galaxy  | UMI | 12.6 | 13.7 | 1.8' | 16 32.5 | +82 32 | 11  | Elliptical |    |      | H III 974;P w NGC 6252 at 2.4' PA 10                       |



7000 DSO List (sorted by name)

| NAME            | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|-----------------|--------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|--|
| NGC 6253        | OCL 972      | Opn CL  | ARA | 10.2 | -    | 4'   | 16 59.1 | -52 43 | 433 | I 3 m      | 30  | 13   |  |
| NGC 6255        | UGC 10606    | Galaxy  | HER | 12.7 | 14.4 | 3.6' | 16 54.8 | +36 30 | 114 | SBc        |     |      | H III 689;UGC 10606                                    |
| NGC 6256        | Pal 15       | Glob CL | SCO | 11.3 | -    | 2.5' | 16 59.5 | -37 07 | 375 |            |     |      |  |
| NGC 6258        | UGC 10595    | Galaxy  | DRA | 13.4 | 12.9 | 0.9' | 16 52.5 | +60 31 | 52  | Elliptical |     |      |  |
| <b>NGC 6259</b> | OCL 996      | Opn CL  | SCO | 8    | -    | 10'  | 17 00.8 | -44 39 | 407 | III 2 m    | 120 | 11.6 |  |
| NGC 6261        | UGC 10617    | Galaxy  | HER | 14   | 13.1 | 1.2' | 16 56.5 | +27 59 | 157 | Sa         |     |      |  |
| NGC 6263        | UGC 10618    | Galaxy  | HER | 13.7 | 13.4 | 0.9' | 16 56.7 | +27 49 | 157 | Elliptical |     |      | vF comp at 0.7' PA 343 0.2'X0.15'                      |
| NGC 6267        | UGC 10628    | Galaxy  | HER | 13.1 | 13.2 | 1.3' | 16 58.1 | +22 59 | 157 | SBc        |     |      | H III 123  |
| NGC 6268        | OCL 1002     | Opn CL  | SCO | 9.5  | -    | 6'   | 17 02.2 | -39 44 | 407 | II 2 p     |     |      |  |
| NGC 6269        | UGC 10629    | Galaxy  | HER | 12.2 | 13.4 | 2'   | 16 58.0 | +27 51 | 157 | Elliptical |     |      | a large number of vF;vS galaxies in vicinity           |
| NGC 6271        | MCG 5-40-    | Galaxy  | HER | 14   | 13.5 | 0.8' | 16 58.8 | +27 58 | 157 | S          |     |      | Very compact   |
| NGC 6278        | UGC 10656    | Galaxy  | HER | 12.4 | 13.3 | 2.1' | 17 00.8 | +23 01 | 157 | SO         |     |      | H III 124;P w NGC 6276 & 6277;UGC 10656                |
| NGC 6279        | UGC 10645    | Galaxy  | HER | 13.6 | 13.6 | 1.1' | 16 59.0 | +47 14 | 80  | SBO        |     |      |  |
| <b>NGC 6281</b> | OCL 1003     | Opn CL  | SCO | 5.4  | -    | 200' | 17 04.7 | -37 59 | 376 | II 2 p n   |     | 7.9  |  |
| NGC 6283        | UGC 10652    | Galaxy  | HER | 13.5 | -    | 1.1' | 16 59.4 | +49 55 | 80  | S Ring     |     |      | H III 728  |
| <b>NGC 6284</b> | GCL 53       | Glob CL | OPH | 9    | -    | 2.7' | 17 04.5 | -24 46 | 337 | IX         |     |      | H VI 11  |
| NGC 6285        | MCG 10-24-   | Galaxy  | DRA | 13.5 | 13.3 | 1.2' | 16 58.4 | +58 57 | 52  | Sa         |     |      |  |
| NGC 6286        | UGC 10647    | Galaxy  | DRA | 13.3 | 13.6 | 1.3' | 16 58.5 | +58 56 | 52  | SB/P       |     |      | P w NGC 6285   |
| <b>NGC 6287</b> | GCL 54       | Glob CL | OPH | 9.2  | -    | 2.7' | 17 05.2 | -22 42 | 337 | VII        |     |      | H II 195   |
| NGC 6290        | UGC 10665    | Galaxy  | DRA | 13.5 | 13.4 | 1.1' | 17 00.9 | +58 58 | 52  | SBa        |     |      | Brightest of 3   |
| NGC 6292        | UGC 10684    | Galaxy  | DRA | 13.5 | 13.6 | 1.6' | 17 03.1 | +61 03 | 29  | Sbc        |     |      |  |
| <b>NGC 6293</b> | GCL 55       | Glob CL | OPH | 8.2  | -    | 3.5' | 17 10.2 | -26 35 | 337 | IV         |     |      | H VI 12  |
| NGC 6296        | UGC 10719    | Galaxy  | OPH | 13.4 | 12.9 | 0.9' | 17 08.7 | +03 54 | 247 | SBbc       |     |      | P w IC 1242  |
| NGC 6297        | UGC 10690    | Galaxy  | DRA | 13.6 | 12.3 | 0.7' | 17 03.6 | +62 02 | 29  | SO         |     |      |  |
| NGC 6301        | IC 4643;H IV | Galaxy  | HER | 13.4 | 14.5 | 2.3' | 17 08.5 | +42 20 | 80  | Sc         |     |      |  |
| <b>NGC 6302</b> | PK 349+1.1   | Pln Neb | SCO | 12.8 | 9    | 72"  | 17 13.7 | -37 06 | 376 | 6          |     | 16.6 | <b>Bug or Bipolar Nebula</b> ;flattened figure 8 shape |
| NGC 6303        | UGC 10711    | Galaxy  | DRA | 13.7 | 13.8 | 1.3' | 17 05.0 | +68 50 | 29  | Elliptical |     |      |  |
| <b>NGC 6304</b> | GCL 56       | Glob CL | OPH | 8.4  | -    | 3.8' | 17 14.5 | -29 28 | 376 | VI         |     |      | H I 147  |
| NGC 6305        | ESO 138-19   | Galaxy  | ARA | 13.2 | -    | 1.8' | 17 18.0 | -59 10 | 433 | E-S0 B     |     |      |  |
| NGC 6306        | UGC 10724    | Galaxy  | DRA | 13.7 | 12.3 | 1'   | 17 07.6 | +60 44 | 52  | SBab/P     |     |      | P w NGC 6307 at 2' nf                                  |
| NGC 6307        | UGC 10727    | Galaxy  | DRA | 12.9 | 13.1 | 1.3' | 17 07.7 | +60 45 | 52  | SBO-a R    |     |      |  |
| NGC 6308        | UGC 10747    | Galaxy  | HER | 13.4 | 13.6 | 1.1' | 17 12.0 | +23 23 | 157 | SBc        |     |      | disturbed;In NGC 6314 group                            |
| <b>NGC 6309</b> | PK 9+14.1    | Pln Neb | OPH | 11.6 | 8.6  | 20"  | 17 14.1 | -12 55 | 292 | 3b(6)      |     | 16.3 | <b>Box Nebula</b>                                      |
| NGC 6310        | UGC 10730    | Galaxy  | DRA | 13.1 | 12.8 | 1.9' | 17 08.0 | +60 59 | 52  | Sb         |     |      |  |
| NGC 6311        | UGC 10741    | Galaxy  | HER | 13.5 | 13.7 | 1.1' | 17 10.7 | +41 39 | 80  | Elliptical |     |      | Triple interacting system                              |
| NGC 6313        | UGC 10742    | Galaxy  | HER | 13.9 | 13.1 | 1.3' | 17 10.3 | +48 20 | 80  | Sab        |     |      |  |
| NGC 6314        | UGC 10752    | Galaxy  | HER | 12.9 | 12.8 | 1.6' | 17 12.6 | +23 16 | 157 | Sa         |     |      | Brightest of 3   |
| NGC 6315        | MCG 4-40-    | Galaxy  | HER | 13.2 | 12.9 | 1'   | 17 12.8 | +23 13 | 157 | SBc        |     |      |  |
| <b>NGC 6316</b> | GCL 57       | Glob CL | OPH | 8.1  | -    | 4.9' | 17 16.6 | -28 08 | 376 | III        |     |      | H I 45   |
| NGC 6318        | OCL 1004     | Opn CL  | SCO | 11.8 | -    | 4'   | 17 16.2 | -39 26 | 408 | III 2 p    |     | 12   |  |
| NGC 6320        | UGC 10761    | Galaxy  | HER | 13.9 | 13.8 | 1.2' | 17 12.9 | +40 16 | 81  | Sbc        |     |      |  |
| NGC 6321        | UGC 10768    | Galaxy  | HER | 13.4 | 13.4 | 1.1' | 17 14.4 | +20 19 | 157 | SBbc       |     |      |  |
| NGC 6322        | OCL 1000     | Opn CL  | SCO | 6    | -    | 10'  | 17 18.4 | -42 56 | 408 | I 2 p      | 30  | 7.5  |  |
| NGC 6323        | UGC 10764    | Galaxy  | HER | 13.9 | 12.8 | 1.1' | 17 13.3 | +43 47 | 81  | Sab        |     |      |  |
| NGC 6324        | UGC 10725    | Galaxy  | UMI | 12.8 | 11.9 | 1'   | 17 05.4 | +75 24 | 11  | Sbc        |     |      | Bright main body w one arm on p side;UGC 10725         |
| NGC 6325        | GCL 58       | Glob CL | OPH | 10.2 | -    | 1.6' | 17 18.0 | -23 46 | 337 | IV         |     |      |  |
| NGC 6326        | PK 338-8.1   | Pln Neb | ARA | 12   | 7.7  | 15"  | 17 20.8 | -51 45 | 433 | 3b         |     | 13.5 |  |
| NGC 6329        | UGC 10771    | Galaxy  | HER | 12.8 | 14.1 | 1.8' | 17 14.3 | +43 41 | 81  | Elliptical |     |      | Sev galaxys near                                       |
| NGC 6330        | UGC 10776    | Galaxy  | HER | 14   | 13.6 | 1.5' | 17 15.7 | +29 24 | 115 | SBb        |     |      |  |
| NGC 6332        | UGC 10773    | Galaxy  | HER | 13.6 | 13.3 | 1.2' | 17 15.0 | +43 40 | 81  | Sa         |     |      |  |
| <b>NGC 6334</b> | ESO 392-EN   | Brt Neb | SCO | -    | -    | 120' | 17 20.8 | -36 06 | 376 | E          |     |      | <b>Bear's Claw nebula</b>                              |
| NGC 6336        | UGC 10786    | Galaxy  | HER | 13.6 | 12.9 | 0.9' | 17 16.3 | +43 49 | 81  | SBa        |     |      |  |
| NGC 6337        | PK 349-1.1   | Pln Neb | SCO | 12.3 | 11.6 | 38"  | 17 22.3 | -38 29 | 376 | 4          |     | 14.8 |  |
| NGC 6338        | UGC 10784    | Galaxy  | DRA | 12.3 | 12.7 | 1.5' | 17 15.4 | +57 25 | 52  | SO         |     |      | H II 812;Brightest in group;UGC 10784                  |
| NGC 6339        | UGC 10790    | Galaxy  | HER | 12.7 | 14.3 | 2.9' | 17 17.1 | +40 51 | 81  | SBcd       |     |      |  |
| NGC 6340        | UGC 10762    | Galaxy  | DRA | 11   | 13.3 | 3'   | 17 10.4 | +72 18 | 29  | Sa         |     |      | H II 767;Brightest of 3;IC 1254 at 7' PA 320;UGC 10762 |
| <b>NGC 6342</b> | GCL 61       | Glob CL | OPH | 9.5  | -    | 3'   | 17 21.2 | -19 35 | 338 | IV         |     |      | H I 149  |
| NGC 6347        | IC 1253      | Galaxy  | HER | 13.7 | 13.3 | 1.2' | 17 19.9 | +16 40 | 202 | SBb        |     |      |  |
| NGC 6350        | UGC 10800    | Galaxy  | HER | 13.2 | 13   | 1'   | 17 18.7 | +41 42 | 81  | SO         |     |      | P w NGC 6348 at 5' sp                                  |
| <b>NGC 6352</b> | Dunlop 417   | Glob CL | ARA | 7.8  | -    | 7.1' | 17 25.5 | -48 25 | 408 | XI         |     | 12   | globular ESO 228-SC003                                 |
| <b>NGC 6355</b> | GCL 63       | Glob CL | OPH | 8.6  | -    | 6.1' | 17 24.0 | -26 21 | 338 |            |     |      | H I 46   |
| <b>NGC 6356</b> | GCL 62       | Glob CL | OPH | 8.2  | -    | 3.5' | 17 23.6 | -17 49 | 338 | II         |     |      | H I 48   |
| NGC 6357        | ESO 392-SC   | Brt Neb | SCO | -    | -    | 50'  | 17 24.7 | -34 12 | 376 | E+*        |     |      |  |
| NGC 6359        | UGC 10804    | Galaxy  | DRA | 12.6 | 12.6 | 1.3' | 17 17.9 | +61 47 | 29  | E-SO       |     |      |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 6361        | UGC 10815  | Galaxy  | DRA | 13.1 | 13.3 | 2.2'  | 17 18.7 | +60 36 | 52  | Sb         |    |      | nf of 2   |
| NGC 6363        | UGC 10827  | Galaxy  | HER | 13.3 | 13.2 | 1.1'  | 17 22.7 | +41 06 | 81  | Elliptical |    |      |   |
| NGC 6364        | UGC 10835  | Galaxy  | HER | 12.9 | 13.4 | 1.5'  | 17 24.5 | +29 23 | 115 | SO         |    |      |   |
| <b>NGC 6366</b> | GCL 65     | Glob CL | OPH | 9.5  | -    | 5.8'  | 17 27.7 | -05 05 | 248 | XI         |    |      |   |
| NGC 6368        | UGC 10856  | Galaxy  | OPH | 12.3 | 13.6 | 3.8'  | 17 27.2 | +11 33 | 203 | Sb         |    |      |   |
| <b>NGC 6369</b> | PK 2+5.1;H | Pln Neb | OPH | 11   | 10.5 | 30"   | 17 29.3 | -23 46 | 338 | 4(2)       |    | 15.1 | <b>Little Ghost Nebula</b>                              |
| NGC 6370        | UGC 10836  | Galaxy  | DRA | 12.9 | 13.6 | 1.4'  | 17 23.4 | +56 58 | 52  | Elliptical |    |      |   |
| NGC 6372        | UGC 10861  | Galaxy  | HER | 12.9 | 13.5 | 1.7'  | 17 27.5 | +26 28 | 158 | Sc         |    |      | H III 137;sf of 2;UGC 10861                             |
| NGC 6373        | UGC 10850  | Galaxy  | DRA | 13.6 | 13.8 | 1.3'  | 17 24.1 | +59 00 | 52  | SBc        |    |      |   |
| NGC 6374        | NGC 6383   | Opn CL  | SCO | 9    | -    | 20'   | 17 34.7 | -32 35 | 376 | IV 1 p     |    | 10.2 |   |
| NGC 6376        | UGC 10855  | Galaxy  | DRA | 14   | -    | 0.5'  | 17 25.3 | +58 49 | 52  | Sc         |    |      | Multiple system diff to determine sep                   |
| NGC 6377        | UGC 10855  | Galaxy  | DRA | 14   | -    | 0.7'  | 17 25.4 | +58 49 | 52  | Sbc        |    |      | In group of 3   |
| NGC 6378        | UGC 10884  | Galaxy  | OPH | 13.4 | 13.4 | 1.3'  | 17 30.7 | +06 17 | 203 | Sbc        |    |      |   |
| NGC 6379        | IC 4636    | Galaxy  | HER | 12.9 | 12.9 | 1.1'  | 17 30.6 | +16 17 | 203 | Sc         |    |      | In NGC 6375 Group                                       |
| NGC 6380        | Ton 1      | Glob CL | SCO | 11.5 | -    | 3.9'  | 17 34.5 | -39 04 | 408 |            |    |      | Brightest * 16m;8.5m * on South edge;much absorption    |
| NGC 6381        | UGC 10871  | Galaxy  | DRA | 12.9 | 13.1 | 1.3'  | 17 27.3 | +60 01 | 52  | Sc         |    |      | sev comps   |
| NGC 6383        | NGC 6374   | Opn CL  | SCO | 5.5  | -    | 20'   | 17 34.7 | -32 35 | 376 | IV 3 p n   | 40 | 10.2 |   |
| NGC 6384        | UGC 10891  | Galaxy  | OPH | 10.4 | 13.8 | 5.8'  | 17 32.4 | +07 04 | 203 | SBbc       |    |      | sBN in faint bar  |
| NGC 6385        | UGC 10877  | Galaxy  | DRA | 13.1 | 13.5 | 1.3'  | 17 28.0 | +57 31 | 52  | SBa        |    |      | P w NGC 6387 3' nf                                      |
| <b>NGC 6388</b> | GCL 70     | Glob CL | SCO | 6.8  | -    | 8.7"  | 17 36.3 | -44 44 | 408 | III        |    |      |   |
| NGC 6389        | UGC 10893  | Galaxy  | HER | 12.1 | 13.7 | 2.8'  | 17 32.7 | +16 24 | 203 | Sbc        |    |      | H II 901;UGC 10893                                      |
| NGC 6390        | UGC 10881  | Galaxy  | DRA | 13.8 | 12.9 | 1.6'  | 17 28.5 | +60 06 | 52  | Sbc        |    |      | Sev faint galaxies within 10'                           |
| NGC 6395        | UGC 10876  | Galaxy  | DRA | 12.3 | 12.8 | 2.4'  | 17 26.5 | +71 06 | 30  | Scp        |    |      |   |
| NGC 6396        | OCL 1018   | Opn CL  | SCO | 8.5  | -    | 3'    | 17 37.6 | -35 02 | 376 | II 3 p     | 30 | 9.8  |   |
| <b>NGC 6397</b> | Lac III-11 | Glob CL | ARA | 5.3  | -    | 25.7" | 17 40.7 | -53 40 | 434 | IX         |    | 10   | Poss nearest glob                                       |
| NGC 6399        | UGC 10896  | Galaxy  | DRA | 13.7 | 13.1 | 1.1'  | 17 31.8 | +59 37 | 53  | Sa         |    |      |   |
| NGC 6400        | OCL 1014   | Opn CL  | SCO | 8.8  | -    | 12'   | 17 40.2 | -36 57 | 377 | II 2 m     | 60 | 9    |   |
| <b>NGC 6401</b> | GCL 73     | Glob CL | OPH | 7.4  | -    | 1'    | 17 38.6 | -23 55 | 338 | IX         |    |      | H I 44  |
| NGC 6404        | OCL 1024   | Opn CL  | SCO | 10.6 | -    | 5'    | 17 39.6 | -33 15 | 376 | III 3 m    | 50 |      |   |
| NGC 6408        | UGC 10930  | Galaxy  | HER | 12.7 | 13.4 | 1.6'  | 17 38.8 | +18 53 | 158 | SBa        |    |      |   |
| NGC 6411        | UGC 10916  | Galaxy  | DRA | 11.9 | 13.4 | 2.3'  | 17 35.5 | +60 49 | 53  | Elliptical |    |      |   |
| NGC 6412        | UGC 10897  | Galaxy  | DRA | 11.8 | 13.4 | 2.5'  | 17 29.6 | +75 42 | 12  | SBc        |    |      | H VI 41;Arp 38;UGC 10897                                |
| NGC 6415        | ESO 393-21 | Opn CL  | SCO | 12   | -    |       | 17 44.3 | -35 04 | 377 |            |    |      |   |
| NGC 6416        | OCL 1031   | Opn CL  | SCO | 5.7  | -    | 14'   | 17 44.3 | -32 22 | 377 | IV 1 p     | 40 | 8.4  |   |
| NGC 6417        | UGC 10945  | Galaxy  | HER | 13.1 | 13.6 | 1.4'  | 17 41.8 | +23 40 | 158 | SBb        |    |      | Distorted arm in sf part                                |
| NGC 6421        | ESO 393-22 | Opn CL  | SCO | 14   | -    | 1'    | 17 45.7 | -33 42 | 377 |            |    |      |   |
| NGC 6425        | OCL 1033   | Opn CL  | SCO | 7.2  | -    | 10'   | 17 47.0 | -31 32 | 377 | I 1 p      | 35 | 10.1 |   |
| <b>NGC 6426</b> | GCL 76     | Glob CL | OPH | 10.9 | -    | 3.2'  | 17 44.9 | +03 10 | 248 | IX         |    |      | H II 587  |
| NGC 6427        | NGC 6431   | Galaxy  | HER | 13.3 | 13.2 | 1.6'  | 17 43.6 | +25 30 | 158 | E-SO       |    |      | P w NGC 6429 at 10' PA 325                              |
| NGC 6429        | UGC 10960  | Galaxy  | HER | 13.1 | 13.3 | 1.8'  | 17 44.1 | +25 21 | 158 | SBa        |    |      |   |
| NGC 6433        | UGC 10962  | Galaxy  | HER | 13.3 | 13.2 | 2'    | 17 43.9 | +36 48 | 116 | Sb         |    |      | 15 mag comp at 4' following                             |
| NGC 6434        | UGC 10934  | Galaxy  | DRA | 12.4 | 13.2 | 2.3'  | 17 36.8 | +72 05 | 30  | SBbc       |    |      | H III 741   |
| NGC 6436        | UGC 10951  | Galaxy  | DRA | 14   | 13.9 | 1.4'  | 17 41.2 | +60 27 | 53  | Sc         |    |      |   |
| NGC 6437        | ESO 393-22 | Opn CL  | SCO | 12   | -    |       | 17 48.4 | -35 22 | 377 |            |    |      | Type is Milky Way Star Cloud in HNGC                    |
| NGC 6439        | PK 11+5.1  | Pln Neb | SGR | 13   | 7.3  | 6.1"  | 17 48.3 | -16 28 | 293 | 2a         |    | 18   |   |
| <b>NGC 6440</b> | GCL 77     | Glob CL | SGR | 9.3  | -    | 1.7'  | 17 48.9 | -20 22 | 338 | V          |    |      | H I 150;* eF  |
| <b>NGC 6441</b> | GCL 78     | Glob CL | SCO | 7.4  | -    | 7.8'  | 17 50.2 | -37 03 | 377 | III        |    |      |   |
| NGC 6442        | UGC 10978  | Galaxy  | HER | 12.6 | 13.8 | 1.8'  | 17 46.9 | +20 46 | 158 | Elliptical |    |      | P w UGC 10979 at 7' PA 33 15mag 1'X1'                   |
| NGC 6443        | UGC 10967  | Galaxy  | HER | 13.8 | 13.2 | 1.2'  | 17 44.6 | +48 07 | 81  | Sab        |    |      |   |
| NGC 6444        | Ru 132     | Opn CL  | SCO | -    | -    | 12'   | 17 49.6 | -34 49 | 377 | IV 1 p     |    | 11   |   |
| <b>NGC 6445</b> | PK 8+3.1;H | Pln Neb | SGR | 13   | 9.6  | 35"   | 17 49.3 | -20 01 | 338 | 3b(3)      |    | 19   | <b>Little Gem , crescent nebula</b>                     |
| NGC 6447        | UGC 10975  | Galaxy  | HER | 12.7 | 13   | 1.6'  | 17 46.3 | +35 34 | 116 | SBbc       |    |      | P w NGC 6446 at 2' p;BM w slender arms                  |
| NGC 6449        | UGC 10965  | Galaxy  | DRA | 13.8 | 13.5 | 1'    | 17 43.8 | +56 48 | 53  | Sc         |    |      |   |
| <b>NGC 6451</b> | OCL 1035   | Opn CL  | SCO | 8.2  | -    | 8'    | 17 50.7 | -30 13 | 377 | II 1 p n   | 80 | 12   | <b>Tom Thumb</b> cluster H VI 13;Dark lane down center; |
| <b>NGC 6453</b> | GCL 79     | Glob CL | SCO | 10.2 | -    | 3.5'  | 17 50.9 | -34 36 | 377 | IV         |    |      | on edge on <b>M7</b>                                    |
| NGC 6454        | MCG 9-29-  | Galaxy  | DRA | 13.5 | 13.1 | 1'    | 17 44.9 | +55 42 | 53  | S          |    |      |   |
| NGC 6458        | UGC 10994  | Galaxy  | HER | 13.4 | 13.4 | 1.3'  | 17 49.2 | +20 48 | 158 | SO         |    |      | P w NGC 6460 at 5' PA 118                               |
| NGC 6460        | UGC 10997  | Galaxy  | HER | 13.1 | 13.8 | 1.9'  | 17 49.5 | +20 46 | 158 | Sc         |    |      | P w NGC 6458  |
| NGC 6462        | MCG 10-25- | Galaxy  | DRA | 13.9 | 11.8 | 0.4'  | 17 44.8 | +61 55 | 30  | Elliptical |    |      |   |
| NGC 6467        | NGC 6468   | Galaxy  | HER | 12.5 | 13.9 | 2.6'  | 17 50.7 | +17 32 | 158 | S pec      |    |      |   |
| NGC 6469        | OCL 21     | Opn CL  | SGR | 8.2  | -    | 12'   | 17 53.2 | -22 17 | 339 | III 2 p    | 50 |      |   |
| NGC 6476        |            | Opn CL  | SGR | 12   | -    | 20.0' | 17 54.0 | -29 09 | 377 |            |    |      |   |
| NGC 6478        | UGC 10998  | Galaxy  | DRA | 13.3 | 13.5 | 1.8'  | 17 48.6 | +51 09 | 53  | Sc         |    |      |   |
| NGC 6479        | UGC 10996  | Galaxy  | DRA | 13.7 | 13.4 | 1'    | 17 48.4 | +54 09 | 53  | Sc         |    |      |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|-----------------|------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|--|
| NGC 6480        | ESO 456-71 | CL+Neb  | SCO | 12   | -    | 5'    | 17 54.4 | -30 27 | 377 | E+*        |     |      |  |
| NGC 6482        | UGC 11009  | Galaxy  | HER | 11.4 | 12.8 | 2.1'  | 17 51.8 | +23 04 | 158 | E3p        |     |      |  |
| NGC 6484        | UGC 11010  | Galaxy  | HER | 12.3 | 13.5 | 1.9'  | 17 51.8 | +24 29 | 158 | Sb         |     |      | Brightest of 3                                     |
| NGC 6485        | UGC 11014  | Galaxy  | HER | 12.9 | 13.6 | 1.5'  | 17 51.9 | +31 28 | 116 | Sbc        |     |      |  |
| NGC 6487        | UGC 11022  | Galaxy  | HER | 11.9 | 13.1 | 1.9'  | 17 52.7 | +29 50 | 116 | Elliptical |     |      | P w NGC 6486 at 2' PA 229;sev UGC galaxys in field |
| NGC 6490        | UGC 11033  | Galaxy  | HER | 13.5 | 13.1 | 1'    | 17 54.5 | +18 23 | 159 | E-SO       |     |      | P w NGC 6495 at 6' PA 121                          |
| NGC 6491        | UGC 11008  | Galaxy  | DRA | 13.6 | 13   | 1.2'  | 17 50.0 | +61 32 | 30  | Sab        |     |      | P w NGC 6493 at 3'                                 |
| NGC 6495        | UGC 11034  | Galaxy  | HER | 12.2 | 13.6 | 2'    | 17 54.8 | +18 20 | 159 | Elliptical |     |      | P w NGC 6490 and UGC 11037 at 6'                   |
| NGC 6496        | GCL 80     | Glob CL | SCO | 8.6  | -    | 6.9'  | 17 59.0 | -44 16 | 408 | XII        |     |      |  |
| NGC 6497        | NGC 6498   | Galaxy  | DRA | 13.5 | 13.3 | 1.4'  | 17 51.3 | +59 28 | 53  | SBb        |     |      |  |
| NGC 6500        | UGC 11048  | Galaxy  | HER | 12.1 | 13.4 | 2.2'  | 17 56.0 | +18 20 | 159 | Sab        |     |      | H III 957;P w NGC 6501 at 3' PA 26                 |
| NGC 6501        | UGC 11049  | Galaxy  | HER | 12   | 13.3 | 1.8'  | 17 56.1 | +18 22 | 159 | Sa         |     |      | H III 958  |
| <b>NGC 6503</b> | UGC 11012  | Galaxy  | DRA | 10.2 | 13.1 | 7'    | 17 49.5 | +70 09 | 30  | Sc         |     |      |  |
| NGC 6504        | UGC 11053  | Galaxy  | HER | 12.5 | 12.4 | 2.2'  | 17 56.1 | +33 12 | 116 | S pec      |     |      |  |
| NGC 6506        | OCL 16     | Opn CL  | SGR | -    | -    | 4'    | 17 59.9 | -24 41 | 339 | IV 1 p     |     |      |  |
| NGC 6507        | OCL 32     | Opn CL  | SGR | 9.6  | -    | 7'    | 17 59.8 | -17 27 | 339 | IV 2 p     | 35  | 12   | H VIII 53  |
| NGC 6508        | UGC 11023  | Galaxy  | DRA | 12.8 | 13.3 | 1.3'  | 17 49.8 | +72 01 | 30  | Elliptical |     |      |  |
| NGC 6509        | UGC 11075  | Galaxy  | OPH | 12.5 | 13   | 1.6'  | 17 59.4 | +06 17 | 204 | SBcd       |     |      |  |
| NGC 6512        | MCG 10-25  | Galaxy  | DRA | 13.9 | -    | 0.5'  | 17 54.8 | +62 39 | 30  | E-SO       |     |      |  |
| NGC 6513        | UGC 11078  | Galaxy  | HER | 13.3 | 13.3 | 1.2'  | 17 59.6 | +24 53 | 159 | SBO        |     |      |  |
| NGC 6515        | UGC 11071  | Galaxy  | DRA | 13   | 13.5 | 1.6'  | 17 57.4 | +50 44 | 53  | Elliptical |     |      |  |
| <b>NGC 6517</b> | GCL 81     | Glob CL | OPH | 10.3 | -    | 1'    | 18 01.8 | -08 58 | 294 | IV         |     |      | H II 199   |
| <b>NGC 6520</b> | OCL 10     | Opn CL  | SGR | 7.6  | -    | 6'    | 18 03.4 | -27 53 | 339 | I 2 m n    | 60  | 9    | H VII 7;Dark neb B86 on W edge                     |
| NGC 6521        | UGC 11061  | Galaxy  | DRA | 12.9 | 13.7 | 1.6'  | 17 55.8 | +62 37 | 30  | Elliptical |     |      | Brightest in dense part of cluster;4 gals in 8'    |
| <b>NGC 6522</b> | GCL 82     | Glob CL | SGR | 9.9  | -    | 5.6'  | 18 03.6 | -30 02 | 377 | VI         |     |      | H I 49   |
| NGC 6524        | UGC 11079  | Galaxy  | HER | 12.8 | 13   | 1.4'  | 17 59.2 | +45 53 | 81  | E-SO       |     |      |  |
| NGC 6525        |            | Opn CL  | OPH | -    | -    | 10'   | 18 02.1 | +11 02 | 204 |            |     |      |  |
| <b>NGC 6526</b> | ESO 521-*N | Brn Neb | SGR | -    | -    | 40'   | 18 04.1 | -24 27 | 339 | E+*        |     |      | H V 9  |
| NGC 6527        | UGC 11094  | Galaxy  | HER | 13.4 | 13.7 | 1.4'  | 18 01.8 | +19 44 | 159 | Sa         |     |      |  |
| <b>NGC 6528</b> | GCL 84     | Glob CL | SGR | 9.5  | -    | 3.7'  | 18 04.8 | -30 03 | 377 | V          |     |      | H II 200;* mags 16...;Gamma Sgr in field           |
| NGC 6532        | UGC 11085  | Galaxy  | DRA | 13.9 | 14.2 | 1.8'  | 17 59.2 | +56 14 | 53  | Sc         |     |      |  |
| NGC 6533        |            | CL+Neb  | SGR | -    | -    | 90'   | 18 04.1 | -24 24 | 339 | E+*        |     |      |  |
| <b>NGC 6535</b> | GCL 83     | Glob CL | SER | 9.3  | -    | 1.3'  | 18 03.8 | -00 18 | 249 | XI         |     |      |  |
| NGC 6536        | UGC 11077  | Galaxy  | DRA | 13.4 | 13.5 | 1.2'  | 17 57.3 | +64 56 | 30  | SBb        |     |      |  |
| NGC 6537        | PK 10+0.1  | Pln Neb | SGR | 12   | 8    | 5"    | 18 05.2 | -19 51 | 339 | 2a(6)      |     | 19.5 |  |
| NGC 6538        | UGC 11062  | Galaxy  | DRA | 14   | -    | 1'    | 17 54.3 | +73 25 | 12  | S pec      |     |      |  |
| <b>NGC 6539</b> | GCL 85     | Glob CL | SER | 8.9  | -    | 2.5'  | 18 04.8 | -07 35 | 294 | X          |     |      | In heavily obscured area                           |
| <b>NGC 6541</b> | Dunlop 473 | Glob CL | CRA | 6.3  | -    | 13.1' | 18 08.0 | -43 42 | 409 | III        |     |      | Stars mags 13...                                   |
| NGC 6542        | UGC 11092  | Galaxy  | DRA | 13.3 | 12.3 | 1.3'  | 17 59.7 | +61 22 | 30  | Sa         |     |      |  |
| <b>NGC 6543</b> | PK 96+29.1 | Pln Neb | DRA | 8.3  | 5    | 22"   | 17 58.6 | +66 38 | 30  | 3a(2)      |     | 11.3 | <b>Cat's Eye Nebula</b> ;H IV 37;PK96+29.1         |
| <b>NGC 6544</b> | GCL 87     | Glob CL | SGR | 7.5  | -    | 8.4'  | 18 07.3 | -25 00 | 339 | IX         |     |      | H II 197   |
| NGC 6546        | OCL 24     | Opn CL  | SGR | 8    | -    | 13'   | 18 07.4 | -23 18 | 339 | III 2 m    | 150 | 10.6 |  |
| NGC 6547        | UGC 11110  | Galaxy  | HER | 13.6 | 12.6 | 1.3'  | 18 05.2 | +25 14 | 159 | Sa         |     |      |  |
| NGC 6548        | NGC 6550   | Galaxy  | HER | 11.7 | 13.9 | 2.9'  | 18 06.0 | +18 35 | 159 | SBO        |     |      | H III 555;P w NGC 6549                             |
| NGC 6549        | UGC 11114  | Galaxy  | HER | 13.7 | 13   | 1.4'  | 18 05.8 | +18 32 | 159 | Sbc        |     |      | P w NGC 6548 at 4' PA 38                           |
| NGC 6550        | NGC 6548   | Galaxy  | HER | 12.7 | -    | 2.9'  | 18 06.0 | +18 35 | 159 | SBO        |     |      |  |
| NGC 6552        | UGC 11096  | Galaxy  | DRA | 13.6 | 13.1 | 1'    | 18 00.1 | +66 37 | 30  | SBbc Rii   |     |      |  |
| <b>NGC 6553</b> | GCL 88     | Glob CL | SGR | 8.3  | -    | 3.2'  | 18 09.3 | -25 54 | 339 | XI         |     |      | H IV 12;* mags 20...                               |
| NGC 6554        | ESO 590-70 | Opn CL  | SGR | 12   | -    | 20'   | 18 09.0 | -18 26 | 339 |            |     |      |  |
| NGC 6555        | UGC 11121  | Galaxy  | HER | 12.4 | 13.5 | 2.1'  | 18 07.8 | +17 36 | 159 | SBc        |     |      | H II 902   |
| NGC 6558        | GCL 89     | Glob CL | SGR | 8.6  | -    | 3.7'  | 18 10.3 | -31 46 | 377 |            |     |      |  |
| NGC 6559        | LBN 29     | Brn Neb | SGR | -    | -    | 5'    | 18 10.0 | -24 07 | 339 | E          |     |      | connected w IC 4681                                |
| NGC 6560        | UGC 11117  | Galaxy  | HER | 13.6 | 13.4 | 1.2'  | 18 05.2 | +46 53 | 82  | SBbc       |     |      |  |
| NGC 6563        | PK 358-7.1 | Pln Neb | SGR | 13   | 10.3 | 54"   | 18 12.0 | -33 52 | 377 | 3a         |     | 18   |  |
| NGC 6565        | PK 3-4.5   | Pln Neb | SGR | 13   | 8.1  | 10"   | 18 11.9 | -28 11 | 377 | 4          |     | 19.5 |  |
| NGC 6567        | PK 11-0.2  | Pln Neb | SGR | 11.5 | 6.4  | 11"   | 18 13.8 | -19 05 | 339 | 2a(3)      |     | 15   |  |
| <b>NGC 6568</b> | OCL 28     | Opn CL  | SGR | 8.6  | -    | 13'   | 18 12.8 | -21 35 | 339 | III 1 m    | 50  |      | H VII 30   |
| <b>NGC 6569</b> | GCL 91     | Glob CL | SGR | 8.4  | -    | 5.8'  | 18 13.6 | -31 50 | 377 | VIII       |     |      | H II 201;D* Burnham 1353 in field                  |
| NGC 6570        | UGC 11137  | Galaxy  | OPH | 12.7 | 13.3 | 1.9'  | 18 11.1 | +14 06 | 204 | SBm        |     |      |  |
| <b>NGC 6572</b> | PK 34+11.1 | Pln Neb | OPH | 8    | 4.3  | 15"   | 18 12.1 | +06 51 | 204 | 2a         |     | 12   |  |
| NGC 6574        | NGC 6610   | Galaxy  | HER | 12   | 12.3 | 1.5'  | 18 11.9 | +14 59 | 204 | SBbc       |     |      |  |
| NGC 6575        | UGC 11138  | Galaxy  | HER | 12.7 | 13.6 | 1.8'  | 18 11.0 | +31 07 | 116 | Elliptical |     |      | P w IC 1277  |
| NGC 6577        | UGC 11148  | Galaxy  | HER | 12.6 | 13.4 | 1.5'  | 18 12.0 | +21 28 | 159 | Elliptical |     |      | Several galaxies within 15'                        |
| NGC 6578        | PK 10-1.1  | Pln Neb | SGR | 13.1 | 8.4  | 8.5"  | 18 16.3 | -20 27 | 339 | 2a         |     | 15.7 |  |



## 7000 DSO List (sorted by name)

| NAME            | OTHER         | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES                                  |
|-----------------|---------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|--|
| NGC 6579        | UGC 11153     | Galaxy  | HER | 14   | -    | 0.4' | 18 12.5 | +21 25 | 159 | S          |     |      | Triple system                              |
| NGC 6580        | UGC 11153     | Galaxy  | HER | 14   | -    | 1.3' | 18 12.6 | +21 26 | 159 | Elliptical |     |      |  |
| <b>NGC 6583</b> | OCL 27        | Opn CL  | SGR | 10   | -    | 2.8' | 18 15.8 | -22 08 | 339 | II 1 m     | 35  |      | H VII 31                                   |
| NGC 6584        | Dunlop 376    | Glob CL | TEL | 7.9  | -    | 7.9' | 18 18.6 | -52 13 | 434 | VIII       |     |      |  |
| NGC 6585        | UGC 11159     | Galaxy  | HER | 12.8 | 12.4 | 1.9' | 18 12.4 | +39 38 | 82  | SBc        |     |      |  |
| NGC 6587        | UGC 11166     | Galaxy  | HER | 12.9 | 13.2 | 2'   | 18 13.8 | +18 50 | 159 | E-SO       |     |      |  |
| NGC 6589        | IC 1283;IC 4  | Brn Neb | SGR | -    | -    | 15'  | 18 16.9 | -19 47 | 339 | E          |     |      |  |
| NGC 6590        | LBN 43        | Brn Neb | SGR | -    | -    | 4'   | 18 17.0 | -19 44 | 339 | R          |     |      |  |
| NGC 6595        | IC 4700       | Opn CL  | SGR | 7    | -    | 11'  | 18 17.1 | -19 52 | 339 |            | 30  |      |  |
| NGC 6596        | OCL 41        | Opn CL  | SGR | -    | -    | 10'  | 18 17.5 | -16 40 | 294 | III 2 m n  | 30  |      | H VIII 55                                  |
| NGC 6598        | UGC 11139     | Galaxy  | DRA | 14   | -    | 1.5' | 18 08.9 | +69 04 | 30  | S          |     |      |  |
| NGC 6599        | NGC 6600      | Galaxy  | HER | 12.6 | 13   | 1.3' | 18 15.7 | +24 55 | 159 | SO         |     |      |  |
| NGC 6600        | NGC 6599      | Galaxy  | HER | 13.8 | -    | 1.3' | 18 15.7 | +24 55 | 159 | SO         |     |      |  |
| <b>NGC 6603</b> |               | Opn CL  | SGR | 11.1 | -    | 5'   | 18 18.4 | -18 24 | 339 | I 1 r n    | 100 | 14   | Within star cloud <b>Messier 24</b>        |
| NGC 6604        | OCL 56        | Opn CL  | SER | 6.5  | -    | 2'   | 18 18.1 | -12 14 | 294 | I 3 p n    | 30  | 7.5  | H VIII 15;In Ser OB2?                      |
| NGC 6605        | OCL 47        | Opn CL  | SER | 6    | -    |      | 18 18.4 | -14 57 | 294 |            |     |      | H VIII 47;No cluster                       |
| NGC 6610        | NGC 6574      | Galaxy  | HER | 12.8 | -    | 1.5' | 18 11.9 | +14 59 | 204 | SBbc       |     |      |  |
| NGC 6615        | UGC 11196     | Galaxy  | OPH | 13.1 | 12.7 | 0.9' | 18 18.6 | +13 16 | 204 | SBO-a      |     |      |  |
| NGC 6616        | UGC 11192     | Galaxy  | HER | 13.8 | 13.5 | 1.4' | 18 17.7 | +22 14 | 159 | Sab        |     |      |  |
| NGC 6619        | UGC 11200     | Galaxy  | HER | 13   | 13.3 | 1.2' | 18 18.9 | +23 39 | 159 | Elliptical |     |      |  |
| NGC 6620        | PK 5-6.1      | Pln Neb | SGR | 14   | 8.3  | 5.3" | 18 22.9 | -26 49 | 339 | 2b         |     | 16   |  |
| NGC 6621        | UGC 11175     | Galaxy  | DRA | 13.5 | -    | 1.3' | 18 12.9 | +68 22 | 30  | SB/P       |     |      | Double system w loop and bridge            |
| NGC 6622        | UGC 11175     | Galaxy  | DRA | 13.5 | -    | 0.9' | 18 13.0 | +68 21 | 30  | SBc        |     |      | P w NGC 6621                               |
| <b>NGC 6624</b> | GCL 93        | Glob CL | SGR | 7.6  | -    | 5.9' | 18 23.7 | -30 22 | 378 | VI         |     |      | H I 50                                     |
| NGC 6625        | OCL 58        | Opn CL  | SCT | 9    | -    | 39'  | 18 23.2 | -12 03 | 294 |            | 30  |      |  |
| NGC 6627        | UGC 11212     | Galaxy  | HER | 13.3 | 13.5 | 1.3' | 18 22.6 | +15 42 | 204 | SBb        |     |      |  |
| NGC 6628        | UGC 11211     | Galaxy  | HER | 12.9 | 13.7 | 1.9' | 18 22.4 | +23 29 | 159 | SO         |     |      |  |
| <b>NGC 6629</b> | PK 9-5.1;H II | Pln Neb | SGR | 10.5 | 8.2  | 16"  | 18 25.7 | -23 12 | 340 | 2a         |     | 12.9 |  |
| NGC 6631        | OCL 59        | Opn CL  | SCT | 11.7 | -    | 5'   | 18 27.2 | -12 02 | 295 | II 2 m     | 30  |      |  |
| NGC 6632        | UGC 11226     | Galaxy  | HER | 12.1 | 13.6 | 3'   | 18 25.1 | +27 32 | 160 | Sbc        |     |      |  |
| <b>NGC 6633</b> | OCL 90        | Opn CL  | OPH | 4.6  | -    | 27'  | 18 27.3 | +06 31 | 205 | III 2 m    | 30  | 7.6  | H VIII 72                                  |
| NGC 6636        | UGC 11221     | Galaxy  | DRA | 14   | -    | 2.1' | 18 22.0 | +66 38 | 30  | Sc         |     |      | Disrupted contact pair                     |
| <b>NGC 6638</b> | GCL 95        | Glob CL | SGR | 9.2  | -    | 2.2' | 18 30.9 | -25 30 | 340 | VI         |     |      | H I 51                                     |
| NGC 6640        | UGC 11247     | Galaxy  | LYR | 13.5 | 13.2 | 1.1' | 18 28.1 | +34 18 | 117 | Sc         |     |      |  |
| NGC 6641        | UGC 11250     | Galaxy  | HER | 13.3 | 12.6 | 0.9' | 18 29.0 | +22 54 | 160 | S          |     |      |  |
| <b>NGC 6642</b> | GCL 97        | Glob CL | SGR | 8.8  | -    | 0.8' | 18 31.9 | -23 29 | 340 | IV         |     |      | H II 205;* mags 15....                     |
| NGC 6643        | UGC 11218     | Galaxy  | DRA | 11.1 | 13.1 | 3.7' | 18 19.8 | +74 34 | 12  | Sc         |     |      | multi arm spiral                           |
| NGC 6644        | PK 8-7.2      | Pln Neb | SGR | 12.2 | 3.9  | 3"   | 18 32.6 | -25 08 | 340 | 2          |     | 15.9 |  |
| <b>NGC 6645</b> | OCL 48        | Opn CL  | SGR | 8.5  | -    | 10'  | 18 32.0 | -16 53 | 295 | III 1 m    | 40  | 12   | H VI 23                                    |
| NGC 6646        | UGC 11258     | Galaxy  | LYR | 12.6 | 12.7 | 1.2' | 18 29.6 | +39 52 | 82  | Sa         |     |      | H II 907                                   |
| NGC 6647        | OCL 45        | Opn CL  | SGR | 8    | -    |      | 18 31.5 | -17 21 | 340 |            |     |      | H VIII 14                                  |
| <b>NGC 6649</b> | OCL 66        | Opn CL  | SCT | 8.9  | -    | 6'   | 18 33.5 | -10 24 | 295 | II 2 m     | 50  | 11.6 | With Cepheid V367 Sct & D* Struve 2325     |
| NGC 6651        | UGC 11236     | Galaxy  | DRA | 13.1 | 13.1 | 1.6' | 18 24.3 | +71 36 | 30  | Sbc        |     |      |  |
| <b>NGC 6652</b> | GCL 98        | Glob CL | SGR | 8.5  | -    | 3.5' | 18 35.8 | -32 59 | 378 | VI         |     |      |  |
| NGC 6654        | UGC 11238     | Galaxy  | DRA | 12   | 13.7 | 2.6' | 18 24.1 | +73 11 | 12  | SBO-a R    |     |      |  |
| NGC 6654A       | UGC 11332     | Galaxy  | DRA | 12.9 | 13.5 | 2.7' | 18 39.4 | +73 35 | 12  | SBd pec    |     |      |  |
| NGC 6657        | UGC 11271     | Galaxy  | LYR | 14   | -    | 0.7' | 18 33.0 | +34 04 | 117 | SBc        |     |      |  |
| NGC 6658        | UGC 11274     | Galaxy  | HER | 12.9 | 12.4 | 1.6' | 18 33.9 | +22 53 | 160 | Sa         |     |      | P w NGC 6661 at 9'                         |
| NGC 6660        | NGC 6661      | Galaxy  | HER | 13.2 | -    | 1.8' | 18 34.6 | +22 55 | 160 | Sa         |     |      |  |
| NGC 6661        | NGC 6660      | Galaxy  | HER | 12.1 | 12.6 | 1.8' | 18 34.6 | +22 55 | 160 | Sa         |     |      | P w NGC 6658 at 9'                         |
| NGC 6662        | UGC 11280     | Galaxy  | LYR | 13.7 | 13.3 | 1.6' | 18 34.2 | +32 04 | 117 | SBab       |     |      |  |
| NGC 6663        | UGC 11276     | Galaxy  | LYR | 13.9 | 13.7 | 1'   | 18 33.6 | +40 03 | 82  | Sc         |     |      |  |
| <b>NGC 6664</b> | OCL 68        | Opn CL  | SCT | 7.8  | -    | 16'  | 18 36.6 | -07 49 | 295 | III 2 m    | 50  | 10.1 | H VIII 12;Contains Cepheid variable EV Sct |
| NGC 6667        | NGC 6668      | Galaxy  | DRA | 12.6 | 13.5 | 2.4' | 18 30.7 | +67 59 | 30  | SBab/P     |     |      |  |
| NGC 6668        | NGC 6667      | Galaxy  | DRA | 13.8 | -    | 2.4' | 18 30.7 | +67 59 | 30  | SBab/P     |     |      |  |
| NGC 6671        | UGC 11299     | Galaxy  | LYR | 14   | -    | 1.5' | 18 37.4 | +26 25 | 160 | S pec      |     |      |  |
| NGC 6674        | UGC 11308     | Galaxy  | HER | 12.2 | 14.4 | 4.2' | 18 38.6 | +25 22 | 160 | SBb        |     |      |  |
| NGC 6675        | UGC 11305     | Galaxy  | LYR | 12.4 | 13.1 | 1.8' | 18 37.4 | +40 03 | 82  | Sbc        |     |      |  |
| NGC 6677        | UGC 11288     | Galaxy  | DRA | 13.5 | -    | 0.9' | 18 33.6 | +67 07 | 30  | Sbc        |     |      | Double system w NGC 6679                   |
| NGC 6678        | NGC 6667      | Galaxy  | DRA | 13.8 | -    | 2.4' | 18 30.7 | +67 59 | 30  | SBab/P     |     |      | H VI 15                                    |
| NGC 6679        | MCG 11-22     | Galaxy  | DRA | 13.5 | -    | 0.2' | 18 33.5 | +67 09 | 30  | Sc         |     |      |  |
| NGC 6682        |               | Opn CL  | SCT | -    | -    | 18'  | 18 39.6 | -04 47 | 250 |            |     |      |  |
| NGC 6683        | OCL 74        | Opn CL  | SCT | 9.4  | -    | 11'  | 18 42.2 | -06 17 | 295 | I 2 p n    | 20  | 11.7 | Rich Milky Way field prob not true cluster |
| NGC 6685        | UGC 11317     | Galaxy  | LYR | 13.4 | 13.3 | 1.1' | 18 40.0 | +39 59 | 82  | E-SO       |     |      |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES   |
|-----------------|------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|---|
| NGC 6687        | UGC 11309  | Galaxy  | DRA | 14   | 14.4 | 1.3'  | 18 37.4 | +59 39 | 54  | Scd        |     |      |   |
| NGC 6688        | UGC 11324  | Galaxy  | LYR | 12.6 | 13.6 | 1.7'  | 18 40.7 | +36 17 | 117 | Sa         |     |      | Brightest in group                                |
| NGC 6689        | NGC 6690   | Galaxy  | DRA | 13   | -    | 4'    | 18 34.8 | +70 31 | 30  | SBcd       |     |      |   |
| NGC 6690        | NGC 6689   | Galaxy  | DRA | 12.5 | 14   | 4'    | 18 34.8 | +70 31 | 30  | SBcd       |     |      |   |
| NGC 6691        | UGC 11318  | Galaxy  | DRA | 12.9 | 13.7 | 1.6'  | 18 39.2 | +55 38 | 54  | SBbc       |     |      |   |
| NGC 6695        | UGC 11340  | Galaxy  | LYR | 13.5 | 13.1 | 1.1'  | 18 42.7 | +40 22 | 82  | SBb        |     |      |   |
| NGC 6697        | UGC 11349  | Galaxy  | HER | 12.7 | 12.9 | 1.2'  | 18 45.2 | +25 31 | 160 | Elliptical |     |      |   |
| NGC 6699        | ESO 183-21 | Galaxy  | PAV | 12   | 12.7 | 1.5'  | 18 52.0 | -57 19 | 435 | SBbc       |     |      |   |
| NGC 6700        | UGC 11351  | Galaxy  | LYR | 13.1 | 13.4 | 1.4'  | 18 46.1 | +32 17 | 117 | SBc        |     |      |   |
| NGC 6701        | UGC 11348  | Galaxy  | DRA | 12.1 | 12.7 | 1.5'  | 18 43.2 | +60 39 | 54  | SBa        |     |      |   |
| NGC 6702        | UGC 11354  | Galaxy  | LYR | 12.2 | 13.1 | 1.9'  | 18 47.0 | +45 42 | 82  | E3         |     |      | P w NGC 6703 at 10' PA 159                        |
| NGC 6703        | UGC 11356  | Galaxy  | LYR | 11.3 | 13.1 | 2.7'  | 18 47.3 | +45 33 | 82  | SO         |     |      |   |
| NGC 6704        | OCL 82     | Opn CL  | SCT | 9.2  | -    | 6'    | 18 50.9 | -05 12 | 250 | I 3 m      | 30  | 12.2 |   |
| NGC 6707        | ESO 183-25 | Galaxy  | TEL | 12.6 | 13.2 | 2.1'  | 18 55.4 | -53 49 | 435 | SBc        |     |      |   |
| NGC 6708        | ESO 183-27 | Galaxy  | TEL | 12.7 | 12.5 | 1.2'  | 18 55.6 | -53 43 | 435 | Sb         |     |      |   |
| NGC 6709        | OCL 100    | Opn CL  | AQL | 6.7  | -    | 13'   | 18 51.5 | +10 21 | 205 | III 2 m    | 40  | 9.1  |   |
| NGC 6710        | UGC 11364  | Galaxy  | LYR | 13.1 | 13.6 | 1.7'  | 18 50.6 | +26 50 | 160 | Sa         |     |      |   |
| NGC 6711        | UGC 11361  | Galaxy  | DRA | 12.9 | 13.4 | 1.3'  | 18 49.0 | +47 39 | 83  | SBbc/P     |     |      |   |
| <b>NGC 6712</b> | GCL 103    | Glob CL | SCT | 8.2  | -    | 4.3'  | 18 53.1 | -08 42 | 295 | IX         |     |      | H I 47  |
| NGC 6713        | UGC 11365  | Galaxy  | LYR | 14   | -    | 0.4'  | 18 50.7 | +33 58 | 117 | SO         |     |      |   |
| NGC 6716        | OCL 46     | Opn CL  | SGR | 7.5  | -    | 7'    | 18 54.6 | -19 54 | 340 | IV 1 p     | 20  | 8.3  |   |
| NGC 6717        | Pal 9      | Glob CL | SGR | 8.4  | -    | 3.9'  | 18 55.1 | -22 42 | 340 | VIII       |     |      | H III 143   |
| NGC 6721        | ESO 141-19 | Galaxy  | PAV | 12   | 12.9 | 1.6'  | 19 00.8 | -57 46 | 435 | E0         |     |      |   |
| <b>NGC 6723</b> | Dunlop 573 | Glob CL | SGR | 6.8  | -    | 11'   | 18 59.6 | -36 38 | 378 | VII        |     |      |   |
| NGC 6724        |            | Opn CL  | AQL | 12   | -    | 6.2'  | 18 56.8 | +10 26 | 206 |            |     |      |   |
| NGC 6725        | ESO 183-36 | Galaxy  | TEL | 12.2 | 12.1 | 2.2'  | 19 01.9 | -53 52 | 435 | SO         |     |      |   |
| <b>NGC 6726</b> | ESO 396-N1 | Brn Neb | CRA | -    | -    | 2'    | 19 01.7 | -36 53 | 379 | E          |     |      | Complex neb region w var* TY & R CrA invl         |
| <b>NGC 6727</b> | ESO 396-N1 | Brn Neb | CRA | -    | -    | 80'   | 19 01.7 | -36 53 | 379 | R          |     |      | P w NGC 6726-9                                    |
| <b>NGC 6729</b> | ESO 396-N* | Brn Neb | CRA | -    | -    | 25'   | 19 01.9 | -36 57 | 379 | E+R        |     |      | P w NGC 6726-7                                    |
| NGC 6738        | OCL 101    | Opn CL  | AQL | 8.3  | -    | 15'   | 19 01.4 | +11 36 | 206 | IV 2 p     |     |      |   |
| NGC 6741        | PK 33-2.1  | Pln Neb | AQL | 12   | 7    | 9"    | 19 02.6 | -00 27 | 251 | 4          |     | 14.7 | <b>Phantom Streak Nebula</b>                      |
| NGC 6742        | PK 78+18.1 | Pln Neb | DRA | 13.4 | -    | 31"   | 18 59.3 | +48 28 | 83  |            |     | 19.4 | H III 742   |
| NGC 6745        | UGC 11391  | Galaxy  | LYR | 13.5 | -    | 1.3'  | 19 01.7 | +40 45 | 83  | S pec      |     |      | Triple system disrupted w bridges                 |
| NGC 6749        | GCL 107    | Glob CL | AQL | 12.4 | -    | 6.3'  | 19 05.3 | +01 54 | 251 |            |     |      | Globular absorbed by 7 mags;                      |
| NGC 6750        | UGC 11389  | Galaxy  | DRA | 13.5 | -    | 1'    | 19 00.6 | +59 10 | 54  | Sc         |     |      |   |
| NGC 6751        | PK 29-5.1  | Pln Neb | AQL | 12   | 9.2  | 20"   | 19 05.9 | -06 00 | 296 | 3          |     | 13   | Annular   |
| <b>NGC 6752</b> | Dunlop 295 | Glob CL | PAV | 5.4  | -    | 20.4' | 19 10.9 | -59 59 | 435 | VI         |     |      | Fine cluster                                      |
| NGC 6753        | ESO 184-22 | Galaxy  | PAV | 11.1 | 12.8 | 2.4'  | 19 11.4 | -57 03 | 435 | Sb         |     |      |   |
| NGC 6754        | ESO 231-25 | Galaxy  | TEL | 12.1 | 12.6 | 1.8'  | 19 11.4 | -50 39 | 435 | SBb        |     |      |   |
| <b>NGC 6755</b> | OCL 96     | Opn CL  | AQL | 7.5  | -    | 15'   | 19 07.8 | +04 16 | 251 | IV 2 m     | 100 | 10.2 | H VII 19  |
| <b>NGC 6756</b> | OCL 99     | Opn CL  | AQL | 10.6 | -    | 4'    | 19 08.7 | +04 42 | 251 | I 2 m      | 40  | 13   | H VII 62  |
| NGC 6757        | UGC 11401  | Galaxy  | DRA | 12.9 | 13.1 | 1.4'  | 19 05.1 | +55 43 | 54  | SBO-a R    |     |      |   |
| NGC 6758        | ESO 184-37 | Galaxy  | TEL | 11.6 | 13.1 | 2.3'  | 19 13.9 | -56 19 | 435 | E1         |     |      |   |
| <b>NGC 6760</b> | GCL 109    | Glob CL | AQL | 9.1  | -    | 2.4'  | 19 11.2 | +01 02 | 251 | IX         |     |      |   |
| NGC 6761        | ESO 231-28 | Galaxy  | TEL | 13.4 | 14   | 1.6'  | 19 15.1 | -50 39 | 435 | SBab       |     |      |   |
| NGC 6762        | NGC 6763   | Galaxy  | DRA | 13.4 | 12.5 | 1.5'  | 19 05.6 | +63 56 | 31  | Sa         |     |      |   |
| NGC 6764        | UGC 11407  | Galaxy  | CYG | 11.9 | 12.9 | 2.2'  | 19 08.3 | +50 56 | 54  | SBbc       |     |      |   |
| NGC 6765        | PK 62+9.1  | Pln Neb | LYR | 12.9 | 12.2 | 38"   | 19 11.1 | +30 33 | 118 | 5          |     | 16   |   |
| NGC 6766        | PK 82+7.1  | Pln Neb | CYG | 12.6 | -    | 5.6"  | 20 10.4 | +46 28 | 55  | 2b         |     |      |   |
| NGC 6768        | ESO 337-18 | Galaxy  | CRA | 13.2 | -    | 1.7'  | 19 16.5 | -40 13 | 410 | Elliptical |     |      |   |
| NGC 6772        | PK 33-6.1  | Pln Neb | AQL | 14   | -    | 75"   | 19 14.6 | -02 42 | 251 | 3b(2)      |     | 18.1 | H IV 14;PK33-6.1                                  |
| NGC 6774        | Ru 147     | Opn CL  | SGR | -    | -    | 25'   | 19 16.3 | -16 16 | 296 | III 2 m    | 20  | 9    |   |
| NGC 6778        | PK 34-6.1  | Pln Neb | AQL | 13.3 | 9.1  | 19"   | 19 18.4 | -01 36 | 251 | 3(3)       |     | 14.8 |   |
| NGC 6780        | ESO 184-62 | Galaxy  | TEL | 12.6 | 13.7 | 1.9'  | 19 22.8 | -55 47 | 435 | SBc        |     |      |   |
| <b>NGC 6781</b> | PK 41-2.1  | Pln Neb | AQL | 11.8 | 12.8 | 111"  | 19 18.5 | +06 32 | 206 | 3b(3)      |     | 16.9 | H III 743;PK41-2.1;opposite dark lane from Altair |
| NGC 6782        | ESO 142- 1 | Galaxy  | PAV | 11.8 | 12.9 | 2.2'  | 19 24.0 | -59 55 | 435 | Sba Ring   |     |      |   |
| NGC 6785        | PK 34-6.1  | Pln Neb | AQL | 13.3 | -    | 25"   | 19 18.4 | -01 36 | 251 | 3(3)       |     |      |   |
| NGC 6786        | UGC 11414  | Galaxy  | DRA | 12.8 | 12.6 | 1.1'  | 19 10.9 | +73 25 | 13  | SBbc       |     |      | P w UGC 11415 at 1.2' PA 42                       |
| NGC 6787        | UGC 11424  | Galaxy  | DRA | 13.9 | 13.9 | 1.2'  | 19 16.2 | +60 25 | 54  | SBb        |     |      |   |
| NGC 6788        | ESO 184-67 | Galaxy  | TEL | 12.9 | -    | 2.9'  | 19 26.8 | -54 57 | 435 | Sab        |     |      |   |
| NGC 6789        | UGC 11425  | Galaxy  | DRA | 13.3 | 13.3 | 1.3'  | 19 16.7 | +63 58 | 31  | Ir         |     |      |   |
| NGC 6790        | PK 37-6.1  | Pln Neb | AQL | 11.4 | 5.9  | 2"    | 19 23.0 | +01 31 | 251 | 2          |     | 16.1 | Nearly stellar                                    |
| <b>NGC 6791</b> | OCL 142    | Opn CL  | LYR | 9.5  | -    | 16'   | 19 20.7 | +37 51 | 118 | II 3 r     | 300 | 13   | very rich   |
| NGC 6792        | UGC 11429  | Galaxy  | LYR | 12.1 | 13.1 | 2.2'  | 19 21.0 | +43 08 | 83  | SBb        |     |      | P w UGC 11430 at 12' PA 11                        |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 6793        | OCL 115     | Opn CL  | VUL | -    | -    | 6'    | 19 23.2 | +22 11 | 161 | IV 2 p     |    |      | H VIII 81   |
| NGC 6794        | ESO 338- 5  | Galaxy  | SGR | 12.9 | 13.7 | 1.7'  | 19 28.1 | -38 55 | 379 | Sb Ring    |    |      |   |
| NGC 6796        | UGC 11432   | Galaxy  | DRA | 12.6 | 12.3 | 1.9'  | 19 21.5 | +61 09 | 31  | Sbc        |    |      |   |
| NGC 6798        | IC 1300     | Galaxy  | CYG | 13.2 | 13.5 | 1.6'  | 19 24.1 | +53 37 | 54  | SO         |    |      |   |
| NGC 6799        | ESO 184-78  | Galaxy  | TEL | 13   | -    | 1.6'  | 19 32.3 | -55 55 | 436 | Elliptical |    |      |   |
| NGC 6800        | OCL 123     | Opn CL  | VUL | -    | -    | 5'    | 19 27.1 | +25 08 | 161 | III 2 p    | 20 | 10   | H VIII 21;30' NW from Alpha Vul                           |
| NGC 6801        | UGC 11443   | Galaxy  | CYG | 13.9 | 13.7 | 1.3'  | 19 27.6 | +54 22 | 54  | Sc         |    |      |   |
| <b>NGC 6802</b> | OCL 114     | Opn CL  | VUL | 8.8  | -    | 3.2'  | 19 30.6 | +20 16 | 162 | III 1 m    | 50 | 12.9 | H VI 14;Bar shaped along N-S                              |
| NGC 6803        | PK 46-4.1   | Pln Neb | AQL | 11   | 6.4  | 4"    | 19 31.3 | +10 03 | 207 | 2a         |    | 14   |   |
| NGC 6804        | PK 45-4.1   | Pln Neb | AQL | 12.4 | 11   | 63"   | 19 31.6 | +09 14 | 207 | 4(2)       |    | 14.2 | PK45-4.1;Herschel misclassified this as open cl           |
| NGC 6805        | ESO 338-14  | Galaxy  | SGR | 13.3 | 13.3 | 1.1'  | 19 36.8 | -37 33 | 379 | Elliptical |    |      |   |
| NGC 6806        | ESO 338-15  | Galaxy  | SGR | 13.2 | 13.5 | 1.6'  | 19 37.1 | -42 18 | 411 | SBc        |    |      |   |
| NGC 6807        | PK 42-6.1   | Pln Neb | AQL | 13.8 | 4.8  | 2"    | 19 34.6 | +05 41 | 207 | 2          |    | 13.9 |   |
| NGC 6810        | ESO 142-35  | Galaxy  | PAV | 11.4 | 12.4 | 3.1'  | 19 43.6 | -58 39 | 436 | Sab        |    |      |   |
| NGC 6811        | OCL 185     | Opn CL  | CYG | 6.8  | -    | 13'   | 19 38.2 | +46 34 | 84  | IV 3 p     | 70 | 9.9  |   |
| NGC 6812        | ESO 185-15  | Galaxy  | TEL | 13.6 | -    | 1.6'  | 19 45.4 | -55 21 | 436 | SO         |    |      |   |
| NGC 6813        | SG 3.148    | Brn Neb | VUL | -    | -    | 3'    | 19 40.4 | +27 18 | 162 | E          |    |      |   |
| NGC 6814        | MCG - 2-50- | Galaxy  | AQL | 11.2 | 13.4 | 3.5'  | 19 42.7 | -10 20 | 297 | SBbc Rn    |    |      | H III 744   |
| NGC 6816        | ESO 460-30  | Galaxy  | SGR | 13.4 | 14.1 | 1.7"  | 19 44.0 | -28 24 | 380 | E-SO       |    |      |   |
| <b>NGC 6818</b> | PK 25-17.1  | Pln Neb | SGR | 10   | 7    | 22"   | 19 44.0 | -14 09 | 297 | 4          |    | 15   | <b>Little Gem</b> Nebula;PK25-17.1                        |
| <b>NGC 6819</b> | OCL 155     | Opn CL  | CYG | 7.3  | -    | 5'    | 19 41.3 | +40 11 | 84  | I 1 r      |    | 11.5 | 150 stars mags 11-16                                      |
| NGC 6821        | MCG - 1-50- | Galaxy  | AQL | 13.1 | 13.1 | 1.3'  | 19 44.4 | -06 50 | 297 | SBcd       |    |      |   |
| <b>NGC 6822</b> | IC 4895     | Galaxy  | SGR | 8.8  | 14.5 | 15.4' | 19 44.9 | -14 48 | 297 | Ir+        |    |      | <b>Barnard's Galaxy</b> ;IC 1308 =HII reg; in Local Group |
| <b>NGC 6823</b> | OCL 124     | Opn CL  | VUL | 7.1  | -    | 12'   | 19 43.2 | +23 18 | 162 | I 3 p n    | 30 | 8.8  | H VII 18;In Vul OB1 w nebula NGC 6820;30 * mags 11..      |
| NGC 6824        | UGC 11470   | Galaxy  | CYG | 12.2 | 12.8 | 1.9'  | 19 43.7 | +56 07 | 55  | Sab        |    |      | H II 878  |
| <b>NGC 6826</b> | PK 83+12.1  | Pln Neb | CYG | 8.8  | 6.9  | 27"   | 19 44.8 | +50 32 | 55  | 3a(2)      |    | 10.7 | <b>Blinking Planetary</b> ;H IV 73;PK83+12.1              |
| NGC 6827        | Berk 48     | Opn CL  | VUL | -    | -    | 2'    | 19 48.9 | +21 13 | 162 |            |    |      |   |
| <b>NGC 6830</b> | OCL 125     | Opn CL  | VUL | 7.9  | -    | 12'   | 19 51.0 | +23 06 | 162 | II 2 p     | 20 | 9.9  | H VII 9   |
| NGC 6831        | UGC 11483   | Galaxy  | DRA | 13.3 | 14   | 1.5'  | 19 48.0 | +59 54 | 55  | SO         |    |      | Brightest in group of 4                                   |
| NGC 6833        | PK 82+11.1  | Pln Neb | CYG | 13.8 | 4.7  | 2"    | 19 49.8 | +48 58 | 84  | 2          |    | 15.1 |   |
| <b>NGC 6834</b> | OCL 134     | Opn CL  | CYG | 7.8  | -    | 5'    | 19 52.2 | +29 24 | 119 | II 2 m     | 50 | 9.6  | H VIII 16   |
| NGC 6835        | MCG - 2-50- | Galaxy  | SGR | 12.5 | 12.6 | 2.4'  | 19 54.5 | -12 34 | 297 | SBa        |    |      |   |
| NGC 6836        | MCG - 2-50- | Galaxy  | SGR | 12.9 | 13.5 | 1.7'  | 19 54.7 | -12 41 | 297 | SBm        |    |      |   |
| NGC 6837        | OCL 108     | Opn CL  | AQL | 12   | -    | 6'    | 19 53.5 | +11 41 | 207 | IV 1p :b   |    |      | H VIII 18   |
| NGC 6841        | ESO 461-23  | Galaxy  | SGR | 12.6 | 13.4 | 1.5'  | 19 57.8 | -31 49 | 380 | Elliptical |    |      |   |
| NGC 6842        | PK 65+0.1   | Pln Neb | VUL | 13.1 | 13.4 | 52.8" | 19 55.0 | +29 17 | 119 | 3b         |    | 14.5 |   |
| NGC 6845        | NGC 6845A   | Galaxy  | TEL | 13.8 | -    | 2.3'  | 20 01.0 | -47 04 | 411 | SBb        |    |      |   |
| NGC 6845A       | NGC 6845    | Galaxy  | TEL | 13.8 | -    | 2.3'  | 20 01.0 | -47 04 | 411 | SBb        |    |      |   |
| NGC 6847        | LBN 151     | CL+Neb  | CYG | -    | -    |       | 19 56.7 | +30 13 | 119 |            |    |      | H II 202; maybe Sh2-97                                    |
| NGC 6848        | ESO 185-52  | Galaxy  | TEL | 12.5 | -    | 2.4'  | 20 02.8 | -56 05 | 436 | Sa         |    |      |   |
| NGC 6849        | ESO 339-32  | Galaxy  | SGR | 12.1 | 12.8 | 1.9'  | 20 06.3 | -40 12 | 411 | E-SO Ba    |    |      |   |
| NGC 6850        | ESO 185-56  | Galaxy  | TEL | 12.5 | 13.3 | 2.1'  | 20 03.5 | -54 51 | 436 | SBO-a      |    |      |   |
| NGC 6851        | ESO 233-21  | Galaxy  | TEL | 11.8 | 13   | 2'    | 20 03.6 | -48 17 | 411 | E4         |    |      |   |
| NGC 6851B       | ESO 233-23  | Galaxy  | TEL | 14   | 13.5 | 1.1'  | 20 05.7 | -47 59 | 411 | SBcd       |    |      |   |
| NGC 6852        | PK 42-14.1  | Pln Neb | AQL | 11.4 | 11.2 | 28"   | 20 00.7 | +01 44 | 253 | 4          |    | 17.9 |   |
| NGC 6854        | ESO 185-61  | Galaxy  | TEL | 12.2 | 13.2 | 2'    | 20 05.6 | -54 23 | 436 | E2         |    |      |   |
| NGC 6855        | ESO 185-63  | Galaxy  | TEL | 12.8 | 13.3 | 1.5'  | 20 06.8 | -56 23 | 436 | SBO-a      |    |      |   |
| <b>NGC 6857</b> | Sh2-100     | Brn Neb | CYG | 11.4 | -    | 0.8'  | 20 02.8 | +33 31 | 119 | E          |    | 14.3 | oval; not planetary; Sharpless 2-100 is brightcore        |
| NGC 6861        | IC 4949     | Galaxy  | TEL | 11.1 | 12.8 | 3'    | 20 07.3 | -48 22 | 411 | E-SO Ba    |    |      |   |
| NGC 6861C       | ESO 233-31  | Galaxy  | TEL | 14   | 13.4 | 1.2'  | 20 06.7 | -48 39 | 411 | SO         |    |      |   |
| NGC 6861D       | ESO 233-34  | Galaxy  | TEL | 12.4 | 12.9 | 2.1'  | 20 08.3 | -48 13 | 411 | E-SO       |    |      |   |
| NGC 6862        | ESO 186- 2  | Galaxy  | TEL | 13.5 | -    | 1.6'  | 20 08.9 | -56 24 | 436 | SBbc       |    |      |   |
| <b>NGC 6866</b> | OCL 183     | Opn CL  | CYG | 7.6  | -    | 7'    | 20 03.9 | +44 10 | 84  | II 2 m     | 80 | 10.7 | H VII 59;50* mags 10...                                   |
| NGC 6867        | ESO 186- 6  | Galaxy  | TEL | 13.1 | 13.3 | 2'    | 20 10.5 | -54 47 | 436 | SBbc       |    |      |   |
| NGC 6868        | ESO 233-39  | Galaxy  | TEL | 10.6 | 13.1 | 3.6'  | 20 09.9 | -48 23 | 411 | E2         |    |      |   |
| NGC 6869        | UGC 11506   | Galaxy  | DRA | 12   | 12.7 | 1.6'  | 20 00.7 | +66 14 | 32  | SO         |    |      |   |
| NGC 6870        | ESO 233-41  | Galaxy  | TEL | 12.3 | 13.4 | 2.6'  | 20 10.2 | -48 17 | 411 | Sab        |    |      |   |
| NGC 6871        | OCL 148     | Opn CL  | CYG | 5.2  | -    | 20'   | 20 05.9 | +35 47 | 119 | IV 3 p n   | 15 | 6.8  | In Cyg OB3?   |
| NGC 6875        | ESO 284-28  | Galaxy  | TEL | 12.1 | 13.1 | 2.4'  | 20 13.2 | -46 10 | 411 | E6         |    |      |   |
| NGC 6875A       | ESO 284-24  | Galaxy  | TEL | 13.1 | 13.2 | 2.7'  | 20 11.9 | -46 09 | 411 | SBbc       |    |      |   |
| NGC 6878        | ESO 284-31  | Galaxy  | SGR | 12.7 | 13.3 | 1.6'  | 20 13.9 | -44 32 | 411 | SBb        |    |      |   |
| NGC 6878A       | ESO 284-29  | Galaxy  | SGR | 13.2 | 13.5 | 1.8'  | 20 13.6 | -44 49 | 411 | SBb        |    |      |   |
| NGC 6879        | PK 57-8.1   | Pln Neb | SGE | 11   | 7.3  | 4.7"  | 20 10.4 | +16 55 | 208 | 2a         |    | 15   |   |
| <b>NGC 6882</b> |             | Aster   | VUL | 8.1  | -    | 18'   | 20 11.9 | +26 40 | 163 | II 2 p     |    | 9.9  | H VIII 22;Near cluster NGC 6885                           |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| NGC 6883        | OCL 148     | Opn CL  | CYG | 8    | -    | 15'   | 20 11.3 | +35 51 | 119 | I 3 p n    | 30 |      |   |
| NGC 6884        | PK 82+7.1   | Pln Neb | CYG | 12.6 | 6    | 5.6"  | 20 10.4 | +46 28 | 84  | 2b         |    | 16.7 |   |
| <b>NGC 6885</b> | OCL 152     | Opn CL  | VUL | 8.1  | -    | 7'    | 20 11.9 | +26 29 | 163 | III 2 p    | 30 | 6    | H VIII 20;With 20 Vul                             |
| NGC 6886        | PK 60-7.2   | Pln Neb | SGE | 12.5 | 6.2  | 4"    | 20 12.7 | +19 59 | 163 | 2(3)       |    | 16.5 |   |
| NGC 6887        | ESO 186-27  | Galaxy  | TEL | 12.1 | 13.5 | 3.2'  | 20 17.3 | -52 48 | 436 | Sbc        |    |      |   |
| <b>NGC 6888</b> | LBN 203     | Brt Neb | CYG | 10   | -    | 20'   | 20 12.8 | +38 19 | 119 | E          |    |      | <b>Crescent Neb;</b> Wolf-Rayet * invl            |
| NGC 6889        | ESO 186-29  | Galaxy  | TEL | 13.7 | -    | 1.7'  | 20 18.9 | -53 57 | 436 | SBbc       |    |      |   |
| NGC 6890        | ESO 284-54  | Galaxy  | SGR | 12.3 | 12.8 | 1.6'  | 20 18.3 | -44 48 | 411 | SBb        |    |      |   |
| NGC 6891        | PK 54-12.1  | Pln Neb | DEL | 10.5 | 7.4  | 15.5" | 20 15.1 | +12 42 | 208 | 2a(2b)     |    | 12.3 |   |
| NGC 6893        | ESO 234- 6  | Galaxy  | TEL | 11.8 | 13.3 | 2.6'  | 20 20.8 | -48 14 | 411 | SBO Rin    |    |      |   |
| NGC 6895        |             | Opn CL  | CYG | 12   | -    | 20'   | 20 16.5 | +50 14 | 55  |            |    |      | H VIII 83   |
| NGC 6898        | MCG - 2-52- | Galaxy  | CAP | 14   | -    | 1.2'  | 20 21.1 | -12 22 | 298 | Sa         |    |      |   |
| NGC 6899        | ESO 234-22  | Galaxy  | TEL | 13.4 | -    | 1.7'  | 20 24.4 | -50 26 | 436 | SBbc       |    |      |   |
| NGC 6900        | MCG 0-52-   | Galaxy  | AQL | 14   | -    | 1'    | 20 21.6 | -02 34 | 253 | Sb         |    |      |   |
| NGC 6901        | IC 1316     | Galaxy  | AQL | 13.7 | 13.4 | 1.1'  | 20 22.4 | +06 26 | 208 | SBab       |    |      | IC5000=IC1316                                     |
| NGC 6902        | IC 4948     | Galaxy  | SGR | 10.9 | 14.1 | 6.1'  | 20 24.5 | -43 39 | 412 | SBa        |    |      |   |
| NGC 6902A       | ESO 285- 4  | Galaxy  | SGR | 13.9 | 14.1 | 1.3'  | 20 23.0 | -44 16 | 411 | SBm        |    |      |   |
| NGC 6902B       | ESO 285- 5  | Galaxy  | SGR | 13.6 | 14.2 | 1.5'  | 20 23.1 | -43 52 | 411 | SB Ring    |    |      |   |
| NGC 6903        | ESO 596-29  | Galaxy  | CAP | 11.9 | 13.8 | 2.6'  | 20 23.7 | -19 20 | 343 | E-SO Ba    |    |      |   |
| <b>NGC 6905</b> | PK 61-9.1;H | Pln Neb | DEL | 12   | 10   | 44"   | 20 22.4 | +20 06 | 163 | 3(3)       |    | 14   | <b>Blue Flash Nebula</b>                          |
| NGC 6906        | UGC 11548   | Galaxy  | AQL | 12.3 | 12.4 | 1.6'  | 20 23.6 | +06 27 | 208 | SBbc       |    |      |   |
| <b>NGC 6907</b> | ESO 528- 3  | Galaxy  | CAP | 11.2 | 13.4 | 3.4'  | 20 25.1 | -24 49 | 343 | SBbc       |    |      | H III 141;S shaped spiral                         |
| NGC 6909        | ESO 285-12  | Galaxy  | TEL | 11.7 | 12.6 | 2.2'  | 20 27.6 | -47 02 | 412 | E6         |    |      |   |
| <b>NGC 6910</b> | OCL 181     | Opn CL  | CYG | 7.4  | -    | 8'    | 20 23.2 | +40 47 | 84  | I 2 p n    | 50 | 9.6  | H VIII 56; <b>In Gamma Cyg nebula</b> and Cyg OB9 |
| NGC 6912        | ESO 596-38  | Galaxy  | CAP | 13.1 | 13.5 | 1.4'  | 20 26.9 | -18 37 | 343 | SBc        |    |      |   |
| NGC 6914        | LBN 274     | Brt Neb | CYG | -    | -    | 3'    | 20 24.8 | +42 29 | 85  | R          |    |      |   |
| NGC 6915        | IRAS20251-  | Galaxy  | AQL | 13.1 | -    | 1.5'  | 20 27.8 | -03 05 | 253 | Sab        |    |      |   |
| NGC 6916        | UGC 11554   | Galaxy  | CYG | 13.5 | 14.1 | 1.8'  | 20 23.6 | +58 21 | 55  | SBbc       |    |      |   |
| NGC 6918        | ESO 234-40  | Galaxy  | IND | 13.5 | 13   | 0.9'  | 20 30.8 | -47 28 | 412 | SB0-a      |    |      |   |
| NGC 6919        | ESO 285-27  | Galaxy  | MIC | 13   | 13.6 | 1.6'  | 20 31.6 | -44 13 | 412 | SBc        |    |      |   |
| NGC 6921        | UGC 11570   | Galaxy  | VUL | 13.4 | 11.4 | 0.9'  | 20 28.5 | +25 43 | 163 | Sa         |    |      | sp of 2   |
| NGC 6922        | UGC 11574   | Galaxy  | AQL | 13.5 | 13.7 | 1.3'  | 20 29.9 | -02 12 | 253 | Sc         |    |      |   |
| NGC 6923        | ESO 462-29  | Galaxy  | MIC | 11.9 | 13.1 | 2.6'  | 20 31.7 | -30 50 | 381 | SBb Rin    |    |      |   |
| NGC 6924        | ESO 528-16  | Galaxy  | CAP | 12.8 | 14.1 | 2'    | 20 33.3 | -25 29 | 344 | E-SO       |    |      |   |
| NGC 6925        | ESO 463- 4  | Galaxy  | MIC | 11.3 | 13   | 4.4'  | 20 34.3 | -31 59 | 381 | Sbc        |    |      |   |
| NGC 6926        | UGC 11588   | Galaxy  | AQL | 12.4 | 13.3 | 2'    | 20 33.1 | -02 02 | 254 | SBc/P      |    |      | H III 142;Distorted;UGC 11588                     |
| NGC 6928        | IC 1326     | Galaxy  | DEL | 12.2 | 12.3 | 2.1'  | 20 32.8 | +09 56 | 209 | SBab       |    |      | Brightest in group;P w NGC 6930 at 4'             |
| NGC 6929        | MCG 0-52-   | Galaxy  | AQL | 13.4 | 12.6 | 0.8'  | 20 33.4 | -02 02 | 254 | Sa         |    |      |   |
| NGC 6930        | IC 1326     | Galaxy  | DEL | 12.8 | 12.1 | 1.2'  | 20 33.0 | +09 52 | 209 | SBab       |    |      |   |
| NGC 6931        | MCG - 2-52- | Galaxy  | CAP | 14   | -    | 1'    | 20 33.7 | -11 22 | 299 | Sb         |    |      |   |
| <b>NGC 6934</b> | GCL 117     | Glob CL | DEL | 8.9  | -    | 7'    | 20 34.2 | +07 24 | 209 | VIII       |    |      | H I 103;*10m 2' west                              |
| NGC 6935        | ESO 234-59  | Galaxy  | IND | 12   | 13.2 | 2.1'  | 20 38.3 | -52 07 | 437 | SBa        |    |      |   |
| NGC 6936        | ESO 528-22  | Galaxy  | CAP | 12.8 | 13.4 | 1.8'  | 20 35.9 | -25 17 | 344 | E-SO       |    |      |   |
| NGC 6937        | ESO 234-60  | Galaxy  | IND | 12.9 | 14.4 | 2.1'  | 20 38.8 | -52 09 | 437 | SBab       |    |      |   |
| <b>NGC 6939</b> | OCL 217     | Opn CL  | CEP | 7.8  | -    | 8'    | 20 31.5 | +60 40 | 56  | I 1 m      | 80 | 11.9 | H VI 42;Gal N6946 38' SE                          |
| <b>NGC 6940</b> | OCL 141     | Opn CL  | VUL | 6.3  | -    | 31"   | 20 34.4 | +28 17 | 120 | III 2 m    | 60 | 9.3  | H VII 8;100 * mags 9...                           |
| NGC 6941        | MCG - 1-52- | Galaxy  | AQL | 13.5 | -    | 2'    | 20 36.4 | -04 37 | 254 | Sb         |    |      |   |
| NGC 6942        | ESO 186-73  | Galaxy  | IND | 11.8 | 12.9 | 2.1'  | 20 40.6 | -54 18 | 437 | SBO-a      |    |      |   |
| NGC 6944        | MCG 1-52-   | Galaxy  | DEL | 13.8 | 13.6 | 1.2'  | 20 38.4 | +07 00 | 209 | SO         |    |      |   |
| NGC 6945        | MCG - 1-52- | Galaxy  | AQR | 13.5 | -    | 1.6'  | 20 39.0 | -04 58 | 254 | E-SO       |    |      |   |
| <b>NGC 6946</b> | UGC 11597   | Galaxy  | CEP | 8.8  | 13.8 | 11.2' | 20 34.9 | +60 09 | 56  | SBc        |    |      | H IV 76;One of nearest spirals                    |
| NGC 6947        | ESO 401- 3  | Galaxy  | MIC | 14   | -    | 1.6'  | 20 41.3 | -32 29 | 381 | SBb        |    |      |   |
| NGC 6948        | ESO 187- 9  | Galaxy  | IND | 13.8 | -    | 2.2'  | 20 43.5 | -53 21 | 437 | Sa         |    |      |   |
| NGC 6949        | UGC 11600   | Galaxy  | CEP | 13.5 | 13.9 | 1.4'  | 20 35.1 | +64 48 | 32  | S Ring     |    |      |   |
| NGC 6951        | NGC 6952    | Galaxy  | CEP | 10.6 | 13.3 | 3.9'  | 20 37.2 | +66 06 | 32  | SBbc       |    |      |   |
| NGC 6952        | NGC 6951    | Galaxy  | CEP | 11.8 | -    | 3.9'  | 20 37.2 | +66 06 | 32  | SBbc       |    |      |   |
| NGC 6954        | UGC 11618   | Galaxy  | DEL | 13.2 | 12.6 | 1'    | 20 44.1 | +03 13 | 254 | Sa         |    |      |   |
| NGC 6955        | UGC 11621   | Galaxy  | DEL | 13.6 | 14.1 | 1.4'  | 20 44.3 | +02 36 | 254 | Sbc        |    |      |   |
| NGC 6956        | UGC 11619   | Galaxy  | DEL | 12.3 | 13.6 | 2'    | 20 43.9 | +12 31 | 209 | SBb        |    |      | H III 219;Brightest of 3;UGC 11619                |
| NGC 6958        | ESO 341-15  | Galaxy  | MIC | 11.4 | 12.7 | 2.1'  | 20 48.7 | -38 00 | 381 | E1         |    |      |   |
| NGC 6959        | ZWG 374. 13 | Galaxy  | AQR | 13.7 | 11.8 | 0.6'  | 20 47.1 | +00 26 | 254 | SO         |    |      |   |
| <b>NGC 6960</b> | LBN 191     | SN Rem  | CYG | 7    | -    | 210'  | 20 45.7 | +30 43 | 120 |            |    |      | <b>Veil Nebula</b> western part;* 52 CYG invl     |
| NGC 6961        | ZWG 374. 14 | Galaxy  | AQR | 13.7 | 12.3 | 0.6'  | 20 47.2 | +00 22 | 254 | Elliptical |    |      |   |
| NGC 6962        | UGC 11628   | Galaxy  | AQR | 12.1 | 14   | 2.9'  | 20 47.3 | +00 19 | 254 | SBab       |    |      | H II 426;P w NGC 6964 at 2' PA 135;brst in group  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 6964        | UGC 11629   | Galaxy  | AQR | 13   | 13.8 | 1.7' | 20 47.4 | +00 18 | 254 | E4p        |    |      | H II 427  |
| NGC 6965        | UGC 11630   | Galaxy  | AQR | 14   | 13   | 0.7' | 20 47.3 | +00 29 | 254 | SO         |    |      | P w NGC 6963 at 5.5' PA 323                           |
| NGC 6967        | UGC 11630   | Galaxy  | AQR | 13.1 | 12.6 | 0.9' | 20 47.6 | +00 25 | 254 | Sa         |    |      |   |
| NGC 6968        | MCG - 2-53- | Galaxy  | AQR | 14   | -    | 1.5' | 20 48.5 | -08 22 | 299 | E-SO       |    |      |   |
| NGC 6969        | UGC 11633   | Galaxy  | DEL | 14   | 12.8 | 1.1' | 20 48.5 | +07 44 | 209 | Sa         |    |      |   |
| NGC 6970        | ESO 235- 8  | Galaxy  | IND | 12.6 | 12.6 | 1.4' | 20 52.2 | -48 47 | 412 | SBa        |    |      |   |
| NGC 6971        | UGC 11637   | Galaxy  | DEL | 13.7 | 13.5 | 1.1' | 20 49.4 | +06 00 | 209 | Sb         |    |      |   |
| NGC 6972        | UGC 11640   | Galaxy  | DEL | 13.3 | 12.4 | 1.1' | 20 50.0 | +09 54 | 209 | Sa         |    |      |   |
| <b>NGC 6974</b> | SG 3.202    | SN Rem  | CYG | -    | -    |      | 20 51.1 | +31 50 | 120 |            |    |      | <b>part of Veil</b>                                   |
| NGC 6976        | NGC 6975    | Galaxy  | AQR | 14   | 14.2 | 1.3' | 20 52.4 | -05 46 | 299 | Sbc        |    |      |   |
| NGC 6977        | MCG - 1-53- | Galaxy  | AQR | 13.2 | 13.2 | 1.3' | 20 52.5 | -05 45 | 299 | SBb        |    |      |   |
| NGC 6978        | MCG - 1-53- | Galaxy  | AQR | 13.3 | 13.1 | 1.5' | 20 52.6 | -05 43 | 299 | Sb         |    |      |   |
| <b>NGC 6979</b> |             | Brn Neb | CYG | -    | -    | 3'   | 20 51.0 | +32 08 | 120 | E          |    |      | H II 206;Portion of Veil Neb between two arcs         |
| NGC 6982        | ESO 235-19  | Galaxy  | IND | 13.7 | 13.1 | 1'   | 20 57.3 | -51 52 | 437 | SBa        |    |      |   |
| NGC 6983        | ESO 286-14  | Galaxy  | MIC | 13.3 | 12.4 | 0.8' | 20 56.7 | -43 59 | 412 | Sab        |    |      |   |
| NGC 6984        | ESO 235-20  | Galaxy  | IND | 12.7 | 13.4 | 1.8' | 20 57.9 | -51 52 | 437 | SBc        |    |      |   |
| NGC 6986        | ESO 598- 7  | Galaxy  | CAP | 13.6 | 12.9 | 1'   | 20 56.5 | -18 34 | 344 | E-SO       |    |      |   |
| NGC 6987        | ESO 235-21  | Galaxy  | IND | 12.4 | 13   | 1.4' | 20 58.2 | -48 38 | 412 | Elliptical |    |      |   |
| NGC 6990        | ESO 187-43  | Galaxy  | IND | 14   | -    | 1.2' | 21 00.0 | -55 34 | 437 | Sa         |    |      |   |
| NGC 6991        | OCL 201     | Opn CL  | CYG | -    | -    | 5'   | 20 56.6 | +47 25 | 85  | III 3 p n  |    |      | H VIII 76   |
| <b>NGC 6992</b> | CED 182B    | SN Rem  | CYG | 7    | -    | 60'  | 20 56.4 | +31 43 | 120 | R          |    |      | <b>Veil Nebula</b> eastern part                       |
| NGC 6993        | ESO 529-11  | Galaxy  | CAP | 13.8 | -    | 1.2' | 20 53.9 | -25 28 | 344 | Sc         |    |      |   |
| <b>NGC 6995</b> | CED 182C    | SN Rem  | CYG | 7    | -    | 12'  | 20 57.1 | +31 13 | 120 | R          |    |      | part of veil  |
| NGC 6996        |             | Opn CL  | CYG | 10   | -    | 7'   | 20 56.5 | +45 29 | 85  | III 2 p n  | 40 |      |   |
| NGC 6997        | OCL 197     | Opn CL  | CYG | 10   | -    | 7'   | 20 56.8 | +44 39 | 85  |            |    |      | Scattered Cl in west <b>part of North America Neb</b> |
| NGC 6999        | ESO 464-15  | Galaxy  | MIC | 14   | 13.4 | 0.9' | 21 02.0 | -28 04 | 382 | SO         |    |      |   |
| <b>NGC 7000</b> | LBN 373     | Brn Neb | CYG | 4    | -    | 120' | 21 01.8 | +44 12 | 85  | E          |    |      | <b>North America nebula</b> ;Cl NGC 6997 invl         |
| NGC 7001        | UGC 11663   | Galaxy  | AQR | 12.9 | 13.3 | 1.4' | 21 01.1 | -00 12 | 254 | Sab        |    |      |   |
| NGC 7002        | ESO 235-43  | Galaxy  | IND | 12.4 | 13   | 1.5' | 21 03.8 | -49 02 | 412 | Elliptical |    |      |   |
| NGC 7003        | UGC 11662   | Galaxy  | DEL | 13   | 12.7 | 1.1' | 21 00.7 | +17 48 | 164 | Sbc        |    |      |   |
| NGC 7004        | ESO 235-46  | Galaxy  | IND | 13.8 | 13.4 | 1.3' | 21 04.0 | -49 07 | 412 | SBO-a      |    |      |   |
| <b>NGC 7006</b> | GCL 119     | Glob CL | DEL | 10.6 | -    | 2.8' | 21 01.5 | +16 11 | 209 | I          |    |      | H I 52;Stars eF;very remote globular                  |
| NGC 7007        | ESO 187-48  | Galaxy  | IND | 12   | 12.7 | 2'   | 21 05.5 | -52 33 | 437 | E-SO       |    |      |   |
| <b>NGC 7008</b> | PK 93+5.2   | Pln Neb | CYG | 12   | 11.8 | 86"  | 21 00.5 | +54 33 | 56  | 3          |    | 13.9 | H I 192   |
| <b>NGC 7009</b> | PK 37-34.1  | Pln Neb | AQR | 8.3  | 6.2  | 28"  | 21 04.2 | -11 22 | 300 | 4(6)       |    | 12.9 | <b>Saturn Nebula</b> ;H IV 1;bright blue-green disk   |
| NGC 7010        | IC 5082     | Galaxy  | AQR | 14   | -    | 1.9' | 21 04.7 | -12 20 | 300 | Elliptical |    |      |   |
| NGC 7012        | ESO 286-51  | Galaxy  | MIC | 13.7 | -    | 2.4' | 21 06.8 | -44 49 | 412 | Elliptical |    |      |   |
| NGC 7013        | UGC 11670   | Galaxy  | CYG | 11.3 | 13.1 | 4.5' | 21 03.6 | +29 54 | 121 | Sa         |    |      | H II 203  |
| NGC 7014        | ESO 286-57  | Galaxy  | IND | 12.4 | 13.4 | 1.7' | 21 07.9 | -47 11 | 412 | Elliptical |    |      |   |
| NGC 7015        | UGC 11674   | Galaxy  | EQU | 12.5 | 13.6 | 1.8' | 21 05.6 | +11 25 | 210 | Sbc        |    |      |   |
| NGC 7018        | ESO 529-27  | Galaxy  | CAP | 14   | -    | 1.3' | 21 07.4 | -25 26 | 345 | Elliptical |    |      |   |
| NGC 7022        | ESO 235-65  | Galaxy  | IND | 13   | 13.4 | 1.5' | 21 09.6 | -49 18 | 412 | SBO        |    |      |   |
| <b>NGC 7023</b> | OCL 235     | CL+Neb  | CEP | 7.1  | -    | 5'   | 21 00.5 | +68 10 | 33  | E+*        |    |      | H IV 74;Complex structure w Br and dark filaments     |
| NGC 7025        | UGC 11681   | Galaxy  | DEL | 12.8 | 13.6 | 1.9' | 21 07.8 | +16 20 | 210 | Sa         |    |      |   |
| <b>NGC 7026</b> | PK 89+0.1   | Pln Neb | CYG | 12   | 8.5  | 25"  | 21 06.3 | +47 51 | 85  | 3a         |    | 14   | double at high power                                  |
| <b>NGC 7027</b> | PK 84-3.1   | Pln Neb | CYG | 9.6  | -    | 18"  | 21 07.0 | +42 14 | 85  | 3a         |    | 16.5 | bizarre spectrum                                      |
| NGC 7029        | ESO 235-72  | Galaxy  | IND | 11.5 | 12.9 | 2.5' | 21 11.9 | -49 17 | 412 | Elliptical |    |      |   |
| NGC 7030        | ESO 598-28  | Galaxy  | CAP | 13.7 | 13.1 | 0.9' | 21 11.2 | -20 29 | 345 | SBab       |    |      |   |
| NGC 7031        | OCL 210     | Opn CL  | CYG | 9.1  | -    | 5'   | 21 07.3 | +50 50 | 56  | IV 1 p     | 50 | 11.3 | H VIII 74   |
| NGC 7034        | UGC 11687   | Galaxy  | PEG | 13.8 | 13.5 | 1'   | 21 09.6 | +15 09 | 210 | Elliptical |    |      |   |
| NGC 7036        |             | Opn CL  | PEG | 12   | -    | 8'   | 21 10.2 | +15 23 | 210 |            |    |      |   |
| NGC 7038        | ESO 286-79  | Galaxy  | IND | 11.9 | 13.5 | 3.1' | 21 15.1 | -47 13 | 413 | SBc        |    |      |   |
| NGC 7039        | OCL 203     | Opn CL  | CYG | 7.6  | -    | 25'  | 21 11.2 | +45 39 | 85  | III 2 p    | 50 | 11.3 |   |
| NGC 7041        | ESO 235-82  | Galaxy  | IND | 11.2 | 12.9 | 3.6' | 21 16.5 | -48 22 | 413 | E-SO       |    |      |   |
| NGC 7042        | UGC 11702   | Galaxy  | PEG | 12   | 13.2 | 2'   | 21 13.8 | +13 34 | 210 | Sb         |    |      | H III 209;UGC 11702                                   |
| NGC 7043        | UGC 11704   | Galaxy  | PEG | 13.7 | 13.4 | 1'   | 21 14.1 | +13 38 | 210 | SBa        |    |      |   |
| <b>NGC 7044</b> | OCL 198     | Opn CL  | CYG | 12   | -    | 6'   | 21 12.9 | +42 29 | 86  | II 2 R     |    | 15   | H VI 24   |
| NGC 7046        | UGC 11708   | Galaxy  | EQU | 13.1 | 13.9 | 1.9' | 21 14.9 | +02 50 | 255 | SBc        |    |      | H III 858   |
| NGC 7047        | UGC 11712   | Galaxy  | AQR | 13.4 | 12.9 | 1.2' | 21 16.5 | -00 50 | 255 | Sb Ring    |    |      |   |
| NGC 7048        | PK 88-1.1   | Pln Neb | CYG | 11   | 12.2 | 60"  | 21 14.3 | +46 17 | 86  | 3b         |    | 18   |   |
| NGC 7049        | ESO 236- 1  | Galaxy  | IND | 10.7 | 13.3 | 4.5' | 21 19.0 | -48 34 | 413 | SO         |    |      |   |
| NGC 7051        | MCG - 2-54- | Galaxy  | AQR | 14   | -    | 1.4' | 21 19.9 | -08 47 | 300 | Sa         |    |      |   |
| NGC 7052        | UGC 11718   | Galaxy  | VUL | 12.4 | 13.8 | 2.5' | 21 18.6 | +26 27 | 165 | Elliptical |    |      | H III 145   |
| NGC 7053        | UGC 11727   | Galaxy  | PEG | 13   | 13.5 | 1.4' | 21 21.1 | +23 05 | 165 | Compac     |    |      | II Zw 124   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES                       |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|---------------------------------|
| NGC 7056        | UGC 11734   | Galaxy  | PEG | 12.9 | 12.7 | 1'   | 21 22.1 | +18 40 | 165 | SBbc       |     |      |                                 |
| NGC 7057        | ESO 287-17  | Galaxy  | MIC | 12.6 | 12.8 | 1.4' | 21 25.0 | -42 28 | 413 | E-SO       |     |      |                                 |
| NGC 7060        | ESO 287-22  | Galaxy  | MIC | 12.9 | 13.2 | 1.7' | 21 25.9 | -42 25 | 413 | SBa        |     |      |                                 |
| <b>NGC 7062</b> | OCL 205     | Opn CL  | CYG | 8.3  | -    | 7'   | 21 23.5 | +46 23 | 86  | III 1 p    | 30  | 10.1 | H VII 51                        |
| NGC 7063        | OCL 192     | Opn CL  | CYG | 7    | -    | 8'   | 21 24.4 | +36 30 | 121 | III 2 p    | 12  | 8.9  |                                 |
| NGC 7064        | ESO 188- 9  | Galaxy  | IND | 12.5 | 13.3 | 3.8' | 21 29.1 | -52 46 | 437 | SBc        |     |      |                                 |
| NGC 7065A       | MCG - 1-54- | Galaxy  | AQR | 13.1 | 13.7 | 1.5' | 21 27.0 | -07 01 | 300 | SBc        |     |      |                                 |
| NGC 7066        | UGC 11741   | Galaxy  | PEG | 13.8 | 13.6 | 0.9' | 21 26.2 | +14 11 | 210 | Sb         |     |      | Companion superimposed          |
| NGC 7067        | OCL 208     | Opn CL  | CYG | 9.7  | -    | 3'   | 21 24.2 | +48 01 | 86  | II 2 p     | 20  | 11.2 | H VII 50                        |
| NGC 7069        | UGC 11747   | Galaxy  | AQR | 13.4 | 13.4 | 1.3' | 21 28.1 | -01 39 | 255 | E-SO       |     |      |                                 |
| NGC 7070        | ESO 287-28  | Galaxy  | GRU | 12.3 | 13.7 | 2.4' | 21 30.4 | -43 05 | 413 | SBc        |     |      |                                 |
| NGC 7070A       | ESO 287-34  | Galaxy  | GRU | 12.3 | 13.3 | 2.1' | 21 31.8 | -42 51 | 413 | Sa         |     |      |                                 |
| NGC 7072        | ESO 287-31  | Galaxy  | GRU | 13.7 | 12.9 | 0.9' | 21 30.6 | -43 09 | 413 | SBcd       |     |      |                                 |
| NGC 7072A       | ESO 287-29  | Galaxy  | GRU | 13.9 | 12.9 | 0.8' | 21 30.4 | -43 12 | 413 | SBc        |     |      |                                 |
| NGC 7073        | MCG - 2-54- | Galaxy  | CAP | 14   | -    | 0.9' | 21 29.4 | -11 29 | 300 | Sbc        |     |      |                                 |
| NGC 7075        | ESO 343- 4  | Galaxy  | GRU | 12.7 | 12.7 | 1.2' | 21 31.5 | -38 37 | 382 | Elliptical |     |      |                                 |
| NGC 7077        | UGC 11755   | Galaxy  | AQR | 13.1 | 12.5 | 0.8' | 21 30.0 | +02 25 | 255 | Elliptical |     |      |                                 |
| NGC 7079        | ESO 287-36  | Galaxy  | GRU | 11.6 | 12.6 | 2'   | 21 32.6 | -44 04 | 413 | SBO        |     |      |                                 |
| NGC 7080        | UGC 11756   | Galaxy  | VUL | 12.3 | 13.4 | 1.8' | 21 30.0 | +26 43 | 165 | SBb        |     |      |                                 |
| NGC 7081        | UGC 11759   | Galaxy  | AQR | 12.7 | 13.2 | 1.3' | 21 31.4 | +02 29 | 255 | Sb         |     |      | H III 859;UGC 11759             |
| NGC 7082        | OCL 209     | Opn CL  | CYG | 7.2  | -    | 25'  | 21 29.4 | +47 05 | 86  | IV 2 p     |     | 9.9  | H VII 52                        |
| NGC 7084        |             | Opn CL  | PEG | 12   | -    | 20'  | 21 32.5 | +17 31 | 165 |            |     |      |                                 |
| <b>NGC 7086</b> | OCL 214     | Opn CL  | CYG | 8.4  | -    | 9'   | 21 30.5 | +51 36 | 57  | II 2 m     | 50  | 10.2 | H VI 32                         |
| NGC 7087        | ESO 343- 8  | Galaxy  | GRU | 13   | 12.5 | 1.1' | 21 34.6 | -40 49 | 413 | Sab        |     |      |                                 |
| <b>NGC 7090</b> | ESO 188-12  | Galaxy  | IND | 10.7 | 13   | 7.3' | 21 36.5 | -54 33 | 438 | SBc        |     |      |                                 |
| NGC 7091        | IC 5114     | Galaxy  | GRU | 12.9 | 14.1 | 2.1' | 21 34.1 | -36 39 | 382 | SBd        |     |      |                                 |
| NGC 7094        | PK 66-28.1  | Pln Neb | PEG | 13.4 | 14.7 | 99"  | 21 36.9 | +12 47 | 211 | 4          |     | 13.6 |                                 |
| NGC 7097        | ESO 287-48  | Galaxy  | GRU | 11.7 | 12.7 | 1.8' | 21 40.2 | -42 32 | 413 | Elliptical |     |      |                                 |
| NGC 7106        | ESO 188-17  | Galaxy  | IND | 13.9 | -    | 1.7' | 21 42.6 | -52 42 | 438 | SBc        |     |      |                                 |
| NGC 7107        | ESO 287-52  | Galaxy  | GRU | 12.8 | 13.8 | 2.1' | 21 42.4 | -44 48 | 413 | SBd        |     |      |                                 |
| NGC 7108        | NGC 7111    | Galaxy  | AQR | 13.8 | -    | 1.4' | 21 41.9 | -06 43 | 301 | Elliptical |     |      |                                 |
| NGC 7109        | ESO 403-15  | Galaxy  | PSA | 13.4 | 12.9 | 0.8' | 21 42.0 | -34 27 | 383 | Elliptical |     |      |                                 |
| NGC 7110        | ESO 403-16  | Galaxy  | PSA | 13.4 | 13   | 1.3' | 21 42.2 | -34 10 | 383 | SBb        |     |      |                                 |
| NGC 7115        | ESO 531-25  | Galaxy  | PSA | 14   | -    | 1.7' | 21 43.7 | -25 21 | 346 | Sb         |     |      |                                 |
| NGC 7116        | UGC 11796   | Galaxy  | CYG | 13.3 | 12.4 | 1.1' | 21 42.7 | +28 57 | 122 | Sbc        |     |      |                                 |
| NGC 7117        | ESO 236-40  | Galaxy  | GRU | 12.8 | 12.9 | 1.4' | 21 45.8 | -48 25 | 413 | E-SO       |     |      |                                 |
| NGC 7118        | ESO 236-45  | Galaxy  | GRU | 12.6 | 13   | 1.4' | 21 46.2 | -48 21 | 413 | E-SO       |     |      |                                 |
| NGC 7119A       | NGC 7119-1  | Galaxy  | GRU | 12.9 | 12.6 | 1.2' | 21 46.3 | -46 31 | 413 | SBbc       |     |      |                                 |
| NGC 7119B       | NGC 7119-2  | Galaxy  | GRU | 13   | 10.9 | 1.1' | 21 46.2 | -46 31 | 413 | Sc         |     |      |                                 |
| NGC 7121        | MCG - 1-55- | Galaxy  | AQR | 14   | -    | 1.1' | 21 44.9 | -03 37 | 256 | Sbc        |     |      |                                 |
| NGC 7124        | ESO 237- 2  | Galaxy  | IND | 12.3 | 13.6 | 2.8' | 21 48.1 | -50 34 | 438 | SBbc       |     |      |                                 |
| NGC 7127        | OCL 219     | Opn CL  | CYG | -    | -    | 2.8' | 21 43.9 | +54 37 | 57  | IV 2 p     | 12  |      |                                 |
| <b>NGC 7128</b> | OCL 218     | Opn CL  | CYG | 9.7  | -    | 3.1' | 21 44.0 | +53 43 | 57  | II 3 m     | 35  | 11.5 | H VII 40                        |
| <b>NGC 7129</b> | OCL 240     | CL+Neb  | CEP | 11.5 | -    | 2.7' | 21 43.0 | +66 07 | 33  | IV 2 p n:l | 10  | 11.5 | H IV 75;Sev F * invl            |
| NGC 7130        | IC 5135     | Galaxy  | PSA | 12.1 | 12.7 | 1.6' | 21 48.3 | -34 57 | 383 | Sa         |     |      |                                 |
| NGC 7131        | MCG - 2-55- | Galaxy  | CAP | 14   | -    | 1.7' | 21 47.6 | -13 11 | 301 | SO         |     |      |                                 |
| NGC 7135        | ESO 403-35  | Galaxy  | PSA | 11.7 | 13.5 | 2.9' | 21 49.8 | -34 53 | 383 | E-SO       |     |      |                                 |
| NGC 7137        | UGC 11815   | Galaxy  | PEG | 12.4 | 13.1 | 1.6' | 21 48.2 | +22 10 | 166 | SBc        |     |      | H II 261                        |
| NGC 7139        | PK 104+7.1  | Pln Neb | CEP | 13.5 | 13.9 | 86"  | 21 46.1 | +63 48 | 33  | 3b         |     | 18.1 | H III 696                       |
| NGC 7140        | NGC 7141    | Galaxy  | IND | 12.5 | -    | 4.1' | 21 52.3 | -55 34 | 438 | SBbc       |     |      | N2 reports DEC one degree north |
| NGC 7141        | NGC 7140    | Galaxy  | IND | 11.5 | 14.1 | 4.1' | 21 52.3 | -55 34 | 438 | SBbc       |     |      |                                 |
| <b>NGC 7142</b> | OCL 241     | Opn CL  | CEP | 9.3  | -    | 4.3' | 21 45.2 | +65 46 | 33  | II 2 r     | 100 | 12.1 | H VII 66                        |
| NGC 7144        | ESO 237-11  | Galaxy  | GRU | 10.8 | 13.6 | 3.7' | 21 52.7 | -48 15 | 413 | Elliptical |     |      |                                 |
| NGC 7145        | ESO 237-13  | Galaxy  | GRU | 11.1 | 13.1 | 2.5' | 21 53.3 | -47 53 | 413 | Elliptical |     |      |                                 |
| NGC 7147        | MCG 0-55-   | Galaxy  | PEG | 13.5 | 13.2 | 1'   | 21 52.0 | +03 04 | 256 | SBO-a      |     |      |                                 |
| NGC 7149        | UGC 11835   | Galaxy  | PEG | 13.1 | 13.4 | 1.3' | 21 52.2 | +03 18 | 256 | Elliptical |     |      |                                 |
| NGC 7151        | ESO 237-15  | Galaxy  | IND | 12.8 | 14   | 2.9' | 21 55.1 | -50 40 | 438 | SBc        |     |      |                                 |
| NGC 7152        | ESO 466-13  | Galaxy  | PSA | 13.6 | 13.1 | 1.2' | 21 54.0 | -29 17 | 383 | SBb        |     |      |                                 |
| NGC 7153        | ESO 466-16  | Galaxy  | PSA | 13.4 | 12.7 | 1.9' | 21 54.6 | -29 04 | 383 | Sb         |     |      |                                 |
| NGC 7154        | ESO 404- 8  | Galaxy  | PSA | 12.4 | 13.6 | 2.2' | 21 55.4 | -34 49 | 383 | SB         |     |      |                                 |
| NGC 7155        | IC 5143     | Galaxy  | IND | 12.2 | 13.5 | 2.3' | 21 56.2 | -49 31 | 413 | SBO        |     |      |                                 |
| NGC 7156        | UGC 11843   | Galaxy  | PEG | 12.5 | 13.3 | 1.7' | 21 54.6 | +02 57 | 256 | SBc        |     |      | H III 452                       |
| <b>NGC 7160</b> | OCL 236     | Opn CL  | CEP | 6.1  | -    | 7'   | 21 53.7 | +62 36 | 33  | II 3 p     | 12  | 7    | H VIII 67;In Cep OB2            |
| NGC 7162        | ESO 288-26  | Galaxy  | GRU | 12.7 | 13.7 | 2.8' | 21 59.6 | -43 18 | 413 | Sc         |     |      |                                 |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES                                       |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| NGC 7162A       | ESO 288-28  | Galaxy | GRU | 12.6 | 14.4 | 2.6' | 22 00.6 | -43 09 | 414 | SB         |    |      |   |
| NGC 7163        | ESO 466-30  | Galaxy | PSA | 13.4 | 14   | 1.9' | 21 59.3 | -31 53 | 383 | SBab       |    |      |   |
| NGC 7165        | MCG - 3-56- | Galaxy | AQR | 14   | -    | 0.9' | 21 59.4 | -16 31 | 301 | Sab Ring   |    |      | H III 930                                       |
| NGC 7166        | ESO 288-27  | Galaxy | GRU | 11.9 | 12.6 | 2.4' | 22 00.5 | -43 23 | 414 | E-SO       |    |      |   |
| NGC 7167        | ESO 532- 9  | Galaxy | AQR | 12.5 | 13.2 | 1.7' | 22 00.5 | -24 38 | 346 | SBc        |    |      |   |
| NGC 7168        | ESO 237-26  | Galaxy | IND | 11.9 | 13.1 | 1.9' | 22 02.1 | -51 45 | 438 | Elliptical |    |      |   |
| NGC 7171        | MCG - 2-56- | Galaxy | AQR | 12.2 | 13.6 | 2.3' | 22 01.0 | -13 16 | 301 | SBb        |    |      | H III 692                                       |
| NGC 7172        | ESO 466-38  | Galaxy | PSA | 11.9 | 13.1 | 2.4' | 22 02.0 | -31 52 | 383 | Sa         |    |      | Equatorial dust band;Nearly edge-on             |
| NGC 7173        | NGC 7174    | Galaxy | PSA | 12   | 12.1 | 1.9' | 22 02.1 | -31 58 | 383 | Elliptical |    |      |   |
| NGC 7174        | ESO 466-40  | Galaxy | PSA | 13.3 | 14.3 | 2.6' | 22 02.1 | -32 00 | 383 | Sab        |    |      |   |
| NGC 7176        | ESO 466-41  | Galaxy | PSA | 11.3 | 11.1 | 2.1' | 22 02.1 | -31 59 | 383 | Elliptical |    |      |   |
| NGC 7177        | UGC 11872   | Galaxy | PEG | 11.2 | 13   | 3.2' | 22 00.7 | +17 44 | 166 | SBb        |    |      | H II 247  |
| NGC 7178        | ESO 404-22  | Galaxy | PSA | 14   | 13.2 | 1.1' | 22 02.4 | -35 47 | 383 | SBb        |    |      |   |
| NGC 7180        | ESO 601- 6  | Galaxy | AQR | 12.6 | 12.7 | 1.5' | 22 02.3 | -20 33 | 346 | SO         |    |      | H III 693                                       |
| NGC 7181        | ZWG 377. 14 | Galaxy | AQR | 14   | 13.4 | 1'   | 22 01.7 | -01 58 | 256 | SO         |    |      |   |
| NGC 7183        | ESO 601- 8  | Galaxy | AQR | 11.9 | 13.4 | 3.8' | 22 02.4 | -18 55 | 346 | Sa         |    |      | H II 595  |
| <b>NGC 7184</b> | ESO 601- 9  | Galaxy | AQR | 10.9 | 13.1 | 5.9' | 22 02.7 | -20 49 | 346 | SBc Ring   |    |      | H II 1;With Saturn-like inner ring              |
| NGC 7185        | ESO 601-10  | Galaxy | AQR | 12.6 | 13.8 | 2.3' | 22 02.9 | -20 28 | 346 | E-SO Ba    |    |      |   |
| NGC 7187        | ESO 404-24  | Galaxy | PSA | 12.5 | 13   | 1.3' | 22 02.7 | -32 48 | 383 | Sa Ring    |    |      |   |
| NGC 7188        | ESO 601-11  | Galaxy | AQR | 13.2 | 13.3 | 1.6' | 22 03.5 | -20 19 | 346 | SBbc       |    |      |   |
| NGC 7189        | UGC 11882   | Galaxy | AQR | 13.5 | 12.9 | 1'   | 22 03.3 | +00 34 | 256 | SBb        |    |      |   |
| NGC 7190        | UGC 11885   | Galaxy | PEG | 13.8 | 12.8 | 0.9' | 22 03.1 | +11 12 | 211 | Sa         |    |      |   |
| NGC 7194        | UGC 11888   | Galaxy | PEG | 13.1 | 13.1 | 1.1' | 22 03.5 | +12 38 | 211 | Elliptical |    |      | Brightest in group                              |
| NGC 7196        | ESO 237-36  | Galaxy | IND | 11.5 | 13.1 | 2.5' | 22 05.9 | -50 07 | 438 | Elliptical |    |      |   |
| NGC 7197        | UGC 11887   | Galaxy | LAC | 12.8 | 12.9 | 1.6' | 22 03.0 | +41 04 | 87  | Sa         |    |      | H II 599  |
| NGC 7198        | MCG 0-56-   | Galaxy | AQR | 13.3 | 13.6 | 1.5' | 22 05.2 | -00 39 | 256 | SO         |    |      |   |
| NGC 7200        | ESO 237-37  | Galaxy | IND | 12.9 | 13.5 | 1.6' | 22 07.2 | -50 00 | 414 | Elliptical |    |      |   |
| NGC 7201        | ESO 467- 4  | Galaxy | PSA | 12.8 | 12.4 | 1.6' | 22 06.5 | -31 16 | 383 | Sab        |    |      |   |
| NGC 7203        | ESO 467- 7  | Galaxy | PSA | 12.6 | 12.8 | 1.6' | 22 06.7 | -31 10 | 383 | SBO-a      |    |      |   |
| NGC 7204        | ESO 467- 8  | Galaxy | PSA | 13.5 | 12.7 | 1.3' | 22 06.9 | -31 03 | 383 | Sa         |    |      |   |
| NGC 7205        | ESO 146- 9  | Galaxy | IND | 10.9 | 13.1 | 4'   | 22 08.6 | -57 27 | 438 | Sbc        |    |      |   |
| NGC 7205A       | ESO 146- 7  | Galaxy | IND | 14   | 13.9 | 1.2' | 22 07.5 | -57 28 | 438 | SBcd       |    |      |   |
| NGC 7206        | UGC 11904   | Galaxy | PEG | 13.3 | 13.7 | 1.3' | 22 05.7 | +16 47 | 211 | SO         |    |      | Compact;Brightest of 3                          |
| NGC 7208        | ESO 467-10  | Galaxy | PSA | 12.8 | 11.9 | 0.9' | 22 08.4 | -29 03 | 383 | SBO        |    |      |   |
| <b>NGC 7209</b> | OCL 215     | Opn CL | LAC | 7.7  | -    | 25'  | 22 05.1 | +46 29 | 87  | III 1 p    | 25 | 9    | H VII 53  |
| NGC 7212        | UGC 1212    | Galaxy | PEG | 13.8 | 13.3 | 1.2' | 22 07.0 | +10 14 | 211 | Sb         |    |      | Companion superimposed;distorted                |
| NGC 7213        | ESO 288-43  | Galaxy | GRU | 10.1 | 12.3 | 3.7' | 22 09.3 | -47 10 | 414 | Sa         |    |      | 16' SE from Alpha Gru                           |
| NGC 7214        | ESO 467-12  | Galaxy | PSA | 12.7 | 13.8 | 2.7' | 22 09.1 | -27 49 | 347 | SBc/P      |    |      |   |
| NGC 7215        | ZWG 377. 3  | Galaxy | AQR | 13.9 | 12.7 | 1.1' | 22 08.6 | +00 31 | 257 | SO         |    |      |   |
| <b>NGC 7217</b> | UGC 11914   | Galaxy | PEG | 10.1 | 12.7 | 4'   | 22 07.9 | +31 22 | 122 | Sb         |    |      | H II 207;vB diff Nuc .35'X0.27'many knotty arms |
| NGC 7218        | MCG - 3-56- | Galaxy | AQR | 12   | 13   | 2.6' | 22 10.2 | -16 40 | 302 | SBc        |    |      | H II 897;Central mass appears triple            |
| NGC 7220        | ESO 532-28  | Galaxy | AQR | 13.5 | 12.8 | 0.9' | 22 11.5 | -22 57 | 347 | SBO        |    |      |   |
| NGC 7221        | ESO 467-18  | Galaxy | PSA | 12.1 | 13.3 | 2'   | 22 11.3 | -30 34 | 383 | SBbc       |    |      |   |
| NGC 7222        | UGC 11934   | Galaxy | AQR | 13.8 | 14   | 1.2' | 22 10.9 | +02 06 | 257 | SBab       |    |      | p of 2  |
| NGC 7223        | UGC 11931   | Galaxy | LAC | 12.2 | 12.8 | 1.7' | 22 10.2 | +41 01 | 87  | SBc        |    |      | H III 862;UGC 11931 asym spir w 3 main arms     |
| NGC 7224        | UGC 11940   | Galaxy | PEG | 13.2 | 13.8 | 1.6' | 22 11.6 | +25 52 | 167 | Elliptical |    |      |   |
| NGC 7225        | ESO 532-33  | Galaxy | PSA | 12.2 | 12.8 | 2'   | 22 13.1 | -26 09 | 347 | Sa Ring    |    |      |   |
| NGC 7226        | OCL 226     | Opn CL | CEP | 9.6  | -    | 1.8' | 22 10.5 | +55 25 | 57  | I 1 p      | 25 | 10.8 |   |
| NGC 7227        | UGC 11942   | Galaxy | LAC | 13.5 | 13.1 | 1.3' | 22 11.5 | +38 43 | 122 | SO         |    |      |   |
| NGC 7228        | UGC 11945   | Galaxy | LAC | 13.5 | 13.9 | 1.3' | 22 11.8 | +38 42 | 122 | SBa        |    |      |   |
| NGC 7229        | ESO 467-24  | Galaxy | PSA | 12.5 | 13.5 | 1.8' | 22 14.1 | -29 23 | 383 | SBc        |    |      |   |
| NGC 7230        | MCG - 3-56- | Galaxy | AQR | 14   | -    | 0.9' | 22 14.2 | -17 05 | 347 | SBbc       |    |      | H III 931                                       |
| NGC 7231        | UGC 11951   | Galaxy | LAC | 13   | 13.1 | 1.9' | 22 12.5 | +45 20 | 87  | SBa        |    |      | H II 606  |
| NGC 7232        | ESO 289- 7  | Galaxy | GRU | 12   | 12.7 | 2.6' | 22 15.6 | -45 51 | 414 | SBa        |    |      | P w NGC 7233 @2'                                |
| NGC 7232A       | ESO 289- 3  | Galaxy | GRU | 13   | 12.7 | 2.1' | 22 13.7 | -45 54 | 414 | SBab       |    |      |   |
| NGC 7232B       | ESO 289- 9  | Galaxy | GRU | 13.6 | 14.5 | 1.6' | 22 15.9 | -45 47 | 414 | SB         |    |      |   |
| NGC 7233        | ESO 289- 8  | Galaxy | GRU | 12.5 | 13.2 | 1.7' | 22 15.8 | -45 51 | 414 | SBO-a      |    |      |   |
| NGC 7234        | Cr 447      | Opn CL | CEP | 12   | -    | 4'   | 22 12.4 | +57 16 | 57  | II 3 m     |    |      | H VIII 63; From Historial NGC                   |
| NGC 7235        | OCL 229     | Opn CL | CEP | 7.7  | -    | 4'   | 22 12.6 | +57 17 | 57  | III 2 p    | 30 | 8.8  |   |
| NGC 7236        | 3C442       | Galaxy | PEG | 13.6 | 12.6 | 1.1' | 22 14.8 | +13 51 | 212 | E-SO       |    |      | Triple system;plumes;w NGC 7237                 |
| NGC 7241        | UGC 11968   | Galaxy | PEG | 12.6 | 13.8 | 3.4' | 22 15.8 | +19 14 | 167 | SBbc/P     |    |      | II Zw 174;edge-on spiral                        |
| <b>NGC 7243</b> | OCL 221     | Opn CL | LAC | 6.4  | -    | 21'  | 22 15.1 | +49 54 | 87  | IV 2 p     | 40 | 8.5  | H VIII 75;Incl Struve 2890 D*                   |
| NGC 7244        | MCG 3-56-   | Galaxy | PEG | 13.8 | 12   | 0.7' | 22 16.4 | +16 28 | 212 | Sc         |    |      |   |
| NGC 7245        | OCL 225     | Opn CL | LAC | 9.2  | -    | 5'   | 22 15.3 | +54 20 | 57  | II 1 p     |    | 12.8 | H VI 29;50 vF stars                             |

## 7000 DSO List (sorted by name)

| NAME             | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|------------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| NGC 7247         | ESO 533- 8  | Galaxy  | AQR | 12.6 | 12.7 | 1.4'  | 22 17.7 | -23 44 | 347 | SBb        |    |      |  |
| NGC 7248         | UGC 11972   | Galaxy  | LAC | 12.4 | 12.7 | 1.8'  | 22 16.9 | +40 30 | 87  | SO         |    |      | H III 863;UGC 11972;sev smaller galaxies near          |
| NGC 7249         | ESO 190- 1  | Galaxy  | GRU | 13.4 | 13.1 | 1.1'  | 22 20.5 | -55 08 | 438 | SO         |    |      |  |
| NGC 7250         | UGC 11980   | Galaxy  | LAC | 12.6 | 12.8 | 1.7'  | 22 18.3 | +40 34 | 87  | Sd         |    |      | H III 864;Disturbed?;UGC 11980                         |
| NGC 7251         | MCG - 3-57- | Galaxy  | AQR | 13   | -    | 1.9'  | 22 20.5 | -15 46 | 302 | Sa         |    |      | H III 933  |
| NGC 7252         | ESO 533-15  | Galaxy  | AQR | 12.1 | 13.2 | 2.1'  | 22 20.7 | -24 41 | 347 | SBO        |    |      | H III 458;F extension on west side                     |
| NGC 7254         | NGC 7256    | Galaxy  | AQR | 13.9 | -    | 1.3'  | 22 22.6 | -21 44 | 347 | SBb        |    |      |  |
| NGC 7256         | NGC 7254    | Galaxy  | AQR | 13.1 | 12.8 | 1.3'  | 22 22.6 | -21 44 | 347 | SBb        |    |      |  |
| NGC 7257         | NGC 7260    | Galaxy  | AQR | 13.7 | -    | 1.9'  | 22 22.6 | -04 07 | 257 | SBbc       |    |      |  |
| NGC 7258         | ESO 467-49  | Galaxy  | PSA | 13.1 | 12.9 | 1.4'  | 22 23.0 | -28 21 | 384 | Sb         |    |      |  |
| NGC 7259         | ESO 467-50  | Galaxy  | PSA | 13.1 | 13   | 1.1'  | 22 23.1 | -28 57 | 384 | Sb         |    |      |  |
| NGC 7260         | NGC 7257    | Galaxy  | AQR | 14   | -    | 1.9'  | 22 22.6 | -04 07 | 257 | SBbc       |    |      |  |
| NGC 7261         | OCL 237     | Opn CL  | CEP | 8.4  | -    | 6'    | 22 20.4 | +58 05 | 57  | III 1 p    | 30 | 9.6  |  |
| NGC 7262         | ESO 405-17  | Galaxy  | PSA | 13.8 | 12.9 | 0.7'  | 22 23.5 | -32 22 | 384 | SO         |    |      |  |
| NGC 7264         | UGC 12001   | Galaxy  | LAC | 13.8 | 13.3 | 2.2'  | 22 22.2 | +36 23 | 123 | Sb         |    |      | Core .15'X0.15' mag=15.7                               |
| NGC 7265         | UGC 12004   | Galaxy  | LAC | 12.2 | 13.7 | 2.4'  | 22 22.5 | +36 13 | 123 | E-SO       |    |      |  |
| NGC 7267         | ESO 405-18  | Galaxy  | PSA | 12.2 | 12.9 | 1.6'  | 22 24.4 | -33 42 | 384 | SBa        |    |      |  |
| NGC 7269         | MCG - 2-57- | Galaxy  | AQR | 14   | -    | 1'    | 22 25.8 | -13 10 | 302 | Sb         |    |      |  |
| NGC 7270         | UGC 12019   | Galaxy  | PEG | 13.9 | 13.1 | 0.9'  | 22 23.8 | +32 24 | 123 | Sc         |    |      | 1 of 2 brightest in group of 6 or more galaxies        |
| NGC 7274         | UGC 12026   | Galaxy  | LAC | 12.8 | 13.7 | 1.5'  | 22 24.2 | +36 08 | 123 | Elliptical |    |      | brightest of 3   |
| NGC 7277         | ESO 467-59  | Galaxy  | PSA | 13.3 | 13.1 | 1.5'  | 22 26.2 | -31 09 | 384 | Sb Ring    |    |      |  |
| NGC 7279         | ESO 405-21  | Galaxy  | PSA | 13.8 | 13.5 | 1.2'  | 22 27.2 | -35 08 | 384 | SBc        |    |      |  |
| NGC 7280         | UGC 12035   | Galaxy  | PEG | 12.1 | 13.3 | 2.1'  | 22 26.5 | +16 09 | 212 | SBO-a      |    |      | H II 248;spp of 2;UGC 12035                            |
| NGC 7281         | OCL 238     | Opn CL  | CEP | -    | -    | 12'   | 22 24.7 | +57 50 | 57  | IV 2 p     | 20 |      | Small scattered group w 3 *10m in short row            |
| NGC 7282         | UGC 12034   | Galaxy  | LAC | 13.7 | 14.6 | 2.5'  | 22 25.9 | +40 19 | 87  | SBb Ring   |    |      |  |
| NGC 7284         | ESO 533-31  | Galaxy  | AQR | 11.9 | 13.1 | 2.3'  | 22 28.6 | -24 51 | 347 | SBO        |    |      | H II 469   |
| NGC 7285         | ESO 533-32  | Galaxy  | AQR | 11.9 | 13.1 | 2.4'  | 22 28.6 | -24 50 | 347 | SBa        |    |      |  |
| NGC 7286         | UGC 12043   | Galaxy  | PEG | 12.5 | 12.5 | 1.6'  | 22 27.8 | +29 06 | 123 | Sa         |    |      |  |
| NGC 7289         | ESO 405-23  | Galaxy  | PSA | 13.2 | 13.5 | 1.3'  | 22 29.3 | -35 28 | 384 | SO         |    |      |  |
| NGC 7290         | UGC 12045   | Galaxy  | PEG | 13.3 | 13.6 | 1.6'  | 22 28.4 | +17 09 | 167 | Sbc        |    |      |  |
| NGC 7291         | UGC 12047   | Galaxy  | PEG | 13.1 | 14.2 | 1.8'  | 22 28.5 | +16 47 | 212 | SO         |    |      |  |
| NGC 7292         | UGC 12048   | Galaxy  | PEG | 12.5 | 13.8 | 2.1'  | 22 28.4 | +30 18 | 123 | Ir Bar     |    |      | irregular  |
| <b>NGC 7293</b>  | PK 36-57.1  | Pin Neb | AQR | 6.3  | 13.6 | 960"  | 22 29.6 | -20 50 | 347 | 4(3)       |    | 13.5 | <b>Helix Nebula</b> ;low surf brightness               |
| NGC 7294         | ESO 533-44  | Galaxy  | PSA | 12.5 | 13.3 | 2'    | 22 32.1 | -25 24 | 347 | SBO        |    |      |  |
| <b>NGC 7296</b>  | OCL 228     | Opn CL  | LAC | 9.7  | -    | 4'    | 22 28.2 | +52 17 | 57  | III 2 p    | 20 | 10   | H VII 41   |
| NGC 7297         | ESO 345-18  | Galaxy  | GRU | 13.7 | 12.8 | 0.9'  | 22 31.2 | -37 50 | 384 | Sbc        |    |      |  |
| NGC 7298         | MCG - 2-57- | Galaxy  | AQR | 13.7 | 14   | 1.3'  | 22 30.8 | -14 11 | 302 | Sc         |    |      |  |
| NGC 7299         | ESO 345-19  | Galaxy  | GRU | 14   | 13   | 0.7'  | 22 31.6 | -37 49 | 384 | SBc        |    |      |  |
| NGC 7300         | MCG - 2-57- | Galaxy  | AQR | 12.9 | 13.5 | 2.1'  | 22 31.0 | -14 00 | 302 | SBb        |    |      |  |
| NGC 7301         | ESO 602-23  | Galaxy  | AQR | 13.2 | 12.4 | 1'    | 22 30.6 | -17 34 | 347 | SBab       |    |      |  |
| NGC 7302         | IC 5228     | Galaxy  | AQR | 12.3 | 12.9 | 2.1'  | 22 32.4 | -14 07 | 302 | E-SO       |    |      | H IV 31  |
| NGC 7303         | UGC 12065   | Galaxy  | PEG | 12.6 | 13.1 | 1.5'  | 22 31.6 | +30 57 | 123 | Sbc        |    |      | Stronly asym barred spiral                             |
| NGC 7306         | ESO 468-11  | Galaxy  | PSA | 12.7 | 12.7 | 1.7'  | 22 33.3 | -27 15 | 347 | Sb Ring    |    |      |  |
| NGC 7307         | ESO 345-26  | Galaxy  | GRU | 12.6 | 13.7 | 3.4'  | 22 33.9 | -40 56 | 414 | SBc/P      |    |      |  |
| NGC 7308         | IC 1448     | Galaxy  | AQR | 14   | -    | 1.2'  | 22 34.5 | -12 56 | 302 | E-SO       |    |      |  |
| NGC 7309         | MCG - 2-57- | Galaxy  | AQR | 12.5 | 13.7 | 2'    | 22 34.4 | -10 21 | 302 | SBc        |    |      | H II 476;3 arm spiral                                  |
| NGC 7310         | ESO 533-49  | Galaxy  | AQR | 13.9 | 13.3 | 0.9'  | 22 34.6 | -22 29 | 347 | SBbc Ring  |    |      |  |
| NGC 7311         | UGC 12080   | Galaxy  | PEG | 12.5 | 12.6 | 1.6'  | 22 34.1 | +05 34 | 212 | Sab        |    |      | H II 428;UGC 12080                                     |
| NGC 7312         | UGC 12083   | Galaxy  | PEG | 13.4 | 13.4 | 1.5'  | 22 34.6 | +05 49 | 212 | SBb        |    |      |  |
| NGC 7314         | ESO 533-53  | Galaxy  | PSA | 11   | 13.3 | 4.6'  | 22 35.8 | -26 03 | 347 | SBbc       |    |      |  |
| NGC 7315         | UGC 12097   | Galaxy  | PEG | 12.5 | 13.4 | 1.6'  | 22 35.5 | +34 48 | 123 | SO         |    |      |  |
| NGC 7316         | UGC 12098   | Galaxy  | PEG | 13   | 12.8 | 1.1'  | 22 35.9 | +20 19 | 167 | Sc         |    |      | H III 180  |
| <b>NGC 7317</b>  | MCG 6-49-   | Galaxy  | PEG | 13.6 | 13.8 | 0.7'  | 22 35.9 | +33 57 | 123 | Elliptical |    |      | <b>stephan's quintet</b>                               |
| <b>NGC 7318A</b> | NGC 7318-1  | Galaxy  | PEG | 13.4 | 13   | 1.2'  | 22 35.9 | +33 58 | 123 | Elliptical |    |      | <b>Stephan's Quintet</b> ;A projects onto arm of B     |
| <b>NGC 7318B</b> | NGC 7318-2  | Galaxy  | PEG | 13.1 | 13.9 | 1.6'  | 22 36.0 | +33 58 | 123 | SBbc       |    |      | <b>Stephan's Quintet</b> ;B is distorted colliding w A |
| <b>NGC 7319</b>  | UGC 12102   | Galaxy  | PEG | 13.1 | 13.8 | 1.4'  | 22 36.1 | +33 59 | 123 | SBbc       |    |      | <b>Stephan's Quintet</b> ;distorted                    |
| <b>NGC 7320</b>  | UGC 12101   | Galaxy  | PEG | 12.6 | 13.5 | 2.3'  | 22 36.1 | +33 57 | 123 | Scd        |    |      | Brighest in <b>Stephan's Quintet</b>                   |
| NGC 7321         | UGC 12103   | Galaxy  | PEG | 12.9 | 13.4 | 1.6'  | 22 36.5 | +21 37 | 167 | SBb        |    |      | H III 237;UGC 12103                                    |
| NGC 7322         | NGC 7334    | Galaxy  | GRU | 13.5 | 12.6 | 0.9'  | 22 37.9 | -37 14 | 384 | Sa         |    |      |  |
| NGC 7323         | UGC 12108   | Galaxy  | PEG | 12.9 | 13.3 | 1.4'  | 22 36.9 | +19 09 | 167 | Sb Ring    |    |      | p of 2;disturbed                                       |
| NGC 7328         | UGC 12118   | Galaxy  | PEG | 13.1 | 13.4 | 2'    | 22 37.5 | +10 32 | 212 | Sab        |    |      |  |
| NGC 7330         | UGC 12111   | Galaxy  | LAC | 12.2 | 13.4 | 1.8'  | 22 36.9 | +38 33 | 123 | Elliptical |    |      |  |
| <b>NGC 7331</b>  | UGC 12113   | Galaxy  | PEG | 9.5  | 13.3 | 10.2' | 22 37.1 | +34 25 | 123 | SBc        |    |      | Brightest in group of F obj;sev dark lanes             |
| NGC 7332         | UGC 12115   | Galaxy  | PEG | 11.1 | 12.6 | 3.8'  | 22 37.4 | +23 48 | 167 | SO         |    |      | H II 233;UGC 12115;vB cent. bulge .7'X0.4';lenticular  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES                                     |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|------|---|
| <b>NGC 7335</b> | UGC 12116   | Galaxy  | PEG | 13.4 | 12.9 | 1.3' | 22 37.3 | +34 27 | 123 | Sa         |    |      | H III 166;Brightest of 4;UGC 12116; near 7331 |
| NGC 7339        | UGC 12122   | Galaxy  | PEG | 12.2 | 13   | 2.8' | 22 37.8 | +23 47 | 167 | SBbc       |    |      | H II 234;B cent. bulge w knots .7'X0.25'      |
| NGC 7340        | MCG 6-49-   | Galaxy  | PEG | 13.7 | 12.9 | 0.9' | 22 37.7 | +34 25 | 123 | Elliptical |    |      |   |
| NGC 7341        | ESO 534-11  | Galaxy  | AQR | 12.4 | 13.1 | 2.4' | 22 39.1 | -22 40 | 347 | SBab Rii   |    |      |   |
| NGC 7342        | UGC 12126   | Galaxy  | PEG | 13.9 | 14.4 | 1.4' | 22 38.2 | +35 30 | 123 | SBa        |    |      | UGC 12127 group                               |
| NGC 7343        | UGC 12129   | Galaxy  | PEG | 13.5 | 13.3 | 1'   | 22 38.6 | +34 04 | 123 | SBbc       |    |      |   |
| NGC 7344        | MCG - 1-57- | Galaxy  | AQR | 14   | -    | 1.5' | 22 39.6 | -04 10 | 257 | Sab        |    |      |   |
| NGC 7347        | UGC 12136   | Galaxy  | PEG | 13.6 | 12.7 | 1.5' | 22 39.9 | +11 02 | 212 | Sc         |    |      |   |
| NGC 7348        | UGC 12142   | Galaxy  | PEG | 13.8 | 13.4 | 1.1' | 22 40.6 | +11 54 | 213 | SBc        |    |      |   |
| NGC 7351        | MCG - 1-57- | Galaxy  | AQR | 13   | -    | 1.7' | 22 41.4 | -04 27 | 258 | SO         |    |      |   |
| NGC 7352        |             | Opn CL  | CEP | 12   | -    |      | 22 39.8 | +57 24 | 58  |            |    |      |   |
| NGC 7354        | PK 107+2.1  | Pln Neb | CEP | 12.9 | 10.1 | 22"  | 22 40.3 | +61 17 | 34  | 4(3b)      |    | 16.5 | H II 705                                      |
| NGC 7357        | UGC 12162   | Galaxy  | PEG | 14   | 13.8 | 1.5' | 22 42.4 | +30 10 | 123 | Sb         |    |      |   |
| NGC 7359        | ESO 534-22  | Galaxy  | AQR | 12.5 | 12.7 | 2.4' | 22 44.8 | -23 41 | 348 | SO         |    |      |   |
| NGC 7360        | UGC 12167   | Galaxy  | PEG | 13.6 | 12   | 0.7' | 22 43.6 | +04 09 | 258 | S          |    |      |   |
| NGC 7361        | IC 5237     | Galaxy  | PSA | 12.3 | 13.5 | 3.9' | 22 42.3 | -30 03 | 384 | Sc         |    |      | Nearly edge-on                                |
| NGC 7362        | UGC 12171   | Galaxy  | PEG | 12.7 | 12.5 | 1.1' | 22 43.8 | +08 42 | 213 | Elliptical |    |      | Compact                                       |
| NGC 7363        | MCG 6-49-   | Galaxy  | PEG | 13.8 | 13.8 | 0.9' | 22 43.3 | +34 00 | 123 | SBcd       |    |      |   |
| NGC 7364        | UGC 12174   | Galaxy  | AQR | 12.6 | 13.1 | 1.8' | 22 44.4 | -00 10 | 258 | Sa         |    |      | H II 442;UGC 12174                            |
| NGC 7365        | ESO 603-10  | Galaxy  | AQR | 12.9 | 13.2 | 1.5' | 22 45.2 | -19 57 | 348 | E-SO       |    |      |   |
| NGC 7367        | UGC 12175   | Galaxy  | PEG | 13.8 | 13.1 | 1.6' | 22 44.6 | +03 39 | 258 | Sab        |    |      |   |
| NGC 7368        | ESO 345-49  | Galaxy  | GRU | 12.4 | 12.7 | 2.9' | 22 45.5 | -39 21 | 414 | SBb        |    |      |   |
| NGC 7369        | MCG 6-49-   | Galaxy  | PEG | 13.6 | 13.2 | 0.9' | 22 44.2 | +34 21 | 123 | Sc Ring    |    |      |   |
| NGC 7371        | MCG - 2-58- | Galaxy  | AQR | 11.5 | 12.9 | 1.7' | 22 46.1 | -11 00 | 303 | SBO-a      |    |      | H II 477;Faint outer ring                     |
| NGC 7372        | MCG 2-58-   | Galaxy  | PEG | 13.4 | 13   | 1'   | 22 45.8 | +11 08 | 213 | Sbc        |    |      |   |
| NGC 7373        | ZWG 379. 4  | Galaxy  | PEG | 13.6 | 12.8 | 1.3' | 22 46.3 | +03 13 | 258 | SO         |    |      |   |
| NGC 7377        | ESO 534-26  | Galaxy  | AQR | 11.1 | 13.1 | 4.1' | 22 47.8 | -22 19 | 348 | SBO-a      |    |      | H II 598                                      |
| NGC 7378        | MCG - 2-58- | Galaxy  | AQR | 13   | -    | 1.5' | 22 47.8 | -11 49 | 303 | Sab Ring   |    |      |   |
| NGC 7379        | UGC 12187   | Galaxy  | LAC | 13.4 | 13.2 | 1.1' | 22 47.5 | +40 14 | 87  | SBa        |    |      |   |
| <b>NGC 7380</b> | OCL 244     | Opn CL  | CEP | 7.2  | -    | 12'  | 22 47.3 | +58 08 | 58  | III 3 p n  | 40 | 8.6  | H VIII 77; In Cep OB1                         |
| NGC 7382        | ESO 406-15  | Galaxy  | GRU | 13.6 | 12.5 | 1.2' | 22 50.4 | -36 51 | 384 | Sa         |    |      |   |
| NGC 7383        | MCG 2-58-   | Galaxy  | PEG | 13.7 | 12.9 | 0.8' | 22 49.6 | +11 33 | 213 | SBO        |    |      |   |
| NGC 7385        | UGC 12207   | Galaxy  | PEG | 12   | 12.8 | 1.3' | 22 49.9 | +11 36 | 213 | Elliptical |    |      | H III 216;Brightest in cluster;UGC 12207      |
| NGC 7386        | UGC 12209   | Galaxy  | PEG | 12.3 | 12.8 | 1.8' | 22 50.0 | +11 42 | 213 | SO         |    |      | H III 217                                     |
| NGC 7387        | MCG 2-58-   | Galaxy  | PEG | 14   | 12.5 | 0.7' | 22 50.3 | +11 38 | 213 | SO         |    |      |   |
| NGC 7389        | MCG 2-58-   | Galaxy  | PEG | 13.8 | 13.6 | 1.1' | 22 50.3 | +11 34 | 213 | S pec      |    |      |   |
| NGC 7391        | UGC 12211   | Galaxy  | AQR | 12   | 13   | 1.7' | 22 50.6 | -01 33 | 258 | Elliptical |    |      | H II 443                                      |
| NGC 7392        | ESO 603-22  | Galaxy  | AQR | 11.9 | 12.8 | 2.2' | 22 51.8 | -20 37 | 348 | SBbc       |    |      | H II 702                                      |
| NGC 7393        | MCG - 1-58- | Galaxy  | AQR | 14   | -    | 2'   | 22 51.6 | -05 33 | 303 | SBc/P      |    |      | H II 453                                      |
| NGC 7395        | UGC 12216   | Galaxy  | LAC | 13.8 | 14   | 1.2' | 22 51.0 | +37 05 | 123 | SO         |    |      | Double nucleus?                               |
| NGC 7396        | UGC 12220   | Galaxy  | PSC | 12.9 | 13.5 | 1.9' | 22 52.4 | +01 06 | 258 | Sa         |    |      | Brightest in group                            |
| NGC 7398        | UGC 12225   | Galaxy  | PSC | 13.6 | 13.5 | 1.2' | 22 52.8 | +01 12 | 258 | Sa         |    |      |   |
| NGC 7399        | MCG - 2-58- | Galaxy  | AQR | 14   | -    | 0.9' | 22 52.7 | -09 16 | 303 | Sa         |    |      |   |
| NGC 7400        | ESO 290-22  | Galaxy  | GRU | 13.6 | -    | 2.7' | 22 54.3 | -45 21 | 415 | Sbc        |    |      |   |
| NGC 7404        | IC 5260     | Galaxy  | GRU | 12.8 | 12.9 | 1.5' | 22 54.3 | -39 19 | 415 | E-SO Ba    |    |      |   |
| NGC 7407        | UGC 12230   | Galaxy  | PEG | 13.1 | 13.7 | 2'   | 22 53.4 | +32 08 | 123 | Sc         |    |      | Inner spiral structure                        |
| NGC 7410        | ESO 346-12  | Galaxy  | GRU | 10.3 | 12.5 | 5.5' | 22 55.0 | -39 40 | 415 | SBa        |    |      | Nearly edge-on                                |
| NGC 7411        | UGC 12241   | Galaxy  | PEG | 13.4 | 13.2 | 1'   | 22 54.6 | +20 14 | 168 | Elliptical |    |      | Compact;4th in chain of 6                     |
| NGC 7412        | ESO 290-24  | Galaxy  | GRU | 11.4 | 13.8 | 3.8' | 22 55.8 | -42 39 | 415 | SBb        |    |      |   |
| NGC 7412A       | ESO 290-28  | Galaxy  | GRU | 13.9 | 14.3 | 3.8' | 22 57.1 | -42 48 | 415 | SBd        |    |      |   |
| NGC 7416        | MCG - 1-58- | Galaxy  | AQR | 12.4 | 13.3 | 3.2' | 22 55.7 | -05 30 | 258 | SBb        |    |      |   |
| NGC 7418        | ESO 406-25  | Galaxy  | GRU | 10.9 | 13.2 | 3.8' | 22 56.6 | -37 02 | 384 | SBc        |    |      |   |
| NGC 7418A       | ESO 406-27  | Galaxy  | GRU | 13.2 | 15.1 | 3.5' | 22 56.7 | -36 46 | 384 | Scd        |    |      |   |
| NGC 7419        | OCL 250     | Opn CL  | CEP | 13   | -    | 2'   | 22 54.3 | +60 50 | 58  | II 3 r     | 40 | 10   | H VII 43                                      |
| NGC 7420        | MCG 5-54-   | Galaxy  | PEG | 13.9 | 12.9 | 0.8' | 22 55.5 | +29 48 | 123 | Sc         |    |      |   |
| NGC 7421        | ESO 346-17  | Galaxy  | GRU | 11.9 | 13.2 | 2'   | 22 56.9 | -37 21 | 384 | SBab       |    |      |   |
| NGC 7422        | UGC 12254   | Galaxy  | PSC | 13.4 | 12.9 | 1'   | 22 56.2 | +03 56 | 258 | Sb         |    |      | Complex;disturbed                             |
| <b>NGC 7424</b> | ESO 346-19  | Galaxy  | GRU | 10.5 | 15.1 | 10'  | 22 57.3 | -41 04 | 415 | SBc        |    |      | face on                                       |
| NGC 7426        | UGC 12256   | Galaxy  | LAC | 12.3 | 13.3 | 1.7' | 22 56.1 | +36 22 | 123 | Elliptical |    |      | H III 576;UGC 12256                           |
| NGC 7428        | UGC 12262   | Galaxy  | PSC | 12.5 | 13.6 | 2.4' | 22 57.3 | -01 03 | 258 | SBa        |    |      |   |
| NGC 7429        | OCL 249     | Opn CL  | CEP | -    | -    | 14'  | 22 55.9 | +59 59 | 58  | III 2 p    | 15 | 11   |   |
| NGC 7432        | UGC 12268   | Galaxy  | PEG | 13.4 | 14.1 | 1.6' | 22 58.0 | +13 08 | 213 | Elliptical |    |      | H III 465;Companion superimposed?;UGC 12268   |
| NGC 7433        | MCG 4-54-   | Galaxy  | PEG | 14   | -    | 0.7' | 22 57.9 | +26 10 | 168 | S pec      |    |      | Double system w NGC 7436A;B                   |
| NGC 7436A       | NGC 7436    | Galaxy  | PEG | 14   | -    | 2'   | 22 58.0 | +26 09 | 168 | Elliptical |    |      | H III 243                                     |



## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs  | SAC NOTES                                    |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|-----|--|
| NGC 7437        | UGC 12270   | Galaxy  | PEG | 13.3 | 14.4 | 1.8' | 22 58.2 | +14 18 | 213 | Scd        |    |     |  |
| NGC 7439        | UGC 12273   | Galaxy  | PEG | 14   | 13.2 | 1'   | 22 58.2 | +29 14 | 123 | SBO        |    |     |  |
| NGC 7440        | UGC 12276   | Galaxy  | AND | 13.5 | 13.9 | 1.4' | 22 58.5 | +35 48 | 123 | SBa        |    |     |  |
| NGC 7442        | UGC 12286   | Galaxy  | PEG | 13.3 | 13.4 | 1'   | 22 59.4 | +15 33 | 213 | Sc         |    |     |  |
| NGC 7443        | MCG - 2-58- | Galaxy  | AQR | 12.6 | 12.2 | 1.4' | 23 00.1 | -12 49 | 303 | Sa         |    |     | H II 450                                     |
| NGC 7444        | MCG - 2-58- | Galaxy  | AQR | 12.8 | 12.8 | 1.7' | 23 00.1 | -12 50 | 303 | SO         |    |     | H II 451                                     |
| <b>NGC 7448</b> | UGC 12294   | Galaxy  | PEG | 11.7 | 12.9 | 2.6' | 23 00.1 | +15 59 | 213 | Sbc        |    |     | H II 251;Brightest in group;UGC 12294;Arp 13 |
| NGC 7449        | UGC 12292   | Galaxy  | AND | 14   | 13.7 | 1'   | 22 59.6 | +39 09 | 88  | Elliptical |    |     | UGC 12292;Core mag=15.7                      |
| NGC 7450        | MCG - 2-58- | Galaxy  | AQR | 13   | -    | 1.8' | 23 00.8 | -12 55 | 303 | Sa         |    |     |  |
| NGC 7451        | UGC 12299   | Galaxy  | PEG | 14   | 13.1 | 1'   | 23 00.7 | +08 28 | 213 | SBbc       |    |     |  |
| NGC 7454        | UGC 12305   | Galaxy  | PEG | 11.8 | 13.2 | 2.2' | 23 01.1 | +16 23 | 213 | Elliptical |    |     | H II 249;NGC 7448 group;UGC 12305            |
| NGC 7456        | ESO 346-26  | Galaxy  | GRU | 11.8 | 14.1 | 5.1' | 23 02.2 | -39 34 | 415 | Sc         |    |     |  |
| NGC 7457        | UGC 12306   | Galaxy  | PEG | 11.2 | 13.6 | 4'   | 23 01.0 | +30 09 | 124 | E-SO       |    |     | H II 212                                     |
| NGC 7458        | UGC 12309   | Galaxy  | PSC | 12.5 | 13.1 | 1.4' | 23 01.5 | +01 45 | 258 | Elliptical |    |     | H II 590;p of 2;UGC 12309                    |
| NGC 7460        | UGC 12312   | Galaxy  | PSC | 13   | 13.3 | 1.5' | 23 01.7 | +02 16 | 258 | SB/P       |    |     | Companion superimposed;disturbed;3-armed gal |
| NGC 7461        | UGC 12314   | Galaxy  | PEG | 13.3 | 12.7 | 0.9' | 23 01.8 | +15 35 | 213 | SBO        |    |     |  |
| NGC 7462        | ESO 346-28  | Galaxy  | GRU | 11.7 | 12.8 | 4.3' | 23 02.8 | -40 50 | 415 | SBbc       |    |     |  |
| NGC 7463        | UGC 12316   | Galaxy  | PEG | 13.2 | 13.8 | 3'   | 23 01.9 | +15 59 | 213 | SBb/P      |    |     | H III 210;Distorted;NGC 7448 group;UGC 12316 |
| NGC 7464        | UGC 12315   | Galaxy  | PEG | 13.3 | 12.7 | 0.5' | 23 01.9 | +15 58 | 213 | Elliptical |    |     | NGC 7448 group                               |
| NGC 7465        | UGC 12317   | Galaxy  | PEG | 12.6 | 12.4 | 1.2' | 23 02.0 | +15 58 | 213 | SBO        |    |     | H III 211;NGC 7448 group;UGC 12317           |
| NGC 7466        | IC 5281     | Galaxy  | PEG | 13.6 | 13.1 | 1.5' | 23 02.1 | +27 03 | 168 | Sb         |    |     |  |
| NGC 7468        | UGC 12329   | Galaxy  | PEG | 13.7 | 13   | 0.9' | 23 03.0 | +16 36 | 213 | Elliptical |    |     | H III 202;Peculiar;two jets;UGC 12329        |
| NGC 7469        | UGC 12332   | Galaxy  | PEG | 12.3 | 12.7 | 1.4' | 23 03.3 | +08 52 | 213 | SBa        |    |     | H III 230;Seyfert;UGC 12332                  |
| NGC 7473        | UGC 12335   | Galaxy  | PEG | 13.7 | 12.9 | 1.1' | 23 04.0 | +30 10 | 124 | SBO        |    |     |  |
| NGC 7476        | ESO 290-45  | Galaxy  | GRU | 12.6 | 12.8 | 1.4' | 23 05.2 | -43 06 | 415 | SBab       |    |     |  |
| <b>NGC 7479</b> | UGC 12343   | Galaxy  | PEG | 10.9 | 13.4 | 4'   | 23 04.9 | +12 19 | 213 | SBbc       |    |     | H I 55;excellent barred spiral               |
| NGC 7482        | NGC 7472    | Galaxy  | PSC | 13.6 | 12.1 | 0.6' | 23 05.6 | +03 04 | 258 | Elliptical |    |     |  |
| NGC 7483        | UGC 12353   | Galaxy  | PSC | 13   | 13.5 | 1.6' | 23 05.8 | +03 33 | 258 | SBa        |    |     |  |
| NGC 7484        | ESO 407- 6  | Galaxy  | SCL | 11.8 | 12.9 | 1.8' | 23 07.1 | -36 16 | 385 | Elliptical |    |     |  |
| NGC 7485        | UGC 12360   | Galaxy  | PEG | 13.1 | 12.7 | 1.2' | 23 06.1 | +34 06 | 124 | SO         |    |     |  |
| NGC 7488        | MCG 0-59-   | Galaxy  | PSC | 13.8 | 12.3 | 0.6' | 23 07.8 | +00 56 | 258 | E-SO       |    |     | compact                                      |
| NGC 7489        | UGC 12378   | Galaxy  | PEG | 13.4 | 14.1 | 2.1' | 23 07.5 | +23 00 | 168 | Scd        |    |     |  |
| NGC 7490        | UGC 12379   | Galaxy  | PEG | 12.3 | 14.3 | 2.7' | 23 07.4 | +32 23 | 124 | Sbc        |    |     |  |
| NGC 7492        | GCL 125     | Glob CL | AQR | 11.2 | -    | 4.3' | 23 08.4 | -15 37 | 303 | XII        |    |     | H III 558                                    |
| NGC 7495        | UGC 12391   | Galaxy  | PEG | 13.1 | 14.1 | 1.8' | 23 09.0 | +12 03 | 213 | Sc         |    |     |  |
| NGC 7496        | ESO 291- 1  | Galaxy  | GRU | 11.1 | 13.5 | 3.3' | 23 09.8 | -43 26 | 415 | SBb        |    |     |  |
| NGC 7497        | UGC 12392   | Galaxy  | PEG | 12.2 | 14   | 4.4' | 23 09.1 | +18 11 | 168 | SBc        |    |     |  |
| NGC 7499        | UGC 12397   | Galaxy  | PSC | 12.8 | 12.4 | 1.2' | 23 10.4 | +07 35 | 213 | SO         |    |     |  |
| NGC 7500        | UGC 12399   | Galaxy  | PEG | 13.3 | 14.1 | 2.1' | 23 10.5 | +11 01 | 213 | SO         |    |     |  |
| NGC 7501        | MCG 1-59-   | Galaxy  | PSC | 13.4 | 13.4 | 0.5' | 23 10.5 | +07 35 | 213 | Elliptical |    |     |  |
| NGC 7503        | MCG 1-59-   | Galaxy  | PSC | 13.2 | 13.4 | 0.8' | 23 10.7 | +07 34 | 213 | Elliptical |    |     |  |
| NGC 7506        | UGC 12406   | Galaxy  | PSC | 12.9 | 13.5 | 1.7' | 23 11.7 | -02 10 | 258 | Sa         |    |     | H III 184                                    |
| NGC 7507        | ESO 469-19  | Galaxy  | SCL | 10.4 | 12.5 | 2.8' | 23 12.1 | -28 32 | 385 | Elliptical |    |     | H II 2                                       |
| <b>NGC 7510</b> | OCL 256     | Opn CL  | CEP | 7.9  | -    | 4'   | 23 11.5 | +60 34 | 58  | II 2 m n   | 60 | 9.7 | H VII 44;L region of F neby to SE            |
| NGC 7511        | UGC 12412   | Galaxy  | PEG | 13.8 | 13.1 | 1.1' | 23 12.4 | +13 44 | 214 | S pec      |    |     |  |
| NGC 7512        | UGC 12414   | Galaxy  | PEG | 12.6 | 13.7 | 1.8' | 23 12.3 | +31 08 | 124 | Elliptical |    |     | spp of 2                                     |
| NGC 7513        | ESO 469-22  | Galaxy  | SCL | 11.4 | 13.3 | 3.2' | 23 13.2 | -28 22 | 385 | SBb/P      |    |     |  |
| NGC 7514        | UGC 12415   | Galaxy  | PEG | 12.5 | 12.6 | 1.4' | 23 12.4 | +34 53 | 124 | Sbc        |    |     |  |
| NGC 7515        | UGC 12418   | Galaxy  | PEG | 12.4 | 13.4 | 1.7' | 23 12.8 | +12 41 | 214 | Sc         |    |     | H III 220                                    |
| NGC 7516        | UGC 12420   | Galaxy  | PEG | 13.3 | 13.2 | 1.1' | 23 12.9 | +20 15 | 169 | SO         |    |     |  |
| NGC 7518        | UGC 12422   | Galaxy  | PSC | 13.4 | 13.7 | 1.4' | 23 13.2 | +06 19 | 214 | Sa         |    |     |  |
| NGC 7521        | MCG 0-59-   | Galaxy  | PSC | 13.9 | 12.3 | 0.6' | 23 13.6 | -01 44 | 259 | SO         |    |     |  |
| NGC 7527        | UGC 12428   | Galaxy  | PEG | 13.3 | 13.5 | 1.3' | 23 13.7 | +24 54 | 169 | Elliptical |    |     |  |
| NGC 7531        | ESO 291-10  | Galaxy  | GRU | 11.3 | 13.4 | 4.5' | 23 14.8 | -43 36 | 415 | Sbc        |    |     |  |
| NGC 7535        | UGC 12438   | Galaxy  | PEG | 13.7 | 14.4 | 1.5' | 23 14.2 | +13 35 | 214 | Scd        |    |     |  |
| NGC 7536        | UGC 12437   | Galaxy  | PEG | 13.4 | 13.6 | 1.9' | 23 14.2 | +13 26 | 214 | SBbc Rii   |    |     |  |
| NGC 7537        | UGC 12442   | Galaxy  | PSC | 13.2 | 13.3 | 2.1' | 23 14.6 | +04 30 | 259 | Sbc        |    |     | H II 429;UGC 12442                           |
| NGC 7538        | LBN 542     | Brn Neb | CEP | -    | -    | 8'   | 23 14.1 | +61 29 | 34  | E          |    |     | H II 706;Filamentary struct in neby          |
| NGC 7539        | UGC 12443   | Galaxy  | PEG | 12.5 | 13   | 1.5' | 23 14.5 | +23 41 | 169 | SO         |    |     |  |
| NGC 7541        | UGC 12447   | Galaxy  | PSC | 11.7 | 13.1 | 3.5' | 23 14.7 | +04 32 | 259 | SBc        |    |     | H II 430                                     |
| NGC 7543        | UGC 12450   | Galaxy  | PEG | 13   | 12.9 | 1.1' | 23 14.6 | +28 20 | 124 | Sbc        |    |     |  |
| NGC 7545        | ESO 347- 4  | Galaxy  | GRU | 13   | 12.6 | 1.1' | 23 15.5 | -38 32 | 385 | SB Ring    |    |     |  |
| NGC 7547        | UGC 12453   | Galaxy  | PEG | 13.7 | 12.8 | 1.1' | 23 15.1 | +18 58 | 169 | SBap       |    |     | NGC 7550 group;Arp 99                        |
| NGC 7548        | UGC 12455   | Galaxy  | PEG | 13.3 | 13.1 | 1.1' | 23 15.2 | +25 17 | 169 | SBO        |    |     |  |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs | SAC NOTES   |
|-----------------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|----|----|---|
| NGC 7549        | UGC 12457   | Galaxy  | PEG | 13   | 13.7 | 2.8' | 23 15.3 | +19 02 | 169 | SBc/P      |    |    | NGC 7550 group;distorted                                      |
| NGC 7550        | UGC 12456   | Galaxy  | PEG | 12.2 | 12.6 | 1.4' | 23 15.3 | +18 58 | 169 | E-SO       |    |    | H III 181;Brightest in group;Arp 99;UGC 12456                 |
| NGC 7552        | IC 5294     | Galaxy  | GRU | 10.6 | 12.8 | 3.4' | 23 16.2 | -42 35 | 415 | SBab       |    |    |   |
| NGC 7556        | MCG - 1-59- | Galaxy  | PSC | 14   | -    | 2.5' | 23 15.7 | -02 23 | 259 | E-SO       |    |    | H II 235  |
| NGC 7562        | UGC 12464   | Galaxy  | PSC | 11.6 | 12.9 | 2.2' | 23 16.0 | +06 41 | 214 | Elliptical |    |    | H II 467;UGC 12464  |
| NGC 7563        | UGC 12465   | Galaxy  | PEG | 12.8 | 13.3 | 1.9' | 23 15.9 | +13 12 | 214 | SBa        |    |    | H III 222;UGC 12465   |
| NGC 7568        | UGC 12469   | Galaxy  | PEG | 13.5 | 12.6 | 0.9' | 23 16.4 | +24 30 | 169 | S pec      |    |    |   |
| NGC 7570        | UGC 12473   | Galaxy  | PEG | 13.2 | 13.4 | 1.6' | 23 16.7 | +13 29 | 214 | SBa        |    |    | H III 238;UGC 12473   |
| NGC 7573        | ESO 604- 8  | Galaxy  | AQR | 14   | -    | 1.3' | 23 16.4 | -22 09 | 349 | SBc        |    |    |   |
| NGC 7576        | MCG - 1-59- | Galaxy  | AQR | 12.9 | 12.9 | 1.3' | 23 17.4 | -04 44 | 259 | Sa         |    |    | H II 454  |
| NGC 7578A       | NGC 7578-1  | Galaxy  | PEG | 13.3 | 14   | 1.5' | 23 17.2 | +18 42 | 169 | SO         |    |    | H III 182;double system                                       |
| NGC 7578B       | NGC 7578-2  | Galaxy  | PEG | 14   | 14.1 | 0.8' | 23 17.2 | +18 42 | 169 | Elliptical |    |    | Double system   |
| NGC 7579        | MCG 1-59-   | Galaxy  | PEG | 14   | -    | 0.5' | 23 17.6 | +09 26 | 214 | Compac     |    |    | compact   |
| NGC 7580        | UGC 12481   | Galaxy  | PEG | 13.7 | 12.8 | 0.8' | 23 17.6 | +14 00 | 214 | S pec      |    |    |   |
| NGC 7581        | MCG+01-59-  | Galaxy  | PSC | 12.4 | -    | 3.5' | 23 14.8 | +04 32 | 259 | Sc         |    |    | B narrow bar .55'X0.5'  |
| <b>NGC 7582</b> | ESO 291-16  | Galaxy  | GRU | 10.6 | 13   | 5'   | 23 18.4 | -42 22 | 415 | SBab       |    |    | Group w NGC 7590 & 7599                                       |
| NGC 7583        | NGC 7605    | Galaxy  | PSC | 13.7 | 12.6 | 0.7' | 23 17.9 | +07 23 | 214 | S          |    |    |   |
| NGC 7585        | MCG - 1-59- | Galaxy  | AQR | 11.4 | 13   | 3.1' | 23 18.0 | -04 39 | 259 | Sa         |    |    | H II 236  |
| NGC 7587        | UGC 12484   | Galaxy  | PEG | 13.9 | 12.7 | 1.2' | 23 18.0 | +09 41 | 214 | SBab       |    |    | n of 2  |
| <b>NGC 7590</b> | ESO 347-33  | Galaxy  | GRU | 11.5 | 12.5 | 2.6' | 23 18.9 | -42 14 | 415 | Sbc        |    |    | near 7582   |
| NGC 7591        | UGC 12486   | Galaxy  | PSC | 13   | 13.3 | 1.9' | 23 18.3 | +06 35 | 214 | SBbc       |    |    |   |
| NGC 7592        | MCG - 1-59- | Galaxy  | AQR | 14   | -    | 1.1' | 23 18.4 | -04 25 | 259 | Sa         |    |    | H III 186;colliding pair                                      |
| NGC 7593        | UGC 12483   | Galaxy  | PEG | 13.6 | 12.9 | 1'   | 23 17.9 | +11 21 | 214 | Sbc        |    |    | Peculiar  |
| NGC 7594        | IC 5307     | Galaxy  | PEG | 13   | 11   | 1.4' | 23 18.2 | +10 18 | 214 | Sb         |    |    |   |
| NGC 7597        | MCG 3-59-   | Galaxy  | PEG | 13.9 | 13.5 | 0.9' | 23 18.5 | +18 41 | 169 | SO         |    |    | compact   |
| <b>NGC 7599</b> | IC 5308     | Galaxy  | GRU | 11.5 | 13.3 | 4.4' | 23 19.3 | -42 16 | 415 | SBc        |    |    | near 7582   |
| NGC 7600        | MCG - 1-59- | Galaxy  | AQR | 11.9 | 12.9 | 3.1' | 23 18.9 | -07 35 | 304 | E-SO       |    |    | H II 431  |
| NGC 7601        | UGC 12487   | Galaxy  | PEG | 14   | 13.9 | 1.1' | 23 18.8 | +09 14 | 214 | SBbc       |    |    |   |
| NGC 7603        | UGC 12493   | Galaxy  | PSC | 13.2 | 13.6 | 1.6' | 23 18.9 | +00 15 | 259 | SB/P       |    |    | Seyfert;np of 2;bridge  |
| <b>NGC 7606</b> | MCG - 2-59- | Galaxy  | AQR | 10.8 | 13.3 | 4.2' | 23 19.1 | -08 29 | 304 | Sbc        |    |    | H I 104   |
| NGC 7610        | UGC 12511   | Galaxy  | PEG | 13   | 14.5 | 2.5' | 23 19.7 | +10 11 | 214 | SBc Ring   |    |    | Disturbed?  |
| NGC 7611        | UGC 12509   | Galaxy  | PSC | 12.5 | 12.3 | 1.5' | 23 19.6 | +08 04 | 214 | SBO-a      |    |    |   |
| NGC 7612        | UGC 12512   | Galaxy  | PEG | 12.8 | 12.9 | 1.6' | 23 19.7 | +08 35 | 214 | SO         |    |    |   |
| NGC 7617        | MCG 1-59-   | Galaxy  | PSC | 13.8 | 13.2 | 0.9' | 23 20.1 | +08 10 | 214 | SO         |    |    |   |
| NGC 7618        | UGC 12516   | Galaxy  | AND | 13   | 13.2 | 1.2' | 23 19.8 | +42 51 | 88  | Elliptical |    |    |   |
| <b>NGC 7619</b> | UGC 12523   | Galaxy  | PEG | 11.1 | 12.9 | 2.8' | 23 20.2 | +08 12 | 214 | Elliptical |    |    | H II 439;UGC 12523  |
| NGC 7620        | UGC 12520   | Galaxy  | PEG | 13.1 | 13.2 | 1.2' | 23 20.1 | +24 13 | 169 | Sc         |    |    |   |
| NGC 7623        | UGC 12526   | Galaxy  | PEG | 12.9 | 12.8 | 1.3' | 23 20.5 | +08 24 | 214 | SO         |    |    | H III 435;UGC 12526   |
| NGC 7624        | UGC 12527   | Galaxy  | PEG | 13.1 | 12.6 | 1'   | 23 20.4 | +27 19 | 169 | SBc        |    |    | S-shaped arms w high surface brightnes                        |
| NGC 7625        | UGC 12529   | Galaxy  | PEG | 12.1 | 12.8 | 1.6' | 23 20.5 | +17 14 | 169 | Sa         |    |    | H II 250;UGC 12529;V V 280;Arp 212;III Zw 102                 |
| NGC 7626        | UGC 12531   | Galaxy  | PEG | 11.1 | 13.1 | 3'   | 23 20.7 | +08 13 | 214 | E2         |    |    | H II 440;P w NGC 7619;Br members of small group               |
| NGC 7628        | UGC 12534   | Galaxy  | PEG | 12.7 | 12.7 | 1.1' | 23 20.9 | +25 54 | 169 | Elliptical |    |    |   |
| NGC 7629        | MCG 0-59-   | Galaxy  | PSC | 13.8 | 13.4 | 1'   | 23 21.3 | +01 24 | 259 | SO         |    |    |   |
| NGC 7631        | UGC 12539   | Galaxy  | PEG | 13.1 | 13.2 | 1.7' | 23 21.4 | +08 13 | 214 | Sb         |    |    |   |
| NGC 7632        | IC 5313     | Galaxy  | GRU | 12.1 | 12.9 | 2.4' | 23 22.0 | -42 29 | 415 | SBO Rin    |    |    |   |
| NGC 7634        | UGC 12542   | Galaxy  | PEG | 12.6 | 12.5 | 1.2' | 23 21.7 | +08 53 | 214 | SBO        |    |    | H II 441;Brightest of 3                                       |
| <b>NGC 7635</b> | LBN 549     | Br Neb  | CAS | 11   | -    | 15'  | 23 20.2 | +61 11 | 34  | E          |    |    | <b>Bubble Nebula</b> ;H IV 52;L neb ring                      |
| NGC 7636        | ESO 470- 2  | Galaxy  | SCL | 13.7 | 12.8 | 0.9' | 23 22.6 | -29 17 | 385 | SO         |    |    |   |
| NGC 7640        | UGC 12554   | Galaxy  | AND | 11.3 | 14.5 | 10'  | 23 22.1 | +40 51 | 88  | SBbc       |    |    | H II 600;nearly edge on spiral                                |
| NGC 7641        | NGC 7627    | Galaxy  | PEG | 13.9 | 13.6 | 1.7' | 23 22.5 | +11 54 | 214 | Sa         |    |    | NGC 7643 group  |
| NGC 7642        | UGC 12560   | Galaxy  | PSC | 13.7 | 12.1 | 0.6' | 23 22.9 | +01 27 | 259 | Sa         |    |    | np of 2   |
| NGC 7643        | UGC 12563   | Galaxy  | PEG | 13.2 | 13.1 | 1.4' | 23 22.8 | +11 59 | 214 | S pec      |    |    | brightest of 3  |
| NGC 7645        | ESO 470- 3  | Galaxy  | SCL | 13.1 | 13.6 | 1.5' | 23 23.8 | -29 23 | 385 | SBc        |    |    |   |
| NGC 7647        | UGC 12576   | Galaxy  | PEG | 13.6 | 14   | 1.4' | 23 24.0 | +16 47 | 214 | Elliptical |    |    | H III 473;UGC 12576   |
| NGC 7648        | IC 1486     | Galaxy  | PEG | 13   | 13.4 | 1.6' | 23 23.9 | +09 40 | 214 | SO         |    |    | H III 218;UGC 12575   |
| NGC 7649        | UGC 12579   | Galaxy  | PEG | 14   | 14.1 | 1.3' | 23 24.3 | +14 39 | 214 | Elliptical |    |    |   |
| NGC 7650        | ESO 148-10  | Galaxy  | TUC | 12.7 | 13   | 1.4' | 23 25.3 | -57 48 | 439 | SBc        |    |    |   |
| NGC 7652        | ESO 148-11  | Galaxy  | TUC | 13.6 | 13.2 | 1.2' | 23 25.6 | -57 53 | 439 | Sa         |    |    |   |
| NGC 7653        | IC 1488     | Galaxy  | PEG | 12.7 | 13.5 | 1.6' | 23 24.8 | +15 17 | 214 | Sb         |    |    | UGC 12586   |
| NGC 7656        | ESO 605- 5  | Galaxy  | AQR | 13.3 | 13.5 | 1.2' | 23 24.5 | -19 04 | 349 | SO         |    |    |   |
| NGC 7659        | UGC 12595   | Galaxy  | PEG | 14   | 12.5 | 0.8' | 23 25.9 | +14 13 | 214 | Sa         |    |    | H III 212   |
| NGC 7660        | UGC 12594   | Galaxy  | PEG | 12.7 | 13.1 | 1.4' | 23 25.8 | +27 02 | 169 | Elliptical |    |    |   |
| <b>NGC 7662</b> | PK 106-17.1 | Pln Neb | AND | 8.6  | 5.6  | 17"  | 23 25.9 | +42 32 | 88  | 4(3)       |    | 14 | <b>Blue Snowball Nebula</b> ;H IV 18;Barnard-cent * variable? |
| NGC 7664        | UGC 12598   | Galaxy  | PEG | 12.7 | 14   | 2.6' | 23 26.7 | +25 05 | 169 | Sc         |    |    |   |

## 7000 DSO List (sorted by name)

| NAME            | OTHER       | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns | bs  | SAC NOTES   |
|-----------------|-------------|--------|-----|------|------|------|---------|--------|-----|------------|----|-----|---|
| NGC 7665        | MCG - 2-59- | Galaxy | AQR | 13   | -    | 0.8' | 23 27.2 | -09 23 | 304 | Sm         |    |     | H III 438   |
| NGC 7667        | UGC 12578   | Galaxy | PSC | 14   | 14.5 | 1.6' | 23 24.4 | -00 07 | 259 | Sm         |    |     |   |
| NGC 7671        | UGC 12602   | Galaxy | PEG | 12.8 | 12.8 | 1.4' | 23 27.3 | +12 28 | 214 | SO         |    |     | H III 226;UGC 12602                                 |
| NGC 7672        | MCG 2-59-   | Galaxy | PEG | 13.9 | 13.9 | 0.8' | 23 27.5 | +12 23 | 214 | Sb         |    |     |   |
| NGC 7673        | UGC 12607   | Galaxy | PEG | 12.8 | 13.1 | 1.3' | 23 27.7 | +23 35 | 169 | Scp        |    |     | compact   |
| NGC 7674        | UGC 12608   | Galaxy | PEG | 13.2 | 13.2 | 1.1' | 23 27.9 | +08 47 | 214 | SBbc       |    |     |   |
| NGC 7676        | ESO 148-16  | Galaxy | TUC | 12.5 | 12.8 | 1.6' | 23 29.0 | -59 43 | 439 | E-SO       |    |     |   |
| NGC 7677        | UGC 12610   | Galaxy | PEG | 13.2 | 13.6 | 1.6' | 23 28.1 | +23 32 | 169 | SBbc       |    |     |   |
| NGC 7678        | UGC 12614   | Galaxy | PEG | 11.8 | 13.1 | 2.5' | 23 28.5 | +22 25 | 169 | SBc        |    |     | H II 226;UGC 12614;Arp 28;slightly asym;1big arm    |
| NGC 7679        | UGC 12618   | Galaxy | PSC | 12.9 | 13   | 1.2' | 23 28.8 | +03 31 | 259 | SBO        |    |     | disturbed   |
| NGC 7680        | UGC 12616   | Galaxy | PEG | 12.6 | 13.8 | 1.8' | 23 28.6 | +32 25 | 124 | E-SO       |    |     | H III 860;UGC 12616                                 |
| NGC 7681        | UGC 12620   | Galaxy | PEG | 13.7 | 12.9 | 1.8' | 23 28.9 | +17 19 | 169 | SO         |    |     | H II 242  |
| NGC 7682        | UGC 12622   | Galaxy | PSC | 13.1 | 13.3 | 1.2' | 23 29.1 | +03 32 | 259 | SBab       |    |     | disturbed   |
| NGC 7683        | UGC 12623   | Galaxy | PSC | 12.5 | 13.1 | 1.9' | 23 29.1 | +11 27 | 214 | SO         |    |     |   |
| NGC 7684        | UGC 12637   | Galaxy | PSC | 13.6 | 12.9 | 1.5' | 23 30.5 | +00 05 | 259 | Sa         |    |     |   |
| NGC 7685        | UGC 12638   | Galaxy | PSC | 13.2 | 14.1 | 1.9' | 23 30.6 | +03 54 | 259 | SBc        |    |     | H III 426   |
| <b>NGC 7686</b> | OCL 251     | Opn CL | AND | 5.6  | -    | 15'  | 23 30.1 | +49 08 | 88  | IV 1 p     | 20 | 6.2 | H VIII 69;12* mags 8...13                           |
| NGC 7687        | MCG 0-59-   | Galaxy | PSC | 13.4 | 13.6 | 1.3' | 23 30.9 | +03 33 | 259 | SO         |    |     | compact   |
| NGC 7689        | ESO 192- 7  | Galaxy | PHE | 11.5 | 13.2 | 2.8' | 23 33.3 | -54 06 | 416 | SBc        |    |     |   |
| NGC 7690        | ESO 240- 6  | Galaxy | PHE | 12.4 | 12.9 | 2.1' | 23 33.0 | -51 42 | 416 | Sb         |    |     |   |
| NGC 7691        | UGC 12654   | Galaxy | PEG | 12.9 | 14   | 2.1' | 23 32.4 | +15 51 | 214 | SBbc Rii   |    |     | H III 213   |
| NGC 7693        | MCG 0-60-   | Galaxy | PSC | 13.4 | 13.3 | 1.2' | 23 33.2 | -01 18 | 259 | Sa         |    |     |   |
| NGC 7694        | MCG - 1-60- | Galaxy | PSC | 14   | -    | 1.6' | 23 33.3 | -02 42 | 259 | Ir         |    |     | H III 187   |
| NGC 7698        | UGC 12668   | Galaxy | PEG | 13.3 | 13.1 | 1'   | 23 34.0 | +24 57 | 169 | SO         |    |     |   |
| NGC 7701        | MCG - 1-60- | Galaxy | PSC | 14   | -    | 1.2' | 23 34.5 | -02 51 | 259 | Sb         |    |     | H III 188   |
| NGC 7702        | ESO 192- 9  | Galaxy | PHE | 12.2 | 13.1 | 2.1' | 23 35.5 | -56 01 | 416 | SBO-a R    |    |     | lenticular w outer ring                             |
| NGC 7703        | UGC 12676   | Galaxy | PEG | 13.4 | 13.3 | 2.2' | 23 34.8 | +16 05 | 214 | SO         |    |     |   |
| NGC 7704        | UGC 12684   | Galaxy | PSC | 13.4 | 13.2 | 1.1' | 23 35.0 | +04 54 | 259 | E-SO       |    |     |   |
| NGC 7706        | UGC 12686   | Galaxy | PSC | 13.2 | 13.2 | 1.2' | 23 35.2 | +04 58 | 259 | SO         |    |     |   |
| NGC 7707        | UGC 12683   | Galaxy | AND | 13.4 | 13.6 | 1.3' | 23 34.9 | +44 18 | 88  | E-SO       |    |     | H III 579   |
| NGC 7709        | MCG - 3-60- | Galaxy | AQR | 13   | -    | 2.3' | 23 35.5 | -16 42 | 304 | SBO        |    |     |   |
| NGC 7711        | UGC 12691   | Galaxy | PEG | 12.1 | 13.3 | 2.6' | 23 35.7 | +15 18 | 214 | SO         |    |     | H II 244;UGC 12691                                  |
| NGC 7712        | UGC 12694   | Galaxy | PEG | 12.7 | 12.1 | 0.9' | 23 35.9 | +23 37 | 169 | S pec      |    |     | peculiar  |
| NGC 7713        | ESO 347-28  | Galaxy | SCL | 11.2 | 13.3 | 4.5' | 23 36.3 | -37 56 | 385 | SBcd       |    |     |   |
| NGC 7713A       | ESO 347-30  | Galaxy | SCL | 12.5 | 13.4 | 1.6' | 23 37.1 | -37 43 | 385 | SBc        |    |     |   |
| NGC 7714        | UGC 12699   | Galaxy | PSC | 12.5 | 13.4 | 1.9' | 23 36.2 | +02 09 | 259 | SBb/P      |    |     | bridge;disturbed                                    |
| NGC 7716        | UGC 12702   | Galaxy | PSC | 12.1 | 13.4 | 2.2' | 23 36.5 | +00 18 | 259 | SBb        |    |     |   |
| NGC 7717        | MCG - 3-60- | Galaxy | AQR | 13   | -    | 1.4' | 23 37.7 | -15 07 | 304 | SBO-a      |    |     |   |
| NGC 7718        | UGC 12712   | Galaxy | PEG | 14   | 13.2 | 0.9' | 23 38.1 | +25 43 | 169 | S pec      |    |     | sf of 2   |
| NGC 7720        | UGC 12716   | Galaxy | PEG | 12.4 | 13.1 | 1.6' | 23 38.5 | +27 02 | 169 | Elliptical |    |     | H III 146;3C465;E + comp symbiotic                  |
| NGC 7721        | MCG - 1-60- | Galaxy | AQR | 11.6 | 13.2 | 3.1' | 23 38.8 | -06 31 | 304 | Sc         |    |     | H II 432  |
| NGC 7722        | UGC 12718   | Galaxy | PEG | 12.4 | 13.2 | 2.1' | 23 38.7 | +15 57 | 214 | Sa         |    |     |   |
| <b>NGC 7723</b> | MCG - 2-60- | Galaxy | AQR | 11.2 | 13.3 | 3.5' | 23 39.0 | -12 58 | 304 | SBb        |    |     | H I 110   |
| NGC 7724        | MCG - 2-60- | Galaxy | AQR | 13   | -    | 1.5' | 23 39.1 | -12 13 | 304 | Sb         |    |     |   |
| <b>NGC 7727</b> | MCG - 2-60- | Galaxy | AQR | 10.6 | 13.5 | 4.7' | 23 39.9 | -12 18 | 304 | SBap       |    |     | H I 111;Faint outer arms ext to 5'                  |
| NGC 7728        | UGC 12727   | Galaxy | PEG | 13.1 | 12.9 | 1'   | 23 40.0 | +27 08 | 169 | Elliptical |    |     |   |
| NGC 7729        | UGC 12730   | Galaxy | PEG | 13.5 | 13.5 | 1.8' | 23 40.6 | +29 11 | 89  | SBa        |    |     |   |
| NGC 7731        | UGC 12737   | Galaxy | PSC | 13.5 | 13.9 | 1.4' | 23 41.5 | +03 44 | 259 | SBa        |    |     |   |
| NGC 7732        | UGC 12738   | Galaxy | PSC | 13.8 | 13.8 | 2'   | 23 41.6 | +03 43 | 259 | Scd        |    |     | disturbed   |
| NGC 7735        | UGC 12744   | Galaxy | PEG | 13.6 | 13.7 | 1.3' | 23 42.3 | +26 14 | 169 | Elliptical |    |     |   |
| NGC 7736        | ESO 606- 5  | Galaxy | AQR | 12.9 | 13.8 | 1.6' | 23 42.4 | -19 27 | 349 | SO         |    |     |   |
| NGC 7737        | UGC 12745   | Galaxy | PEG | 13.8 | 12.7 | 0.9' | 23 42.8 | +27 03 | 169 | Sa         |    |     |   |
| NGC 7741        | UGC 12754   | Galaxy | PEG | 11.3 | 13.9 | 4.5' | 23 43.9 | +26 04 | 169 | SBc        |    |     | UGC 12754;B narrow bar .8'X0.2';S shape w thick bar |
| NGC 7742        | UGC 12760   | Galaxy | PEG | 11.6 | 12.7 | 1.8' | 23 44.3 | +10 46 | 170 | Sb         |    |     | H II 255;P w NGC 7743                               |
| NGC 7743        | UGC 12759   | Galaxy | PEG | 11.5 | 13.6 | 2.8' | 23 44.4 | +09 56 | 170 | SBO-a      |    |     | H II 256;P w NGC 7742                               |
| NGC 7744        | IC 5348     | Galaxy | PHE | 11.9 | 13.2 | 2.2' | 23 45.0 | -42 55 | 386 | E-SO Ba    |    |     |   |
| NGC 7746        | UGC 12768   | Galaxy | PSC | 13.1 | 13.4 | 1.4' | 23 45.3 | -01 41 | 215 | SO         |    |     |   |
| NGC 7747        | UGC 12272   | Galaxy | PEG | 13.6 | 13.2 | 1.5' | 23 45.5 | +27 22 | 125 | SBb        |    |     |   |
| NGC 7748        |             | Star   | CEP | 7.1  | -    |      | 23 44.9 | +69 45 | 15  |            |    |     |   |
| NGC 7749        | ESO 471- 9  | Galaxy | SCL | 12.8 | 13.3 | 1.6' | 23 45.8 | -29 31 | 350 | SO         |    |     |   |
| NGC 7750        | UGC 12777   | Galaxy | PSC | 12.9 | 13   | 1.6' | 23 46.6 | +03 48 | 215 | SBc/P      |    |     | H III 427   |
| NGC 7751        | UGC 12778   | Galaxy | PSC | 12.8 | 12.6 | 1'   | 23 47.0 | +06 52 | 170 | S          |    |     | H III 437;UGC 12778;core .45'X0.40'                 |
| NGC 7753        | UGC 12780   | Galaxy | PEG | 12   | 14   | 2.9' | 23 47.1 | +29 29 | 89  | SBbc       |    |     | H II 213;connected w NGC 7752                       |
| NGC 7755        | ESO 471-20  | Galaxy | SCL | 11.9 | 14.3 | 3.8' | 23 47.9 | -30 31 | 350 | SBc        |    |     |   |



## 7000 DSO List (sorted by name)

| NAME     | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|----------|-------------|---------|-----|------|------|------|---------|--------|-----|------------|-----|------|--|
| NGC 7756 |             | Galaxy  | PSC | 14   | -    | 0.5' | 23 48.7 | +04 11 | 215 | S          |     |      |  |
| NGC 7757 | UGC 12788   | Galaxy  | PSC | 12.7 | 14.2 | 2.4' | 23 48.8 | +04 10 | 215 | Sc         |     |      |  |
| NGC 7759 | MCG - 3-60- | Galaxy  | AQR | 14   | -    | 1.3' | 23 48.9 | -16 32 | 260 | SBO        |     |      |  |
| NGC 7760 | UGC 12794   | Galaxy  | PEG | 13.4 | 13.3 | 1'   | 23 49.2 | +30 59 | 89  | Elliptical |     |      | H III 854;Red plate size 1.5'x1.5';very compact        |
| NGC 7761 | IC 5361     | Galaxy  | AQR | 14   | -    | 1.2' | 23 51.5 | -13 23 | 260 | SO         |     |      |  |
| NGC 7762 | OCL 280     | Opn CL  | CEP | 10   | -    | 11'  | 23 49.8 | +68 02 | 15  | II 2 p     | 40  | 11   | H VII 55   |
| NGC 7764 | ESO 293- 4  | Galaxy  | PHE | 12.2 | 13.1 | 2'   | 23 50.9 | -40 44 | 386 | SB         |     |      |  |
| NGC 7767 | IC 1511     | Galaxy  | PEG | 13.5 | 11.6 | 1'   | 23 50.9 | +27 05 | 125 | Sa         |     |      | UGC 12805  |
| NGC 7768 | UGC 12806   | Galaxy  | PEG | 12.3 | 13.1 | 1.6' | 23 51.0 | +27 09 | 125 | Elliptical |     |      |  |
| NGC 7769 | UGC 12808   | Galaxy  | PEG | 12   | 12.9 | 1.6' | 23 51.1 | +20 09 | 125 | Sb         |     |      | H II 230;Size 2.5'x2.1' in red light;UGC 12808         |
| NGC 7770 | UGC 12813   | Galaxy  | PEG | 13.8 | 13.1 | 0.8' | 23 51.4 | +20 06 | 125 | Sa         |     |      | disturbed;NGC 7769 group                               |
| NGC 7771 | UGC 12815   | Galaxy  | PEG | 12.3 | 13.1 | 2.4' | 23 51.4 | +20 07 | 125 | SBa        |     |      | H II 231;disturbed;NGC 7769 group;UGC 12815            |
| NGC 7772 | OCL 230     | Opn CL  | PEG | -    | -    | 2'   | 23 51.8 | +16 15 | 170 | III 1 p    |     |      |  |
| NGC 7773 | UGC 12820   | Galaxy  | PEG | 13.4 | 13.7 | 1.2' | 23 52.2 | +31 17 | 89  | SBbc       |     |      | H II 851   |
| NGC 7774 | UGC 12819   | Galaxy  | PEG | 13.1 | 13.6 | 1.3' | 23 52.2 | +11 28 | 170 | Elliptical |     |      |  |
| NGC 7775 | UGC 12821   | Galaxy  | PEG | 13.3 | 12.8 | 0.9' | 23 52.4 | +28 46 | 89  | SBc        |     |      | disturbed?;chaotic spiral                              |
| NGC 7777 | UGC 12829   | Galaxy  | PEG | 13.3 | 13.1 | 1.2' | 23 53.2 | +28 17 | 89  | SO         |     |      |  |
| NGC 7778 | UGC 12827   | Galaxy  | PSC | 12.7 | 12.7 | 1'   | 23 53.3 | +07 52 | 170 | Elliptical |     |      | H III 231;NGC 7782 group                               |
| NGC 7779 | UGC 12831   | Galaxy  | PSC | 12.7 | 13.1 | 1.4' | 23 53.4 | +07 53 | 170 | Sa         |     |      | H III 232;NGC 7782 group                               |
| NGC 7780 | UGC 12833   | Galaxy  | PSC | 13.9 | 13   | 0.9' | 23 53.5 | +08 07 | 170 | SBab       |     |      | sf of 2  |
| NGC 7781 | MCG 1-60-   | Galaxy  | PSC | 13.9 | 11.9 | 0.8' | 23 53.8 | +07 52 | 170 | S          |     |      |  |
| NGC 7782 | UGC 12834   | Galaxy  | PSC | 12.2 | 13.3 | 2.2' | 23 53.9 | +07 58 | 170 | Sb         |     |      | H III 233;Brightest of 3                               |
| NGC 7785 | UGC 12841   | Galaxy  | PSC | 11.6 | 12.9 | 2'   | 23 55.3 | +05 55 | 170 | Elliptical |     |      | H II 468   |
| NGC 7786 | UGC 12842   | Galaxy  | PEG | 13.1 | 11.6 | 0.6' | 23 55.4 | +21 35 | 125 | S          |     |      |  |
| NGC 7788 | OCL 275     | Opn CL  | CAS | 9.4  | -    | 9'   | 23 56.7 | +61 24 | 15  | I 2 p      | 20  |      | in Cas OB5?  |
| NGC 7789 | OCL 269     | Opn CL  | CAS | 6.7  | -    | 16'  | 23 57.4 | +56 43 | 35  | II 1 r     | 300 | 10.7 | H VI 30;1000 members from 11 to 18 mag                 |
| NGC 7790 | OCL 276     | Opn CL  | CAS | 8.5  | -    | 17'  | 23 58.4 | +61 13 | 15  | III 2 p    | 40  | 10.9 | H VII 56;Contains CE Cas                               |
| NGC 7793 | ESO 349-12  | Galaxy  | SCL | 9.1  | 13.4 | 9.6' | 23 57.8 | -32 36 | 350 | Scd        |     |      |  |
| NGC 7794 | UGC 12872   | Galaxy  | PEG | 12.5 | 13.1 | 1.5' | 23 58.6 | +10 44 | 170 | Sbc        |     |      | H III 466;Peculiar;UGC 12872                           |
| NGC 7795 |             | Opn CL  | CAS | 12   | -    | 10'  | 23 58.7 | +60 01 | 35  |            |     |      |  |
| NGC 7796 | ESO 149- 7  | Galaxy  | PHE | 11.5 | 12.9 | 2.2' | 23 59.0 | -55 28 | 416 | Elliptical |     |      |  |
| NGC 7797 | UGC 12877   | Galaxy  | PSC | 13.7 | 13.4 | 1'   | 23 59.0 | +03 38 | 215 | Sbc        |     |      | H III 867;UGC 12877                                    |
| NGC 7798 | UGC 12884   | Galaxy  | PEG | 12.4 | 12.8 | 1.4' | 23 59.4 | +20 45 | 125 | Sc         |     |      | H II 232   |
| NGC 7800 | UGC 12885   | Galaxy  | PEG | 12.6 | 13.9 | 2.3' | 23 59.6 | +14 48 | 170 | Ir         |     |      | H II 10;UGC 12885                                      |
| NGC 7802 | UGC 12902   | Galaxy  | PSC | 13.5 | 12.9 | 1.1' | 00 01.0 | +06 14 | 170 | SO         |     |      |  |
| NGC 7803 | UGC 12906   | Galaxy  | PEG | 13.1 | 12.4 | 1'   | 00 01.3 | +13 07 | 170 | Sa         |     |      | Brightest in chain of 6                                |
| NGC 7805 | UGC 12908   | Galaxy  | PEG | 13.3 | 13.2 | 1.2' | 00 01.4 | +31 26 | 89  | SBO        |     |      | H III 855;contact w NGC 7806                           |
| NGC 7806 | UGC 12911   | Galaxy  | PEG | 13.5 | 13.2 | 1.1' | 00 01.5 | +31 26 | 89  | SB/P       |     |      | H III 856;disturbed PA20;contact w NGC 7805            |
| NGC 7808 | MCG - 2- 1- | Galaxy  | CET | 13.5 | 13.9 | 1.3' | 00 03.5 | -10 45 | 260 | SO         |     |      |  |
| NGC 7810 | UGC 12919   | Galaxy  | PEG | 13   | 13   | 1.2' | 00 02.3 | +12 58 | 170 | SO         |     |      | H III 984;UGC 12919                                    |
| NGC 7812 | ESO 349-21  | Galaxy  | SCL | 13.1 | 12.7 | 1.1' | 00 02.9 | -34 14 | 350 | Sb         |     |      |  |
| NGC 7814 | UGC 8       | Galaxy  | PEG | 10.6 | 13.2 | 4.7' | 00 03.2 | +16 09 | 170 | Sab        |     |      | H II 240;Equatorial dust lane;Nearly edge-on           |
| NGC 7816 | UGC 16      | Galaxy  | PSC | 12.8 | 13.7 | 1.7' | 00 03.8 | +07 29 | 170 | Sbc        |     |      | H III 436  |
| NGC 7817 | UGC 19      | Galaxy  | PEG | 11.8 | 12.9 | 3.5' | 00 04.0 | +20 45 | 125 | Sbc        |     |      | H II 227   |
| NGC 7818 | UGC 21      | Galaxy  | PSC | 14   | 13.9 | 1'   | 00 04.2 | +07 23 | 170 | Sc         |     |      |  |
| NGC 7819 | UGC 26      | Galaxy  | PEG | 13.5 | 14   | 1.5' | 00 04.4 | +31 28 | 89  | SBb        |     |      |  |
| NGC 7820 | UGC 28      | Galaxy  | PSC | 12.9 | 12.4 | 1.3' | 00 04.5 | +05 12 | 215 | Sa         |     |      | Brightest in group                                     |
| NGC 7821 | MCG - 3- 1- | Galaxy  | CET | 14   | -    | 1.4' | 00 05.3 | -16 29 | 260 | Sc         |     |      |  |
| NGC 7822 | LBN 589     | Brn Neb | CEP | -    | -    | 20'  | 00 02.2 | +67 25 | 15  | E          |     |      | Portion of 2 deg arc;whole area nebulous               |
| NGC 7824 | UGC 34      | Galaxy  | PSC | 13.2 | 13.7 | 1.6' | 00 05.1 | +06 55 | 170 | Sab        |     |      |  |
| NGC 7827 | UGC 38      | Galaxy  | PSC | 13.9 | 13.9 | 1.2' | 00 05.5 | +05 13 | 215 | SBO        |     |      | interaction?   |
| NGC 7828 | MCG - 2- 1- | Galaxy  | CET | 13.9 | 12.7 | 1'   | 00 06.5 | -13 25 | 260 | Sc Ring    |     |      |  |
| NGC 7829 | MCG - 2- 1- | Galaxy  | CET | 13.9 | 12.9 | 0.7' | 00 06.5 | -13 25 | 260 | Sa Ring    |     |      |  |
| NGC 7831 | IC 1530     | Galaxy  | AND | 12.8 | 12.3 | 1.5' | 00 07.3 | +32 37 | 89  | Sb         |     |      |  |
| NGC 7832 | IC 5386     | Galaxy  | PSC | 13.3 | -    | 1.9' | 00 06.5 | -03 43 | 215 | Elliptical |     |      | H III 190;IC 5386                                      |
| NGC 7836 | UGC 65      | Galaxy  | AND | 13.7 | 12.7 | 0.9' | 00 08.0 | +33 04 | 89  | Ir         |     |      |  |
| IC 10    | UGC 192     | Galaxy  | CAS | 13.3 | 14   | 6.4' | 00 20.4 | +59 18 | 35  | Ir+        |     |      | Mem. of Local Group;very obscured;several H II regions |
| IC 59    | LBN 620     | Brn Neb | CAS | -    | -    | 10'  | 00 57.5 | +61 09 | 16  | E          |     |      | Neb patch 30' N of Gamma Cas                           |
| IC 63    | LBN 623     | Brn Neb | CAS | -    | -    | 10'  | 00 59.5 | +60 55 | 36  | E          |     |      | Fan-shaped neby 20' north foll Gamma Cas               |
| IC 65    | UGC 625     | Galaxy  | AND | 12.8 | 14.3 | 3.9' | 01 00.9 | +47 41 | 60  | SBbc       |     |      |  |
| IC 156   | UGC 1231    | Galaxy  | PSC | 13.5 | 13.9 | 1.5' | 01 45.5 | +10 33 | 173 | S pec      |     |      |  |
| IC 163   | UGC 1276    | Galaxy  | ARI | 13.1 | 13.4 | 1.8' | 01 49.3 | +20 43 | 128 | SBd        |     |      |  |
| IC 166   | OCL 334     | Opn CL  | CAS | 11.7 | -    | 7'   | 01 52.5 | +61 51 | 17  | III 1 r    | 120 | 11.7 |  |
| IC 239   | UGC 2080    | Galaxy  | AND | 11.1 | 14.2 | 4.6' | 02 36.5 | +38 58 | 93  | SBa        |     |      | In NGC 1023 group;vsBN in smooth bar;low surface br    |

## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES   |
|----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|------|---|
| IC 289         | PK 138+2.1  | Pln Neb | CAS | 12   | 12.3 | 45"   | 03 10.3 | +61 19 | 18  | 4(2)      |    | 16.8 |   |
| IC 334         | UGC 2824    | Galaxy  | CAM | 12.3 | 12.9 | 3.7'  | 03 45.3 | +76 38 | 5   | Pec       |    |      |   |
| <b>IC 342</b>  | UGC 2847    | Galaxy  | CAM | 12   | 14.9 | 20.9' | 03 46.8 | +68 06 | 18  | SBc       |    |      | Local Group Member                                    |
| IC 348         | IC 1985     | CL+Neb  | PER | 7.3  | -    | 10'   | 03 44.6 | +32 10 | 95  | IV 2 p n  | 20 | 8.5  | With faint neby;surrounds Omicron Persei;near B4      |
| IC 349         | vdB 22      | Brn Neb | TAU | -    | -    | 30'   | 03 46.3 | +23 56 | 132 | R         |    |      | Very small neb south foll Merope                      |
| IC 351         | PK 159-15.1 | Pln Neb | PER | 11.9 | 7.3  | 8"    | 03 47.6 | +35 03 | 95  | 2a        |    | 15   |   |
| IC 353         | LBN 774     | Brn Neb | TAU | -    | -    | 180'  | 03 53.0 | +25 30 | 132 | E         |    |      |   |
| IC 356         | UGC 2953    | Galaxy  | CAM | 10.5 | 13.6 | 4.5'  | 04 07.8 | +69 49 | 18  | Sbp       |    |      |   |
| IC 360         | LBN 786     | Brn Neb | TAU | -    | -    | 180'  | 04 09.0 | +26 08 | 133 | E         |    |      |   |
| IC 361         | OCL 393     | Opn CL  | CAM | 11.7 | 13.9 | 6'    | 04 18.8 | +58 15 | 39  | II 1 r    | 60 | 14.6 |   |
| <b>IC 405</b>  | LBN 795     | Brn Neb | AUR | 10   | -    | 50'   | 05 16.5 | +34 21 | 97  | E         |    |      | <b>Flaming Star nebula</b> ;variable AE Aur in center |
| <b>IC 410</b>  | NGC 1893    | Brn Neb | AUR | 7.5  | -    | 11'   | 05 22.7 | +33 25 | 97  | E         |    |      | Incl cluster NGC 1893                                 |
| IC 417         | LBN 804     | Brn Neb | AUR | -    | -    | 13'   | 05 28.1 | +34 25 | 97  | E+*       |    |      |   |
| IC 418         | PK 215-24.1 | Pln Neb | LEP | 10.7 | 5.8  | 14"   | 05 27.5 | -12 42 | 270 | 4         |    | 10.2 | 11 mag star in nebulous disk                          |
| IC 423         | LBN 913     | Brn Neb | ORI | -    | -    | 2'    | 05 33.4 | -00 37 | 225 | E         |    |      |   |
| IC 426         | LBN 921     | Brn Neb | ORI | -    | -    | 10'   | 05 36.5 | -00 18 | 226 | E         |    |      |   |
| IC 430         | CED 55K     | Brn Neb | ORI | -    | -    | 11'   | 05 38.5 | -07 05 | 271 | E         |    |      |   |
| IC 431         | LBN 944     | Brn Neb | ORI | -    | -    | 8'    | 05 40.2 | -01 28 | 226 | E         |    |      |   |
| IC 432         | LBN 946     | Brn Neb | ORI | -    | -    | 10'   | 05 40.9 | -01 30 | 226 | E         |    |      |   |
| <b>IC 434</b>  | LBN 954     | Brn Neb | ORI | 11   | -    | 90'   | 05 41.0 | -02 27 | 226 | E         |    |      | <b>Contains Horsehead neb (B33)</b>                   |
| IC 435         | CED 55Q     | Brn Neb | ORI | -    | -    | 5'    | 05 43.0 | -02 19 | 226 | R         |    |      |   |
| IC 443         | LBN 844     | SN Rem  | GEM | 12   | -    | 50'   | 06 17.8 | +22 49 | 137 |           |    |      | vF;vL;arc 25'x5';filamentary structure                |
| IC 444         | LBN 840     | Brn Neb | GEM | -    | -    | 8'    | 06 19.4 | +23 17 | 137 | E         |    |      | 7th mag star (12 GEM) w faint neby;diam 4'            |
| IC 446         | IC 2167     | Brn Neb | MON | -    | -    | 25'   | 06 31.1 | +10 27 | 182 | R+*       |    |      |   |
| IC 448         | LBN 930     | Brn Neb | MON | -    | -    | 15'   | 06 32.8 | +07 23 | 182 | R         |    |      |   |
| IC 466         | CED 92      | Brn Neb | MON | -    | -    | 1'    | 07 08.6 | -04 19 | 228 | E         |    |      |   |
| IC 691         | UGC 6447    | Galaxy  | UMA | 13.9 | 12.4 | 0.6'  | 11 26.7 | +59 09 | 46  | Pec       |    |      | compact w jet   |
| IC 719         | UGC 6633    | Galaxy  | VIR | 13.1 | 12.2 | 1.3'  | 11 40.3 | +09 01 | 192 | SO        |    |      |   |
| IC 719         | UGC 6633    | Galaxy  | VIR | 13.1 | 12.2 | 1.3'  | 11 40.3 | +09 01 | 192 | SO        |    |      |   |
| IC 749         | UGC 6962    | Galaxy  | UMA | 12.4 | 13.8 | 2.3'  | 11 58.6 | +42 44 | 74  | SBc Ring  |    |      | P w IC 750;3.3' distant                               |
| IC 749         | UGC 6962    | Galaxy  | UMA | 12.4 | 13.8 | 2.3'  | 11 58.6 | +42 44 | 74  | SBc Ring  |    |      | P w IC 750;3.3' distant                               |
| IC 750         | UGC 6973    | Galaxy  | UMA | 11.9 | 13   | 2.6'  | 11 58.9 | +42 43 | 74  | Sab       |    |      | P w IC 749;very red obi                               |
| IC 750         | UGC 6973    | Galaxy  | UMA | 11.9 | 13   | 2.6'  | 11 58.9 | +42 43 | 74  | Sab       |    |      | P w IC 749;very red obj                               |
| IC 758         | UGC 7056    | Galaxy  | UMA | 13.3 | 14.6 | 1.9'  | 12 04.2 | +62 30 | 25  | SBc       |    |      |   |
| IC 764         | UA 273      | Galaxy  | HYA | 12.2 | 14.1 | 4.8'  | 12 10.2 | -29 44 | 368 | SBc       |    |      |   |
| IC 769         | UGC 7209    | Galaxy  | VIR | 12.6 | 14.1 | 2.5'  | 12 12.5 | +12 07 | 193 | SBbc Ring |    |      | Member of Virgo group of galaxies                     |
| IC 775         | UGC 7350    | Galaxy  | VIR | 13.3 | 13.2 | 1.2'  | 12 18.9 | +12 55 | 193 | SB0 pec   |    |      |   |
| IC 776         | UGC 7352    | Galaxy  | VIR | 13.8 | 14.4 | 1.8'  | 12 19.0 | +08 51 | 193 | SBd       |    |      | Virgo grp memb;P w IC 3134 vF;vS;E                    |
| IC 783         | UGC 7415    | Galaxy  | COM | 13.6 | 13.9 | 1.3'  | 12 21.6 | +15 45 | 193 | SBO-a     |    |      |   |
| IC 875         | UGC 8355    | Galaxy  | UMA | 12.8 | 13   | 1.2'  | 13 17.1 | +57 32 | 48  | SO        |    |      |   |
| IC 1014        | UGC 9275    | Galaxy  | BOO | 12.5 | 14.2 | 2.7'  | 14 28.3 | +13 47 | 197 | SBd       |    |      |   |
| IC 1048        | UGC 9483    | Galaxy  | VIR | 12.6 | 13   | 2.2'  | 14 43.0 | +04 53 | 243 | S pec     |    |      |   |
| IC 1065        | UGC 9553    | Galaxy  | DRA | 13.6 | 13.2 | 1'    | 14 49.4 | +63 16 | 27  | SBO       |    |      |   |
| IC 1158        | UGC 10133   | Galaxy  | SER | 12.6 | 14   | 2.5'  | 16 01.6 | +01 42 | 245 | SBc       |    |      |   |
| IC 1257        | OCL 51      | Glob CL | OPH | 12.5 | -    | 1'    | 17 27.1 | -07 06 | 293 | V         |    |      | Identified as distant globular cluster in 1996        |
| IC 1266        | PK 345-8.1  | Pln Neb | ARA | 12.3 | -    | 13"   | 17 45.6 | -46 05 | 408 | 4         |    | 11.1 | Also Thackeray 1                                      |
| IC 1274        | IC 1275     | Brn Neb | SGR | -    | -    | 20'   | 18 10.1 | -23 42 | 339 | E+*       |    |      |   |
| IC 1275        | IC 1274     | Brn Neb | SGR | -    | -    | 20'   | 18 10.1 | -23 42 | 339 | E+*       |    |      |   |
| IC 1276        | Pal 7       | Glob CL | SER | 10.3 | -    | 7.1'  | 18 10.8 | -07 13 | 294 | XII       |    |      |   |
| IC 1284        | Gum 78;RCV  | Brn Neb | SGR | -    | -    | 17'   | 18 17.7 | -19 40 | 339 | E+*       |    |      |   |
| IC 1287        | LBN 76      | Brn Neb | SCT | -    | -    | 20'   | 18 31.6 | -10 50 | 295 | E         |    | 6    | Dbl * Struve 2325 illum neby--Hartung                 |
| IC 1291        | UGC 11283   | Galaxy  | DRA | 13   | 13.9 | 1.8'  | 18 33.9 | +49 17 | 82  | SBdm pe   |    |      | Br of 3;S-shaped;very patchy                          |
| IC 1295        | PK 25-4.2   | Pln Neb | SCT | 12.7 | 13.4 | 102"  | 18 54.6 | -08 50 | 295 | 3b(2)     |    | 15   | Often mislabeled IC 1298                              |
| IC 1297        | PK 358-21.1 | Pln Neb | CRA | 11.5 | 5.9  | 8"    | 19 17.4 | -39 37 | 410 |           |    | 12.9 | Ring shape  |
| IC 1310        | Berk 50     | CL+Neb  | CYG | -    | -    | 15'   | 20 10.1 | +34 58 | 119 | II 1 p n  | 12 | 14   | Brian Skiff ID of Be 50=IC 1310                       |
| IC 1311        | OCL 173     | CL+Neb  | CYG | 13.1 | -    | 5'    | 20 10.3 | +41 13 | 84  | II 3 r n  | 60 | 17   | Neb Descr=60'x20' emission neb in sev parts           |
| <b>IC 1340</b> |             | SN Rem  | CYG | -    | -    | 25'   | 20 56.2 | +31 04 | 120 | E         |    |      | <b>Veil nebula</b> , see 6960                         |
| IC 1369        | Cr 432      | Opn CL  | CYG | 8.8  | -    | 4'    | 21 12.1 | +47 44 | 86  | I 1 m     | 40 | 12.1 | Barnard saw nebulosity-there is none                  |
| <b>IC 1396</b> | OCL 222     | CL+Neb  | CEP | 3.5  | -    | 89'   | 21 39.1 | +57 30 | 57  | II 3 m n  | 50 | 3.8  | In Cep OB2;Neby is 165'X135';cluster is Tr 37         |
| IC 1434        | Cr 445      | Opn CL  | LAC | 9    | -    | 8'    | 22 10.5 | +52 50 | 57  | II 1 p?   | 40 | 12   |   |
| IC 1442        | OCL 224     | Opn CL  | LAC | 9.1  | -    | 5'    | 22 16.5 | +54 03 | 57  | II 2 m    | 20 | 11.4 |   |
| IC 1459        | IC 5265     | Galaxy  | GRU | 10   | 13.2 | 5.1'  | 22 57.2 | -36 28 | 384 | E3        |    |      |   |
| IC 1470        | CED 208     | Brn Neb | CEP | -    | -    | 15'   | 23 05.2 | +60 15 | 58  | E         |    |      | 12 mag star w 70" X 45" neby                          |
| IC 1558        | MCG -04-03- | Galaxy  | SCL | 12.2 | 14.4 | 3.3'  | 00 35.8 | -25 23 | 306 | SB        |    |      |   |

## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES   |
|----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|---|
| IC 1613        | UGC 668     | Galaxy  | CET | 9.2  | 15   | 16.6' | 01 04.9 | +02 08 | 217 | Ir         |    |      | Member of Local Group                                 |
| IC 1727        | UGC 1249    | Galaxy  | TRI | 11.5 | 14.7 | 7.1'  | 01 47.5 | +27 20 | 128 | SBm        |    |      | P w NGC 672;Low surf br;distortedby NGC 672           |
| IC 1747        | PK 130+1.1  | Pln Neb | CAS | 12   | 8.7  | 13"   | 01 57.6 | +63 19 | 17  | 3b         |    | 15.8 |   |
| IC 1795        | LBN 645     | Brt Neb | CAS | -    | -    | 12'   | 02 25.8 | +61 59 | 17  | E          |    |      | Brightest portion of IC 1805;vast neby incl Mel 15    |
| IC 1805        | Mel 15      | CL+Neb  | CAS | 6.5  | -    | 60'   | 02 32.7 | +61 27 | 17  | III 3 p n  | 40 | 7.9  | Cluster is Mel 15 & Cr 26;neby eF;Irr loop 90' diam   |
| IC 1848        | OCL 364     | CL+Neb  | CAS | 6.5  | -    | 40'   | 02 51.4 | +60 25 | 38  | IV 3 p n   | 10 | 7.1  | Neby descr: eL;vF;90' X 45'                           |
| IC 1871        | LBN 675     | Brt Neb | CAS | -    | -    | 4.0'  | 03 03.2 | +60 28 | 38  | E          |    |      |   |
| IC 1933        | ESO 155-25  | Galaxy  | HOR | 12.5 | 13.4 | 2.2'  | 03 25.7 | -52 47 | 419 | SBc        |    |      |   |
| IC 1954        | ESO 200-36  | Galaxy  | HOR | 11.6 | 13.2 | 3'    | 03 31.5 | -51 54 | 420 | SBb        |    |      |   |
| IC 1995        | LBN 774     | Brt Neb | TAU | -    | -    | 2'    | 03 50.3 | +25 35 | 132 | E          |    |      |   |
| IC 2000        | ESO 201-G0  | Galaxy  | HOR | 11.9 | 13   | 4.1'  | 03 49.1 | -48 52 | 391 | SBc        |    |      |   |
| IC 2003        | PK 161-14.1 | Pln Neb | PER | 12.6 | 7.4  | 10.8" | 03 56.4 | +33 53 | 95  | 2          |    | 15.3 |   |
| IC 2035        | ESO 250- 7  | Galaxy  | HOR | 11.8 | 11.7 | 1.2'  | 04 09.0 | -45 31 | 391 | SBO        |    |      |   |
| IC 2087        | LBN 813     | Brt Neb | TAU | -    | -    | 4'    | 04 40.0 | +25 45 | 134 | E          |    |      | In dark neb B22                                       |
| IC 2149        | PK 166+10.1 | Pln Neb | AUR | 10.6 | -    | 12"   | 05 56.4 | +46 06 | 66  | 3b(2)      |    | 11.3 |   |
| IC 2157        | Cr 80       | Opn CL  | GEM | 8.4  | -    | 7'    | 06 04.8 | +24 04 | 136 | III 2 p    | 20 | 11.1 |   |
| IC 2158        | ESO 425- 7  | Galaxy  | COL | 12   | 12.7 | 1.7'  | 06 05.3 | -27 51 | 316 | SBab       |    |      |   |
| IC 2162        | Sh2-256     | Brt Neb | ORI | -    | -    | 4'    | 06 12.9 | +17 59 | 137 | E          |    |      | With E-W extensions                                   |
| IC 2165        | PK 221-12.1 | Pln Neb | CMA | 10.6 | 6.5  | 9"    | 06 21.7 | -12 59 | 272 | 3b         |    | 15.1 | Nearly stellar  |
| IC 2166        | UGC 3463    | Galaxy  | LYN | 12.4 | 14.3 | 3'    | 06 26.9 | +59 05 | 41  | SBbc       |    |      |   |
| IC 2169        | IC 447      | Brt Neb | MON | -    | -    | 25'   | 06 31.0 | +09 54 | 182 | R          |    |      |   |
| IC 2177        | Gum 2;Sh2-  | Brt Neb | MON | -    | -    | 20'   | 07 05.1 | -10 42 | 273 | E          |    |      | Streamer incl bright patches 2337 & Gum 1;Eagle nebu  |
| IC 2179        | UGC 3750    | Galaxy  | CAM | 12.4 | 12.6 | 1.7'  | 07 15.5 | +64 56 | 21  | E1         |    |      | P w NGC 2347 at 13' south foll                        |
| IC 2233        | UGC 4278    | Galaxy  | LYN | 12.6 | 13.3 | 4.6'  | 08 14.0 | +45 44 | 69  | SBcd       |    |      |   |
| IC 2391        | Cr 191      | Opn CL  | VEL | 2.5  | -    | 60'   | 08 39.6 | -52 55 | 425 | II 3 p     | 30 | 3.6  | Scattered group of 10 * incl Omicron Velorum          |
| IC 2395        | Cr 192      | Opn CL  | VEL | 4.6  | -    | 17'   | 08 42.5 | -48 08 | 397 | II 3 p     | 40 | 5.5  | Cluster NGC 2670 in field 30' south                   |
| IC 2488        | Cr 208      | Opn CL  | VEL | 7.4  | -    | 15'   | 09 27.4 | -56 57 | 425 | II 2 m     | 70 | 10   |   |
| IC 2511        | IC 2512     | Galaxy  | ANT | 12.1 | 12.5 | 2.9'  | 09 49.4 | -32 50 | 365 | SBab       |    |      |   |
| IC 2522        | ESO 374-10  | Galaxy  | ANT | 11.9 | 13.6 | 2.8'  | 09 55.1 | -33 08 | 365 | SBc        |    |      |   |
| IC 2537        | ESO 499-39  | Galaxy  | ANT | 12.1 | 13.6 | 2.5'  | 10 03.9 | -27 34 | 324 | SBc        |    |      |   |
| <b>IC 2574</b> | UGC 5666    | Galaxy  | UMA | 10.8 | 15.5 | 10.8' | 10 28.4 | +68 25 | 24  | SAB        |    |      | <b>Coddington Galaxy</b>                              |
| IC 2581        | Cr 222      | Opn CL  | CAR | 4.3  | -    | 8'    | 10 27.4 | -57 38 | 426 | I 3 m n    | 25 | 4.6  | In Car OB1?;beaut fld;central* CPD 3256 many pairs--H |
| IC 2627        | ESO 502-21  | Galaxy  | CRT | 12   | 13.9 | 2.6'  | 11 09.9 | -23 44 | 326 | SBbc       |    |      |   |
| IC 2995        | ESO 440-50  | Galaxy  | HYA | 12.2 | 13.3 | 3'    | 12 05.8 | -27 57 | 328 | SBc        |    |      |   |
| IC 3061        | UGC 7255    | Galaxy  | COM | 13.6 | 13.4 | 2.2'  | 12 15.1 | +14 02 | 193 | SBc        |    |      | Mem Virgo group;P w NCC 4212                          |
| IC 3115        | UGC 7333    | Galaxy  | VIR | 13.1 | 13.9 | 1.7'  | 12 18.0 | +06 39 | 193 | SBc        |    |      | P w NGC 4241  |
| IC 3253        | ESO 380-24  | Galaxy  | CEN | 11.9 | 13   | 2.7'  | 12 23.8 | -34 37 | 369 | Sc         |    |      |   |
| IC 3259        | UGC 7469    | Galaxy  | VIR | 13.5 | 13.8 | 1.7'  | 12 23.8 | +07 11 | 193 | SBd        |    |      | Low surface brightness                                |
| IC 3267        | UGC 7474    | Galaxy  | VIR | 13.4 | 13.7 | 1.2'  | 12 24.1 | +07 02 | 193 | Sc         |    |      | Possible member of Virgo group of galaxies            |
| IC 3268        | UGC 7477    | Galaxy  | VIR | 13.3 | 12.8 | 0.9'  | 12 24.1 | +06 36 | 193 | Sc         |    |      |   |
| IC 3322        | UGC 7513    | Galaxy  | VIR | 12.9 | 13.2 | 2.3'  | 12 25.9 | +07 33 | 193 | SBc        |    |      | Member of Virgo group of galaxies                     |
| IC 3365        | UGC 7563    | Galaxy  | COM | 13.9 | 14.5 | 2.1'  | 12 27.2 | +15 54 | 193 | Ir+        |    |      | Member of Virgo group of galaxies                     |
| IC 3475        | UGC 7692    | Galaxy  | VIR | 13.1 | 14.2 | 1.7'  | 12 32.7 | +12 46 | 194 | Elliptical |    |      | Member of Virgo group of galaxies                     |
| IC 3476        | UGC 7695    | Galaxy  | COM | 12.7 | 14   | 2.2'  | 12 32.7 | +14 03 | 194 | Ir+        |    |      |   |
| IC 3499        | UGC 7712    | Galaxy  | VIR | 13.3 | 12.7 | 1.4'  | 12 33.8 | +11 00 | 194 | Sa         |    |      | Member of Virgo group of galaxies                     |
| IC 3568        | PK 123+34.1 | Pln Neb | CAM | 11.6 | 6.7  | 18"   | 12 33.1 | +82 34 | 9   | 2(2a)      |    | 12.9 |   |
| IC 3576        | UGC 7781    | Galaxy  | VIR | 13.5 | 15   | 2.3'  | 12 36.6 | +06 37 | 194 | S          |    |      | Member of Virgo group of galaxies                     |
| IC 3583        | UGC 7784    | Galaxy  | VIR | 12.8 | 13.6 | 2.2'  | 12 36.7 | +13 16 | 194 | Ir+        |    |      | P w NGC 4569  |
| IC 3687        | UGC 7866    | Galaxy  | CVN | 13.4 | 15.8 | 3.4'  | 12 42.3 | +38 30 | 108 | Ir+        |    |      | Dwarf irr;bright cond. on south side of nuc 0.6'      |
| IC 3881        | UGC 8036    | Galaxy  | COM | 13   | 14.1 | 0.2'  | 12 54.9 | +19 07 | 149 | SBc        |    |      |   |
| IC 4051        | UGC 8129    | Galaxy  | COM | 13.2 | 13   | 1'    | 13 00.9 | +28 00 | 109 | E0         |    |      | Member of Coma group of galaxies                      |
| IC 4182        | UGC 8188    | Galaxy  | CVN | 12.5 | 16.1 | 6'    | 13 05.8 | +37 36 | 109 | Sm         |    |      | Dwarf spiral  |
| IC 4213        | UGC 8280    | Galaxy  | CVN | 13.3 | 13.3 | 2.5'  | 13 12.2 | +35 40 | 109 | Sc         |    |      |   |
| IC 4351        | ESO 445-84  | Galaxy  | HYA | 11.7 | 13.4 | 5.9'  | 13 57.9 | -29 19 | 371 | Sb         |    |      |   |
| <b>IC 4406</b> | PK 319+15.1 | Pln Neb | LUP | 11   | 9.1  | 46"   | 14 22.4 | -44 09 | 404 | 4(3)       |    | 17.4 | Annular;N2-- Stellar ?;pB diffused disk 20"--Hartung  |
| IC 4444        | IC 4441     | Galaxy  | LUP | 11.4 | 12.2 | 1.7'  | 14 31.6 | -43 25 | 404 | SBbc       |    |      |   |
| IC 4562        | UGC 9928    | Galaxy  | BOO | 12.6 | 13   | 1.2'  | 15 36.0 | +43 30 | 78  | Elliptical |    |      |   |
| IC 4592        | LBN 1113    | Brt Neb | SCO | -    | -    | 60'   | 16 12.0 | -19 28 | 335 | E+*        |    |      |   |
| IC 4593        | PK 25+40.1  | Pln Neb | HER | 11   | 7.4  | 12.5" | 16 11.7 | +12 04 | 200 | 2(2)       |    | 11.1 | Central star is variable mags 10.2 to 11.1            |
| IC 4599        | PK 321+5.1  | Pln Neb | SCO | 12.3 | -    | 16"   | 16 19.4 | -42 16 | 406 |            |    | 16.3 |   |
| IC 4601        | ESO 585-*N  | Brt Neb | SCO | -    | -    | 20'   | 16 20.3 | -20 05 | 336 | E+*        |    |      |   |
| IC 4603        | LBN 1109    | Brt Neb | OPH | -    | -    | 20'   | 16 25.4 | -24 28 | 336 | E+*        |    |      |   |
| IC 4604        | LBN 1112    | Brt Neb | OPH | -    | -    | 60'   | 16 25.6 | -23 27 | 336 | E+*        |    |      | Photographically 140' X 70'                           |
| IC 4605        | LBN 1110    | Brt Neb | SCO | -    | -    | 30'   | 16 30.2 | -25 07 | 336 | E+*        |    |      | Surrounds 22 Sco;irregular shape                      |



## 7000 DSO List (sorted by name)

| NAME           | OTHER            | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns | bs   | SAC NOTES  |
|----------------|------------------|---------|-----|------|------|-------|---------|--------|-----|------------|----|------|--|
| IC 4628        | ESO 332-EN       | Brt Neb | SCO | -    | -    | 90'   | 16 57.0 | -40 27 | 407 | E          |    |      |  |
| IC 4634        | PK 0+12.1        | Pln Neb | OPH | 12   | 6.6  | 20"   | 17 01.6 | -21 50 | 337 | 2a(3)      |    | 17   | Pale blue disk 10" across--Hartung                         |
| IC 4637        | PK 345+0.1       | Pln Neb | SCO | 13.5 | 9.2  | 21"   | 17 05.2 | -40 53 | 407 | 3          |    | 12.7 |  |
| IC 4642        | PK 334-9.1       | Pln Neb | ARA | 12.4 | 9.6  | 15"   | 17 11.8 | -55 24 | 433 | 4          |    | 13.6 |  |
| IC 4651        | OCL 987          | Opn CL  | ARA | 6.9  | -    | 10'   | 17 24.8 | -49 56 | 408 | II 3 m     | 80 | 8.9  | Not much condensation--Hartung;70 * mags 10..14            |
| IC 4663        | PK 346-8.1       | Pln Neb | SCO | 13   | 8.8  | 14"   | 17 45.5 | -44 54 | 408 | 4          |    | 14   |  |
| IC 4665        | OCL 85           | Opn CL  | OPH | 4.2  | -    | 41'   | 17 46.3 | +05 43 | 203 | III 2 p    | 30 | 6.9  | Incl Struve 2212 8.5+9 ;3.1"sep;340 deg PA                 |
| IC 4673        | PK 3-2.3         | Pln Neb | SGR | 13   | 9.9  | 18"   | 18 03.3 | -27 06 | 339 | 4          |    | 14.6 |  |
| IC 4684        | IC 4681          | Brt Neb | SGR | -    | -    | 3'    | 18 09.1 | -23 26 | 339 | E+*        |    |      |  |
| IC 4685        | OCL 22           | Brt Neb | SGR | -    | -    | 10'   | 18 09.3 | -23 59 | 339 | E+*        |    |      |  |
| IC 4699        | PK 348-13.1      | Pln Neb | TEL | 12   | 7.2  | 13"   | 18 18.5 | -45 59 | 409 | 2          |    | 15.1 |  |
| IC 4701        | Gum 79;RCV       | Brt Neb | SGR | -    | -    | 60'   | 18 16.0 | -16 44 | 294 | E          |    |      |  |
| IC 4721        | ESO 140-G0       | Galaxy  | PAV | 11.6 | 13.7 | 5.6'  | 18 34.4 | -58 30 | 435 | SBc        |    |      | Interacting with IC 4720?                                  |
| IC 4732        | PK 10-6.1        | Pln Neb | SGR | 13.3 | 6.2  | 3.6"  | 18 33.9 | -22 39 | 340 | 1          |    | 16.6 |  |
| IC 4756        | Cr 386           | Opn CL  | SER | 4.6  | -    | 39'   | 18 39.0 | +05 27 | 250 | III 2 m    | 80 | 8.7  | Naked eye from dark site                                   |
| IC 4776        | PK 2-13.1        | Pln Neb | SGR | 12.5 | 6.4  | 8"    | 18 45.8 | -33 21 | 378 | 2a         |    | 16   |  |
| IC 4812        | ESO 396-*N       | Brt Neb | CRA | -    | -    | 20'   | 19 01.1 | -37 04 | 379 | E+*        |    |      |  |
| IC 4846        | PK 27-9.1        | Pln Neb | AQL | 12   | 4.5  | 2"    | 19 16.5 | -09 03 | 296 | 2          |    | 13.7 |  |
| IC 4889        | IC 4891          | Galaxy  | TEL | 11.1 | 12.8 | 2.7"  | 19 45.3 | -54 21 | 436 | E5         |    |      |  |
| IC 4946        | New 5            | Galaxy  | SGR | 12.6 | 12.4 | 2.4'  | 20 23.9 | -44 00 | 411 | SAB        |    |      |  |
| IC 4954        | IC 4955;Ced      | Brt Neb | VUL | -    | -    | 10'   | 20 04.8 | +29 15 | 119 | E          |    |      | 3 Bright components;Roslund 4 open cluster invl            |
| IC 4996        | Cr 418           | Opn CL  | CYG | 7.3  | -    | 6'    | 20 16.5 | +37 38 | 119 | I 3 p n    | 15 | 8.5  |  |
| IC 4997        | PK 58-10.1       | Pln Neb | SGE | 11.3 | 2.9  | 2"    | 20 20.1 | +16 44 | 208 | 1          |    | 13.7 | Small;bright PLNNB--Hartung                                |
| IC 5006        |                  | Star    | AQL | 12   | -    |       | 20 23.7 | +06 28 | 208 |            |    |      |  |
| IC 5063        | ESO 187-23       | Galaxy  | IND | 11.9 | 12.9 | 2.4'  | 20 52.0 | -57 04 | 437 | SA0        |    |      |  |
| <b>IC 5067</b> | IC 5070; LBN     | Brt Neb | CYG | 8    | -    | 60'   | 20 50.8 | +44 21 | 85  | E          |    |      | <b>Pelican Nebula</b> ;w IC 5067;56 Cyg invl               |
| IC 5068        | LBN 328          | Brt Neb | CYG | -    | -    | 40'   | 20 50.8 | +42 31 | 85  | E          |    |      |  |
| IC 5076        | LBN 394          | Brt Neb | CYG | -    | -    | 7'    | 20 55.9 | +47 25 | 85  | E          |    |      | surr *6m   |
| IC 5117        | PK 89-5.1        | Pln Neb | CYG | 13.3 | 3    | 2"    | 21 32.5 | +44 36 | 86  | 2          |    | 16.7 |  |
| <b>IC 5146</b> | OCL 213          | CL+Neb  | CYG | 10   | -    | 20'   | 21 53.4 | +47 16 | 86  | IV 2 p n   | 20 | 9.6  | <b>Cocoon neb</b> ;at end of dark streamer B168            |
| IC 5148        | PK 2-52.1        | Pln Neb | GRU | 11   | 14.4 | 120"  | 21 59.6 | -39 23 | 413 | 4          |    | 16.2 | Also IC 5149 and IC 5150;called IC 5150 in Hartung         |
| IC 5152        | ESO 237-27       | Galaxy  | IND | 10.6 | 13.5 | 5.5'  | 22 02.7 | -51 18 | 438 | Ir         |    |      | Member of Local Group                                      |
| IC 5181        | ESO 289-G0       | Galaxy  | GRU | 11.5 | 12.2 | 2.5'  | 22 13.4 | -46 01 | 414 | SA0        |    |      | Brightest in group with NGC 7232;A; B and 7233             |
| IC 5186        | ESO 405-G0       | Galaxy  | GRU | 11.9 | 12.6 | 1.8'  | 22 18.8 | -36 48 | 383 | SBb        |    |      |  |
| IC 5201        | ESO 289-G0       | Galaxy  | GRU | 10.6 | 14.3 | 7.8'  | 22 21.0 | -46 02 | 414 | SBc        |    |      |  |
| IC 5217        | PK 100-5.1       | Pln Neb | LAC | 12.6 | 6.6  | 7.5"  | 22 23.9 | +50 58 | 57  | 2          |    | 14.6 |  |
| IC 5240        | ESO 290-G0       | Galaxy  | GRU | 11.9 | 13.6 | 2.8'  | 22 41.9 | -44 46 | 414 | SBa        |    |      |  |
| IC 5267        | ESO 290-G0       | Galaxy  | GRU | 10.5 | 13.7 | 5.4'  | 22 57.2 | -43 24 | 415 | Sa(s)      |    |      | Brightest in group   |
| IC 5269        | ESO 406-32       | Galaxy  | PSA | 12.2 | 12.5 | 1.7"  | 22 57.7 | -36 02 | 384 | SBO        |    |      | np of 2  |
| IC 5271        | ESO 406-34       | Galaxy  | PSA | 11.6 | 12.3 | 2.6'  | 22 58.0 | -33 45 | 384 | Sb         |    |      |  |
| IC 5273        | ESO 346-G0       | Galaxy  | GRU | 11.4 | 13   | 2.6'  | 22 59.4 | -37 42 | 384 | SBc        |    |      | Asymmetrical   |
| IC 5332        | ESO 408- 9       | Galaxy  | SCL | 10.5 | 14.5 | 8.4'  | 23 34.5 | -36 06 | 385 | SBcd       |    |      |  |
| IC 5332        | ESO 408- 9       | Galaxy  | SCL | 10.5 | 14.5 | 8.4'  | 23 34.5 | -36 06 | 385 | SBcd       |    |      |  |
| <b>3C 273</b>  | PGC 41121        | Quasar  | VIR | 13   | -    |       | 12 29.1 | +02 03 | 238 |            |    |      | <b>Brightest quasar</b> ; ~2 billion light years, variable |
| Abell 194      |                  | Gal CL  | PSC | 13.9 | -    | 56'   | 01 25.5 | -01 30 | 218 | 0 1 II     |    |      | Includes 541 and <b>Minkowski's object</b> ; 37 galaxies   |
| Abell 262      |                  | Gal CL  | AND | 13   | -    | 100.8 | 01 52.7 | +36 09 | 92  | 0 1 III    |    |      | Includes 708, 753;rather loose and irregular; 40 galaxies  |
| Abell 347      |                  | Gal CL  | AND | 13   | -    | 56'   | 02 25.1 | +41 52 | 62  | 0 1 II-III |    |      | 0.5 degrees south preceding NGC 891; 32 galaxies           |
| Abell 400      |                  | Gal CL  | CET | 13.9 | -    | 56'   | 02 57.6 | +06 02 | 176 | 1 II-III   |    |      | 17 Gal/Deg; 58 galaxies                                    |
| Abell 426      | <b>Perseus I</b> | Gal CL  | PER | 13   | -    | 190.4 | 03 19.7 | +41 30 | 63  | 2 0 II-III |    |      | Centered on 1275; 88 galaxies                              |
| Abell 548      |                  | Gal CL  | LEP | 13.7 | -    | 56'   | 05 47.1 | -25 38 | 316 | 1 1 III    |    |      | 14 Gal/Deg; 79 galaxies                                    |
| Abell 569      |                  | Gal CL  | LYN | 13.8 | -    | 25.8' | 07 09.2 | +48 38 | 68  | 0 1 II     |    |      | 9 Gal/Deg; brightest is NGC 2329; 36 galaxies              |
| Abell 779      |                  | Gal CL  | LYN | 13.8 | -    | 50.4' | 09 19.9 | +33 46 | 103 | 0 1 I-II   |    |      | 9 Gal/Deg; NGC 2832 group; 32 galaxies                     |
| Abell 1060     | <b>Hydra I</b>   | Gal CL  | HYA | 12.7 | -    | 168'  | 10 36.8 | -27 32 | 325 | 1 0 II     |    |      | 5 Gal/Deg; 50 galaxies                                     |
| Abell 1185     | Arp 105          | Gal CL  | UMA | 14   | -    | 28'   | 11 10.6 | +28 46 | 106 | 1 2 II     |    |      | Incl 3550 and <b>Ambartsumian's Knot</b> ; 52 galaxies     |
| Abell 1228     |                  | Gal CL  | UMA | 13.8 | -    | 50.4' | 11 21.5 | +34 20 | 106 | 1 1 II-III |    |      | 15 Gal/Deg; drawing in Webb Hnbk 5; 50 galaxies            |
| Abell 1314     |                  | Gal CL  | UMA | 13.9 | -    | 28'   | 11 34.8 | +49 03 | 73  | 0 1 III    |    |      | 10 Gal/Deg; 44 galaxies                                    |
| Abell 1367     |                  | Gal CL  | LEO | 14   | -    | 100.8 | 11 44.5 | +19 50 | 147 | 2 I II-III |    |      | More GALXYS >14 mag than any GALCL; 117 galaxies           |
| Abell 1656     | <b>Coma I</b>    | Gal CL  | COM | 13.5 | -    | 224'  | 12 59.8 | +27 59 | 149 | 2 1 II     |    |      | Dense GALCL;72 brighter than 15m in 2deg; 106 galaxies     |
| Abell 2147     |                  | Gal CL  | HER | 13.8 | -    | 39.2' | 16 02.2 | +15 53 | 200 | 1 1 III    |    |      | 15 Gal/Deg; 52 galaxies                                    |
| Abell 2151     | Her. Gx. Cl      | Gal CL  | HER | 13.8 | -    | 56'   | 16 05.1 | +17 43 | 155 | 2 1 III    |    |      | Her. Gal. Cl. 20 galaxies 14 to 15 mag; 87 galaxies        |
| Abell 2152     |                  | Gal CL  | HER | 13.8 | -    | 37'   | 16 05.3 | +16 27 | 200 | 1 1 III    |    |      | 15 Gal/Deg; 60 galaxies                                    |
| Abell 2162     |                  | Gal CL  | CRB | 13.7 | -    | 56'   | 16 12.5 | +29 32 | 113 | 0 1 II-III |    |      | 8 Gal/Deg; 37 galaxies                                     |
| Abell 2197     |                  | Gal CL  | HER | 14   | -    | 89.6' | 16 27.7 | +40 55 | 80  | 1 1 III    |    |      | Centered on E-W chain of 6146 6160 and 6173; 73 galaxies   |
| Abell 2199     |                  | Gal CL  | HER | 13   | -    | 89.6' | 16 28.6 | +39 31 | 80  | 2 1 I      |    |      | Centered on NGC 6166; 88 galaxies                          |

## 7000 DSO List (sorted by name)

| NAME           | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES  |
|----------------|-------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|------|--|
| Abell 2634     |             | Gal CL  | PEG | 13.8 | -    | 22.4' | 23 38.3 | +27 01 | 169 | 1 1 II    |    |      | 15 Gal/Deg; 52 galaxies                                      |
| Abell 2666     |             | Gal CL  | PEG | 13.8 | -    | 78.4' | 23 50.9 | +27 08 | 125 | 0 1 I     |    |      | 9 Gal/Deg; NGC 7768 group; 34 galaxies                       |
| AND I          | PGC 2666    | Galaxy  | AND | 13.2 | -    | 4.0'  | 00 45.7 | +38 03 | 90  | E3        |    |      | <b>Andromeda Dwarf</b> ;Member Local Group                   |
| AND II         | PGC 4601    | Galaxy  | PSC | 13.5 | -    | 2.0'  | 01 16.4 | +33 25 | 91  | dE2       |    |      | <b>Andromeda Dwarf</b> ;Member Local Group                   |
| Antalova 1     |             | Opn CL  | SCO | -    | -    | 12.0' | 17 28.9 | -31 33 | 376 | IV 2pn:b  | 20 | 7    |  |
| Antalova 2     |             | Opn CL  | SCO | 8.8  | -    | 3'    | 17 29.7 | -32 30 | 376 | IV 1p     | 8  | 9.7  |  |
| Archinal 1     |             | Opn CL  | SER | -    | -    | 1.5'  | 18 54.7 | +05 33 | 250 | II 2 p    | 24 | 13.4 | Includes 4 GSC stars; near IC 4756                           |
| Arp 2          |             | Glob CL | SGR | 13.6 | 15.1 | 2.3'  | 19 28.8 | -30 21 | 379 |           |    | 15.5 |  |
| Auner 1        |             | Opn CL  | CMA | -    | -    | 2.5'  | 07 04.3 | -19 45 | 318 | III 2m :b | 30 |      |  |
| Av-Hunter 1    |             | Opn CL  | AND | -    | -    | 47'   | 23 37.8 | +48 34 | 59  | IV 2pn:b  | 16 | 8.6  | Includes variable star BM And                                |
| B 1            | LDN 1472    | Drk Neb | PER | --   | --   | 30'   | 03 32.9 | +31 10 | 94  | 5 Ir      |    |      | Patchy region preceding NGC 1333; elongated EW               |
| B 2            | LDN 1472    | Drk Neb | PER | --   | --   | 20'   | 03 33.5 | +32 19 | 94  | 4 Ir      |    |      | Indefinite; elongated SE and NW                              |
| B 3            | LDN 1470    | Drk Neb | PER | --   | --   | 20'   | 03 40.0 | +31 59 | 95  | 5 Ir      |    |      | Lies south preceding O Per; dark space in neb; large         |
| B 4            | LDN 1470    | Drk Neb | PER | --   | --   | 30'   | 03 44.0 | +31 48 | 95  | 5 Ir      |    |      | Very large; indefinite                                       |
| B 5            | LDN 1471    | Drk Neb | PER | --   | --   | 60'   | 03 48.0 | +32 53 | 95  | 5 E G     |    |      | 1 deg north following O Per                                  |
| B 7            | LDN 1495    | Drk Neb | TAU | --   | --   | 600'  | 04 17.5 | +28 34 | 134 | 6 Ir      |    |      | Narrow lanes E-W;Area contains B22-24 and B208-220           |
| B 8;9;11;13    | LDN 1392    | Drk Neb | CAM | --   | --   | 150'  | 04 19.0 | +55 03 | 39  | 5 Ir      |    |      | Grouping of LDN 1392;1395;1399;1402;                         |
| B 12           | LDN 1407    | Drk Neb | CAM | --   | --   | 24'   | 04 30.0 | +54 17 | 39  | 5 Ir      |    |      | Lies south following B9 complex                              |
| B 26-8         | LDN 1517    | Drk Neb | AUR | --   | --   | 20'   | 04 55.2 | +30 35 | 96  | 6 Ir      |    |      | Several small clouds adjacent to AB Aur                      |
| B 29           | LDN 1523    | Drk Neb | AUR | --   | --   | 10'   | 05 06.2 | +31 44 | 97  | 6 C       |    |      | 1.2 deg south and 2 deg following Z Aur                      |
| B 30           | LDN 1577    | Drk Neb | ORI | --   | --   | 67'   | 05 30.2 | +12 46 | 180 | 5 Ir      |    |      | Large dark area with few stars                               |
| B 31-2         | LDN 1582;15 | Drk Neb | ORI | --   | --   | 80'   | 05 29.8 | +12 46 | 180 | 5 Ir      |    |      | 3 deg north preceding Lambda Ori                             |
| <b>B 33</b>    | LDN 1630    | Drk Neb | ORI | --   | --   | 6'    | 05 40.9 | -02 28 | 226 | 4 Ir      |    |      | <b>Horsehead nebula</b> ;part of dark following cloud        |
| B 34           |             | Drk Neb | AUR | --   | --   | 20'   | 05 43.5 | +32 39 | 98  | 4 C G     |    |      | 2 deg preceding cluster <b>M 37</b>                          |
| B 35           | LDN 1594    | Drk Neb | ORI | --   | --   | 20'   | 05 45.5 | +09 03 | 181 | 5 E       |    |      | Near FU ORI and bright nebula Ced 59                         |
| B 36           | LDN 1599    | Drk Neb | ORI | --   | --   | 120'  | 05 45.7 | +07 31 | 181 | 4 Ir      |    |      | Narrow south preceding-north following lane                  |
| B 37-9         | LDN 1605;16 | Drk Neb | MON | --   | --   | 180'  | 06 32.8 | +10 38 | 182 | 5 Ir      |    |      | Near bright nebulae NGC 2245;47                              |
| B 40           | LDN 1721    | Drk Neb | SCO | --   | --   | 15'   | 16 14.7 | -18 58 | 335 | 3 E       |    |      | Diffused dark spot; small star in it;                        |
| B 41           | LDN 1717    | Drk Neb | SCO | --   | --   | 40'   | 16 22.3 | -19 38 | 336 | 3 E       |    |      | Diffused dark spot near Psi SCO.                             |
| B 42           | LDN 1696    | Drk Neb | OPH | --   | --   | 20'   | 16 25.5 | -23 26 | 336 | 6 Ir      |    |      | <b>Great Nebula of Rho OPH</b>                               |
| B 43           | LDN 1752    | Drk Neb | OPH | --   | --   | 120'  | 16 30.3 | -19 47 | 336 | 4 Ir      |    |      | Large dark region; bulbous with two lobes                    |
| B 44           | LDN 1712    | Drk Neb | OPH | --   | --   | 280'  | 16 40.5 | -24 04 | 336 | 5 Ir      |    |      | Dark lane E from Rho OPH region                              |
| B 44a          | SL 18       | Drk Neb | SCO | --   | --   | 5'    | 16 44.8 | -40 23 | 407 | 5 Ir      |    |      | 2.4 degrees preceding bright nebula IC 4628                  |
| B 45           | LDN 1744    | Drk Neb | OPH | --   | --   | 120'  | 16 46.5 | -21 36 | 337 | 5 Ir      |    |      | Rather definite; 2 degrees long                              |
| B 46           | LDN 1775    | Drk Neb | OPH | --   | --   | 12'   | 16 57.2 | -22 44 | 337 | 6 Ir G    |    |      | 30' north of 24 Oph; String of small stars in middle         |
| B 47           | LDN 1792    | Drk Neb | OPH | --   | --   | 15'   | 16 59.7 | -22 39 | 337 | 5 Ir      |    |      | Connected with B51 by two sharp lanes                        |
| B 48           | SL 20       | Drk Neb | SCO | --   | --   | 40'   | 17 01.0 | -40 47 | 407 | 5 Ir      |    |      | 1 deg south following bright nebula IC 4628                  |
| B 50           | SL 30       | Drk Neb | SCO | --   | --   | 15'   | 17 03.0 | -34 24 | 376 | 6 Ir      |    |      | 30' south preceding star CoD -33 degrees 11706               |
| B 51           | LDN 0015    | Drk Neb | OPH | --   | --   | 20'   | 17 04.8 | -22 16 | 337 | 6 Ir      |    |      | Definite   |
| B 53           | SL 32       | Drk Neb | SCO | --   | --   | 30'   | 17 06.1 | -33 15 | 376 | 4 Ir      |    |      | Curved   |
| B 55           | LDN 1682    | Drk Neb | SCO | --   | --   | 16'   | 17 07.5 | -32 00 | 337 | 5 Ir      |    |      | Irregular  |
| B 56           | LDN 1685    | Drk Neb | SCO | --   | --   | 3'    | 17 08.7 | -32 06 | 376 | 5 IR      |    |      | Small  |
| B 57           | LDN 11      | Drk Neb | OPH | --   | --   | 5'    | 17 08.3 | -23 40 | 337 | 6 E G     |    |      | In patchy region following B44                               |
| B 58           | SL 23       | Drk Neb | SCO | --   | --   | 30'   | 17 11.2 | -40 25 | 407 | 6 Ir      |    |      | 2.7 deg following bright nebula IC 4628; darker core         |
| B 59           | LDN 1746    | Drk Neb | OPH | --   | --   | 60'   | 17 11.4 | -27 30 | 338 | 5 Ir      |    |      | Sink hole; broken lane from B 78                             |
| B 60;246       | LDN 17      | Drk Neb | OPH | --   | --   | 30'   | 17 11.8 | -22 27 | 337 | 3 Ir      |    |      | In patchy region following B44                               |
| B 61           | LDN 0111    | Drk Neb | OPH | --   | --   | 10'   | 17 15.2 | -20 29 | 337 | 6 Ir      |    |      | 1 deg south preceding B63                                    |
| B 62           | LDN 100     | Drk Neb | OPH | --   | --   | 19'   | 17 16.2 | -20 53 | 337 | 6 Ir      |    |      | 30' south preceding B63                                      |
| B 63           | LDN 99      | Drk Neb | OPH | --   | --   | 100'  | 17 16.5 | -21 29 | 337 | 3 Ir G    |    |      | 3 deg north-north foll Theta Oph;w a globule at end          |
| B 64           | LDN 173     | Drk Neb | OPH | --   | --   | 20'   | 17 17.2 | -18 29 | 337 | 6 Co      |    |      | Cometary; 30' preceding globular cluster <b>M9</b>           |
| <b>B 65-67</b> | LDN 1772-3; | Drk Neb | OPH | --   | --   | 12'   | 17 19.6 | -26 42 | 338 | 6 Ir      |    |      | <b>Pipe nebula</b> (stem); 2 deg south of Theta Oph;         |
| B 67a          | LDN 102     | Drk Neb | OPH | --   | --   | 13'   | 17 22.5 | -21 53 | 338 | 6 Ir G    |    |      | 3 deg north of Theta Oph                                     |
| B 68           | LDN 57      | Drk Neb | OPH | --   | --   | 4'    | 17 22.6 | -23 47 | 338 | 6 K G     |    |      | 20' southwest preceding B72                                  |
| B 69           | LDN 55      | Drk Neb | OPH | --   | --   | 4'    | 17 22.9 | -23 55 | 338 | 6 Ir      |    |      | 15' south following B68                                      |
| B 70           | LDN 54      | Drk Neb | OPH | --   | --   | 4'    | 17 23.5 | -24 02 | 338 | 4 C?      |    |      | 20' south following B68                                      |
| B 72           | LDN 66      | Drk Neb | OPH | --   | --   | 4'    | 17 23.5 | -23 38 | 338 | 6 S G     |    |      | The Snake;1.5 deg nnn Theta Oph                              |
| B 74           | LDN 081     | Drk Neb | OPH | --   | --   | 15'   | 17 25.2 | -24 12 | 338 | 5 Ir      |    |      | 15' preceding 44 Oph   |
| B 75;261-2     | LDN 0112;85 | Drk Neb | OPH | --   | --   | 110'  | 17 25.3 | -22 28 | 338 | 5 Ir      |    |      | Two arcs 1 deg north following B72                           |
| B 77;269       | LDN 69      | Drk Neb | OPH | --   | --   | 100'  | 17 28.0 | -23 22 | 338 | 3 Ir      |    |      | Faint extension of bowl of <b>Pipe nebula</b>                |
| B 78           | LDN 42      | Drk Neb | OPH | --   | --   | 200'  | 17 33.0 | -25 36 | 338 | 5 Ir      |    |      | 2.5 deg south ;Bowl of <b>Pipe nebula</b>                    |
| B 79;276       | LDN 216; 21 | Drk Neb | OPH | --   | --   | 50'   | 17 39.5 | -19 47 | 338 | 6 Ir      |    |      | B79 is narrow;straight north preceding extension             |
| B 83a          | LDN 233     | Drk Neb | SGR | --   | --   | 4'    | 17 45.3 | -20 00 | 338 | 6 E? G    |    |      | On star cloud 1.7 deg north and 30'                          |
| B 84           | LDN 235     | Drk Neb | SGR | --   | --   | 30'   | 17 46.5 | -20 11 | 338 | 6 Ir      |    |      | Looped figure; 1.5 deg north;40' following 58 Oph            |
| B 84a          | LDN 302     | Drk Neb | SGR | --   | --   | 16'   | 17 57.5 | -17 40 | 339 | 5 C       |    |      | Round; 1.5 deg north of cluster <b>M23</b> ;w faint ext to S |

## 7000 DSO List (sorted by name)

| NAME        | OTHER       | TYPE    | CON | MAG | S.B. | SIZE | RA      | DEC    | U2K | Class  | ns | bs | SAC NOTES   |
|-------------|-------------|---------|-----|-----|------|------|---------|--------|-----|--------|----|----|---|
| B 85        |             | Drk Neb | SGR | --  | --   |      | 18 02.6 | -23 02 | 339 |        |    |    | Dark regions <b>in Trifid nebula</b> ; M 20                 |
| <b>B 86</b> | LDN 93      | Drk Neb | SGR | --  | --   | 4'   | 18 02.7 | -27 50 | 339 | 5 Ir G |    |    | <b>Ink Spot Neb</b> ,On Sgr star cloud preceding 6520;      |
| B 87        | LDN 1771    | Drk Neb | SGR | --  | --   | 12'  | 18 04.3 | -32 30 | 377 | 4 C G  |    |    | <b>Parrot's Head</b> ;4.5 deg south of cluster NGC 6520     |
| B 88-9;286  |             | Drk Neb | SGR | --  | --   | 2'   | 18 03.8 | -24 23 | 339 |        |    |    | Dark regions <b>in Lagoon nebula</b>                        |
| B 90        | LDN 227     | Drk Neb | SGR | --  | --   | 3'   | 18 10.2 | -28 19 | 377 | 5 Ir G |    |    | 1.5 deg following;20' south of cluster NGC 6520             |
| B 91        |             | Drk Neb | SGR | --  | --   | 5'   | 18 10.0 | -23 39 | 339 | 5 K    |    |    | Adjacent to bright nebulae IC 1274-5                        |
| <b>B 92</b> | LDN 323     | Drk Neb | SGR | --  | --   | 15'  | 18 15.5 | -18 14 | 339 | 6 E G  |    |    | <b>Black spot</b> ; On edge <b>of Small Sag Star Cloud</b>  |
| B 93        | LDN 327     | Drk Neb | SGR | --  | --   | 12'  | 18 16.9 | -18 04 | 339 | 4 Co G |    |    | Cometary; 30' following B92                                 |
| B 95        | LDN 406     | Drk Neb | SCT | --  | --   | 30'  | 18 25.6 | -11 45 | 295 | 5 C G  |    |    | 2.6 deg north following bright nebula <b>M16</b>            |
| B 97        | LDN 435     | Drk Neb | SCT | --  | --   | 50'  | 18 26.4 | -10 18 | 295 | 4 Ir   |    |    | 1 deg north preceding cluster NGC 6649                      |
| B100-1      | LDN 443     | Drk Neb | SCT | --  | --   | 40'  | 18 32.7 | -09 08 | 295 | 5 Ir g |    |    | 1.4 deg north of cluster NGC 6649 and curved                |
| B103        | LDN 497     | Drk Neb | SCT | --  | --   | 4'   | 18 39.2 | -06 40 | 295 | 6 Ir   |    |    | On north preceding side of Scutum star cloud                |
| B104        | LDN 532     | Drk Neb | SCT | --  | --   | 16'  | 18 47.3 | -04 32 | 250 | 5 Co   |    |    | Carot shaped; 20' north of Beta Sct;L-shaped                |
| B108        | LDN 534     | Drk Neb | SCT | --  | --   | 3'   | 18 49.6 | -06 19 | 295 | 3 Ir   |    |    | Not black; very small; 0.5 deg preceding cluster <b>M11</b> |
| B110        | LDN 530     | Drk Neb | SCT | --  | --   | 9'   | 18 50.2 | -04 46 | 250 | 6 Ir G |    |    | Part of B111  |
| B111;119a   | LDN 534     | Drk Neb | SCT | --  | --   | 120' | 18 51.0 | -05 00 | 250 | 3 Ir   |    |    | Two crescent-shaped areas north of <b>M11</b>               |
| B112        |             | Drk Neb | SCT | --  | --   | 20'  | 18 51.2 | -06 40 | 295 | 4 Ir   |    |    | Lies south of <b>M11</b>                                    |
| B113        | LDN 548     | Drk Neb | SCT | --  | --   | 11'  | 18 51.4 | -04 19 | 250 | 5 Ir G |    |    | Part of B111  |
| B114-7      | LDN 514     | Drk Neb | SCT | --  | --   | 50'  | 18 53.2 | -07 06 | 295 | 6 Ir   |    |    | LDN 514;518;512;509; Chain of dark neb near <b>m11</b>      |
| B118        | LDN 509     | Drk Neb | SCT | --  | --   | 2'   | 18 53.9 | -07 27 | 295 | 6 C G  |    |    | Blacker than B 117; Definite; Member of group               |
| B127;129-30 | LDN 544     | Drk Neb | AQL | --  | --   | 20'  | 19 01.6 | -05 26 | 251 | 5 Ir   |    |    | LDN 544;549;542; Curved;lying north of 12 Aql               |
| B132;328    | LDN 567     | Drk Neb | AQL | --  | --   | 16'  | 19 04.1 | -04 28 | 251 | 6 Ir   |    |    | 40' north preceding Lambda AQL                              |
| B133        | LDN 531     | Drk Neb | AQL | --  | --   | 10'  | 19 06.1 | -06 50 | 296 | 6 Co G |    |    | Cometary; On Scutum star cloud                              |
| B134        | LDN 543     | Drk Neb | AQL | --  | --   | 6'   | 19 06.9 | -06 14 | 296 | 6 C G  |    |    | 1.4 deg south of Lambda Aql                                 |
| B135-6      | LDN 581     | Drk Neb | AQL | --  | --   | 50'  | 19 07.4 | -03 55 | 251 | 6 Ir   |    |    | Dusty spots; 1 deg north following Lambda Aql               |
| B137-8      | LDN 618;62  | Drk Neb | AQL | --  | --   | 180' | 19 15.6 | +00 13 | 251 | 3 Ir   |    |    | Long;curved lane on Scutum star cloud                       |
| B139        | LDN 619     | Drk Neb | AQL | --  | --   | 10'  | 19 18.1 | -01 28 | 251 | 5 E G  |    |    | At south tip of B137-8; magnitude 10 star on SE edge        |
| B142-3      | LDN 688;694 | Drk Neb | AQL | --  | --   | 80'  | 19 40.7 | +10 57 | 207 | 6 Ir   |    |    | Barnard's famous E; Narrow lanes                            |
| B144        | LDN 857     | Drk Neb | CYG | --  | --   | 30'  | 19 59.0 | +35 00 | 119 | 1 Ir   |    |    | <b>Fish on the platter</b> ;preceding cluster NGC 6883      |
| B145        | LDN 865     | Drk Neb | CYG | --  | --   | 35'  | 20 02.8 | +37 40 | 119 | 4 G    |    |    | Triangular;north of B144                                    |
| B146        | LDN 860     | Drk Neb | CYG | --  | --   | 1'   | 20 03.5 | +36 02 | 119 | 6 Ir   |    |    | Very small; In B144 adjacent to BD +35 3930                 |
| B148-9      | LDN 1076    | Drk Neb | CEP | --  | --   | 3'   | 20 49.1 | +59 32 | 56  | 5 C    |    |    | Two small clouds south of B150                              |
| B150        | LDN 1082    | Drk Neb | CEP | --  | --   | 60'  | 20 50.6 | +60 18 | 56  | 5 Ir   |    |    | Curved filament 1.6 deg south of Eta Cep                    |
| B152        |             | Drk Neb | CEP | --  | --   | 15'  | 21 14.5 | +61 45 | 33  | 5 Ir   |    |    | Double cloud 1 deg south preceding Alpha Cep                |
| B157        | LDN 1075    | Drk Neb | CYG | --  | --   | 4'   | 21 33.7 | +54 40 | 57  | 4 C G  |    |    | 8' preceding 8th-mag. star BD +54 2576                      |
| B160        | LDN 1088    | Drk Neb | CEP | --  | --   | 30'  | 21 38.0 | +56 14 | 57  | 4 Ir   |    |    | Lies south of BRTNB IC 1396                                 |
| B161        | LDN 1103    | Drk Neb | CEP | --  | --   | 13'  | 21 40.3 | +57 49 | 57  | 6 Co G |    |    | In north part of BRTNB IC 1396                              |
| B162        | LDN 1095    | Drk Neb | CEP | --  | --   | 13'  | 21 41.1 | +56 19 | 57  | 4 Ir   |    |    | Curved strip following B160                                 |
| B163        | LDN 1106    | Drk Neb | CEP | --  | --   | 4'   | 21 42.2 | +56 42 | 57  | 4 Ir G |    |    | In a part of bright nebula IC 1396                          |
| B164        | LDN 1070    | Drk Neb | CYG | --  | --   | 12'  | 21 46.5 | +51 04 | 57  | 5 K G  |    |    | 0.8 deg following Pi 1 Cyg                                  |
| B168        | LDN 1055    | Drk Neb | CYG | --  | --   | 100' | 21 53.2 | +47 12 | 86  | 5 Ir   |    |    | Narrow E-W lane; <b>Cocoon nebula at f end</b>              |
| B169-71     | LDN 1151;11 | Drk Neb | CEP | --  | --   | 80'  | 21 58.9 | +58 45 | 57  | 5 Ir   |    |    | Narrow curved lanes 3 deg north following IC 1396           |
| B173-4      | LDN 1166;11 | Drk Neb | CEP | --  | --   | 40'  | 22 07.4 | +59 10 | 57  | 6 Ir   |    |    | Patchy lane north following B169                            |
| B202        | LDN 1451    | Drk Neb | ARI | --  | --   | 33'  | 03 25.6 | +30 17 | 94  | 4 Ir   |    |    | Elongated NW and SE   |
| B203        | LDN 1448    | Drk Neb | ARI | --  | --   | 10'  | 03 25.8 | +30 47 | 94  | 4 Ir   |    |    | Elongated E and W   |
| B204        | LDN 1455    | Drk Neb | ARI | --  | --   | 14'  | 03 28.5 | +30 11 | 94  | 5 Ir   |    |    | Irregular   |
| B205        | LDN 1450    | Drk Neb | PER | --  | --   | 15'  | 03 28.0 | +31 06 | 94  | 5 Ir   |    |    | Two dark strips; N and S. Near NGC1333                      |
| B206        | LDN 1450    | Drk Neb | ARI | --  | --   | 5'   | 03 29.1 | +30 11 | 94  | 5 Ir   |    |    | Very small area   |
| B225        | LDN 1583    | Drk Neb | ORI | --  | --   | 35'  | 05 29.0 | +11 36 | 180 | 5 Ir   |    |    | South end of extension running S from B30                   |
| B228        |             | Drk Neb | LUP | --  | --   | 240' | 15 45.5 | -34 24 | 374 | 6 Ir   |    |    | Contains small bright reflection nebula                     |
| B231        | SL 24       | Drk Neb | SCO | --  | --   | 50'  | 16 37.5 | -35 12 | 375 | 6 Ir   |    |    | Dusky   |
| B233        | SL 25       | Drk Neb | SCO | --  | --   | 55'  | 16 44.1 | -35 21 | 375 | 5 Ir   |    |    | 1 deg following B231  |
| B235        | SL 15       | Drk Neb | SCO | --  | --   | 7'   | 16 46.6 | -44 30 | 407 | 6 E    |    |    | Elongated NE and SW;Darkest at SW end                       |
| B244        | LDN 1736    | Drk Neb | OPH | --  | --   | 20'  | 17 10.1 | -28 24 | 376 | 5 Ir   |    |    | Lies south of tip <b>of Pipe nebula</b>                     |
| B252        | LDN 1698    | Drk Neb | SCO | --  | --   | 20'  | 17 15.2 | -32 13 | 376 | 5 Ir   |    |    | Triangular; eastern side diffuse                            |
| B256        | LDN 1749    | Drk Neb | OPH | --  | --   | 50'  | 17 22.3 | -28 51 | 376 | 5 Ir   |    |    | 1.5 deg south of stem <b>of Pipe nebula</b> ;Curved         |
| B257        |             | Drk Neb | SCO | --  | --   | 10'  | 17 22.0 | -35 35 | 376 | 5 Ir   |    |    | Faint reflection nebula at edge                             |
| B259        | LDN 177     | Drk Neb | OPH | --  | --   | 30'  | 17 22.0 | -19 19 | 338 | 4 Ir   |    |    | 50' south following globular cluster <b>M9</b>              |
| B263        | SL 22       | Drk Neb | SCO | --  | --   | 30'  | 17 26.3 | -42 38 | 408 | 5 Ir   |    |    | Very slightly elongated                                     |
| B268;270    | LDN 178;18  | Drk Neb | OPH | --  | --   | 120' | 17 32.0 | -20 32 | 338 | 5 Ir   |    |    | Irregular dark shape; round in NE part of B268              |
| B283        |             | Drk Neb | SCO | --  | --   | 90'  | 17 51.3 | -33 53 | 377 | 5 Ir   |    |    | 1 deg north-north preceding cluster <b>M7</b>               |
| B287        |             | Drk Neb | SCO | --  | --   | 25'  | 17 54.4 | -35 12 | 377 | 5 Ir   |    |    | 30' south-south following cluster <b>M7</b>                 |
| B303        | LDN 210     | Drk Neb | SGR | --  | --   | 1'   | 18 09.2 | -24 07 | 339 | 5 S    |    |    | In bright nebula IC 4685                                    |
| B312        | LDN 379     | Drk Neb | SCT | --  | --   | 100' | 18 30.9 | -15 08 | 295 | 4 E    |    |    | <b>following Omega nebula</b> w sharp n boundary            |



## 7000 DSO List (sorted by name)

| NAME       | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES  |
|------------|--------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|--|
| B314       | LDN 445      | Drk Neb | SCT | --   | --   | 35'   | 18 37.7 | -09 37 | 295 | 5 lr       |     |      | 1 degree north following cluster NGC 6649                |
| B318       |              | Drk Neb | SCT | --   | --   | 90'   | 18 49.7 | -06 24 | 295 | 2 lr       |     |      | Narrow preceding-following lane just south of <b>M11</b> |
| B334;336-7 | LDN 701;702  | Drk Neb | AQL | --   | --   | 40'   | 19 36.8 | +12 27 | 207 | 4 lr       |     |      | 2 deg north preceding B142-3                             |
| B335       | LDN 663      | Drk Neb | AQL | --   | --   | 4'    | 19 36.9 | +07 34 | 207 | 6 E G      |     |      | 3.5 deg preceding and 1.2 deg south of Altair            |
| B343       | LDN 880      | Drk Neb | CYG | --   | --   | 10'   | 20 13.5 | +40 16 | 84  | 5 lr G     |     |      | 1.7 deg preceeding Gamma Cyg                             |
| B346       | LDN 906      | Drk Neb | CYG | --   | --   | 10'   | 20 26.7 | +43 45 | 85  | 6 K        |     |      | In patchy area 2.8 deg preced and 1.5 deg S of Deneb     |
| B347       | LDN 889      | Drk Neb | CYG | --   | --   | 10'   | 20 28.4 | +39 55 | 85  | 5 lr       |     |      | Narrow streak 1.2 deg foll and 20' south of Gam Cyg      |
| B348       | LDN 906      | Drk Neb | CYG | --   | --   | 240'  | 20 36.8 | +42 01 | 86  | 3 lr       |     |      | <b>Northern Coalsack</b> ; dark nebula north of Deneb    |
| B350       |              | Drk Neb | CYG | --   | --   | 3'    | 20 49.1 | +45 53 | 85  | 6 C        |     |      | 14' south of Cyg   |
| B352       |              | Drk Neb | CYG | --   | --   | 20'   | 20 57.1 | +45 22 | 85  | 5 lr       |     |      | Lies north of <b>North America</b> nebula                |
| B361       | LDN 970      | Drk Neb | CYG | --   | --   | 17'   | 21 12.9 | +47 22 | 86  | 4 C G      |     |      | Has faint preceding extension                            |
| B362       | LDN 1017     | Drk Neb | CYG | --   | --   | 15'   | 21 24.0 | +50 10 | 56  | 5 E G      |     |      | Adjacent to 9th mag star                                 |
| B364       | LDN 1074     | Drk Neb | CYG | --   | --   | 40'   | 21 33.6 | +54 33 | 57  | 5 lr       |     |      | Narrow lanes of B157                                     |
| B365       | LDN 1090     | Drk Neb | CEP | --   | --   | 22'   | 21 34.9 | +56 43 | 57  | 4 S        |     |      | Lies south preceding bright nebula IC 1396               |
| B367       | LDN 1113     | Drk Neb | CEP | --   | --   | 3'    | 21 44.4 | +57 12 | 57  | 5 lr G     |     |      | In preceding part of bright nebula IC 1396               |
| Bark 1     |              | Opn CL  | CYG | -    | -    | 20'   | 20 53.7 | +46 02 | 85  | III 2 m    | 12  |      |  |
| Bark 2     |              | Opn CL  | CYG | -    | -    | 5'    | 21 43.6 | +51 04 | 57  | III 1 p :b | 21  | 10   |  |
| Basel 1    | Apriamasvili | Opn CL  | SCT | 8.9  | -    | 9'    | 18 48.1 | -05 51 | 295 | I 2 m      | 15  | 12.6 |  |
| Basel 4    |              | Opn CL  | AUR | 9.1  | -    | 8'    | 05 48.9 | +30 11 | 98  | II 1 p     | 15  | 12.2 |  |
| Basel 5    |              | Opn CL  | SGR | -    | -    | 9.0'  | 17 52.5 | -30 06 | 377 | III 2mn:b  | 30  |      |  |
| Basel 6    |              | Opn CL  | CYG | 7.7  | -    | 14.0' | 20 06.8 | +38 21 | 119 |            | 40  | 10.2 |  |
| Basel 7    |              | Opn CL  | MON | 8.5  | -    | 5'    | 06 36.3 | +08 21 | 182 | IV 1 p     | 15  | 10.4 |  |
| Basel 8    |              | Opn CL  | MON | -    | -    | 30'   | 06 34.2 | +08 05 | 182 | IV 3mn:b   | 50  |      |  |
| Basel 10   |              | Opn CL  | PER | 9.9  | -    | 2'    | 02 19.5 | +58 19 | 37  | II 1 p     | 12  | 10.2 |  |
| Basel 11A  |              | Opn CL  | CMA | 8.2  | -    | 9.0'  | 07 17.1 | -13 58 | 274 | II 3 m     | 30  | 8.2  |  |
| Basel 11B  |              | Opn CL  | ORI | 8.9  | -    | 9.0'  | 05 58.2 | +21 58 | 136 | II 2 m     | 12  | 8.9  |  |
| Basel 12   |              | Opn CL  | CYG | -    | -    | 7'    | 21 10.6 | +46 14 | 85  | III 2 p :b | 20  |      |  |
| Basel 13   |              | Opn CL  | CYG | -    | -    | 10'   | 21 13.2 | +46 34 | 86  |            |     |      |  |
| Basel 14   |              | Opn CL  | CYG | -    | -    | 12.0' | 21 21.2 | +44 48 | 86  | II 3pn:b   | 15  |      |  |
| Basel 15   |              | Opn CL  | CYG | -    | -    | 6'    | 21 16.0 | +48 50 | 86  |            |     |      |  |
| Be 84      |              | Drk Neb | TAU | --   | --   | 20'   | 04 22.1 | +19 30 | 133 | 4 lr       |     |      | Associated w nebula NGC 1554-5                           |
| Be 135     |              | Drk Neb | PUP | --   | --   | 13'   | 07 19.0 | -44 35 | 395 | 6 E        |     |      | Contains small reflection nebula                         |
| Be 146     |              | Drk Neb | CEN | --   | --   | 20'   | 13 57.6 | -40 00 | 403 | 5 lr       |     |      | Adjacent to bright nebula NGC 5367                       |
| Be 149     |              | Drk Neb | SCO | --   | --   | 60'   | 16 09.4 | -39 08 | 406 | 6 lr       |     |      | Contains faint reflection nebula                         |
| Be 157     |              | Drk Neb | CRA | --   | --   | 110'  | 19 02.9 | -37 08 | 379 | 6 lr       |     |      | Lies south following bright nebulae NGC 6726-7           |
| Berk 1     |              | Opn CL  | CAS | -    | -    | 5'    | 00 09.7 | +60 29 | 35  | III 1 p :b | 10  |      |  |
| Berk 2     |              | Opn CL  | CAS | -    | -    | 4'    | 00 25.2 | +60 24 | 35  | I 1m:b     | 30  | 15   |  |
| Berk 4     |              | Opn CL  | CAS | 10.6 | -    | 5'    | 00 45.2 | +64 24 | 16  | I 2 p      | 25  | 12.6 |  |
| Berk 5     |              | Opn CL  | CAS | -    | -    | 3'    | 01 47.7 | +62 56 | 17  | IV 1 p :b  | 15  | 17   |  |
| Berk 6     |              | Opn CL  | CAS | -    | -    | 5'    | 01 51.2 | +61 04 | 17  | II 2 p :b  | 20  | 14   |  |
| Berk 7     |              | Opn CL  | CAS | -    | -    | 4'    | 01 55.0 | +62 22 | 17  | II 2 p :b  | 18  | 14   |  |
| Berk 8     |              | Opn CL  | CAS | -    | -    | 7'    | 02 02.0 | +75 30 | 4   | II 2m :b   | 40  | 14   |  |
| Berk 9     |              | Opn CL  | PER | -    | -    | 5'    | 03 32.7 | +52 39 | 39  | II 1 p :b  | 20  | 15   |  |
| Berk 10    |              | Opn CL  | CAM | 12   | -    | 12'   | 03 39.6 | +66 31 | 18  | II 3 p     | 50  | 14   |  |
| Berk 11    |              | Opn CL  | PER | 10.4 | -    | 6'    | 04 20.5 | +44 55 | 64  | II 3 m     | 35  | 11.8 |  |
| Berk 12    |              | Opn CL  | PER | -    | -    | 6'    | 04 44.4 | +42 41 | 65  | II 1m:b    | 30  | 16   |  |
| Berk 13    |              | Opn CL  | CAM | -    | -    | 7'    | 04 55.8 | +52 49 | 40  | III 1 p :b |     | 15   |  |
| Berk 14    |              | Opn CL  | AUR | -    | -    | 9'    | 04 59.7 | +43 29 | 65  | III 1m:b   | 30  | 16   |  |
| Berk 15    |              | Opn CL  | AUR | -    | -    | 5'    | 05 02.1 | +44 31 | 65  | I 2m :b    | 35  | 15   |  |
| Berk 17    |              | Opn CL  | AUR | 14   | -    | 14'   | 05 20.6 | +30 35 | 97  | III 1 r    | 100 | 16   |  |
| Berk 18    |              | Opn CL  | AUR | 14   | -    | 12'   | 05 22.2 | +45 28 | 66  | II 1 r     | 300 | 16   |  |
| Berk 19    |              | Opn CL  | AUR | 11.4 | -    | 7'    | 05 24.1 | +29 34 | 97  | IV 2 p     | 40  | 14.7 |  |
| Berk 20    |              | Opn CL  | ORI | -    | -    | 3'    | 05 33.6 | +00 11 | 225 | II 2 p :b  | 20  | 15   |  |
| Berk 21    |              | Opn CL  | ORI | 11.1 | -    | 3.5'  | 05 51.7 | +21 49 | 136 | II 3 m     | 40  | 14.8 |  |
| Berk 22    |              | Opn CL  | ORI | -    | -    | 2'    | 05 58.5 | +07 45 | 181 | I 2 p :b   | 20  | 15   |  |
| Berk 23    |              | Opn CL  | GEM | -    | -    | 4'    | 06 33.3 | +20 32 | 137 | III 1m:b   | 25  | 15   |  |
| Berk 24    |              | Opn CL  | MON | -    | -    | 6'    | 06 37.8 | -00 53 | 227 | III 1 p :b | 25  | 17   |  |
| Berk 25    |              | Opn CL  | CMA | -    | -    | 6'    | 06 41.2 | -16 29 | 273 | I 2m :b    | 40  | 16   |  |
| Berk 29    |              | Opn CL  | GEM | -    | -    | 4'    | 06 53.1 | +16 55 | 183 | I 1 p :b   | 20  | 15   |  |
| Berk 35    |              | Opn CL  | CMI | -    | -    | 7'    | 07 10.0 | +02 44 | 228 | IV 1 p :b  | 20  | 16   |  |
| Berk 36    |              | Opn CL  | CMA | -    | -    | 5'    | 07 16.3 | -13 12 | 274 | III 1m:b   | 40  | 17   |  |
| Berk 37    |              | Opn CL  | MON | -    | -    | 7'    | 07 20.3 | -01 00 | 229 | III 1 p :b | 25  | 15   |  |
| Berk 39    |              | Opn CL  | MON | -    | -    | 12'   | 07 46.7 | -04 41 | 230 | II 3 r     | 120 | 16   |  |
| Berk 43    |              | Opn CL  | AQL | -    | -    | 5'    | 19 15.5 | +11 17 | 206 | II 1m:b    | 40  | 15   |  |

## 7000 DSO List (sorted by name)

| NAME     | OTHER   | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns  | bs   | SAC NOTES |
|----------|---------|--------|-----|------|------|------|---------|--------|-----|-----------|-----|------|-----------|
| Berk 44  |         | Opn CL | SGE | -    | -    | 2'   | 19 17.3 | +19 33 | 161 | III 1m:b  | 30  | 16   |           |
| Berk 45  |         | Opn CL | AQL | -    | -    | 4'   | 19 19.1 | +15 43 | 206 | II 1p :b  | 20  | 15   |           |
| Berk 47  |         | Opn CL | SGE | -    | -    | 5'   | 19 28.5 | +17 22 | 162 | II 2p :b  | 20  | 16   |           |
| Berk 49  |         | Opn CL | CYG | -    | -    | 4'   | 19 59.5 | +34 39 | 119 | I 1p :b   | 20  | 16   |           |
| Berk 51  |         | Opn CL | CYG | -    | -    | 4'   | 20 12.0 | +34 25 | 119 | I 1pn:b   | 20  | 15   |           |
| Berk 52  |         | Opn CL | VUL | -    | -    | 4'   | 20 14.5 | +28 57 | 119 | I 1m:b    | 40  | 18   |           |
| Berk 53  |         | Opn CL | CYG | -    | -    | 12'  | 20 56.0 | +51 05 | 56  | II 3 p    | 40  | 16   |           |
| Berk 54  |         | Opn CL | CYG | -    | -    | 5'   | 21 03.0 | +40 26 | 85  | I 2m :b   | 30  | 17   |           |
| Berk 55  |         | Opn CL | CYG | -    | -    | 5'   | 21 16.9 | +51 46 | 56  | III 1m:b  | 30  | 14   |           |
| Berk 56  |         | Opn CL | CYG | -    | -    | 7'   | 21 17.6 | +41 50 | 86  | II 1m:b   | 40  | 16   |           |
| Berk 58  |         | Opn CL | CAS | 9.7  | -    | 8'   | 00 00.2 | +60 58 | 35  | IV 2 p    | 30  | 15   |           |
| Berk 59  |         | Opn CL | CEP | 11   | -    | 10'  | 00 02.2 | +67 25 | 15  | III 2 p n | 40  | 11   |           |
| Berk 60  |         | Opn CL | CAS | -    | -    | 4'   | 00 17.6 | +60 57 | 35  | III 1p :b | 20  | 14   |           |
| Berk 61  |         | Opn CL | CAS | -    | -    | 4'   | 00 48.2 | +67 12 | 16  | II 1p :b  | 15  | 14   |           |
| Berk 62  |         | Opn CL | CAS | 9.3  | -    | 10'  | 01 01.2 | +63 57 | 16  | III 2 p   | 50  | 10.9 |           |
| Berk 63  |         | Opn CL | CAS | -    | -    | 4'   | 02 19.5 | +63 43 | 17  | III 1p :b | 12  | 15   |           |
| Berk 64  |         | Opn CL | CAS | -    | -    | 4'   | 02 21.7 | +65 54 | 17  | II 1m:b   | 30  | 14   |           |
| Berk 65  |         | Opn CL | CAS | 10.2 | -    | 5'   | 02 39.0 | +60 24 | 38  | I 2 p     | 20  | 10.8 |           |
| Berk 66  |         | Opn CL | CAS | -    | -    | 6'   | 03 04.1 | +58 46 | 38  | I 3m :b   | 30  | 16   |           |
| Berk 67  |         | Opn CL | PER | -    | -    | 7'   | 04 37.8 | +50 46 | 40  | III 1m:b  | 30  | 15   |           |
| Berk 68  |         | Opn CL | PER | 9.8  | -    | 12'  | 04 44.5 | +42 04 | 65  | IV 2 p    | 60  | 13.7 |           |
| Berk 69  |         | Opn CL | AUR | -    | -    | 5'   | 05 24.4 | +32 36 | 97  | II 2m :b  | 30  | 14   |           |
| Berk 70  |         | Opn CL | AUR | -    | -    | 12'  | 05 25.7 | +41 54 | 66  | IV 3 m    | 40  | 15   |           |
| Berk 71  |         | Opn CL | AUR | -    | -    | 5'   | 05 41.2 | +31 26 | 98  | II 1m:b   | 30  | 15   |           |
| Berk 72  |         | Opn CL | ORI | -    | -    | 5'   | 05 50.2 | +22 15 | 136 | II 1p :b  | 15  | 15   |           |
| Berk 73  |         | Opn CL | MON | -    | -    | 3'   | 06 22.1 | -06 19 | 272 | I 1p :b   | 15  | 16   |           |
| Berk 75  |         | Opn CL | CMA | -    | -    | 4'   | 06 50.0 | -23 59 | 318 | II 2p :b  | 25  | 16   |           |
| Berk 76  |         | Opn CL | MON | -    | -    | 6'   | 07 06.7 | -11 44 | 273 | IV 1m:b   | 40  | 16   |           |
| Berk 77  |         | Opn CL | MON | -    | -    | 6'   | 07 21.5 | -03 14 | 229 | I 2m :b   | 30  | 13   |           |
| Berk 78  |         | Opn CL | CMI | -    | -    | 7'   | 07 23.6 | +05 22 | 229 | II 1p :b  | 12  | 16   |           |
| Berk 79  |         | Opn CL | AQL | -    | -    | 10'  | 18 44.9 | -01 09 | 250 | II 1r :b  | 60  | 15   |           |
| Berk 80  |         | Opn CL | AQL | -    | -    | 4'   | 18 54.3 | -01 13 | 250 | II 1p :b  | 20  | 15   |           |
| Berk 81  |         | Opn CL | AQL | -    | -    | 7'   | 19 01.7 | -00 27 | 251 | II 2r :b  | 80  | 15   |           |
| Berk 82  |         | Opn CL | AQL | -    | -    | 4'   | 19 11.3 | +13 07 | 206 | III 1p :b | 20  | 14   |           |
| Berk 83  |         | Opn CL | VUL | -    | -    | 4'   | 20 01.4 | +28 39 | 119 | II 1p :b  | 20  | 17   |           |
| Berk 84  |         | Opn CL | CYG | -    | -    | 4'   | 20 04.8 | +33 54 | 119 | II 1pn:b  | 20  | 16   |           |
| Berk 85  |         | Opn CL | CYG | -    | -    | 7'   | 20 18.8 | +37 45 | 119 | III 1m:b  | 40  | 15   |           |
| Berk 86  |         | Opn CL | CYG | 7.9  | -    | 8'   | 20 20.4 | +38 42 | 120 | I 3 p n   | 30  | 9.5  |           |
| Berk 87  |         | Opn CL | CYG | -    | -    | 12'  | 20 21.7 | +37 24 | 120 | IV 2 p    | 30  | 13   |           |
| Berk 88  |         | Opn CL | CYG | -    | -    | 3'   | 20 21.3 | +48 09 | 84  | IV 1p :b  | 12  | 15   |           |
| Berk 89  |         | Opn CL | CYG | -    | -    | 5'   | 20 24.5 | +46 02 | 85  | III 1p :b | 15  | 15   |           |
| Berk 90  |         | Opn CL | CYG | -    | -    | 5'   | 20 35.3 | +46 51 | 85  | II 1pn:b  | 20  | 14   |           |
| Berk 91  |         | Opn CL | CYG | -    | -    | 5'   | 21 11.0 | +48 32 | 85  | II 1p :b  | 20  | 16   |           |
| Berk 92  |         | Opn CL | CEP | -    | -    | 4'   | 21 24.8 | +57 32 | 56  | III 1p :b | 15  | 15   |           |
| Berk 93  |         | Opn CL | CEP | -    | -    | 4'   | 21 55.5 | +63 56 | 33  | IV 1p :b  | 120 | 16   |           |
| Berk 94  |         | Opn CL | CEP | 8.7  | -    | 4'   | 22 22.9 | +55 53 | 57  | I 1 p n   | 10  | 9.6  |           |
| Berk 95  |         | Opn CL | CEP | -    | -    | 5'   | 22 28.3 | +59 08 | 57  | II 2p :b  | 15  | 15   |           |
| Berk 96  |         | Opn CL | LAC | -    | -    | 2'   | 22 29.8 | +55 24 | 57  | I 2p :b   | 15  | 13   |           |
| Berk 97  |         | Opn CL | CEP | -    | -    | 6'   | 22 39.5 | +59 01 | 58  | III 1 p   | 12  | 11   |           |
| Berk 98  |         | Opn CL | LAC | -    | -    | 6'   | 22 42.6 | +52 24 | 58  | III 2m :b | 50  | 15   |           |
| Berk 99  |         | Opn CL | CEP | -    | -    | 6'   | 23 21.3 | +71 47 | 34  | III 2r :b | 60  | 14   |           |
| Berk 100 |         | Opn CL | CEP | -    | -    | 4'   | 23 26.0 | +63 47 | 15  | IV 2p :b  | 100 | 16   |           |
| Berk 101 |         | Opn CL | CEP | -    | -    | 4'   | 23 32.8 | +64 12 | 15  | III 2p :b | 10  | 16   |           |
| Berk 102 |         | Opn CL | CAS | -    | -    | 5'   | 23 38.7 | +56 39 | 35  | II 1p :a  |     | 18   |           |
| Berk 103 |         | Opn CL | CAS | -    | -    | 4'   | 23 45.2 | +59 19 | 35  | II 1p :b  | 20  | 15   |           |
| Berk 104 |         | Opn CL | CAS | -    | -    | 4'   | 00 03.4 | +63 36 | 15  | II 1p :b  | 15  | 16   |           |
| Biur 1   |         | Opn CL | CYG | -    | -    | 15'  | 20 07.5 | +35 41 | 119 | IV 3 p n  | 15  |      |           |
| Biur 2   |         | Opn CL | CYG | 6.3  | -    | 13'  | 20 09.2 | +35 29 | 119 | III 2 p   | 10  | 7.9  |           |
| Biur 7   |         | Opn CL | MON | -    | -    | 5'   | 06 57.6 | +08 17 | 183 | II 1m:b   | 30  | 14   |           |
| Biur 8   | Berk 32 | Opn CL | MON | -    | -    | 6'   | 06 58.1 | +06 26 | 183 | II 2 r    | 70  | 14   |           |
| Biur 9   |         | Opn CL | MON | -    | -    | 4'   | 06 57.8 | +03 14 | 228 | II 2m :b  | 30  | 15   |           |
| Biur 10  | Berk 28 | Opn CL | MON | 10.4 | -    | 4'   | 06 52.2 | +02 56 | 228 | I 3 p     | 20  | 10.7 |           |
| Biur 11  |         | Opn CL | MON | -    | -    | 3'   | 06 51.4 | +05 46 | 183 | III 1p :b | 25  | 15   |           |
| Biur 12  | Berk 26 | Opn CL | MON | -    | -    | 4'   | 06 51.3 | +05 44 | 183 | III 1m:b  | 30  | 17   |           |

## 7000 DSO List (sorted by name)

| NAME      | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs   | SAC NOTES   |
|-----------|------------|---------|-----|------|------|-------|---------|--------|-----|-----------|-----|------|---|
| Biur 13   |            | Opn CL  | MON | -    | -    | 5'    | 07 00.3 | -00 14 | 228 | IV 1 p :b | 20  | 17   |   |
| Blanco 1  |            | Opn CL  | SCL | 4.5  | -    | 89.0' | 00 04.3 | -29 56 | 350 | IV 3 m    | 30  | 8    | <b>Zeta Sculptoris cluster</b>                            |
| Bochum 1  |            | Opn CL  | GEM | 7.9  | -    | 26.0' | 06 25.5 | +19 46 | 137 |           | 8   | 8.4  |   |
| Bochum 2  |            | Opn CL  | MON | 9.7  | -    | 1.5'  | 06 48.9 | +00 23 | 228 | I 1 p     | 10  | 10.9 |   |
| Bochum 3  |            | Opn CL  | MON | 9.9  | -    | 4'    | 07 03.5 | -05 00 | 228 | IV 1 p    | 25  | 11.2 |   |
| Bochum 4  |            | Opn CL  | PUP | 7.3  | -    | 23'   | 07 31.0 | -16 57 | 274 |           | 30  | 8    |   |
| Bochum 5  |            | Opn CL  | PUP | 7    | -    | 11.0' | 07 32.1 | -16 57 | 319 | I 2 pn    | 12  | 7.8  |   |
| Bochum 6  |            | Opn CL  | PUP | 9.9  | -    | 10'   | 07 31.8 | -19 27 | 319 | I 3 mn    | 40  | 10.6 |   |
| Bochum 7  |            | Opn CL  | VEL | 6.8  | -    | 20'   | 08 44.8 | -45 58 | 397 | IV 3 p    | 9   | 7.6  |   |
| Bochum 10 |            | Opn CL  | CAR | 6.2  | -    | 20'   | 10 42.2 | -59 09 | 427 | II 3 mn   | 40  | 8.6  |   |
| Bochum 13 |            | Opn CL  | SCO | 7.2  | -    | 15'   | 17 17.3 | -35 33 | 376 | III 3 m   | 35  | 8    |   |
| Bochum 14 |            | Opn CL  | SGR | 9.3  | -    | 2'    | 18 02.0 | -23 42 | 339 | III 1 pn  | 11  | 10.3 |   |
| Bochum 15 |            | Opn CL  | PUP | 6.3  | -    | 3'    | 07 40.2 | -33 33 | 362 | IV 2 pn   | 12  | 7.7  |   |
| Ced 19c   |            | Brn Neb | TAU | -    | -    | 16'   | 03 44.8 | +24 17 | 132 | R         |     |      |   |
| Ced 19e   |            | Brn Neb | TAU | -    | -    | 21'   | 03 45.2 | +24 28 | 132 | R         |     |      |   |
| Ced 19h   |            | Brn Neb | TAU | -    | -    | 15'   | 03 45.9 | +24 33 | 132 | R         |     |      |   |
| Ced 19o   |            | Brn Neb | TAU | -    | -    | 11'   | 03 49.2 | +24 03 | 132 | R         |     |      |   |
| Ced 19p   |            | Brn Neb | TAU | -    | -    | 10'   | 03 49.2 | +24 08 | 132 | R         |     |      |   |
| Ced 33    | LBN 788    | Brn Neb | TAU | -    | -    | 5'    | 04 27.1 | +26 06 | 133 | R         |     |      |   |
| Ced 34    | LBN 814    | Brn Neb | TAU | -    | -    | 12.5' | 04 27.2 | +23 00 | 133 | R         |     |      |   |
| Ced 59    | LBN 879    | Brn Neb | ORI | -    | -    | 3'    | 05 45.3 | +09 04 | 181 | E+R       |     |      | In dark neb B35   |
| Ced 62    |            | Brn Neb | ORI | -    | -    | 2.0'  | 06 07.8 | +18 40 | 137 | bipolar   |     | 13   | Two symmetrical fans extending N-S                        |
| Ced 90    | Sh2-297    | Brn Neb | CMA | -    | -    | 10'   | 07 05.2 | -12 20 | 273 | E+R       |     |      |   |
| Ced 174   | LBN 183    | Brn Neb | CYG | -    | -    | 15'   | 20 02.8 | +37 01 | 119 | E         |     |      |   |
| Ced 211   |            | Brn Neb | AQR | -    | -    | 2'    | 23 43.8 | -15 17 | 304 | E         |     |      | Neb excited by companion to Mira variable R Aqr           |
| Ced 214   | Sh2-171    | Brn Neb | CEP | -    | -    | 50'   | 00 03.7 | +67 13 | 15  | E+R       |     |      |   |
| Cr 21     |            | Opn CL  | TRI | 8.2  | -    | 6'    | 01 50.1 | +27 05 | 128 | III 3 p   | 20  |      | group of 15 *   |
| Cr 33     |            | Opn CL  | CAS | 5.9  | -    | 40.0' | 02 59.3 | +60 24 | 38  |           | 25  |      |   |
| Cr 34     |            | Opn CL  | CAS | 6.8  | -    | 25'   | 02 59.4 | +60 34 | 38  | I 3 p     |     | 7.9  |   |
| Cr 62     |            | Opn CL  | AUR | 4.2  | -    | 28'   | 05 22.5 | +41 00 | 66  | IV 3 p    |     |      |   |
| Cr 65     |            | Opn CL  | ORI | 3    | -    | 220'  | 05 26.1 | +16 42 | 180 | II 3 p    |     | 14.7 | Centered on 113 Tau; large group                          |
| Cr 69     |            | Opn CL  | ORI | 2.8  | -    | 65'   | 05 35.1 | +09 56 | 180 | II 3 p n  | 20  |      | <b>Lambda Ori cluster</b>                                 |
| Cr 70     |            | Opn CL  | ORI | 0.4  | -    | 150'  | 05 36.0 | -01 00 | 225 | II 3 m n  | 100 | 1.7  | <b>Orion's belt stars</b>                                 |
| Cr 89     |            | Opn CL  | GEM | 5.7  | -    | 35'   | 06 18.0 | +23 38 | 137 | IV 2 p n  | 15  |      |   |
| Cr 91     |            | Opn CL  | MON | 6.4  | -    | 17'   | 06 21.5 | +02 20 | 227 | IV 2 p    | 20  |      |   |
| Cr 92     |            | Opn CL  | MON | 8.5  | -    | 11'   | 06 22.9 | +05 07 | 227 |           |     |      |   |
| Cr 95     |            | Opn CL  | MON | -    | -    | 19'   | 06 30.8 | +09 56 | 182 | IV 2 p n  | 10  |      |   |
| Cr 96     |            | Opn CL  | MON | 7.3  | -    | 8'    | 06 30.3 | +02 52 | 227 | IV 2 p    | 15  | 8.8  |   |
| Cr 97     |            | Opn CL  | MON | 5.4  | -    | 21'   | 06 31.0 | +05 50 | 182 | IV 3 p    | 15  |      |   |
| Cr 104    |            | Opn CL  | MON | 9.6  | -    | 22'   | 06 36.5 | +04 49 | 227 | IV 1 p n  | 15  |      | Archinal: a 20 min long 'integral sign' chain of stars    |
| Cr 106    |            | Opn CL  | MON | 4.6  | -    | 45'   | 06 37.1 | +05 57 | 182 | III 3 p   | 20  |      |   |
| Cr 107    |            | Opn CL  | MON | 5.1  | -    | 35'   | 06 37.7 | +04 44 | 227 | IV 3 p    | 15  | 7.1  |   |
| Cr 110    |            | Opn CL  | MON | 10.5 | -    | 12.0' | 06 38.7 | +02 03 | 227 | IV 1 r    | 70  | 11   |   |
| Cr 111    |            | Opn CL  | MON | 7    | -    | 3.2'  | 06 38.7 | +06 54 | 182 |           |     |      |   |
| Cr 115    |            | Opn CL  | MON | 9.1  | -    | 7'    | 06 46.5 | +01 47 | 228 | III 2 p   | 50  |      |   |
| Cr 121    |            | Opn CL  | CMA | 2.6  | -    | 50'   | 06 56.3 | -24 44 | 318 | III 3 p   | 20  | 3.8  |   |
| Cr 132    |            | Opn CL  | CMA | 3.6  | -    | 80'   | 07 15.4 | -30 41 | 361 | III 3 p   | 25  | 5.3  |   |
| Cr 135    |            | Opn CL  | PUP | 2.1  | -    | 50'   | 07 17.4 | -36 50 | 361 | IV 2 p    | 77  | 2.7  |   |
| Cr 140    |            | Opn CL  | CMA | 3.5  | -    | 60'   | 07 24.5 | -31 51 | 361 | III 3 p   | 76  | 5.4  | <b>The Tuft in the tail of the dog</b> ;visible naked eye |
| Cr 173    |            | Opn CL  | PUP | 0.6  | -    | 370'  | 08 03.6 | -46 16 | 396 | IV 2 p    |     | 13   |   |
| Cr 185    |            | Opn CL  | PUP | 7.8  | -    | 9'    | 08 23.3 | -36 20 | 363 | III 2 p   | 35  | 10.1 |   |
| Cr 187    |            | Opn CL  | PUP | 9.6  | -    | 7'    | 08 24.2 | -29 10 | 363 | III 1 p   | 20  |      |   |
| Cr 196    |            | Opn CL  | PYX | 10.5 | -    | 5'    | 08 45.1 | -31 38 | 363 | IV 3 p    | 12  |      |   |
| Cr 197    |            | Opn CL  | VEL | 6.7  | -    | 17'   | 08 44.7 | -41 17 | 397 | IV 2 p n  | 40  | 7.3  |   |
| Cr 205    |            | Opn CL  | VEL | 7.8  | -    | 2'    | 09 00.6 | -48 59 | 397 | I 3 m     | 30  | 9.3  |   |
| Cr 213    |            | Opn CL  | VEL | 9.2  | -    | 17'   | 09 55.0 | -50 57 | 426 | IV 2 p    | 21  | 8.7  |   |
| Cr 232    |            | Opn CL  | CAR | 6.8  | -    | 4'    | 10 44.6 | -59 34 | 427 |           |     |      |   |
| Cr 234    |            | Opn CL  | CAR | 7.5  | -    | 4'    | 10 45.3 | -59 45 | 427 |           |     |      |   |
| Cr 285    |            | Opn CL  | UMA | 0.4  | -    | 1400' | 12 03.0 | +58 00 | 47  |           |     | 2    | <b>UMa moving cluster</b>                                 |
| Cr 292    |            | Opn CL  | NOR | 7.9  | -    | 16'   | 15 50.7 | -57 40 | 432 | III 2 m   | 50  |      |   |
| Cr 299    | Harvard 10 | Opn CL  | NOR | 6.9  | -    | 25'   | 16 19.9 | -54 58 | 432 | III 3 m   | 30  |      |   |
| Cr 302    |            | Opn CL  | SCO | 1    | -    | 500'  | 16 26.0 | -26 13 | 336 | III 3 p   |     |      | <b>Antares moving cluster</b>                             |
| Cr 307    |            | Opn CL  | ARA | 9.2  | -    | 6'    | 16 35.3 | -50 58 | 433 | III 2 p   |     | 11.1 |   |
| Cr 316    |            | Opn CL  | SCO | 3.4  | -    | 105'  | 16 55.5 | -40 50 | 407 | I 2 m     |     | 14   |   |



## 7000 DSO List (sorted by name)

| NAME       | OTHER   | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES  |
|------------|---------|--------|-----|------|------|-------|---------|--------|-----|-----------|----|------|--|
| Cr 332     |         | Opn CL | SCO | 8.9  | -    | 2'    | 17 30.8 | -37 05 | 376 | IV 1 p    | 12 |      |  |
| Cr 333     |         | Opn CL | SCO | 9.8  | -    | 8'    | 17 31.3 | -34 05 | 376 | III 2 p   | 30 |      |  |
| Cr 338     |         | Opn CL | SCO | 8    | -    | 25.0' | 17 38.2 | -37 34 | 376 | III 2 p   | 40 |      |  |
| Cr 345     |         | Opn CL | SCO | 10.9 | -    | 6'    | 17 44.6 | -33 52 | 377 |           | 30 | 9.4  |  |
| Cr 347     |         | Opn CL | SGR | 8.8  | -    | 10'   | 17 46.3 | -29 20 | 377 | III 2 p n | 40 | 10.6 | In nebula Sh2-16                                     |
| Cr 350     |         | Opn CL | OPH | 6.1  | -    | 45'   | 17 48.1 | +01 18 | 248 | IV 2 p    | 20 |      |  |
| Cr 351     |         | Opn CL | SGR | 9.3  | -    | 9'    | 17 49.9 | -28 46 | 377 | IV 2 p    | 30 |      |  |
| Cr 367     |         | Opn CL | SGR | 6.4  | -    | 37'   | 18 09.8 | -23 50 | 339 | IV 3 p n  | 30 |      |  |
| Cr 394     |         | Opn CL | SGR | 6.3  | -    | 22'   | 18 52.3 | -20 12 | 340 | IV 2 m    | 50 | 6.9  |  |
| Cr 399     |         | Opn CL | VUL | 3.6  | -    | 60'   | 19 26.2 | +20 06 | 161 | III 3 m   | 40 | 5.2  | Brocchi's cluster;The Coathanger Cl;                 |
| Cr 401     |         | Opn CL | AQL | 7    | -    | 1'    | 19 38.4 | +00 21 | 252 | IV 2 m    |    |      |  |
| Cr 419     |         | Opn CL | CYG | 5.4  | -    | 4.5'  | 20 18.1 | +40 44 | 84  | IV 2 p    |    |      | Compact but not rich;N of Struve 2666;14 * to 13 mag |
| Cr 421     |         | Opn CL | CYG | 10.1 | -    | 6'    | 20 23.3 | +41 42 | 84  | III 1 p n | 22 |      |  |
| Cr 427     |         | Opn CL | CEP | 13.8 | -    | 4'    | 21 00.6 | +68 10 | 33  | IV 1pn:b  | 6  |      |  |
| Cr 428     |         | Opn CL | CYG | 8.7  | -    | 14'   | 21 03.2 | +44 35 | 85  | III 2 p n | 20 |      |  |
| Cr 463     |         | Opn CL | CAS | 5.7  | -    | 36'   | 01 45.7 | +71 49 | 17  | III 2 p   | 40 | 8.5  |  |
| Cr 464     |         | Opn CL | CAM | 4.2  | -    | 120'  | 05 12.6 | +73 58 | 6   | IV 3 p    | 50 |      |  |
| Cr 465     |         | Opn CL | MON | 10.1 | -    | 9'    | 07 07.0 | -10 32 | 273 | IV 2 p    |    |      |  |
| Cr 466     |         | Opn CL | MON | 11.1 | -    | 4'    | 07 07.0 | -10 43 | 273 | III 2 p n | 25 | 11   | Difficult to locate;nebulous haze w 7 * < 11 mag     |
| Cr 468     |         | Opn CL | SGR | 13.4 | -    | 1.5'  | 18 06.6 | -27 28 | 339 | IV 1p :b  | 8  | 11.1 |  |
| Cr 469     |         | Opn CL | SGR | 9.1  | -    | 5'    | 18 16.5 | -18 19 | 339 | IV 1 p    | 51 | 11.2 |  |
| Cr 471     |         | Opn CL | CEP | -    | -    | 130'  | 22 07.1 | +72 00 | 33  | III 2 p   |    |      |  |
| Czernik 1  |         | Opn CL | CAS | -    | -    | 9'    | 00 07.8 | +61 29 | 15  | I 2p :b   | 12 |      |  |
| Czernik 2  |         | Opn CL | CAS | -    | -    | 10'   | 00 43.6 | +60 12 | 36  | IV 2m :b  | 30 |      |  |
| Czernik 3  | OCL 315 | Opn CL | CAS | 9.9  | -    | 3'    | 01 03.1 | +62 48 | 16  | III 2p :b | 8  |      |  |
| Czernik 4  |         | Opn CL | CAS | -    | -    | 3'    | 01 35.6 | +61 29 | 16  | IV 2p :b  | 10 |      |  |
| Czernik 5  |         | Opn CL | CAS | -    | -    | 7'    | 01 55.7 | +61 21 | 17  | III 1p :b | 10 |      |  |
| Czernik 6  |         | Opn CL | CAS | -    | -    | 3'    | 02 02.0 | +62 51 | 17  | II 2p :b  | 12 |      |  |
| Czernik 7  |         | Opn CL | CAS | -    | -    | 5'    | 02 03.0 | +62 15 | 17  | II 1p :b  | 20 |      |  |
| Czernik 8  |         | Opn CL | PER | 9.7  | -    | 7'    | 02 33.0 | +58 46 | 38  | II 3 m    | 10 | 9.9  |  |
| Czernik 9  |         | Opn CL | CAS | -    | -    | 5'    | 02 33.6 | +59 53 | 38  | III 2p :b | 12 |      |  |
| Czernik 10 |         | Opn CL | CAS | -    | -    | 3'    | 02 34.0 | +60 11 | 38  | IV 1p :b  | 15 |      |  |
| Czernik 11 |         | Opn CL | CAS | -    | -    | 7'    | 02 36.6 | +59 39 | 38  | I 2pn:b   | 20 |      | Superimposed on faint galaxy Maffei 1                |
| Czernik 12 |         | Opn CL | PER | -    | -    | 3'    | 02 39.4 | +54 55 | 38  | III 1p :b | 15 |      |  |
| Czernik 13 |         | Opn CL | CAS | 10.4 | -    | 6'    | 02 44.7 | +62 20 | 17  | II 2 p    | 10 | 12.8 |  |
| Czernik 14 |         | Opn CL | CAM | -    | -    | 6'    | 03 17.0 | +58 36 | 38  | III 1p :b | 15 |      |  |
| Czernik 15 |         | Opn CL | PER | -    | -    | 3'    | 03 23.2 | +52 13 | 38  | IV 2p :b  | 10 |      |  |
| Czernik 16 |         | Opn CL | PER | -    | -    | 9'    | 03 31.0 | +52 36 | 39  | IV 2p :b  | 12 |      |  |
| Czernik 17 |         | Opn CL | CAM | -    | -    | 5'    | 03 52.3 | +61 58 | 18  | IV 1p :b  | 15 |      |  |
| Czernik 18 |         | Opn CL | TAU | -    | -    | 10'   | 04 27.8 | +30 57 | 96  | IV 1p :b  | 15 |      |  |
| Czernik 19 |         | Opn CL | AUR | -    | -    | 18'   | 04 57.0 | +28 47 | 96  | III 2 m   | 50 |      |  |
| Czernik 20 |         | Opn CL | AUR | -    | -    | 36'   | 05 20.5 | +39 33 | 66  | II 2 r    | 30 |      |  |
| Czernik 21 |         | Opn CL | AUR | -    | -    | 9'    | 05 27.4 | +36 00 | 97  | IV 1 mn:l | 40 |      |  |
| Czernik 23 |         | Opn CL | AUR | -    | -    | 5'    | 05 50.1 | +28 54 | 98  | III 1p :a |    |      |  |
| Czernik 24 |         | Opn CL | ORI | -    | -    | 5'    | 05 55.5 | +20 52 | 136 | III 1m:b  | 35 |      |  |
| Czernik 25 |         | Opn CL | ORI | -    | -    | 6'    | 06 13.7 | +06 57 | 182 | III 1p :b | 20 |      |  |
| Czernik 26 |         | Opn CL | MON | -    | -    | 5'    | 06 31.5 | -04 11 | 227 | III 1m:b  | 35 |      |  |
| Czernik 27 |         | Opn CL | MON | -    | -    | 5'    | 07 03.3 | +06 25 | 183 | III 1p :b | 15 |      |  |
| Czernik 29 |         | Opn CL | PUP | 10.3 | -    | 8'    | 07 28.3 | -15 24 | 274 | IV 2 p    | 40 | 12.2 |  |
| Czernik 30 |         | Opn CL | MON | -    | -    | 3'    | 07 31.2 | -09 57 | 274 | III 1p :b | 20 |      |  |
| Czernik 31 |         | Opn CL | PUP | -    | -    | 9'    | 07 37.0 | -20 32 | 319 | III 2m :b | 40 |      |  |
| Czernik 32 |         | Opn CL | PUP | -    | -    | 3'    | 07 50.5 | -29 51 | 362 | II 1m:b   | 30 |      |  |
| Czernik 37 |         | Opn CL | SGR | -    | -    | 3'    | 17 53.3 | -27 22 | 339 | II 1m:b   | 35 |      |  |
| Czernik 38 |         | Opn CL | SER | -    | -    | 14'   | 18 49.7 | +04 58 | 250 | II 3 r    | 80 |      |  |
| Czernik 39 |         | Opn CL | AQL | -    | -    | 6'    | 19 07.6 | +04 18 | 251 | III 2m :b |    |      |  |
| Czernik 41 |         | Opn CL | VUL | -    | -    | 9'    | 19 51.0 | +25 18 | 162 | III 2m :b | 30 |      |  |
| Czernik 42 |         | Opn CL | CEP | -    | -    | 3'    | 22 39.6 | +59 55 | 58  | III 1p :b | 15 |      |  |
| Czernik 43 |         | Opn CL | CAS | -    | -    | 14'   | 23 25.8 | +61 19 | 15  | III 1 r   | 15 |      |  |
| Czernik 44 |         | Opn CL | CAS | -    | -    | 5'    | 23 33.5 | +61 58 | 15  | II 2p :b  | 20 |      |  |
| Czernik 45 |         | Opn CL | CAS | -    | -    | 3'    | 23 55.8 | +64 37 | 15  | II 2p :b  | 8  |      |  |
| Do 2       |         | Opn CL | CYG | -    | -    | 10'   | 20 10.0 | +41 22 | 84  | IV 1pn:b  | 15 |      |  |
| Do 3       |         | Opn CL | CYG | -    | -    | 15'   | 20 15.5 | +36 49 | 119 | III 2 p n | 40 |      |  |
| Do 4       |         | Opn CL | CYG | -    | -    | 6'    | 20 17.8 | +36 45 | 119 | IV 1pn:b  | 20 |      |  |
| Do 5       |         | Opn CL | CYG | -    | -    | 6'    | 20 20.8 | +39 22 | 84  | III 3mn:b | 30 |      |  |

## 7000 DSO List (sorted by name)

| NAME       | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES                                   |
|------------|--------------|---------|-----|------|------|------|---------|--------|-----|-----------|----|------|---|
| Do 6       |              | Opn CL  | CYG | -    | -    | 10'  | 20 20.7 | +41 22 | 84  | IV 2pn:b  | 12 |      |   |
| Do 8       |              | Opn CL  | CYG | -    | -    | 5'   | 20 24.4 | +42 16 | 85  | I 2pn:b   | 20 |      |   |
| Do 9       |              | Opn CL  | CYG | -    | -    | 7'   | 20 25.6 | +41 54 | 85  | IV 2pn:b  | 8  |      |   |
| Do 11      |              | Opn CL  | CYG | -    | -    | 7'   | 20 26.4 | +41 27 | 85  | IV 3pn:b  | 15 |      |   |
| Do 12      |              | Opn CL  | CAS | -    | -    | 18'  | 00 40.8 | +60 51 | 36  |           |    |      |   |
| Do 13      |              | Opn CL  | CAS | -    | -    | 12'  | 00 50.0 | +64 08 | 16  | III 1 p   | 30 |      |   |
| Do 14      |              | Opn CL  | TAU | -    | -    | 12'  | 04 06.6 | +27 34 | 133 | IV 2 p    | 18 |      |   |
| Do 15      |              | Opn CL  | AUR | -    | -    | 18'  | 05 04.6 | +34 50 | 97  | IV 1 p    |    |      |   |
| Do 16      |              | Opn CL  | AUR | -    | -    | 12'  | 05 14.6 | +32 43 | 97  | III 2 p n | 10 |      |   |
| Do 17      |              | Opn CL  | ORI | -    | -    | 12'  | 05 22.4 | +07 07 | 180 | IV 2 p    |    |      | Only 5 pB *                                 |
| Do 18      |              | Opn CL  | AUR | -    | -    | 12'  | 05 24.1 | +33 23 | 97  | IV 2 p n  | 15 |      |   |
| Do 19      |              | Opn CL  | ORI | -    | -    | 24'  | 05 23.7 | +08 10 | 180 | IV 1 p    |    |      |   |
| Do 20      |              | Opn CL  | AUR | -    | -    | 5'   | 05 28.6 | +33 41 | 97  | IV 1 p    | 10 |      |   |
| Do 21      | Cr 458       | Opn CL  | ORI | -    | -    | 12'  | 05 27.4 | +07 04 | 180 | IV 2 p    |    |      | Skiff: not seen in 0.2 degree field         |
| Do 22      |              | Opn CL  | MON | -    | -    | 8'   | 08 31.7 | +04 39 | 227 | IV 1 p    | 10 |      |   |
| Do 23      |              | Opn CL  | MON | -    | -    | 12'  | 06 43.1 | +00 00 | 228 | IV 2 p    | 20 |      |   |
| Do 24      |              | Opn CL  | MON | -    | -    | 18'  | 06 44.8 | +01 45 | 228 | IV 2 m    | 40 |      |   |
| Do 25      |              | Opn CL  | MON | 7.6  | -    | 24'  | 06 45.0 | +00 18 | 228 | IV 2 m n  | 50 | 8.9  |   |
| Do 26      |              | Opn CL  | CMI | -    | -    | 24'  | 07 30.1 | +11 57 | 184 | IV 1 p    |    |      |   |
| Do 27      |              | Opn CL  | OPH | -    | -    | 24'  | 16 36.5 | -08 57 | 291 | IV 2 p n  | 15 |      |   |
| Do 28      |              | Opn CL  | SCT | -    | -    | 12'  | 18 25.4 | -14 39 | 295 | IV 2 p    | 20 |      | Involved in nebula Sh2-50                   |
| Do 29      |              | Opn CL  | SCT | -    | -    | 18'  | 18 31.4 | -06 38 | 295 |           |    |      |   |
| Do 30      |              | Opn CL  | SCT | -    | -    | 18'  | 18 32.9 | -06 02 | 295 |           |    |      |   |
| Do 32      |              | Opn CL  | SCT | -    | -    | 12'  | 18 40.4 | -04 06 | 250 | I 2 p     | 40 |      |   |
| Do 33      |              | Opn CL  | SER | -    | -    | 6'   | 18 40.7 | -04 23 | 250 | III 2m :b | 30 |      |   |
| Do 35      |              | Opn CL  | AQL | -    | -    | 7'   | 19 25.4 | +11 40 | 206 | IV 2p :b  | 10 |      |   |
| Do 36      |              | Opn CL  | CYG | -    | -    | 14'  | 20 02.5 | +42 06 | 84  | IV 1 p    |    |      |   |
| Do 39      |              | Opn CL  | CYG | -    | -    | 13'  | 20 16.4 | +37 55 | 119 | III 1 m n | 40 |      |   |
| Do 40      |              | Opn CL  | CYG | -    | -    | 12'  | 20 18.2 | +37 50 | 119 | III 2 p n | 12 |      |   |
| Do 41      |              | Opn CL  | CYG | -    | -    | 11'  | 20 19.3 | +37 44 | 119 | IV 1 p    |    |      |   |
| Do 42      |              | Opn CL  | CYG | -    | -    | 11'  | 20 19.7 | +38 08 | 119 | IV 2 p n  | 20 |      |   |
| Do 43      |              | Opn CL  | CYG | -    | -    | 20'  | 20 21.7 | +39 57 | 84  | IV 2 p    |    |      |   |
| Do 44      |              | Opn CL  | CYG | -    | -    | 12'  | 20 29.7 | +41 43 | 85  | IV 2 p n  | 15 |      |   |
| Do 45      |              | Opn CL  | CYG | -    | -    | 18'  | 21 09.0 | +37 36 | 121 | III 2 m n | 35 |      |   |
| Do 46      |              | Opn CL  | CAS | -    | -    | 12'  | 23 21.9 | +55 46 | 58  | IV 1 p    |    |      |   |
| Do 47      |              | Opn CL  | CYG | -    | -    | 5'   | 20 41.8 | +36 37 | 120 | III 2p :b | 15 |      |   |
| DoDz 1     |              | Opn CL  | ARI | -    | -    | 12'  | 02 47.4 | +17 15 | 130 | III 2 p   | 8  | 11.5 |   |
| DoDz 2     |              | Opn CL  | ORI | -    | -    | 12'  | 05 23.2 | +11 27 | 180 | III 2p    | 12 |      |   |
| DoDz 3     |              | Opn CL  | TAU | -    | -    | 15'  | 05 33.7 | +26 31 | 135 | IV 2 p    | 10 |      |   |
| DoDz 4     |              | Opn CL  | TAU | -    | -    | 28'  | 05 35.9 | +25 57 | 135 | IV 1 p    | 15 |      |   |
| DoDz 5     |              | Opn CL  | HER | -    | -    | 27'  | 16 27.4 | +38 04 | 114 | III 1 p   |    |      |   |
| DoDz 6     |              | Opn CL  | HER | -    | -    | 17'  | 16 45.5 | +38 21 | 114 | IV 2 p    | 5  | 8.8  |   |
| DoDz 7     |              | Opn CL  | HER | -    | -    | 20'  | 17 11.4 | +15 29 | 202 | III 1 p   | 6  |      |   |
| DoDz 8     |              | Opn CL  | HER | 6.8  | -    | 13'  | 17 26.2 | +24 12 | 158 | IV 2 p    | 6  | 8.2  |   |
| DoDz 9     |              | Opn CL  | HER | -    | -    | 34'  | 18 08.8 | +31 32 | 116 | III 2 p   | 15 |      |   |
| DoDz 10    |              | Opn CL  | CYG | -    | -    | 20'  | 20 05.6 | +40 40 | 84  | IV 1 p n  | 12 | 7.1  |   |
| DoDz 11    |              | Opn CL  | CYG | -    | -    | 13'  | 20 51.0 | +35 55 | 120 | IV 1 p    | 12 |      |   |
| ESO 287-13 | PGC 66669    | Galaxy  | IND | 13.1 | 13.4 | 3.7' | 21 23.2 | -45 46 | 412 | SAbc      |    |      |   |
| ESO 373-GC |              | Galaxy  | ANT | 12   | 13.6 | 5.8' | 09 33.3 | -33 02 | 364 | Sc        |    |      |   |
| ESO 456-SC | Djorgovski 2 | Glob CL | SGR | 9.9  | 14.9 | 9.9' | 18 01.8 | -27 50 | 378 |           |    |      | Near B86 and NGC 6520                       |
| Fein 1     |              | Opn CL  | CAR | 4.7  | -    |      | 11 06.0 | -59 48 | 427 | IV 2 p    | 40 | 6.6  |   |
| Frolov 1   |              | Opn CL  | CAS | 9.2  | -    |      | 23 57.4 | +61 38 | 15  |           | 26 | 10.6 |   |
| Gum 1      | Sh2-292      | Brn Neb | MON | -    | -    | 19'  | 07 04.5 | -10 28 | 273 | E+R       |    |      |   |
| Gum 12     |              | SN Rem  | VEL | -    | -    | 264' | 08 30.0 | -44 00 | 397 | E         |    |      | Vela Supernova Remnant; pulsar PSR 0833 -45 |
| Gum 15     | RCW 32       | Brn Neb | VEL | -    | -    | 20'  | 08 44.8 | -41 17 | 397 | E         |    |      | Brighter knot in Gum nebula (Vela SNR)      |
| Gum 23     | RCW 38       | Brn Neb | VEL | -    | -    | 20'  | 08 59.7 | -47 27 | 397 | E         |    |      | Part of Gum neb (Vela SNR)                  |
| Gum 32     | RCW 52       | Brn Neb | CAR | -    | -    | 7.3' | 10 46.3 | -58 39 | 427 | E         |    |      | Crescent shape; several * invl              |
| Gum 35     | RCW 40       | Brn Neb | VEL | -    | -    | 7'   | 09 02.4 | -48 42 | 397 | E         |    |      |   |
| Haffner 3  |              | Opn CL  | MON | -    | -    | 2.7' | 07 04.1 | -06 07 | 273 | III 2p :b | 20 | 14   |   |
| Haffner 4  |              | Opn CL  | CMA | -    | -    | 2.4' | 07 06.1 | -15 00 | 273 | III 1m:b  | 30 | 14   |   |
| Haffner 6  |              | Opn CL  | CMA | 9.2  | -    | 4'   | 07 20.1 | -13 09 | 274 | IV 3 p n  | 60 | 11.1 |   |
| Haffner 7  |              | Opn CL  | CMA | -    | -    | 2.9' | 07 22.9 | -29 29 | 361 | I 2m :b   | 40 | 14   |   |
| Haffner 8  |              | Opn CL  | CMA | 9.1  | -    | 4.2' | 07 23.4 | -12 18 | 274 | IV 3 m    | 30 | 11.1 |   |
| Haffner 9  |              | Opn CL  | CMA | -    | -    | 2.1' | 07 24.9 | -16 59 | 274 | I 1m:b    | 35 | 14   |   |

## 7000 DSO List (sorted by name)

| NAME         | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns  | bs   | SAC NOTES                                      |
|--------------|------------|---------|-----|------|------|------|---------|--------|-----|-----------|-----|------|--|
| Haffner 10   |            | Opn CL  | PUP | 11.5 | -    | 1.6' | 07 28.6 | -15 23 | 274 | III 2 p   | 40  | 12.7 |  |
| Haffner 11   |            | Opn CL  | PUP | -    | -    | 4.4' | 07 35.4 | -27 42 | 319 | II 2m :b  | 35  | 16   |  |
| Haffner 13   |            | Opn CL  | PUP | -    | -    | 15'  | 07 40.5 | -30 05 | 362 | II 3 p    | 15  | 8    |  |
| Haffner 14   |            | Opn CL  | PUP | -    | -    | 3.8' | 07 45.5 | -27 52 | 320 | III 1m:b  |     | 14   |  |
| Haffner 15   |            | Opn CL  | PUP | 9.4  | -    | 3.5' | 07 45.5 | -32 51 | 362 | II 3 p    | 35  | 12   |  |
| Haffner 16   |            | Opn CL  | PUP | 10   | -    | 1.1' | 07 50.3 | -25 27 | 320 | I 1 p     | 30  | 11.6 |  |
| Haffner 17   |            | Opn CL  | PUP | -    | -    | 1.6' | 07 51.6 | -31 49 | 362 | I 2p :b   | 20  | 15   |  |
| Haffner 18   |            | Opn CL  | PUP | 9.3  | -    | 1'   | 07 52.7 | -26 23 | 320 | I 2pn:b   | 25  | 11   |  |
| Haffner 19   |            | Opn CL  | PUP | 9.4  | -    | 1.8' | 07 52.7 | -26 17 | 320 | I 3 p n   | 30  | 10.8 |  |
| Haffner 20   |            | Opn CL  | PUP | 11   | -    | 1.8' | 07 56.3 | -30 22 | 362 | II 3 p    | 20  | 13.1 |  |
| Haffner 21   |            | Opn CL  | PUP | 10.3 | -    | 1.1' | 08 01.2 | -27 13 | 320 | II 1 p    | 20  | 12.1 | Most of cluster 15 mag and less                |
| Haffner 22   |            | Opn CL  | PUP | -    | -    | 4.8' | 08 12.7 | -27 52 | 320 | II 1m:b   | 30  | 15   |  |
| Haffner 23   |            | Opn CL  | CMA | -    | -    | 11'  | 07 09.4 | -16 57 | 273 | III 2 m   | 40  | 13   |  |
| Haffner 25   |            | Opn CL  | PUP | -    | -    | 1'   | 07 49.0 | -26 57 | 320 | III 1p :b | 20  | 14   |  |
| Haffner 26   |            | Opn CL  | PUP | -    | -    | 6'   | 08 15.4 | -30 49 | 362 | III 2p :b | 20  | 14   |  |
| Harvard 9    |            | Opn CL  | NOR | -    | -    | 3'   | 15 34.2 | -52 44 | 432 | IV 2p :a  |     |      |  |
| Harvard 13   |            | Opn CL  | ARA | -    | -    | 14'  | 17 03.9 | -48 07 | 433 | IV 1 p    | 15  | 13   |  |
| Harvard 16   |            | Opn CL  | SCO | -    | -    | 15'  | 17 31.0 | -36 48 | 376 | IV 2 p    | 70  | 8.5  | 20 * mags 10...;In field of Lambda Sco         |
| Harvard 20   |            | Opn CL  | SGE | 7.7  | -    | 7'   | 19 53.1 | +18 21 | 162 | III 2 p   | 28  | 8.9  | 40 faint * in 12';has two centers              |
| Harvard 21   |            | Opn CL  | CAS | 9    | -    | 4'   | 23 54.3 | +61 44 | 15  | IV 2 p    | 6   |      | 20 F*  |
| Hav-Moffat 1 |            | Opn CL  | SCO | -    | -    | 6'   | 17 19.0 | -38 49 | 376 | III 2p :b | 20  |      |  |
| Hogg 2       |            | Opn CL  | VEL | -    | -    | 5'   | 09 51.5 | -56 17 | 426 | IV 2p :b  | 20  |      | Difficult on POSS plate                        |
| Hogg 3       |            | Opn CL  | VEL | -    | -    | 4'   | 09 57.7 | -54 41 | 426 | IV 2p :b  | 10  |      |  |
| Hogg 4       |            | Opn CL  | VEL | -    | -    | 4'   | 09 57.9 | -54 37 | 426 |           |     |      |  |
| Hogg 9       |            | Opn CL  | CAR | 10.6 | -    | 1.5' | 10 58.4 | -59 03 | 427 | II 1 p    | 10  | 11.5 |  |
| Hogg 14      |            | Opn CL  | CRU | 9.5  | -    | 3'   | 12 28.6 | -59 48 | 428 | II 3 p    | 11  | 10.5 |  |
| Hogg 18      |            | Opn CL  | LUP | 8    | -    | 3'   | 14 50.7 | -52 15 | 431 | III 2 p   | 15  | 8.8  |  |
| Hogg 19      |            | Opn CL  | NOR | -    | -    | 4'   | 16 28.9 | -49 07 | 407 | IV 2p :a  |     |      |  |
| Hogg 20      |            | Opn CL  | ARA | -    | -    | 4'   | 16 44.4 | -47 33 | 407 | III 1p :a |     |      |  |
| Hogg 21      |            | Opn CL  | ARA | -    | -    | 4'   | 16 45.6 | -47 44 | 407 |           | 12  |      |  |
| Hogg 22      |            | Opn CL  | ARA | 6.7  | -    | 1.5' | 16 46.7 | -47 05 | 407 | IV3p      | 8   | 7.3  |  |
| HP 1         |            | Glob CL | OPH | 12.5 | -    | 1.2' | 17 31.1 | -29 59 | 376 |           |     |      |  |
| Kemble 1     |            | Aster   | CAM | 5    | -    | 180' | 03 57.5 | +63 04 | 18  |           | 20  | 5    | Kemble's Cascade; 3 deg chain of stars         |
| Kemble 2     |            | Aster   | DRA | 7    | -    | 30'  | 18 35.0 | +72 23 | 12  |           | 17  | 7    | Fr. Lucian Kemble's "Mini-Cassiopeia" asterism |
| King 1       |            | Opn CL  | CAS | -    | -    | 7'   | 00 21.9 | +64 23 | 15  | II 2r :b  | 100 | 13   |  |
| King 2       |            | Opn CL  | CAS | -    | -    | 5'   | 00 50.9 | +58 11 | 36  | II 2m :b  | 40  | 17   |  |
| King 4       |            | Opn CL  | CAS | 10.5 | -    | 3'   | 02 35.0 | +59 01 | 38  | III 1 p   | 20  | 12.9 |  |
| King 5       |            | Opn CL  | PER | -    | -    | 7'   | 03 14.0 | +52 42 | 38  | I 2m :b   | 40  | 13   |  |
| King 6       |            | Opn CL  | CAM | -    | -    | 7'   | 03 28.0 | +56 27 | 38  | IV 2 p    | 35  | 10   |  |
| King 7       |            | Opn CL  | PER | -    | -    | 5'   | 03 59.2 | +51 47 | 39  | I 2r :b   | 80  | 16   |  |
| King 8       |            | Opn CL  | AUR | 11.2 | -    | 8'   | 05 49.3 | +33 38 | 98  | I 3 m     | 30  | 13.5 |  |
| King 9       |            | Opn CL  | LAC | -    | -    | 2.5' | 22 15.5 | +54 25 | 57  | I 1m:b    | 40  | 18   |  |
| King 10      |            | Opn CL  | CEP | -    | -    | 3'   | 22 54.9 | +59 10 | 58  | II 3 m    | 40  | 11   |  |
| King 11      |            | Opn CL  | CEP | -    | -    | 3.5' | 23 47.6 | +68 38 | 15  | I 2m :b   | 50  | 17   |  |
| King 12      |            | Opn CL  | CAS | 10   | -    | 2'   | 23 53.0 | +61 58 | 15  | I 2 p     | 15  | 10   | 27 stars from 10...16 mag                      |
| King 13      |            | Opn CL  | CAS | -    | -    | 7'   | 00 10.2 | +61 11 | 15  | II 2m :b  | 30  | 12   |  |
| King 14      |            | Opn CL  | CAS | 8.5  | -    | 7'   | 00 31.9 | +63 10 | 15  | III 2 p   | 20  | 11.3 | Rich cl in rich field;29 * in 10' X 6'         |
| King 15      |            | Opn CL  | CAS | -    | -    | 1.5' | 00 33.1 | +61 52 | 15  | IV 2p :b  | 12  | 18   |  |
| King 16      |            | Opn CL  | CAS | 10.3 | -    | 3'   | 00 43.7 | +64 11 | 16  | II 3 p    | 35  | 12.5 | compact and small                              |
| King 17      |            | Opn CL  | AUR | -    | -    | 1.5' | 05 08.5 | +39 05 | 65  | II 2m :b  | 25  | 14   |  |
| King 18      |            | Opn CL  | CEP | -    | -    | 4'   | 22 52.1 | +58 19 | 58  | II 2p :b  | 20  | 12   |  |
| King 19      |            | Opn CL  | CEP | 9.2  | -    | 7'   | 23 08.3 | +60 31 | 58  | II 2 m    | 25  | 10.4 |  |
| King 20      |            | Opn CL  | CAS | -    | -    | 4'   | 23 33.2 | +58 29 | 35  | II 2p :b  | 20  | 13   |  |
| King 21      |            | Opn CL  | CAS | 9.8  | -    | 2.5' | 23 49.9 | +62 43 | 15  | III 3 m   | 20  | 10   |  |
| King 22      | Berk 18    | Opn CL  | AUR | -    | -    | 14'  | 05 22.2 | +45 28 | 66  | III 3 r   | 300 | 15   |  |
| King 23      | Czernik 28 | Opn CL  | CMI | -    | -    | 4'   | 07 21.8 | -00 59 | 229 | III 2p :b | 20  |      | Skiff: sparse cluster                          |
| King 25      |            | Opn CL  | AQL | -    | -    | 5'   | 19 24.5 | +13 42 | 206 | III 2m :b | 40  |      |  |
| King 26      |            | Opn CL  | AQL | -    | -    | 1'   | 19 29.0 | +14 52 | 207 | II 1p :b  | 15  |      |  |
| Latysev 1    |            | Opn CL  | ARI | -    | -    | 330' | 02 53.2 | +27 28 | 130 |           | 5   | 6.7  |  |
| LDN 134      |            | Drk Neb | LIB | --   | --   | 22'  | 15 53.6 | -04 39 | 245 | 5 E G     |     |      | Not listed in U2000 second edition             |
| LDN 557      |            | Drk Neb | SER | --   | --   | 60'  | 18 38.6 | -01 47 | 250 | 6 lr      |     |      | Irregular shape; N of Scutum star cloud        |
| LDN 564      |            | Drk Neb | SER | --   | --   | 45'  | 18 37.6 | -01 12 | 250 | 5 lr      |     |      | Not listed in U2000 second edition             |
| LDN 582      |            | Drk Neb | AQL | --   | --   | 60'  | 18 52.6 | -01 56 | 250 | 5 lr      |     |      | N of Scutum star cloud; elongated E and W.     |
| LDN 617      |            | Drk Neb | AQL | --   | --   | 180' | 18 57.5 | +01 04 | 251 | 5 lr      |     |      | Irregular shape; elongated E and W             |



## 7000 DSO List (sorted by name)

| NAME         | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs   | SAC NOTES   |
|--------------|--------------|---------|-----|------|------|-------|---------|--------|-----|-----------|-----|------|---|
| LDN 673      |              | Drk Neb | AQL | --   | --   | 55'   | 19 20.9 | +11 16 | 206 | 6 lr      |     |      | 8 degrees north preceding Altair;filamentary                |
| LDN 684      |              | Drk Neb | AQL | --   | --   | 50'   | 19 21.8 | +12 26 | 206 | 5 lr      |     |      | Lies north of dark neb LDN 673                              |
| LDN 889      |              | Drk Neb | CYG | --   | --   | 90'   | 20 24.8 | +40 10 | 85  | 4 lr      |     |      | Wide lane in IC 1318 following Gamma Cyg                    |
| LDN 896      |              | Drk Neb | CYG | --   | --   |       | 20 40.0 | +42 00 | 85  | 3 lr      |     |      | <b>Northern Coalsack area</b> ; betw. IC5068 and B348       |
| LDN 935      |              | Drk Neb | CYG | --   | --   | 150'  | 20 56.8 | +43 52 | 85  | 4 lr      |     |      | Wide lane between <b>North America &amp; Pelican neb</b>    |
| LDN 1543     |              | Drk Neb | TAU | --   | --   | 35'   | 04 27.4 | +18 52 | 133 | 6 lr      |     |      | Near bright nebula Sh2-239                                  |
| LDN 1616     |              | Drk Neb | ORI | --   | --   | 10'   | 05 06.5 | -03 26 | 225 | 5 lr      |     |      | Near bright nebula NGC 1788                                 |
| LDN 1622     |              | Drk Neb | ORI | --   | --   | 15'   | 05 54.6 | +02 00 | 226 | 6 lr G    |     |      | Near reflection nebula vdB 62                               |
| LDN 1641     |              | Drk Neb | ORI | --   | --   | 300'  | 05 33.0 | -06 00 | 270 | 5 lr      |     |      | Orion nebula region   |
| LDN 1710     |              | Drk Neb | SCO | --   | --   | 60'   | 17 20.7 | -31 57 | 376 | 5 lr      |     |      | 1 degree following B252                                     |
| Le Gentil 3  | N. Coal Sack | Drk Neb | CYG | --   | --   | 720'  | 21 00.0 | +51 00 | 85  |           |     |      | <b>Funnel Cloud nebula</b> ; Very large                     |
| Lynga 3      |              | Opn CL  | CIR | -    | -    | 5'    | 15 16.8 | -58 23 | 431 | III 1p :a |     | 16   |   |
| Lynga 4      |              | Opn CL  | NOR | 11.4 | -    | 3'    | 15 33.3 | -55 13 | 432 | IV 2 p    | 30  | 12.5 |   |
| Lynga 5      |              | Opn CL  | NOR | -    | -    | 5'    | 15 42.0 | -56 39 | 432 | III 1p :b | 20  |      |   |
| Lynga 6      |              | Opn CL  | NOR | 9.5  | -    | 5'    | 16 04.8 | -51 57 | 432 |           | 60  | 10.7 |   |
| Lynga 7      |              | Opn CL  | NOR | -    | -    | 2.2'  | 16 11.0 | -55 18 | 432 | II 2p :a  |     | 16   |   |
| Lynga 8      |              | Opn CL  | NOR | -    | -    | 1'    | 16 22.9 | -50 11 | 432 | III 2m :a |     |      |   |
| Lynga 9      |              | Opn CL  | NOR | -    | -    | 5'    | 16 20.7 | -48 31 | 406 | III 1m:a  |     |      |   |
| Lynga 11     |              | Opn CL  | ARA | -    | -    | 4'    | 16 38.1 | -46 19 | 407 | III 2p :b | 15  |      |   |
| Lynga 12     |              | Opn CL  | ARA | -    | -    | 5'    | 16 46.0 | -50 46 | 407 | III 2m :b | 35  |      |   |
| Lynga 13     |              | Opn CL  | SCO | -    | -    | 7'    | 16 50.0 | -43 26 | 407 | III 1m:b  | 30  |      |   |
| Lynga 14     |              | Opn CL  | SCO | 9.7  | -    | 2'    | 16 55.0 | -45 15 | 407 |           | 15  | 11.2 |   |
| M1-92        |              | Brn Neb | CYG | 11.7 | -    | 20.0" | 19 36.3 | +29 33 | 118 | R         |     |      | <b>Footprint Neb</b> ;looks like Dbl";30" East of * of eq.m |
| Maffei 1     |              | Galaxy  | CAS | 11.4 | 10   | 5'    | 02 36.3 | +59 39 | 38  |           |     |      | Very obscured infrared source                               |
| Markarian 38 |              | Opn CL  | SGR | -    | -    | 2'    | 18 15.3 | -18 59 | 339 | I 1p :a   |     |      |   |
| MCG +02-32   |              | Galaxy  | VIR | 11.2 | -    |       | 12 30.9 | +12 16 | 193 |           |     |      | Face On   |
| MCG +08-01   |              | Galaxy  | AND | 12   | -    | 1.0'  | 23 59.2 | +46 53 | 59  |           |     |      | Face On   |
| MCG +08-01   |              | Galaxy  | AND | 12   | -    | 0.4'  | 23 59.9 | +47 16 | 59  |           |     |      | Mostly Face On  |
| MCG +09-20   |              | Galaxy  | UMA | 11.8 | -    | 1.5'  | 11 57.8 | +55 28 | 47  |           |     |      | Face On   |
| MCG +09-20   |              | Galaxy  | UMA | 11.7 | -    | 2.5'  | 11 59.5 | +50 55 | 47  |           |     |      | Edge On   |
| MCG +10-13   |              | Galaxy  | UMA | 12.1 | -    | 1.3'  | 09 07.6 | +60 28 | 44  |           |     |      | Appr. 50/50 Face & Edge On                                  |
| MCG +10-19   |              | Galaxy  | UMA | 12   | -    | 0.5'  | 13 08.7 | +62 17 | 26  |           |     |      | Mostly Face On  |
| MCG +13-07   |              | Galaxy  | CAM | 12   | -    | 0.9'  | 08 53.2 | +76 30 | 7   |           |     |      | Appr. 50/50 Face & Edge On                                  |
| MCG -01-24   |              | Galaxy  | HYA | 11.3 | 12.7 | 4.3'  | 09 10.8 | -08 54 | 277 |           |     |      | Mostly Edge On  |
| MCG -01-25   |              | Galaxy  | HYA | 11   | -    | 2'    | 09 38.9 | -04 49 | 233 |           |     |      | Mostly Edge On  |
| MCG -02-24   | Hydra A      | Galaxy  | HYA | 12.9 | 12.1 | 0.7'  | 09 18.1 | -12 06 | 277 | SA0       |     |      | 3C218   |
| MCG -02-53   | Aquarius Dw  | Galaxy  | AQR | 13.9 | 14.8 | 2.2'  | 20 46.8 | -12 51 | 299 | IBm       |     |      | Member of Local Group , <b>aquarius dwarf</b>               |
| MCG -03-01   | UGCA 444;W   | Galaxy  | CET | 10.6 | 14.6 | 11'   | 00 01.9 | -15 27 | 260 |           |     |      | Appr. 50/50 Face & Edge On; Local Group; Low Surf Br        |
| MCG -03-03   |              | Galaxy  | CET | 12.5 | 13.9 | 3'    | 00 58.8 | -18 47 | 307 |           |     |      | Mostly Face On  |
| MCG -03-28   |              | Galaxy  | HYA | 12   | -    | 0.3'  | 10 48.1 | -20 53 | 325 |           |     |      | Face On   |
| MCG -03-34   |              | Galaxy  | VIR | 12   | -    | 2.5'  | 13 12.5 | -17 31 | 330 | Sc pec    |     |      | Appr. 50/50 Face & Edge On                                  |
| MCG -05-18   | PK 241- 7.1  | Galaxy  | CMA | -    | -    | 0.1'  | 07 16.5 | -29 19 | 361 |           |     |      | Not a PLNNB;Seyfert GALXY                                   |
| MCG -06-03   | Sculptor Dw  | Galaxy  | SCL | 10.5 | 17.1 | 40'   | 00 59.9 | -33 43 | 351 | E         |     |      | ESO 351-G030; <b>sculptor dwarf</b> ;large and dim          |
| mcg06-07-01  | Fornax Dw.   | Galaxy  | FOR | 8.9  | 13.9 | 17'   | 02 39.9 | -34 32 | 354 | E4        |     |      | Invl GLOCL NGC 1049;Local Grp; <b>Fornax Dwarf</b>          |
| Mel 15       | Cr 26        | Opn CL  | CAS | 6.6  | -    | 21.0' | 02 32.6 | +61 27 | 17  | III 3 p n | 40  |      | 19* in scattered oval w compress center;                    |
| Mel 20       | Cr 39        | Opn CL  | PER | 1.2  | -    | 185'  | 03 24.3 | +49 52 | 63  | III 3 m   | 50  | 2.9  | <b>Alpha Per moving cluster</b> (Maq w/o Alpha Per)         |
| Mel 25       | Hyades       | Opn CL  | TAU | 0.5  | -    | 330'  | 04 27.0 | +16 00 | 178 | II 3 m    | 40  | 3.4  | <b>Taurus moving cluster</b> ;Aldebaran not a member        |
| Mel 31       |              | Opn CL  | AUR | -    | -    | 135'  | 05 18.2 | +33 22 | 97  |           | 35  | 4.5  | Center star 16 Aur; some nebulosity involved                |
| Mel 66       | Cr 147       | Opn CL  | PUP | 7.8  | -    | 10'   | 07 26.3 | -47 41 | 395 | II 2 m    | 200 | 11.4 |   |
| Mel 71       | Cr 155       | Opn CL  | PUP | 7.1  | -    | 9'    | 07 37.5 | -12 04 | 274 | II 1 m    | 80  | 10.2 | Very compressed w central condensation                      |
| Mel 72       | Cr 467       | Opn CL  | MON | 10.1 | -    | 9'    | 07 38.5 | -10 42 | 274 | III 1 m   | 40  | 10   | Rich w many faint *   |
| Mel 111      | Cr 256       | Opn CL  | COM | 1.8  | -    | 275'  | 12 25.1 | +26 07 | 148 | II 3 p    | 80  | 4.3  | <b>Coma Berenices star cluster</b>                          |
| Mel 186      | Cr 359       | Opn CL  | OPH | 3    | -    | 240'  | 18 01.1 | +02 54 | 249 | IV 3 m    |     |      | Bull of Poniatowski; at end of 'offramp' of Milky Way       |
| Moffat 1     |              | Opn CL  | NOR | -    | -    | 8'    | 16 02.4 | -54 08 | 432 | IV 2p :b  | 20  |      |   |
| Mrk 6        |              | Opn CL  | CAS | 7.1  | -    | 4.5'  | 02 29.6 | +60 39 | 37  | IV 2 p    | 6   | 8.4  | About 12 *  |
| Mrk 18       |              | Opn CL  | VEL | 7.8  | -    | 2.0'  | 09 00.6 | -48 59 | 397 |           | 30  | 9.3  |   |
| Mrk 50       |              | Opn CL  | CEP | 8.5  | -    | 5.0'  | 23 15.3 | +60 28 | 58  | I 2 p n   | 5   | 9.8  | With binary HD 219460;very compressed 13 * in 3'            |
| Mrk 408      | CGCG 182-0   | Galaxy  | LEO | 13.9 | -    |       | 09 48.1 | +32 53 | 104 |           |     |      | Very compact  |
| New 1        | MCG -01-03   | Galaxy  | CET | 11.8 | 14.4 | 4.5'  | 01 05.1 | -06 13 | 262 | S         |     |      |   |
| New 3        | MCG -02-33   | Galaxy  | VIR | 11.6 | 14.2 | 2.5'  | 12 49.4 | -10 07 | 284 | Sc?       |     |      | Marked; but not labeled; on Uranometria 2000                |
| Pal 1        |              | Opn CL  | CEP | 13.6 | -    | 2.8'  | 03 33.3 | +79 35 | 5   |           |     | 16.3 | Palomar 1 is open cluster-Ortolani&Rosino 1985              |
| Pal 2        |              | Glob CL | AUR | 13   | -    | 2.2'  | 04 46.1 | +31 23 | 96  | IX        |     |      |   |
| Pal 3        |              | Glob CL | SEX | 13.9 | -    | 1.6'  | 10 05.5 | +00 04 | 234 | XII       |     |      |   |
| Pal 5        |              | Glob CL | SER | 11.8 | -    | 8.0'  | 15 16.1 | -00 07 | 244 | XII       |     |      |   |

## 7000 DSO List (sorted by name)

| NAME       | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class      | ns  | bs   | SAC NOTES                          |
|------------|------------|---------|-----|------|------|-------|---------|--------|-----|------------|-----|------|------------------------------------|
| Pal 6      |            | Glob CL | OPH | 11.6 | -    | 1.2'  | 17 43.7 | -26 13 | 338 | XI         |     |      |                                    |
| Pal 8      |            | Glob CL | SGR | 10.9 | -    | 5.2'  | 18 41.5 | -19 49 | 340 | X          |     |      |                                    |
| Pal 10     |            | Glob CL | SGE | 13.2 | -    | 4.0'  | 19 18.0 | +18 34 | 161 | XII        |     |      |                                    |
| Pal 11     |            | Glob CL | AQL | 9.8  | -    | 10'   | 19 45.3 | -08 01 | 297 | XI         |     |      |                                    |
| Pal 12     |            | Glob CL | CAP | 11.7 | -    | 2.9'  | 21 46.5 | -21 15 | 346 | XII        |     |      |                                    |
| Pal 13     |            | Glob CL | PEG | 13.8 | -    | 0.7'  | 23 06.7 | +12 46 | 213 | XII        |     |      |                                    |
| Pismis 1   |            | Opn CL  | PUP | 10.7 | -    | 4.6'  | 08 17.8 | -37 05 | 362 | I 3 p      | 30  | 12.8 |                                    |
| Pismis 2   |            | Opn CL  | PUP | -    | -    | 4.3'  | 08 17.9 | -41 40 | 396 | II 1 r :b  | 100 | 15   |                                    |
| Pismis 3   |            | Opn CL  | VEL | -    | -    | 6'    | 08 31.4 | -38 39 | 363 | II 1 m:b   | 20  | 13   |                                    |
| Pismis 4   |            | Opn CL  | VEL | 5.9  | -    | 18'   | 08 34.6 | -44 22 | 397 | IV 1 p n   | 45  | 7.3  |                                    |
| Pismis 5   |            | Opn CL  | VEL | 9.9  | -    | 2'    | 08 37.6 | -39 34 | 397 | III 2 p n  | 10  | 10.4 |                                    |
| Pismis 7   |            | Opn CL  | VEL | -    | -    | 2.5'  | 08 41.1 | -38 42 | 363 | II 1 m:b   | 35  | 13   |                                    |
| Pismis 8   |            | Opn CL  | VEL | 9.5  | -    | 2'    | 08 41.6 | -46 17 | 397 | II 3 p     | 25  | 10.5 |                                    |
| Pismis 10  |            | Opn CL  | VEL | -    | -    | 2.5'  | 09 02.6 | -43 38 | 397 |            |     | 10   |                                    |
| Pismis 11  | vdB-Ha 60  | Opn CL  | VEL | -    | -    | 2'    | 09 16.0 | -50 01 | 398 | I 2 p :b   | 20  | 12   |                                    |
| Pismis 12  |            | Opn CL  | VEL | 9.7  | -    | 4.5'  | 09 19.9 | -45 08 | 398 | III 2 p    | 20  | 11.6 |                                    |
| Pismis 13  |            | Opn CL  | VEL | 10.2 | -    | 2'    | 09 22.1 | -51 06 | 425 | II 2 p     | 30  | 12.1 | Included in NGC 2866               |
| Pismis 14  |            | Opn CL  | VEL | -    | -    | 1.5'  | 09 29.3 | -52 42 | 425 | II 2 p :b  | 12  | 14   |                                    |
| Pismis 15  |            | Opn CL  | VEL | -    | -    | 4.5'  | 09 34.8 | -48 02 | 398 | II 1 m:b   | 35  | 14   |                                    |
| Pismis 16  |            | Opn CL  | VEL | 8    | -    | 1.5'  | 09 51.3 | -53 11 | 426 | I 3 p      | 12  | 8.7  |                                    |
| Pismis 17  |            | Opn CL  | CAR | 9.4  | -    | 0.6'  | 11 01.1 | -59 49 | 427 | III 2 p    |     | 10.4 |                                    |
| Pismis 20  |            | Opn CL  | CIR | 7.8  | -    | 4.5'  | 15 15.4 | -59 04 | 431 | I 3 p      | 12  | 8.2  |                                    |
| Pismis 21  |            | Opn CL  | CIR | -    | -    | 2'    | 15 16.9 | -59 40 | 431 | I 3 p :a   |     | 13   |                                    |
| Pismis 22  |            | Opn CL  | NOR | -    | -    | 4'    | 16 14.1 | -51 53 | 432 | I 2 p :a   | 30  | 7.7  |                                    |
| Pismis 23  |            | Opn CL  | NOR | -    | -    | 1'    | 16 24.0 | -47 19 | 406 | III 2 m :a |     | 15   |                                    |
| Pismis 24  |            | Opn CL  | SCO | 9.6  | -    | 4'    | 17 24.7 | -34 12 | 376 | IV 2 p n   | 15  | 10.4 |                                    |
| PK 0- 2.4  | M2-21      | Pln Neb | SGR | 13.6 | 8.9  | 7.0"  | 17 58.1 | -29 45 | 377 | 1          |     | 14.7 |                                    |
| PK 0- 4.2  | ESO 456-54 | Pln Neb | SGR | 13.8 | 10.2 | 11.0" | 18 07.1 | -30 34 | 377 | 2          |     |      |                                    |
| PK 1- 6.1  |            | Pln Neb | SGR | 14   | -    | 10"   | 18 15.4 | -30 32 | 377 |            |     | 12.5 |                                    |
| PK 1- 6.2  | SwSt 1     | Pln Neb | SGR | 11.8 | 6.5  | 5"    | 18 16.2 | -30 52 | 377 | 1          |     |      |                                    |
| PK 2- 2.4  | M2-23      | Pln Neb | SGR | 12.4 | 8.2  | 9.0"  | 18 01.7 | -28 26 | 377 | 1          |     | 16.7 |                                    |
| PK 2- 3.5  | He2-344    | Pln Neb | SGR | 9.3  | -    | 3.3"  | 18 06.1 | -28 41 | 377 |            |     | 14.4 | magnitude value is infrared region |
| PK 2- 4.2  | M1-42      | Pln Neb | SGR | 13.3 | -    | 9"    | 18 11.1 | -28 59 | 377 | 4          |     | 17.4 |                                    |
| PK 2- 5.1  |            | Pln Neb | SGR | 11.5 | -    | 10"   | 18 14.6 | -29 49 | 377 |            |     |      |                                    |
| PK 2- 6.1  | M2-33      | Pln Neb | SGR | 13.1 | 8    | 6.0"  | 18 15.1 | -30 16 | 377 | 2          |     | 14.4 |                                    |
| PK 2- 6.2  | He2-380    | Pln Neb | SGR | 12.8 | -    | 7"    | 18 16.3 | -30 08 | 377 | 1          |     | 14.7 |                                    |
| PK 2- 9.1  | Cannon 1-5 | Pln Neb | SGR | 12.6 | 7.2  | 7.0"  | 18 29.2 | -31 30 | 378 |            |     | 15.2 |                                    |
| PK 3- 4.7  | ESO 456-69 | Pln Neb | SGR | 11   | -    | 12"   | 18 11.6 | -28 22 | 377 |            |     | 13.2 |                                    |
| PK 3- 4.8  | M2-30      | Pln Neb | SGR | 13.1 | -    | 9.0"  | 18 12.6 | -27 58 | 339 | 1          |     | 17.1 |                                    |
| PK 3- 6.1  | M2-36      | Pln Neb | SGR | 13   | 7.5  | 8.8"  | 18 17.7 | -29 08 | 377 | 2          |     | 15.7 |                                    |
| PK 3+ 2.1  | Hubble 4   | Pln Neb | OPH | 13.1 | -    | 6.6"  | 17 41.9 | -24 42 | 338 | 3b         |     | 17   |                                    |
| PK 3+ 3.1  | ESO 520-14 | Pln Neb | OPH | 14   | -    | 3.5"  | 17 40.1 | -24 26 | 338 | 2          |     | 21   |                                    |
| PK 3-14.1  | Hubble 7   | Pln Neb | SGR | 10.9 | 6.1  | 4"    | 18 55.6 | -32 16 | 378 | 2          |     | 13.9 |                                    |
| PK 3-17.1  | Hubble 8   | Pln Neb | SGR | 13.4 | 7.4  | 5.0"  | 19 05.6 | -33 12 | 379 | 2          |     | 15.7 |                                    |
| PK 4- 5.1  | M3-26      | Pln Neb | SGR | 13.8 | 9.6  | 9.0"  | 18 16.2 | -27 15 | 339 | 4          |     | 17.2 |                                    |
| PK 4+ 4.1  | M1-25      | Pln Neb | OPH | 14   | -    | 4.7"  | 17 38.5 | -22 09 | 338 | 2          |     | 17.9 |                                    |
| PK 4-11.1  | M3-29      | Pln Neb | SGR | 13.1 | 8.8  | 8.4"  | 18 39.5 | -30 41 | 378 | 2          |     | 15.5 |                                    |
| PK 6- 3.3  | M2-31      | Pln Neb | SGR | 13.2 | -    | 5"    | 18 13.3 | -25 30 | 339 | 1          |     |      |                                    |
| PK 6- 4.1  | Perek 2-13 | Pln Neb | SGR | 13.4 | 8.7  | 6.9"  | 18 18.2 | -25 38 | 339 |            |     | 17.3 |                                    |
| PK 6+ 2.5  | M1-31      | Pln Neb | SGR | 13.6 | -    | 7.0"  | 17 52.7 | -22 22 | 339 | 1          |     | 19   |                                    |
| PK 6+ 8.1  | M1-20      | Pln Neb | OPH | 13.4 | -    | 7.0"  | 17 29.0 | -19 16 | 338 | 1          |     | 17.1 |                                    |
| PK 7- 6.2  | VY 2-1     | Pln Neb | SGR | 13.1 | 8.2  | 7"    | 18 28.0 | -26 07 | 340 | 1          |     | 16.6 |                                    |
| PK 7+ 1.1  | Hubble 6   | Pln Neb | SGR | 13.1 | 7.7  | 6.6"  | 17 55.1 | -21 45 | 339 | 2          |     | 14.7 |                                    |
| PK 7+ 7.1  | M1-22      | Pln Neb | OPH | 13.3 | -    | 9.3"  | 17 35.2 | -18 34 | 338 | 4          |     | 21   |                                    |
| PK 8- 4.2  | M2-42      | Pln Neb | SGR | 14   | -    | 4.7"  | 18 22.6 | -24 10 | 339 | 2          |     | 18.2 |                                    |
| PK 8+ 6.1  | He2-260    | Pln Neb | OPH | 11   | -    | 10"   | 17 38.9 | -18 18 | 338 |            |     | 14.2 |                                    |
| PK 9- 4.1  | Haro 1-67  | Pln Neb | SGR | 14   | -    | 6.3"  | 18 25.1 | -22 35 | 340 | 2          |     |      |                                    |
| PK 9- 9.1  | M3-32      | Pln Neb | SGR | 13.6 | -    | 6.6"  | 18 44.7 | -25 20 | 340 | 2          |     | 17.1 |                                    |
| PK 9-10.1  | M3-33      | Pln Neb | SGR | 14   | 8.1  | 5.9"  | 18 48.2 | -25 29 | 340 | 2          |     | 15.9 |                                    |
| PK 9-21.1  | K1- 5      | Galaxy  | SGR | 13.5 | -    | 0.2'  | 19 32.4 | -29 24 | 379 | 3(6)       |     |      | Not a PLNNB;has spectrum of galaxy |
| PK 10+18.2 | M2- 9      | Pln Neb | OPH | 13.2 | -    | 50"   | 17 05.7 | -10 09 | 292 | ?(6)       |     | 15.6 | Butterfly Nebula                   |
| PK 11- 5.1 | M1-47      | Pln Neb | SGR | 13.1 | -    | 4.8"  | 18 29.2 | -21 47 | 340 | 2          |     | 15.3 |                                    |
| PK 12- 7.1 |            | Pln Neb | SGR | 12   | -    | 10"   | 18 42.6 | -21 17 | 340 |            |     |      |                                    |
| PK 12- 9.1 | M1-62      | Pln Neb | SGR | 13.2 | -    | 3.7"  | 18 50.5 | -22 35 | 340 | 2          |     | 17.4 |                                    |

## 7000 DSO List (sorted by name)

| NAME        | OTHER       | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class | ns | bs   | SAC NOTES   |
|-------------|-------------|---------|-----|------|------|-------|---------|--------|-----|-------|----|------|---|
| PK 13- 7.1  | Peimbert 21 | Pln Neb | SGR | 13.9 | 10.7 | 14.9" | 18 45.6 | -20 35 | 340 | ?(3)  |    | 18.4 |   |
| PK 13+ 4.1  | M1-33       | Pln Neb | SER | 13.7 | -    | 5"    | 17 59.0 | -15 32 | 294 | 2     |    | 18.6 |   |
| PK 13+32.1  | Shane 1     | Pln Neb | SER | 12.8 | -    | 6.0"  | 16 21.1 | +00 17 | 246 |       |    | 14.7 | Stellar   |
| PK 14- 4.1  | M1-50       | Pln Neb | SGR | 13   | -    | 5.8"  | 18 33.4 | -18 17 | 340 | 2     |    |      |   |
| PK 15- 4.1  | M1-53       | Pln Neb | SGR | 13.9 | -    | 6.6"  | 18 35.8 | -17 36 | 340 | 2     |    | 14.3 |   |
| PK 16- 4.1  | M1-54       | Pln Neb | SGR | 12.5 | -    | 13.0" | 18 36.2 | -17 00 | 295 | 3     |    |      |   |
| PK 16- 4.2  | M1-56       | Pln Neb | SGR | 13.5 | 9.5  | 10"   | 18 37.8 | -17 05 | 340 | 1     |    | 16.2 |   |
| PK 18+20.1  | Nassau 1    | Pln Neb | OPH | 13.4 | -    | 5.0"  | 17 12.9 | -03 16 | 247 |       |    | 16.6 | Stellar   |
| PK 19- 5.1  | M1-61       | Pln Neb | SCT | 12.5 | -    | 2.0"  | 18 45.9 | -14 28 | 295 | 1     |    | 17.1 |   |
| PK 19-19.1  | K2- 7       | Pln Neb | SGR | 13.1 | -    | 2.3'  | 19 40.5 | -20 27 | 342 | 3b    |    | 19.3 |   |
| PK 20- 0.1  | Abell 45    | Pln Neb | SCT | 12.9 | -    | 4.8'  | 18 30.3 | -11 37 | 295 | 3b    |    | 21.1 |   |
| PK 22- 2.1  | M1-57       | Pln Neb | SCT | 13.5 | 9.3  | 9.3"  | 18 40.4 | -10 40 | 295 | 2     |    | 16.3 |   |
| PK 22- 3.1  | M1-58       | Pln Neb | SCT | 13.9 | 9.1  | 7"    | 18 43.0 | -11 07 | 295 | 2     |    |      | 13"-vF; S; R; nBM; difficult                        |
| PK 23- 2.1  | M1-59       | Pln Neb | SCT | 13.3 | 7.7  | 4.8"  | 18 43.4 | -09 05 | 295 | 2     |    |      | Virtually Stellar                                   |
| PK 26- 2.1  | Perek 1-16  | Pln Neb | SCT | 14   | 9.7  | 7.8"  | 18 47.6 | -06 54 | 295 | 2b    |    | 15.5 |   |
| PK 26+ 0.1  | VV 1-8      | Brn Neb | SCT | -    | -    | 120"  | 18 33.3 | -04 58 | 250 | 3     |    |      | Not a PLNNB;H II region;part of Sh2-61              |
| PK 26-11.1  | Nassau 2    | Pln Neb | AQL | 13.3 | -    | 16.0" | 19 18.7 | -11 06 | 296 |       |    | 14   |   |
| PK 27- 3.2  | VY 1-4      | Pln Neb | SCT | 13.4 | -    | 15.0" | 18 54.0 | -06 26 | 295 | 1     |    | 15.6 |   |
| PK 31-10.1  | M3-34       | Pln Neb | AQL | 12.4 | -    | 6"    | 19 27.1 | -06 35 | 296 | 2     |    | 16.3 |   |
| PK 32- 2.1  | M1-66       | Pln Neb | AQL | 13   | 9.4  | 10.0" | 18 58.4 | -01 04 | 251 | 1     |    |      |   |
| PK 36- 1.1  | Sh2- 71     | Pln Neb | AQL | 12.2 | -    | 2.6'  | 19 02.0 | +02 09 | 251 | 3b(3) |    | 13.8 |   |
| PK 38- 3.2  | M1-69       | Pln Neb | AQL | 14   | -    | 5"    | 19 13.9 | +03 38 | 251 | 1     |    |      |   |
| PK 38- 3.3  | K2-11       | Pln Neb | AQL | 13.6 | -    | 13"   | 19 14.3 | +03 35 | 251 | 3b    |    | 19.4 |   |
| PK 38+12.1  | Cannon 3-1  | Pln Neb | OPH | 12.4 | 7.9  | 7"    | 18 17.6 | +10 09 | 204 | 2     |    | 12.5 | Doubtful PLNNB                                      |
| PK 43+11.1  | M3-27       | Pln Neb | HER | 13.9 | -    | 1.0"  | 18 27.8 | +14 29 | 205 | 1     |    | 15.5 |   |
| PK 45- 2.1  | VY 2-2      | Pln Neb | AQL | 12.7 | 9.6  | 14.0" | 19 24.4 | +09 54 | 206 | 1     |    | 14.6 |   |
| PK 47+42.1  | Abell 39    | Pln Neb | HER | 13.7 | -    | 2.9'  | 16 27.5 | +27 54 | 156 | 2c    |    | 15.7 |   |
| PK 51- 3.1  | M1-73       | Pln Neb | AQL | 13.7 | 8.5  | 5.4"  | 19 41.2 | +14 57 | 207 | 2     |    | 14.5 |   |
| PK 51+ 9.1  | Hu 2-1      | Pln Neb | HER | 11.6 | 4.6  | 3"    | 18 49.8 | +20 50 | 160 |       |    | 13.3 | Stellar   |
| PK 52- 2.2  | Merrill 1-1 | Pln Neb | AQL | 12.6 | 7.7  | 8.0"  | 19 39.1 | +15 56 | 207 | 4     |    | 14.1 | Stellar   |
| PK 52- 4.1  | M1-74       | Pln Neb | AQL | 12.9 | -    | 9"    | 19 42.3 | +15 09 | 207 | 1     |    |      | Very difficult                                      |
| PK 52+ 7.1  | K4-10       | Pln Neb | HER | 13.6 | -    | 30.0" | 18 59.1 | +20 37 | 161 |       |    |      | Stellar   |
| PK 53+24.1  | VY 1-2      | Pln Neb | HER | 12   | 6.7  | 5.2"  | 17 54.4 | +28 00 | 116 | 2     |    | 17.6 |   |
| PK 55- 0.1  | M1-71       | Pln Neb | VUL | 13.9 | -    | 4.7"  | 19 36.5 | +19 42 | 162 |       |    |      |   |
| PK 64+ 5.1  | BD+30 3639  | Pln Neb | CYG | 9.6  | 6.9  | 35.0" | 19 34.8 | +30 31 | 118 | 4     |    | 12.5 | Campbell's hydrogen star;                           |
| PK 64+15.1  | M1-64       | Pln Neb | LYR | 13.3 | -    | 24.0" | 18 50.0 | +35 15 | 117 | 4     |    |      | 13"-F; S; IE; cent* seen occasionally at 220X       |
| PK 66- 5.1  | Peimbert 24 | Pln Neb | VUL | 13.6 | -    | 5"    | 20 19.6 | +27 00 | 163 |       |    |      |   |
| PK 70+ 1.1  | K3-50       | Brn Neb | CYG | -    | -    |       | 20 01.7 | +33 32 | 119 |       |    |      | Not a PLNNB;compact H II region in Sh 2-100         |
| PK 72-17.1  | Abell 74    | Pln Neb | VUL | 12.2 | -    | 13.8' | 21 16.8 | +24 10 | 165 | 2     |    | 17.1 |   |
| PK 80- 6.1  | IV Zw 67;CR | Pln Neb | CYG | 13.5 | -    | 1.0'  | 21 02.3 | +36 42 | 121 |       |    | 12.3 | Egg Nebula;protoplanetary?;bipolar; light polarized |
| PK 86- 8.1  | Hu 1-2      | Pln Neb | CYG | 12.7 | -    | 32.0" | 21 33.1 | +39 38 | 86  | 2     |    | 17.3 | Egg timer shape in 100" scope                       |
| PK 93+ 2.1  | M1-79       | Pln Neb | CYG | 13.2 | -    | 38"   | 21 37.0 | +48 56 | 86  | 4     |    | 14.4 |   |
| PK 100- 8.1 | Merrill 2-2 | Pln Neb | LAC | 11.9 | 6.1  | 5.0"  | 22 31.7 | +47 48 | 87  | 1     |    | 16.1 | Stellar   |
| PK 101- 8.1 | Abell 75    | Pln Neb | CEP | 13.2 | -    | 67"   | 21 26.4 | +62 53 | 33  | 3b    |    | 17.2 |   |
| PK 103+ 0.1 | M2-51       | Pln Neb | CEP | 13.5 | -    | 72.0" | 22 16.1 | +57 29 | 57  | 2(3)  |    | 20.4 |   |
| PK 103+ 0.2 | M2-52       | Pln Neb | CEP | 14   | 10.9 | 13"   | 22 20.5 | +57 36 | 57  | 3     |    |      |   |
| PK 107-13.1 | VY 2-3      | Pln Neb | AND | 13.9 | 7.8  | 4.6"  | 23 23.0 | +46 54 | 88  | 2     |    | 14.7 |   |
| PK 111- 2.1 | Hubble 12   | Pln Neb | CAS | 14   | 2.9  | 1.0"  | 23 26.9 | +58 11 | 58  |       |    | 13.8 | 11 mag * 75" north following                        |
| PK 118- 8.1 | VY 1-1      | Pln Neb | CAS | 12.5 | -    | 5"    | 00 18.7 | +53 53 | 35  |       |    | 14.1 |   |
| PK 118+ 2.1 | Sh1-118     | Brn Neb | CAM | 12.9 | -    | 120"  | 00 07.6 | +64 58 | 15  |       |    |      | Typical spectrum of HII region                      |
| PK 119- 6.1 | Hu 1-1      | Pln Neb | CAS | 13.3 | 6.9  | 5"    | 00 28.2 | +55 57 | 35  | 2     |    | 19.1 |   |
| PK 121- 2.1 |             | Brn Neb | CAS | -    | -    | 39"   | 00 38.7 | +60 17 | 36  | 2b    |    | 18   | Not a PLNNB;reflection nebula                       |
| PK 147- 2.1 | M1- 4       | Pln Neb | PER | 13.6 | 7.7  | 4"    | 03 41.7 | +52 17 | 39  |       |    | 16.7 |   |
| PK 147+ 4.1 | M2- 2       | Pln Neb | CAM | 13.7 | 9    | 6.0"  | 04 13.3 | +56 57 | 39  | 3     |    |      |   |
| PK 149- 1.1 | Kr 2-1      | Brn Neb | PER | -    | -    | 84"   | 03 51.6 | +51 29 | 39  | 2     |    | 17.8 | Not a PLNNB;reflection nebula                       |
| PK 151+ 2.1 | SH2-208     | Brn Neb | CAM | -    | -    | 4.0'  | 04 19.8 | +53 06 | 39  | E     |    | 13.9 | Not a PLNNB;H II region Sh 2-207                    |
| PK 164+31.1 | PNG 164.8+  | Pln Neb | LYN | 14   | -    | 6.3'  | 07 57.8 | +53 25 | 43  | 4     |    | 16.8 | confused with NGC 2474; see Sky+Tel Apr 81 pg. 368  |
| PK 169-0.1  | IC 2120     | Pln Neb | AUR | 12   | -    | 60.0" | 05 18.2 | +37 34 | 97  |       |    | 16.2 |   |
| PK 171-25.1 | Baade 1     | Pln Neb | TAU | 13.9 | 14.8 | 48.0" | 03 53.5 | +19 28 | 132 | 4     |    | 17.1 |   |
| PK 173- 5.1 | K2- 1;SS 38 | Pln Neb | AUR | 13.7 | 15.5 | 2.2'  | 05 08.1 | +30 48 | 97  | 3     |    | 18.8 | May be emission nebula                              |
| PK 189+ 7.1 | M1- 7       | Pln Neb | GEM | 13   | 9.3  | 38"   | 06 37.4 | +24 01 | 137 | 2     |    | 19.6 | 9 mag * 40" NW                                      |
| PK 190-17.1 | J 320       | Pln Neb | ORI | 12.9 | 6.9  | 26.0" | 05 05.6 | +10 42 | 180 | 2(4)  |    | 14.4 |   |
| PK 193- 9.1 | Haro 3-75   | Pln Neb | TAU | 13.9 | 11.9 | 24"   | 05 40.7 | +12 21 | 181 |       |    | 14.2 |   |
| PK 194+ 2.1 | J 900       | Pln Neb | GEM | 12.4 | 7.7  | 12"   | 06 26.0 | +17 47 | 137 | 3b(2) |    | 17.8 | nearly stellar                                      |



## 7000 DSO List (sorted by name)

| NAME               | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class  | ns | bs   | SAC NOTES  |
|--------------------|--------------|---------|-----|------|------|-------|---------|--------|-----|--------|----|------|--|
| PK 195- 0.1        | Sh2-266      | Brт Neb | ORI | -    | -    | 80"   | 06 18.9 | +15 17 | 182 | 3      |    | 11.5 | Not a PLNNB;H II region w Balmer line emission         |
| PK 196- 1.1        | Sh2-267      | Brт Neb | ORI | -    | -    | 350"  | 06 15.8 | +14 16 | 182 | 3      |    |      | Not a PLNNB;IRAS confirms HII region                   |
| PK 197- 2.1        | Sh2-271      | Brт Neb | ORI | -    | -    | 2.0'  | 06 15.2 | +12 22 | 182 | 3b     |    | 14   | Not a PLNNB;IRAS confirms HII region                   |
| PK 198- 6.1        | Abell 12     | Plн Neb | ORI | 13.9 | 11.3 | 37"   | 06 02.4 | +09 39 | 181 |        |    | 19.7 | On NW edge OF Mu Ori;star makes ID difficult           |
| PK 204+ 4.1        | K2- 2        | Plн Neb | MON | 12.5 | -    | 6.2'  | 06 52.6 | +09 58 | 183 | 3      |    | 15   |  |
| <b>PK 205+14.1</b> | Abell 21     | Plн Neb | GEM | 11.3 | 16.4 | 10'   | 07 29.0 | +13 15 | 184 |        |    | 16.1 | <b>Medusa nebula</b> ;large and low surface brightness |
| PK 212+ 4.1        | M1- 9        | Plн Neb | MON | 13.5 | 9.9  | 12.0" | 07 05.3 | +02 47 | 228 | 1      |    | 15.6 |  |
| PK 215-30.1        | Abell 7      | Plн Neb | LEP | 13.2 | -    | 12.7' | 05 03.2 | -15 36 | 269 | 3a     |    | 15.6 |  |
| PK 217+14.1        | Abell 24     | Plн Neb | CMI | 13.6 | 17.8 | 6.0'  | 07 51.7 | +03 00 | 230 | 4(3)   |    | 17.5 |  |
| PK 219+31.1        | Abell 31     | Plн Neb | CNC | 12.2 | -    | 16.8' | 08 54.2 | +08 55 | 187 | 3a     |    | 15.5 |  |
| PK 223- 2.1        | K1- 8        | Brт Neb | MON | 13.1 | -    | 79"   | 07 03.4 | -10 34 | 273 | 2      |    | 16.8 | Not a PLNNB;typical H II spectrum                      |
| PK 226- 3.1        | PB 1         | Plн Neb | CMA | 13.3 | 9.4  | 10"   | 07 02.7 | -13 42 | 273 |        |    | 16.2 |  |
| PK 226+ 5.1        | M1-16        | Plн Neb | MON | 13.9 | 6.8  | 3"    | 07 37.3 | -09 39 | 274 | ?(4)   |    | 16.9 |  |
| PK 228+ 5.1        | M1-17        | Plн Neb | PUP | 13.5 | 7    | 3"    | 07 40.4 | -11 33 | 274 |        |    | 18.5 |  |
| PK 229- 2.1        | K1-10        | Plн Neb | CMA | 13.5 | -    | 86"   | 07 12.5 | -16 06 | 274 | 3b     |    | 21   |  |
| PK 232- 1.1        | M1-13        | Plн Neb | CMA | 12.6 | 9    | 42.0" | 07 21.2 | -18 08 | 319 |        |    |      |  |
| PK 234- 0.1        | M1-15        | Plн Neb | PUP | 14   | -    | 1"    | 07 31.8 | -19 27 | 319 |        |    |      | Stellar  |
| PK 235- 1.1        | M1-14        | Plн Neb | CMA | 13.4 | -    | 13"   | 07 27.9 | -20 13 | 319 |        |    | 14.1 |  |
| PK 238+34.1        | Abell 33     | Plн Neb | HYA | 13.4 | -    | 4.5'  | 09 39.1 | -02 48 | 233 | 2b     |    | 15.5 |  |
| PK 241+ 2.1        | M3- 4        | Plн Neb | PUP | 11.8 | 8.7  | 20.0" | 07 55.2 | -23 38 | 320 | 4      |    | 15.7 |  |
| PK 242-11.1        | M3- 1        | Plн Neb | CMA | 12.2 | 8.3  | 30.0" | 07 02.8 | -31 35 | 361 | ?(6)   |    | 15.5 |  |
| PK 248- 8.1        | M4- 2        | Plн Neb | PUP | 13   | 8    | 8"    | 07 28.9 | -35 45 | 361 | 2      |    | 17   |  |
| PK 248+ 8.1        | He2- 10      | Galaxy  | ANT | -    | -    | 0.2'  | 09 36.2 | -26 24 | 323 |        |    |      | Not a PLNNB;dwarf GALXY w emission lines               |
| PK 249- 5.1        | Abell 23     | Plн Neb | PUP | 13.1 | -    | 54"   | 07 43.3 | -34 45 | 362 |        |    |      |  |
| PK 254+ 5.1        | M3- 6        | Plн Neb | PYX | 11   | 6.5  | 19.0" | 08 40.7 | -32 23 | 363 | 2a     |    | 13.9 |  |
| PK 259+ 0.1        | He2- 11      | Plн Neb | VEL | 13.8 | -    | 75.0" | 08 37.1 | -39 26 | 397 |        |    | 18.9 | Diffuse neb?   |
| PK 263- 5.1        | PB 2         | Plн Neb | VEL | 13.6 | 6.7  | 3.0"  | 08 20.8 | -46 22 | 396 |        |    |      |  |
| PK 264- 8.1        | He2- 7       | Plн Neb | VEL | 12.4 | 11.2 | 45.0" | 08 11.5 | -48 43 | 396 | 2      |    | 16.9 |  |
| PK 264-12.1        | He2- 5       | Plн Neb | CAR | 12.3 | 5.8  | 3.0"  | 07 47.4 | -51 16 | 424 |        |    | 14.7 |  |
| PK 269- 3.1        | PB 3         | Plн Neb | VEL | 13.6 | 8.8  | 7"    | 08 54.1 | -50 32 | 425 |        |    | 13.6 | Bipolar  |
| PK 274+ 2.2        | He2- 35      | Plн Neb | VEL | 13.7 | -    | 5"    | 09 41.6 | -49 58 | 398 |        |    | 16.2 |  |
| PK 274+ 3.1        | He2- 37      | Plн Neb | VEL | 14   | -    | 23.0" | 09 47.5 | -48 58 | 398 |        |    |      |  |
| PK 275- 2.2        | He2- 29      | Plн Neb | VEL | 13.3 | -    | 14.0" | 09 24.8 | -54 36 | 425 |        |    |      |  |
| PK 275- 4.1        | PB 4         | Plн Neb | VEL | 12.9 | 8.9  | 14"   | 09 14.9 | -54 53 | 425 |        |    | 16.1 |  |
| PK 275- 4.2        | He2- 21      | Plн Neb | VEL | 13.5 | 6.5  | 2.0"  | 09 13.9 | -55 28 | 425 |        |    |      |  |
| PK 278- 6.1        | He2- 26      | Plн Neb | CAR | 11.9 | -    | 10"   | 09 19.6 | -59 12 | 425 |        |    | 16.7 |  |
| PK 278+ 5.1        | He2- 43      | Plн Neb | VEL | 13.9 | -    | 15"   | 10 13.3 | -50 20 | 426 |        |    | 17.6 |  |
| PK 279- 3.1        | He2- 36      | Plн Neb | CAR | 13.3 | 11.2 | 25"   | 09 43.5 | -57 17 | 426 |        |    | 11.5 |  |
| PK 283+ 2.1        | Mayall 60    | Plн Neb | VEL | 12.7 | 8.2  | 8"    | 10 31.6 | -55 20 | 427 |        |    | 17.2 |  |
| PK 283+25.1        | K1-22        | Plн Neb | HYA | 12.1 | -    | 3.0'  | 11 26.7 | -34 22 | 367 |        |    | 17.4 |  |
| PK 285+ 1.1        | Peimbert 1-1 | Plн Neb | VEL | 14   | 7.5  | 3.0"  | 10 38.6 | -56 47 | 427 |        |    |      |  |
| PK 286+ 2.1        | He2- 55      | Plн Neb | VEL | 12.7 | -    | 18"   | 10 48.8 | -56 03 | 427 |        |    |      |  |
| PK 288+ 0.1        | Hoffleit 38  | Plн Neb | CAR | 12.4 | -    | 30"   | 10 54.6 | -59 10 | 427 | 4      |    |      | Ring shape   |
| PK 290+ 7.1        | Fleming 1    | Plн Neb | CEN | 11.4 | 8.7  | 30"   | 11 28.6 | -52 56 | 427 | 3(4)   |    |      |  |
| PK 292+ 4.1        | PB 8         | Plн Neb | CEN | 12.8 | 7.6  | 5"    | 11 33.4 | -57 06 | 428 |        |    | 13.6 |  |
| PK 303+40.1        | Abell 35     | Plн Neb | HYA | 12   | 18.9 | 12.8' | 12 53.6 | -22 52 | 329 | 3a     |    | 9.6  | cent* variable LW Hya                                  |
| PK 311+ 2.1        | He2-102      | Plн Neb | CEN | 13.5 | -    | 9"    | 13 58.2 | -58 55 | 430 |        |    | 17.2 |  |
| PK 316+ 8.1        | He2-108      | Plн Neb | CEN | 13.7 | 10.1 | 12"   | 14 18.2 | -52 11 | 430 |        |    | 12.7 |  |
| PK 318+41.1        | Abell 36     | Plн Neb | VIR | 13   | 15.7 | 6.0'  | 13 40.6 | -19 53 | 331 | 3b(3a) |    | 11.5 |  |
| PK 319+ 6.1        | He2-112      | Plн Neb | LUP | 13.2 | 10.2 | 15.0" | 14 40.5 | -52 35 | 431 |        |    | 18.1 |  |
| PK 322- 2.1        | Menzel 1     | Plн Neb | NOR | 12.5 | 10.2 | 50"   | 15 34.2 | -59 09 | 432 | 4(6)   |    |      |  |
| PK 325- 4.1        | He2-141      | Plн Neb | NOR | 12.4 | 10.3 | 16"   | 15 59.1 | -58 24 | 432 |        |    | 13.6 |  |
| PK 326- 6.1        | He2-151      | Plн Neb | NOR | 12.2 | -    | 3"    | 16 15.7 | -59 54 | 432 |        |    | 13   |  |
| PK 327- 7.1        | He2-163      | Plн Neb | NOR | 13.9 | -    | 22"   | 16 29.6 | -59 09 | 432 |        |    |      |  |
| PK 327+13.1        | He2-118      | Plн Neb | LUP | 12.7 | 7.3  | 5"    | 15 06.2 | -43 01 | 405 |        |    | 18.7 |  |
| PK 329- 2.2        | Menzel 2;V   | Plн Neb | NOR | 11.9 | 9.9  | 25"   | 16 14.5 | -54 57 | 432 | 4(3)   |    | 18.3 | Easy grey round lies in dense field--Hartung           |
| PK 329+ 2.1        | Shapley 1    | Plн Neb | NOR | 13.6 | -    | 76"   | 15 51.7 | -51 31 | 432 | 4      |    | 13.9 | Fine annular shape                                     |
| PK 330- 3.1        | He2-159      | Plн Neb | NOR | 13.9 | -    | 16"   | 16 24.3 | -54 36 | 432 |        |    |      |  |
| PK 330+ 4.1        | Cannon 1-1   | Plн Neb | NOR | 12.9 | -    | 1.0"  | 15 51.3 | -48 45 | 406 | 1      |    | 11.1 |  |
| PK 331- 1.1        | Menzel 3     | Plн Neb | NOR | 13.8 | -    | 25.0" | 16 17.2 | -51 59 | 432 | 6      |    | 17.6 |  |
| PK 331- 3.2        | He2-165      | Plн Neb | NOR | 13.7 | -    | 54"   | 16 30.0 | -54 10 | 432 |        |    |      |  |
| PK 331- 5.1        | He2-172      | Plн Neb | NOR | 11.9 | -    | 5"    | 16 38.0 | -55 42 | 433 |        |    | 12.6 |  |
| PK 332- 3.1        | He2-164      | Plн Neb | NOR | 13.7 | -    | 16"   | 16 29.9 | -53 23 | 432 |        |    |      |  |
| PK 332- 4.1        | He2- 170     | Plн Neb | NOR | 13.5 | -    | 5"    | 16 35.4 | -53 50 | 433 |        |    | 16.4 |  |

## 7000 DSO List (sorted by name)

| NAME        | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES  |
|-------------|--------------|---------|-----|------|------|-------|---------|--------|-----|-----------|----|------|--|
| PK 333+ 1.1 | He2-152      | Pln Neb | NOR | 13.7 | -    | 13"   | 16 15.3 | -49 14 | 406 |           |    |      |  |
| PK 336- 5.1 | He2-186      | Pln Neb | ARA | 13.3 | -    | 3"    | 16 59.6 | -51 42 | 433 |           |    | 16.6 |  |
| PK 336- 6.1 | Peimbert 14  | Pln Neb | ARA | 12.6 | -    | 8"    | 17 06.3 | -52 30 | 433 |           |    | 16.5 |  |
| PK 342- 2.1 | He2-198      | Pln Neb | SCO | 13   | -    | 25"   | 17 06.4 | -44 13 | 407 | 4         |    |      |  |
| PK 342- 4.1 | He2-207      | Pln Neb | SCO | 12   | 13.4 | 40"   | 17 19.5 | -45 53 | 408 |           |    |      |  |
| PK 342- 6.1 | Cannon 1-4   | Pln Neb | ARA | 12.9 | 8.5  | 10"   | 17 27.9 | -46 56 | 408 |           |    | 16.2 |  |
| PK 342+27.1 | Merrill 2-1  | Pln Neb | LIB | 11.6 | 6.7  | 16"   | 15 22.3 | -23 38 | 334 | 2         |    | 18.4 | same as PK342+17.1                                       |
| PK 342-14.1 | Shapley 3    | Pln Neb | ARA | 11.9 | 12.4 | 36"   | 18 07.4 | -51 03 | 434 |           |    | 13.2 |  |
| PK 343+11.1 | Haro 1- 1    | Pln Neb | SCO | 14   | -    | 2.5"  | 16 13.5 | -34 36 | 374 | 2         |    | 17.3 |  |
| PK 345- 0.1 | Haro 2- 3    | Brn Neb | SCO | -    | -    |       | 17 09.5 | -41 36 | 407 |           |    |      | Not a PLNNB;compact H II region RCW 117                  |
| PK 345- 1.1 | He2-300      | Pln Neb | SCO | 13.4 | -    | 8.5"  | 17 10.5 | -41 53 | 407 | 2         |    |      |  |
| PK 345- 4.1 | Cannon 1-3   | Pln Neb | SCO | 11.9 | 6.5  | 5"    | 17 26.3 | -44 12 | 408 | 1         |    | 14.3 |  |
| PK 346- 6.1 | He2-257      | Pln Neb | SCO | 12.6 | -    | 5"    | 17 39.3 | -44 10 | 408 |           |    |      |  |
| PK 347+ 5.1 | Haro 1-2     | Pln Neb | SCO | 13   | -    | 1"    | 16 48.9 | -35 47 | 375 |           |    |      |  |
| PK 348- 0.1 | Haro 2- 6    | Brn Neb | SCO | -    | -    |       | 17 18.4 | -39 19 | 408 |           |    |      | Not a PLNNB;compact H II region RCW 121                  |
| PK 349- 4.1 | Longmore 16  | Pln Neb | SCO | 13   | -    | 83"   | 17 35.7 | -40 12 | 408 |           |    | 16.8 |  |
| PK 349+ 4.1 | M2-4         | Pln Neb | SCO | 13.4 | -    | 5"    | 17 01.1 | -34 50 | 376 | 1         |    | 17   |  |
| PK 350- 3.1 | Haro 1-26    | Pln Neb | SCO | 14   | -    | 23"   | 17 36.5 | -39 22 | 408 | 4         |    |      |  |
| PK 350+ 4.1 | Haro 2- 1    | Pln Neb | SCO | 14   | -    | 5.6"  | 17 04.6 | -33 59 | 376 | 2         |    | 12.9 |  |
| PK 351- 6.1 | Haro 1-37    | Pln Neb | SCO | 13.8 | -    | 9.9"  | 17 50.7 | -39 18 | 408 | 2         |    |      |  |
| PK 351+ 4.1 | M1-19        | Pln Neb | SCO | 13.2 | 9.8  | 10"   | 17 03.8 | -33 30 | 376 | 1         |    | 16.9 | Stellar  |
| PK 352- 7.1 | Fleming 3;V  | Pln Neb | CRA | 11.4 | 4.3  | 2"    | 18 00.2 | -38 50 | 377 | 1         |    | 14.3 | Stellar point in rich field foundw prism--Hartung        |
| PK 353- 4.1 | Haro 1-36    | Pln Neb | SCO | 12   | -    | 10"   | 17 49.8 | -37 02 | 377 |           |    | 16.8 |  |
| PK 353+ 6.2 | M2- 6        | Pln Neb | SCO | 13.7 | 9.4  | 8"    | 17 04.3 | -30 53 | 376 | 1         |    | 16.4 |  |
| PK 355- 3.3 | He2-228      | Pln Neb | SCO | 12.7 | -    | 2"    | 17 49.2 | -34 23 | 377 |           |    | 15.4 |  |
| PK 355- 4.1 | Hoffleit 2-1 | Pln Neb | SCO | 14   | -    | 11"   | 17 51.2 | -34 55 | 377 | 3         |    |      |  |
| PK 355- 6.5 | M3-21        | Pln Neb | SGR | 11.7 | 6.3  | 5"    | 18 02.5 | -36 39 | 377 |           |    | 13.5 |  |
| PK 356- 4.1 | Cannon 2-1   | Pln Neb | SCO | 13.9 | -    | 3"    | 17 54.6 | -34 23 | 377 |           |    | 14   | On north side of <b>M7</b> star cluster                  |
| PK 356- 4.2 | Haro 1-41    | Pln Neb | SCO | 13   | -    | 10"   | 17 57.3 | -34 10 | 377 | 2         |    | 16.2 |  |
| PK 357- 3.2 | M2-16        | Pln Neb | SCO | 14   | -    | 6.2"  | 17 52.6 | -32 46 | 377 | 2         |    |      |  |
| PK 357- 4.3 | He2-313      | Pln Neb | SCO | 8.5  | -    | 2"    | 17 58.2 | -33 48 | 377 | 1         |    | 15.4 | magnitude value is infrared region                       |
| PK 358- 0.2 | M1-26        | Pln Neb | SCO | 13.8 | 7.9  | 9.0"  | 17 46.0 | -30 12 | 377 | 2         |    | 12.1 |  |
| PK 358- 6.1 |              | Pln Neb | SGR | 12   | -    | 10"   | 18 09.9 | -33 19 | 377 |           |    |      |  |
| PK 358+ 3.1 | M3-10        | Pln Neb | OPH | 13.6 | -    | 3.5"  | 17 28.7 | -28 27 | 376 | 2         |    |      | same as PK358+ 3.3                                       |
| PK 358+ 4.1 | M3- 8        | Pln Neb | OPH | 14   | -    | 5.6"  | 17 24.9 | -28 06 | 376 | 2         |    |      |  |
| PK 358+ 5.2 | He2-216      | Pln Neb | OPH | 13.1 | -    | 3"    | 17 22.4 | -27 09 | 338 |           |    | 17.2 |  |
| PK 359- 0.1 | Hubble 5     | Pln Neb | SGR | 13.6 | -    | 19"   | 17 47.9 | -30 00 | 377 | 2(6)      |    | 18.6 |  |
| PK 359- 1.1 | M1-29        | Pln Neb | SCO | 13.5 | 9.1  | 9.3"  | 17 50.3 | -30 35 | 377 | 4(2)      |    |      |  |
| PK 359- 7.1 | M2-32        | Pln Neb | SGR | 12.4 | 8.5  | 10"   | 18 14.9 | -32 37 | 377 | 1         |    | 15.7 |  |
| RCW 47      |              | Brn Neb | CAR | -    | -    | 25'   | 10 05.2 | -58 57 | 426 | E         |    |      | Irregular shape; very rich field; nova shell on W border |
| RCW 50      |              | Brn Neb | CAR | -    | -    | 12'   | 10 27.4 | -57 09 | 426 | E         |    |      | Oval shape; very rich field                              |
| RCW 59      |              | Brn Neb | CEN | -    | -    | 180'  | 11 37.0 | -57 00 | 428 | E         |    |      |  |
| RCW 102     |              | Brn Neb | NOR | -    | -    | 12'   | 16 17.8 | -51 55 | 432 | E         |    |      | Oval shape; elongated NE and SE; very rich field         |
| RCW 103     |              | SN Rem  | NOR | -    | -    | 5'    | 16 17.1 | -51 07 | 432 |           |    |      | Broken ring shape; very rich field                       |
| RCW 104     |              | Brn Neb | NOR | -    | -    | 20'   | 16 24.0 | -51 31 | 432 | E         |    |      |  |
| RCW 106     |              | Brn Neb | NOR | -    | -    | 35'   | 16 20.8 | -50 55 | 432 | E         |    |      |  |
| RCW 126     |              | Brn Neb | SCO | -    | -    | 16'   | 17 16.9 | -36 21 | 376 | E         |    |      | Faint and diffuse  |
| Roslund 1   |              | Opn CL  | SGE | -    | -    | 3'    | 19 45.1 | +17 35 | 162 | IV 1p :b  | 15 |      |  |
| Roslund 2   |              | Opn CL  | VUL | -    | -    | 15.0' | 19 45.4 | +23 56 | 162 | IV 2p :b  | 20 | 7.1  |  |
| Roslund 3   |              | Opn CL  | SGE | -    | -    | 5'    | 19 58.7 | +20 31 | 162 | IV 1p :b  | 20 |      |  |
| Roslund 4   |              | Opn CL  | VUL | 10   | -    | 6'    | 20 04.9 | +29 13 | 119 | IV 2 p n  | 30 | 11.6 | In nebula IC 4954-5                                      |
| Roslund 5   |              | Opn CL  | CYG | -    | -    | 45'   | 20 10.0 | +33 46 | 119 | IV 3 p n  | 15 |      |  |
| Roslund 6   |              | Opn CL  | CYG | -    | -    | 24'   | 20 28.8 | +39 20 | 85  | IV 3mn:t  | 30 |      |  |
| Roslund 7   |              | Opn CL  | CYG | -    | -    | 20'   | 20 52.1 | +37 54 | 120 | IV 2p :a  |    |      |  |
| Ru 1        |              | Opn CL  | CMA | -    | -    | 11'   | 06 36.4 | -14 09 | 272 | III 1 p   | 15 | 11   |  |
| Ru 2        |              | Opn CL  | CMA | -    | -    | 7'    | 06 41.0 | -29 33 | 360 | IV 3 p    | 10 | 12   |  |
| Ru 3        |              | Opn CL  | CMA | -    | -    | 2.8'  | 06 42.1 | -29 27 | 360 | II 1 p    | 15 | 11   |  |
| Ru 4        |              | Opn CL  | MON | -    | -    | 5'    | 06 49.0 | -10 31 | 273 | III 2m :b | 40 | 14   |  |
| Ru 5        |              | Opn CL  | CMA | -    | -    | 2'    | 06 55.4 | -18 44 | 318 | IV 1p :b  | 10 | 13   |  |
| Ru 6        |              | Opn CL  | CMA | -    | -    | 2'    | 06 56.1 | -13 15 | 273 | III 1p :b | 10 |      |  |
| Ru 7        |              | Opn CL  | CMA | -    | -    | 4'    | 06 57.8 | -13 13 | 273 | II 2m :b  | 30 | 14   |  |
| Ru 8        |              | Opn CL  | CMA | -    | -    | 4'    | 07 01.7 | -13 33 | 273 | IV 1p :b  | 10 | 12   |  |
| Ru 10       |              | Opn CL  | CMA | -    | -    | 4.5'  | 07 06.5 | -20 07 | 318 | III 1p :b | 40 | 12   |  |
| Ru 11       |              | Opn CL  | CMA | -    | -    | 2.9'  | 07 07.4 | -20 48 | 318 | III 2 p   | 20 | 11   |  |

## 7000 DSO List (sorted by name)

| NAME  | OTHER | TYPE   | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES                             |
|-------|-------|--------|-----|------|------|------|---------|--------|-----|-----------|----|------|---------------------------------------|
| Ru 12 |       | Opn CL | CMA | -    | -    | 5'   | 07 07.2 | -28 09 | 318 | IV 1p :b  | 20 | 14   |                                       |
| Ru 13 |       | Opn CL | CMA | -    | -    | 4.2' | 07 07.9 | -25 52 | 318 | IV 2p :b  | 15 | 13   |                                       |
| Ru 14 |       | Opn CL | CMA | -    | -    | 2.3' | 07 15.0 | -31 21 | 361 | IV 1p :b  | 10 | 13   |                                       |
| Ru 15 |       | Opn CL | CMA | -    | -    | 1.7' | 07 19.6 | -19 38 | 319 | II 1p :b  | 20 | 12   |                                       |
| Ru 16 |       | Opn CL | CMA | -    | -    | 11'  | 07 23.2 | -19 27 | 319 | IV 2 p    | 15 | 13   |                                       |
| Ru 17 |       | Opn CL | CMA | -    | -    | 5'   | 07 23.6 | -23 11 | 319 | II 1p :b  | 15 | 12   |                                       |
| Ru 18 |       | Opn CL | CMA | 9.4  | -    | 4'   | 07 24.7 | -26 11 | 319 | III 2 p   | 40 | 11   |                                       |
| Ru 19 |       | Opn CL | CMA | -    | -    | 8'   | 07 25.6 | -21 30 | 319 | IV 1p :b  | 20 | 13   |                                       |
| Ru 20 |       | Opn CL | CMA | 9.5  | -    | 10'  | 07 26.7 | -28 50 | 361 | III 2 m   | 30 | 11.6 |                                       |
| Ru 22 |       | Opn CL | PUP | -    | -    | 2.8' | 07 29.3 | -29 11 | 361 | IV 1p :b  | 15 | 12   |                                       |
| Ru 23 |       | Opn CL | PUP | -    | -    | 3'   | 07 30.7 | -23 22 | 319 | III 1p :b | 20 | 13   |                                       |
| Ru 24 |       | Opn CL | PUP | -    | -    | 2'   | 07 31.9 | -12 47 | 274 | III 1 p   | 15 | 11   |                                       |
| Ru 25 |       | Opn CL | PUP | -    | -    | 0.7' | 07 36.8 | -23 23 | 319 | III 1p :b | 10 | 14   |                                       |
| Ru 26 |       | Opn CL | PUP | -    | -    | 10'  | 07 37.2 | -15 41 | 274 | III 1p :b | 20 | 12   |                                       |
| Ru 27 |       | Opn CL | PUP | -    | -    | 18'  | 07 37.6 | -26 30 | 319 | II 2 m    | 30 | 12   |                                       |
| Ru 28 |       | Opn CL | PUP | -    | -    | 4'   | 07 39.6 | -29 18 | 362 | IV 1p :b  | 20 | 14   |                                       |
| Ru 30 |       | Opn CL | PUP | -    | -    | 6.5' | 07 42.2 | -31 28 | 362 | II 2 p    | 30 | 11   |                                       |
| Ru 31 |       | Opn CL | PUP | -    | -    | 2'   | 07 42.0 | -35 35 | 362 | I 3 p     | 15 | 11   |                                       |
| Ru 32 |       | Opn CL | PUP | 8.4  | -    | 6'   | 07 45.0 | -25 31 | 320 | III 2 p n | 30 | 9.6  |                                       |
| Ru 33 |       | Opn CL | PUP | -    | -    | 6'   | 07 45.8 | -21 57 | 320 | IV 1p :b  | 20 | 13   |                                       |
| Ru 34 |       | Opn CL | PUP | 9.5  | -    | 4'   | 07 45.9 | -20 23 | 320 | III 2 p   | 35 | 11.2 |                                       |
| Ru 35 |       | Opn CL | PUP | -    | -    | 0.8' | 07 46.2 | -31 17 | 362 | II 1p :b  | 10 | 14   |                                       |
| Ru 36 |       | Opn CL | PUP | 9.6  | -    | 4'   | 07 48.5 | -26 18 | 320 | IV 1 m    | 30 | 10.3 |                                       |
| Ru 37 |       | Opn CL | PUP | -    | -    | 0.8' | 07 49.8 | -17 15 | 275 | II 2m :b  | 30 | 14   |                                       |
| Ru 38 |       | Opn CL | PUP | -    | -    | 6'   | 07 50.5 | -20 11 | 320 | III 2p :b | 15 | 13   |                                       |
| Ru 39 |       | Opn CL | PUP | -    | -    | 1.5' | 07 52.3 | -22 27 | 320 | III 1p :b | 15 | 14   |                                       |
| Ru 40 |       | Opn CL | PUP | -    | -    | 3.5' | 07 33.5 | -20 31 | 319 | IV 1p :b  | 10 | 13   |                                       |
| Ru 41 |       | Opn CL | PUP | -    | -    | 1.1' | 07 53.8 | -26 58 | 320 | IV 1p :b  | 20 | 14   |                                       |
| Ru 42 |       | Opn CL | PUP | -    | -    | 1.5' | 07 57.7 | -25 55 | 320 | III 2p :b | 20 | 14   |                                       |
| Ru 44 |       | Opn CL | PUP | 7.2  | -    | 5'   | 07 59.0 | -28 35 | 362 | III 1 p   | 40 | 9.4  | About 100 O or B * of 12 mag and less |
| Ru 45 |       | Opn CL | PUP | -    | -    | 11'  | 07 59.6 | -16 17 | 275 | IV 2 p    | 35 | 13   |                                       |
| Ru 46 |       | Opn CL | PUP | 9.1  | -    | 2'   | 08 02.1 | -19 28 | 320 | II 3 p    | 15 | 9.4  |                                       |
| Ru 47 |       | Opn CL | PUP | 9.6  | -    | 5'   | 08 02.3 | -31 06 | 362 | I 1 p     | 20 | 10.9 |                                       |
| Ru 48 |       | Opn CL | PUP | -    | -    | 2'   | 08 02.7 | -30 03 | 362 | III 1p :b | 20 | 12   |                                       |
| Ru 49 |       | Opn CL | PUP | 9.6  | -    | 2.5' | 08 03.3 | -26 47 | 320 | II 3 p    | 10 | 10.1 |                                       |
| Ru 50 |       | Opn CL | PUP | -    | -    | 3.5' | 08 03.4 | -30 52 | 362 | II 2m :b  | 30 | 12   |                                       |
| Ru 51 |       | Opn CL | PUP | -    | -    | 4.5' | 08 03.6 | -30 37 | 362 | IV 1m:b   | 30 | 14   |                                       |
| Ru 52 |       | Opn CL | PUP | -    | -    | 2.5' | 08 05.0 | -31 56 | 362 | III 1p :b | 15 | 13   |                                       |
| Ru 53 |       | Opn CL | PUP | -    | -    | 18'  | 08 10.8 | -27 00 | 320 | IV 2 p    | 40 | 10   |                                       |
| Ru 54 |       | Opn CL | PUP | -    | -    | 2.5' | 08 11.4 | -31 57 | 362 | III 2p :b | 20 | 15   |                                       |
| Ru 55 |       | Opn CL | PUP | 7.8  | -    | 17'  | 08 12.3 | -32 34 | 362 | IV 2 p    | 12 | 8.6  |                                       |
| Ru 56 |       | Opn CL | PUP | -    | -    | 42'  | 08 12.6 | -40 28 | 396 | IV 2 p    | 40 | 9    |                                       |
| Ru 57 |       | Opn CL | PUP | -    | -    | 5'   | 08 14.8 | -26 58 | 320 | IV 2m :b  | 30 | 12   |                                       |
| Ru 58 |       | Opn CL | PUP | -    | -    | 10'  | 08 14.9 | -31 56 | 362 | IV 1m:b   | 30 | 12   |                                       |
| Ru 59 |       | Opn CL | PUP | 9    | -    | 5'   | 08 19.4 | -34 29 | 362 | III 1 p   | 20 | 10.2 |                                       |
| Ru 60 |       | Opn CL | VEL | -    | -    | 6'   | 08 24.5 | -47 13 | 397 | II 1m:b   | 30 | 13   |                                       |
| Ru 61 |       | Opn CL | PUP | -    | -    | 2.5' | 08 25.3 | -34 09 | 363 | II 1p :b  | 25 | 14   |                                       |
| Ru 62 |       | Opn CL | PYX | -    | -    | 7'   | 08 32.5 | -19 39 | 321 | IV 2 p    | 20 | 11   |                                       |
| Ru 63 |       | Opn CL | VEL | -    | -    | 5'   | 08 32.7 | -48 18 | 397 | II 1p :b  | 20 | 13   |                                       |
| Ru 64 |       | Opn CL | VEL | -    | -    | 67'  | 08 37.4 | -40 05 | 397 | II 3 p    | 80 | 9    |                                       |
| Ru 65 |       | Opn CL | VEL | -    | -    | 11'  | 08 39.4 | -44 03 | 397 | IV 1 p    | 20 | 13   |                                       |
| Ru 66 |       | Opn CL | PYX | -    | -    | 2'   | 08 40.5 | -38 05 | 363 | II 1p :b  | 20 | 15   |                                       |
| Ru 67 |       | Opn CL | VEL | 9.1  | -    | 6'   | 08 41.8 | -43 23 | 397 | IV 3 p    | 35 | 10.7 |                                       |
| Ru 68 |       | Opn CL | PYX | -    | -    | 10'  | 08 44.5 | -35 55 | 363 | III 1r :b | 80 | 14   |                                       |
| Ru 69 |       | Opn CL | VEL | -    | -    | 2.2' | 08 44.8 | -47 36 | 397 | IV 1pn:b  | 10 | 14   |                                       |
| Ru 70 |       | Opn CL | VEL | -    | -    | 5'   | 08 49.1 | -46 49 | 397 | IV 2p :a  |    | 13   |                                       |
| Ru 71 |       | Opn CL | VEL | -    | -    | 7'   | 08 49.5 | -46 47 | 397 | III 2 p   | 30 | 11   |                                       |
| Ru 72 |       | Opn CL | PYX | -    | -    | 1.4' | 08 52.1 | -37 36 | 363 | IV 1p :b  | 10 | 13   |                                       |
| Ru 73 |       | Opn CL | VEL | -    | -    | 3.6' | 09 01.2 | -50 55 | 397 | IV 1p :b  | 25 | 14   |                                       |
| Ru 74 |       | Opn CL | PYX | -    | -    | 2.2' | 09 21.3 | -37 07 | 364 | III 1p :b | 20 | 13   |                                       |
| Ru 75 |       | Opn CL | VEL | -    | -    | 4'   | 09 21.9 | -56 19 | 425 | II 1p :b  | 20 | 12   |                                       |
| Ru 76 |       | Opn CL | VEL | 10.8 | -    | 6'   | 09 24.3 | -51 40 | 425 | III 2 p   | 20 | 12.5 |                                       |
| Ru 77 |       | Opn CL | VEL | 10.4 | -    | 2'   | 09 27.1 | -55 07 | 425 | II 3 p    | 35 | 12.5 |                                       |
| Ru 78 |       | Opn CL | VEL | -    | -    | 3'   | 09 29.1 | -53 42 | 425 | II 2m :b  | 30 | 15   |                                       |



## 7000 DSO List (sorted by name)

| NAME   | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class     | ns | bs   | SAC NOTES                            |
|--------|------------|---------|-----|------|------|------|---------|--------|-----|-----------|----|------|--------------------------------------|
| Ru 79  |            | Opn CL  | VEL | 9.2  | -    | 11'  | 09 41.0 | -53 50 | 426 | III 3 p   | 20 | 11.5 |                                      |
| Ru 80  |            | Opn CL  | VEL | -    | -    | 12'  | 09 42.3 | -44 02 | 398 | III 1 p   |    | 13   |                                      |
| Ru 81  |            | Opn CL  | VEL | -    | -    | 5'   | 09 45.2 | -44 06 | 398 | IV 3p :a  |    | 12   |                                      |
| Ru 82  |            | Opn CL  | VEL | 8.1  | -    | 3.6' | 09 45.6 | -53 59 | 426 | II 3 p    | 20 | 10.8 |                                      |
| Ru 83  |            | Opn CL  | VEL | 9.8  | -    | 3.4' | 09 49.3 | -54 36 | 426 | I 3 p     | 30 | 11.3 |                                      |
| Ru 85  |            | Opn CL  | VEL | -    | -    | 1.7' | 10 01.5 | -55 07 | 426 | III 1m:b  | 40 | 15   |                                      |
| Ru 86  |            | Opn CL  | CAR | -    | -    | 12'  | 10 01.5 | -59 31 | 426 | III 2 m   |    | 12   |                                      |
| Ru 87  |            | Opn CL  | VEL | -    | -    | 2.2' | 10 15.5 | -50 43 | 426 | II 3 p    | 20 | 11   |                                      |
| Ru 90  |            | Opn CL  | CAR | -    | -    | 9'   | 10 31.0 | -58 27 | 427 | IV 2 p    | 15 | 12   |                                      |
| Ru 91  |            | Opn CL  | CAR | -    | -    | 1.7' | 10 47.7 | -57 28 | 427 | II 2 p    | 15 | 10   |                                      |
| Ru 106 |            | Glob CL | CEN | 10.9 | -    | 2'   | 12 38.7 | -51 09 | 402 |           |    | 14.8 | Skiff: Nice globular cluster!        |
| Ru 108 |            | Opn CL  | CEN | 7.5  | -    | 12'  | 13 32.2 | -58 29 | 430 | III 2 p   | 15 | 8.5  |                                      |
| Ru 111 |            | Opn CL  | CEN | -    | -    | 8'   | 14 36.8 | -59 56 | 431 | III 1m:b  | 40 | 13   |                                      |
| Ru 113 | Cr 36      | Opn CL  | NOR | -    | -    | 45'  | 15 57.2 | -59 28 | 432 | III 1 m   | 20 | 9    |                                      |
| Ru 114 |            | Opn CL  | NOR | -    | -    | 8'   | 16 06.6 | -55 52 | 432 | IV 1m:b   | 50 | 12   |                                      |
| Ru 115 |            | Opn CL  | NOR | -    | -    | 5'   | 16 12.9 | -52 23 | 432 | III 1p :a |    | 13   |                                      |
| Ru 116 |            | Opn CL  | NOR | -    | -    | 5'   | 16 23.4 | -52 00 | 432 | II 2 p    |    | 9    |                                      |
| Ru 117 |            | Opn CL  | NOR | -    | -    | 1.7' | 16 23.5 | -51 52 | 432 | III 1p :a |    | 12   |                                      |
| Ru 119 |            | Opn CL  | NOR | 8.8  | -    | 8'   | 16 28.3 | -51 31 | 432 | II 1 p    | 13 | 10.9 |                                      |
| Ru 120 |            | Opn CL  | ARA | -    | -    | 3.4' | 16 35.2 | -48 17 | 407 | II 3p :a  | 11 | 12   |                                      |
| Ru 121 |            | Opn CL  | ARA | -    | -    | 8'   | 16 41.8 | -46 09 | 407 | IV 1m:b   | 35 | 13   |                                      |
| Ru 123 | Harvard 14 | Opn CL  | SCO | -    | -    | 9'   | 17 23.4 | -37 56 | 376 | II 3 p    | 50 | 10   | About 40 * mags 15...                |
| Ru 126 |            | Opn CL  | SCO | -    | -    | 6'   | 17 35.0 | -34 19 | 376 | IV 2p :b  | 20 | 13   |                                      |
| Ru 127 |            | Opn CL  | SCO | 8.8  | -    | 8'   | 17 37.8 | -36 18 | 376 | IV 2 p    | 20 | 10.4 |                                      |
| Ru 128 |            | Opn CL  | SCO | -    | -    | 3.4' | 17 44.3 | -34 53 | 377 | IV 1m:b   |    | 13   |                                      |
| Ru 130 |            | Opn CL  | SGR | -    | -    | 3.9' | 17 47.5 | -30 06 | 377 | II 1p :b  | 20 | 14   |                                      |
| Ru 131 |            | Opn CL  | SGR | -    | -    | 10'  | 17 49.1 | -29 13 | 377 | III 1 p   | 15 | 11   |                                      |
| Ru 133 |            | Opn CL  | SGR | -    | -    | 5'   | 17 52.5 | -28 41 | 339 | IV 2p :b  | 20 | 12   |                                      |
| Ru 134 |            | Opn CL  | SGR | -    | -    | 5'   | 17 52.8 | -29 33 | 377 | II 1 mn:b | 30 | 12   |                                      |
| Ru 135 |            | Opn CL  | SER | -    | -    | 11'  | 17 58.0 | -11 39 | 294 | I 1 p     | 20 |      |                                      |
| Ru 136 |            | Opn CL  | SGR | -    | -    | 2.2' | 17 59.3 | -24 41 | 339 | IV 1m:b   | 40 | 13   |                                      |
| Ru 137 |            | Opn CL  | SGR | -    | -    | 3'   | 18 00.0 | -25 10 | 339 | IV 2m :b  | 30 | 13   |                                      |
| Ru 138 |            | Opn CL  | SGR | -    | -    | 4'   | 18 00.0 | -24 40 | 339 | IV 1p :b  | 20 | 13   |                                      |
| Ru 139 |            | Opn CL  | SGR | -    | -    | 10'  | 18 01.2 | -23 32 | 339 | III 2m:b  | 80 | 12   |                                      |
| Ru 140 |            | Opn CL  | SGR | -    | -    | 3.5' | 18 21.8 | -33 15 | 378 | III 2 p   | 15 | 11   |                                      |
| Ru 141 |            | Opn CL  | SCT | -    | -    | 7'   | 18 31.3 | -12 19 | 295 | III 2 m   | 20 | 12   |                                      |
| Ru 142 |            | Opn CL  | SCT | -    | -    | 4'   | 18 32.2 | -12 14 | 295 | IV 1p :b  | 15 | 13   |                                      |
| Ru 143 |            | Opn CL  | SCT | -    | -    | 5'   | 18 32.7 | -12 08 | 295 | IV 1m:b   | 30 | 14   |                                      |
| Ru 144 |            | Opn CL  | SCT | -    | -    | 5'   | 18 32.5 | -11 25 | 295 | IV 1p :b  | 10 | 12   |                                      |
| Ru 145 |            | Opn CL  | SGR | -    | -    | 35'  | 18 50.3 | -18 12 | 340 | III 1 m   |    | 10   |                                      |
| Ru 148 |            | Opn CL  | PER | 9.5  | -    | 3'   | 04 46.5 | +44 43 | 65  | IV 2 p    | 15 | 9.9  |                                      |
| Ru 150 |            | Opn CL  | CMA | -    | -    | 2.5' | 07 05.9 | -28 25 | 318 | II 2p :b  | 12 | 13   |                                      |
| Ru 151 |            | Opn CL  | PUP | -    | -    | 15'  | 07 41.1 | -16 17 | 274 | IV 3 m    | 30 | 12   |                                      |
| Ru 152 |            | Opn CL  | PUP | -    | -    | 1.7' | 07 54.5 | -38 14 | 362 | II 1m:b   | 35 | 16   |                                      |
| Ru 153 |            | Opn CL  | PUP | -    | -    | 2.8' | 08 00.3 | -30 14 | 362 | IV 2pe:a  |    | 14   |                                      |
| Ru 154 |            | Opn CL  | PUP | -    | -    | 0.6' | 08 01.7 | -44 25 | 396 | III 2p :b | 20 | 13   |                                      |
| Ru 155 |            | Opn CL  | PUP | -    | -    | 2'   | 08 05.0 | -31 46 | 362 | IV 1p :b  | 10 | 13   |                                      |
| Ru 157 |            | Opn CL  | PYX | -    | -    | 17'  | 08 29.9 | -19 06 | 321 | IV 2 p    | 30 | 11   |                                      |
| Ru 158 |            | Opn CL  | PYX | -    | -    | 2.5' | 08 52.4 | -37 34 | 363 | III 2p :b | 10 | 12   |                                      |
| Ru 160 |            | Opn CL  | VEL | -    | -    | 1.7' | 09 55.5 | -47 01 | 398 | I 3p :a   |    | 14   |                                      |
| Ru 165 |            | Opn CL  | CRU | -    | -    | 22'  | 12 28.5 | -56 26 | 428 | IV 1 p    | 35 | 7    |                                      |
| Ru 167 |            | Opn CL  | CEN | -    | -    | 14'  | 14 18.2 | -58 58 | 430 | IV 2 p    | 40 | 11   |                                      |
| Ru 168 |            | Opn CL  | SGR | -    | -    | 3.4' | 17 52.8 | -28 27 | 339 | IV 1p :b  | 20 | 12   |                                      |
| Ru 170 |            | Opn CL  | SCT | -    | -    | 2.5' | 18 25.2 | -10 01 | 295 | IV 1m:b   |    | 13   |                                      |
| Ru 171 |            | Opn CL  | SCT | -    | -    | 6'   | 18 32.6 | -16 02 | 295 | III 1r :b | 15 | 14   |                                      |
| Ru 172 |            | Opn CL  | CYG | -    | -    | 4'   | 20 11.6 | +35 36 | 119 | III 2pn:b | 20 | 12   |                                      |
| Ru 173 |            | Opn CL  | CYG | -    | -    | 50'  | 20 41.8 | +35 33 | 120 | III 3 p   | 20 | 8    | Large loose cl;34 * in 20'           |
| Ru 174 |            | Opn CL  | CYG | -    | -    | 5'   | 20 43.5 | +37 02 | 120 | IV 1p :b  | 10 | 14   |                                      |
| Ru 175 |            | Opn CL  | CYG | -    | -    | 9'   | 20 45.4 | +35 31 | 120 | III 2 p   | 30 | 11   | Not rich;27 * at 120X in 10" scope   |
| Ru 176 |            | Opn CL  | NOR | -    | -    |      | 16 14.9 | -51 20 | 432 |           |    |      | Stellar arc or broken ring--Archinal |
| Sh2- 1 | LBN 1093   | Brt Neb | SCO | -    | -    | 150' | 15 55.7 | -25 40 | 335 | E+R       |    |      | Neb brightest south of Pi Sco        |
| Sh2- 3 | Gum 58;RCV | Brt Neb | SCO | -    | -    | 7.3' | 17 12.3 | -38 29 | 376 | E         |    |      |                                      |
| Sh2- 5 | Gum 59;RCV | Brt Neb | SCO | -    | -    | 32'  | 17 24.9 | -38 12 | 376 | E         |    |      |                                      |
| Sh2- 9 |            | Brt Neb | SCO | -    | -    | 35'  | 16 20.2 | -25 22 | 336 | E+R       |    |      |                                      |

## 7000 DSO List (sorted by name)

| NAME           | OTHER      | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class     | ns  | bs   | SAC NOTES   |
|----------------|------------|---------|-----|------|------|-------|---------|--------|-----|-----------|-----|------|---|
| Sh2- 13        | Gum 68;RCV | Brn Neb | SCO | -    | -    | 40'   | 17 29.0 | -31 31 | 376 | E         |     |      |   |
| Sh2- 16        | Gum 70     | Brn Neb | SGR | -    | -    | 14'   | 17 46.6 | -29 18 | 377 | E         |     |      |   |
| Sh2- 46        | Gum 80;RCV | Brn Neb | SER | -    | -    | 30'   | 18 06.1 | -14 11 | 294 | E         |     |      |   |
| Sh2- 53        |            | Brn Neb | SCT | -    | -    | 15'   | 18 25.2 | -13 14 | 295 | E         |     |      |   |
| Sh2- 55        | LBN 74     | Brn Neb | SCT | -    | -    | 5'    | 18 32.2 | -11 46 | 295 | E         |     |      |   |
| Sh2- 64        | LBN 90     | Brn Neb | SER | -    | -    | 20'   | 18 31.6 | -02 05 | 250 | E         |     |      |   |
| Sh2- 72        |            | Brn Neb | AQL | -    | -    | 25'   | 19 03.8 | +02 19 | 251 | E         |     |      |   |
| Sh2- 82        |            | Brn Neb | SGE | -    | -    | 7'    | 19 30.3 | +18 16 | 162 | E+R       |     |      | Large and irregularly round                                 |
| Sh2- 84        |            | Brn Neb | SGE | -    | -    | 15'   | 19 49.0 | +18 24 | 162 | E         |     |      | V shaped neby; rich field of stars                          |
| Sh2- 88        | LBN 149    | Brn Neb | VUL | -    | -    | 18'   | 19 46.0 | +25 20 | 162 | E         |     |      | Has two small brighter knots w in large faint neby          |
| Sh2- 90        | LBN 144    | Brn Neb | VUL | -    | -    | 5'    | 19 49.3 | +26 51 | 162 | E         |     |      |   |
| Sh2- 91        |            | SN Rem  | CYG | -    | -    | 120'  | 19 35.6 | +29 37 | 118 |           |     |      | Long; thin filament   |
| Sh2-101        |            | Brn Neb | CYG | -    | -    | 16'   | 20 00.0 | +35 17 | 119 | E         |     |      | Near dark neb B144; appears as bright edge to dark lane     |
| Sh2-104        |            | Brn Neb | CYG | -    | -    | 7'    | 20 17.8 | +36 46 | 119 | E         |     |      |   |
| Sh2-112        |            | Brn Neb | CYG | -    | -    | 15'   | 20 33.9 | +45 39 | 85  | E         |     |      |   |
| Sh2-115        |            | Brn Neb | CYG | -    | -    | 30'   | 20 34.5 | +46 48 | 85  | E         |     |      |   |
| Sh2-132        | LBN 470    | Brn Neb | CEP | -    | -    | 40'   | 22 19.3 | +56 06 | 57  | E         |     |      | NE section has highest surface brightness                   |
| <b>Sh2-155</b> | LBN 529    | Brn Neb | CEP | -    | -    | 15'   | 22 56.9 | +62 37 | 34  | E         |     |      | <b>Cave nebula</b> ; crescent shaped with northern brighter |
| Sh2-157        |            | Brn Neb | CAS | -    | -    | 60'   | 23 16.1 | +60 02 | 58  | E         |     |      | Incl brighter area Sh2-157a                                 |
| Sh2-188        | LBN 633    | Brn Neb | CAS | -    | -    | 10'   | 01 30.6 | +58 23 | 37  | E         |     |      | Crescent shaped with SE side brighter                       |
| Sh2-205        |            | Brn Neb | CAM | -    | -    | 80'   | 03 53.2 | +53 04 | 39  | E         |     |      |   |
| Sh2-223        |            | SN Rem  | AUR | -    | -    | 70'   | 05 16.6 | +42 04 | 66  |           |     |      |   |
| Sh2-224        | LBN 769    | SN Rem  | AUR | -    | -    | 31'   | 05 26.9 | +42 58 | 66  | E         |     |      |   |
| Sh2-231        | LBN 808    | Brn Neb | AUR | -    | -    | 10'   | 05 39.4 | +35 56 | 97  | E         |     |      |   |
| Sh2-232        | LBN 805    | Brn Neb | AUR | -    | -    | 37'   | 05 42.5 | +36 10 | 97  | E         |     |      | PLNNB PK 175+0.1 involved                                   |
| Sh2-235        |            | Brn Neb | AUR | -    | -    | 7.8'  | 05 41.1 | +35 52 | 98  | E         |     |      |   |
| Sh2-240        | Simeis 147 | SN Rem  | TAU | -    | -    | 200'  | 05 39.1 | +28 00 | 97  | E         |     |      | Huge oval cloud w filaments;prob supernova remnant          |
| Sh2-241        | LBN 824    | Brn Neb | AUR | -    | -    | 2'    | 06 04.1 | +30 15 | 98  | E+R       |     |      |   |
| Sh2-247        | LBN 843    | Brn Neb | GEM | -    | -    | 10'   | 06 08.5 | +21 37 | 137 | E         |     |      |   |
| Sh2-261        | LBN 863    | Brn Neb | ORI | -    | -    | 30'   | 06 08.6 | +15 47 | 182 | E         |     |      | <b>Lower's nebula</b>                                       |
| Sh2-263        | LBN 866    | Brn Neb | ORI | -    | -    | 20'   | 05 21.4 | +08 25 | 180 | E+R       | 5.7 |      | Brightst part of <b>Lambda Ori neb</b>                      |
| Sh2-264        |            | Brn Neb | ORI | 5    | -    | 70'   | 05 36.3 | +10 00 | 180 | E         |     |      | Seems to apply to entire <b>Lambda Ori neb</b>              |
| Sh2-276        |            | Brn Neb | ORI | 7    | 12   | 600'  | 05 54.4 | -01 00 | 226 | E         |     |      | Part of <b>Barnard's Loop</b> ;faint                        |
| Sh2-282        | LBN 978    | Brn Neb | MON | -    | -    | 40'   | 06 38.0 | +01 29 | 227 | E         |     |      |   |
| Sh2-294        | LBN 1032   | Brn Neb | MON | -    | -    | 8'    | 07 16.6 | -09 26 | 274 | E         |     |      |   |
| Sh2-301        | Gum 5;RCV  | Brn Neb | CMA | -    | -    | 8'    | 07 09.8 | -18 30 | 318 | E         |     |      |   |
| Sh2-302        | Gum 6;RCV  | Brn Neb | PUP | -    | -    | 20'   | 07 31.6 | -16 58 | 274 | E         |     |      | Cluster Bochum 5 invl                                       |
| Sh2-307        | Gum 7;RCV  | Brn Neb | PUP | -    | -    | 4'    | 07 35.5 | -18 46 | 319 | E         |     |      |   |
| Sh2-311        | LBN 1067   | Brn Neb | PUP | -    | -    | 16'   | 07 52.4 | -26 25 | 320 | E         |     |      | Involved in cluster NGC 2467; dark lane near middle         |
| Sh2-312        |            | Brn Neb | PYX | -    | -    | 720'  | 09 00.0 | -26 00 | 322 | E         |     |      |   |
| Steph 1        |            | Opn CL  | LYR | 3.8  | -    | 20.0' | 18 54.5 | +36 54 | 117 | IV 3 p    | 15  | 4.3  | <b>Delta Lyrae cluster</b>                                  |
| Stock 1        |            | Opn CL  | VUL | 5.3  | -    | 60'   | 19 35.8 | +25 11 | 162 | III 2 m   | 40  | 7    | 47 * in 40' field   |
| Stock 2        |            | Opn CL  | CAS | 4.4  | -    | 60'   | 02 14.7 | +59 29 | 37  | III 1 m   | 166 | 8.2  | 2 deg north of <b>Double Cluster</b> ; easy in binocs       |
| Stock 3        |            | Opn CL  | CAS | -    | -    | 2'    | 01 12.0 | +62 16 | 16  | IV 1 p    | 8   | 11   |   |
| Stock 4        |            | Opn CL  | PER | -    | -    | 20'   | 01 52.8 | +57 04 | 37  | III 1 p   | 15  | 11   |   |
| Stock 5        |            | Opn CL  | CAS | 7    | -    | 15'   | 02 04.5 | +64 23 | 17  | IV 2 p    | 25  | 7    | 53 Cas is star on west side                                 |
| Stock 8        |            | Opn CL  | AUR | -    | -    | 5'    | 05 28.1 | +34 25 | 97  | I 2 p n   | 40  | 9    | In nebula IC 417  |
| Stock 10       |            | Opn CL  | AUR | -    | -    | 25'   | 05 39.0 | +37 52 | 97  | IV 3 p    | 15  |      |   |
| Stock 11       |            | Opn CL  | CAS | -    | -    | 10'   | 23 30.9 | +55 45 | 35  | IV 2 p    |     | 8    |   |
| Stock 12       |            | Opn CL  | CAS | -    | -    | 20'   | 23 36.4 | +52 33 | 35  | IV 2 p    | 9   | 8    |   |
| Stock 13       |            | Opn CL  | CAR | 7    | -    | 3'    | 11 13.1 | -58 55 | 427 | I 2 p n   | 15  | 8.5  | In Carina OB3   |
| Stock 15       |            | Opn CL  | CRU | -    | -    | 12'   | 12 10.5 | -59 30 | 428 | IV 1 p    |     | 10   |   |
| Stock 17       |            | Opn CL  | CAS | -    | -    | 1'    | 23 43.7 | +62 10 | 15  | I 3p :a   |     | 8.5  |   |
| Stock 18       |            | Opn CL  | CAS | -    | -    | 5'    | 00 01.6 | +64 37 | 15  | IV 2p :a  |     |      |   |
| Stock 19       |            | Opn CL  | CAS | -    | -    | 3'    | 00 04.4 | +56 05 | 35  | II 2 p    | 6   | 8    |   |
| Stock 20       |            | Opn CL  | CAS | -    | -    | 1'    | 00 25.2 | +62 39 | 15  | II 2p :a  |     | 13   |   |
| Stock 21       |            | Opn CL  | CAS | -    | -    | 5'    | 00 30.5 | +57 56 | 36  | IV 2p :b  | 10  | 12   |   |
| Stock 23       |            | Opn CL  | CAM | -    | -    | 15'   | 03 16.2 | +60 06 | 38  | III 3 p n | 25  | 7.6  |   |
| Stock 24       | Berk 3     | Opn CL  | CAS | 8.8  | -    | 4'    | 00 39.7 | +61 57 | 16  | IV 2 P    | 20  | 11.1 | Superb at high power in 10" scope                           |
| Ter 5          |            | Glob CL | SGR | 13.9 | -    | 2.1'  | 17 48.1 | -24 47 | 338 |           |     |      |   |
| Ter 6          |            | Glob CL | SCO | 13.9 | -    | 1.2'  | 17 50.7 | -31 17 | 377 |           |     |      |   |
| Tombaugh 1     | OCL 603    | Opn CL  | CMA | 10.5 | -    | 5'    | 07 00.5 | -20 34 | 318 | III 1m:b  | 45  | 14   |   |
| Tombaugh 2     | OCL 605    | Opn CL  | CMA | -    | -    | 3'    | 07 03.1 | -20 49 | 318 | I 1m:b    | 50  | 16   |   |
| Tombaugh 4     |            | Opn CL  | CAS | -    | -    | 2.5'  | 02 29.2 | +61 47 | 17  | II 1 mn:b | 40  | 16   |   |

## 7000 DSO List (sorted by name)

| NAME       | OTHER        | TYPE    | CON | MAG  | S.B. | SIZE | RA      | DEC    | U2K | Class    | ns  | bs   | SAC NOTES  |
|------------|--------------|---------|-----|------|------|------|---------|--------|-----|----------|-----|------|--|
| Tombaugh 5 |              | Opn CL  | CAM | 8.4  | -    | 17'  | 03 47.7 | +59 05 | 39  | III 2 m  | 60  | 11.6 |  |
| Ton 2      |              | Glob CL | SCO | 12.2 | -    | 3.4' | 17 36.6 | -39 04 | 408 |          |     |      |  |
| Tr 1       | Cr 15        | Opn CL  | CAS | 8.1  | -    | 4.5' | 01 35.7 | +61 17 | 16  | I 3 p    | 20  | 9.6  | 2 10 mag * and haze of unresolved stars                    |
| Tr 2       | Cr 29        | Opn CL  | PER | 5.9  | -    | 20'  | 02 36.9 | +55 55 | 38  | III 2 p  | 20  | 7.4  | Moderately rich about 30 * to 11 mag some faint * to south |
| Tr 3       | Cr 36;Harva  | Opn CL  | CAS | 7    | -    | 23'  | 03 11.9 | +63 11 | 18  | III 3 p  | 30  |      |  |
| Tr 5       | Cr 105       | Opn CL  | MON | 10.9 | -    | 8'   | 06 36.5 | +09 29 | 182 | II 3 r n | 150 | 17   | One member is variable V 493 Mon--a red carbon star        |
| Tr 6       | Cr 145       | Opn CL  | CMA | 10   | -    | 6'   | 07 26.4 | -24 13 | 319 | III 2 p  |     | 14   |  |
| Tr 7       | Cr 146       | Opn CL  | PUP | 7.9  | -    | 5'   | 07 27.3 | -24 00 | 319 | II 3 p n | 30  | 9.1  |  |
| Tr 9       | Cr 168;Harva | Opn CL  | PUP | 8.7  | -    | 6'   | 07 55.7 | -25 53 | 320 | II 2 p   | 20  | 10.1 | 40 * in clumpy groups                                      |
| Tr 10      | Cr 203       | Opn CL  | VEL | 4.6  | -    | 15'  | 08 47.8 | -42 29 | 397 | II 2 p   | 40  | 6.4  |  |
| Tr 14      | Cr 230       | Opn CL  | CAR | 5.5  | -    | 5'   | 10 43.9 | -59 33 | 427 |          | 44  | 7    |  |
| Tr 15      | Cr 231       | Opn CL  | CAR | 7    | -    | 15'  | 10 44.4 | -59 21 | 427 | III 2 pn | 39  | 8.4  |  |
| Tr 16      | Cr 233       | Opn CL  | CAR | 5    | -    | 10'  | 10 45.1 | -59 43 | 427 |          | 90  | 6.2  | Nu Car Cl;Mag includes Nu Car                              |
| Tr 17      | Cr 235       | Opn CL  | CAR | 8.4  | -    | 5'   | 10 56.4 | -59 13 | 427 | II 2 p   | 30  | 10.3 |  |
| Tr 19      | Cr 243       | Opn CL  | CAR | 9.6  | -    | 10'  | 11 14.3 | -57 35 | 427 | III 3 m  | 40  |      |  |
| Tr 23      | Cr 295       | Opn CL  | NOR | 11.2 | -    | 5'   | 16 00.8 | -53 31 | 432 | II 2 p   | 40  |      |  |
| Tr 24      | Harvard 12   | Opn CL  | SCO | 8.6  | -    | 60'  | 16 57.0 | -40 38 | 407 | IV 2 p n | 200 | 7.7  | 200 * in rich Milky field;nebula IC 4628 invl              |
| Tr 25      |              | Opn CL  | SCO | 11.7 | -    | 5'   | 17 24.5 | -39 01 | 376 | II 1m:b  | 40  |      |  |
| Tr 26      | Cr 331       | Opn CL  | OPH | 9.5  | -    | 7'   | 17 28.5 | -29 30 | 376 | III 2 p  | 40  |      |  |
| Tr 27      | Cr 336       | Opn CL  | SCO | 6.7  | -    | 7'   | 17 36.2 | -33 29 | 376 | I 2 p    | 35  | 8.4  | Extinction varies from 3 to 8 mags across face of cluster  |
| Tr 28      | Cr 337       | Opn CL  | SCO | 7.7  | -    | 8'   | 17 36.9 | -32 28 | 376 | II 2 p n | 30  | 9.8  |  |
| Tr 29      | Cr 343       | Opn CL  | SCO | 7.5  | -    | 9'   | 17 41.6 | -40 07 | 408 | II 3 p   | 30  |      |  |
| Tr 30      | Harvard 18   | Opn CL  | SCO | 8.8  | -    | 10'  | 17 56.5 | -35 19 | 377 | III 2 p  | 20  |      | In field of <b>M 7</b>                                     |
| Tr 31      | Cr 357       | Opn CL  | SGR | 9.8  | -    | 8'   | 17 59.9 | -28 11 | 377 | III 1 p  | 25  |      |  |
| Tr 32      | Harvard 19   | Opn CL  | SER | 12.2 | -    | 4'   | 18 17.2 | -13 21 | 294 | I 2m :b  | 50  | 11.8 |  |
| Tr 33      | Cr 378       | Opn CL  | SGR | 7.8  | -    | 7'   | 18 24.6 | -19 44 | 340 | II 3 p   | 20  | 9.7  |  |
| Tr 34      | Cr 387       | Opn CL  | SCT | 8.6  | -    | 8'   | 18 39.8 | -08 29 | 295 | II 2 m   | 40  | 11.2 |  |
| Tr 35      | Cr 398       | Opn CL  | SCT | 9.2  | -    | 9'   | 18 42.9 | -04 14 | 250 | II 2 p   | 35  | 11.4 |  |
| Tr 37      | Cr 439       | Opn CL  | CEP | 5.1  | -    | 50'  | 21 39.0 | +57 30 | 57  | II 3 m   | 30  | 7.8  | In IC 1396 nebula  |
| UGC 191    | D2           | Galaxy  | PSC | 13.4 | 14   | 3'   | 00 20.1 | +10 53 | 171 | S        |     |      |  |
| UGC 439    | MCG +00-02   | Galaxy  | CET | 13.2 | 13.2 | 1.1' | 00 41.4 | -01 43 | 216 | Sa       |     |      |  |
| UGC 711    | MCG +00-04   | Galaxy  | CET | 14   | -    | 3.9' | 01 08.7 | +01 39 | 217 | Sc       |     |      |  |
| UGC 1072   | PGC 5574     | Galaxy  | CET | 14   | -    | 1.2' | 01 29.8 | -01 15 | 218 | SO       |     |      | vF companion on west side                                  |
| UGC 1102   | Arp 306A     | Galaxy  | PSC | 13.9 | -    | 1.4' | 01 32.6 | +04 35 | 218 | Pec      |     |      | Dbl sys w UGC 1105 in south part of disk;Symbiotic pr      |
| UGC 1195   | MCG -02-05   | Galaxy  | PSC | 13.2 | -    | 3'   | 01 42.4 | +13 58 | 173 | Irp+     |     |      | distorted  |
| UGC 1281   | PGC 6699     | Galaxy  | TRI | 12.6 | -    | 4.5' | 01 49.6 | +32 35 | 92  | Sdm      |     |      |  |
| UGC 1385   | Mrk 2        | Galaxy  | AND | 13.4 | 12.3 | 0.8' | 01 54.9 | +36 55 | 92  | SBa      |     |      | brightest of 3   |
| UGC 1546   | PGC 7826     | Galaxy  | ARI | 13.7 | 13.8 | 1.1' | 02 03.4 | +18 38 | 129 | Sc       |     |      |  |
| UGC 1547   | PGC 7825     | Galaxy  | ARI | 13.9 | 15.5 | 2'   | 02 03.4 | +22 02 | 129 | Ir+      |     |      |  |
| UGC 1551   | PGC 7841     | Galaxy  | ARI | 13.5 | 14.4 | 2.8' | 02 03.6 | +24 04 | 129 | SBdm     |     |      | faint comp 3.1' PA 155                                     |
| UGC 1561   | PGC 7871     | Galaxy  | ARI | 14   | 13.8 | 1.4' | 02 04.1 | +24 12 | 129 | Irp+     |     |      | very mottled   |
| UGC 2023   | PGC 9726     | Galaxy  | TRI | 13.9 | 15.2 | 2.0' | 02 33.3 | +33 30 | 93  | Im       |     |      |  |
| UGC 2034   | PGC 9759     | Galaxy  | AND | 13.1 | 15.1 | 3.1' | 02 33.7 | +40 32 | 62  | Ir+      |     |      |  |
| UGC 2082   | MCG +04-07   | Galaxy  | ARI | 12.9 | 14.5 | 6.2' | 02 36.3 | +25 26 | 130 | Sc       |     |      |  |
| UGC 2105   | Mrk 1050     | Galaxy  | TRI | 13.5 | 13.2 | 1.5' | 02 37.7 | +34 26 | 93  | SBa      |     |      | Supernova 1938A here                                       |
| UGC 2119   | PGC 9973     | Galaxy  | CET | 13.5 | 13.7 | 2'   | 02 37.9 | -01 51 | 220 | SBb      |     |      |  |
| UGC 2259   | PGC 10586    | Galaxy  | PER | 13.4 | 14.9 | 2.8' | 02 47.9 | +37 32 | 93  | SBdm     |     |      | south of 2   |
| UGC 2275   | PGC 10588    | Galaxy  | CET | 13.4 | 16.6 | 5.8' | 02 48.0 | +03 53 | 220 | Sm       |     |      |  |
| UGC 2302   | PGC 10670    | Galaxy  | CET | 13.2 | 16.6 | 4.8' | 02 49.2 | +02 08 | 220 | (R)SB(rs |     |      |  |
| UGC 2463   | PGC 11371    | Galaxy  | PER | 13.9 | 15.1 | 2.3' | 03 00.6 | +40 15 | 63  | SABm     |     |      |  |
| UGC 2855   | PGC 13880    | Galaxy  | CAM | 12.9 | 15   | 4.4' | 03 48.4 | +70 08 | 18  | S(B)c    |     |      | P w UGC 2866 at 10' south foll                             |
| UGC 3504   | MCG +10-10   | Galaxy  | LYN | 12.3 | 14.1 | 3.1' | 06 40.1 | +60 04 | 42  | S(B)c    |     |      |  |
| UGC 3574   | MCG +10-10   | Galaxy  | LYN | 12.6 | 15.3 | 4.2' | 06 53.1 | +57 11 | 42  | Sc       |     |      | P w UGC 3569 6' preced                                     |
| UGC 3580   | PGC 19867    | Galaxy  | CAM | 11.8 | 13.6 | 3.4' | 06 55.5 | +69 35 | 21  | Sa       |     |      |  |
| UGC 3587   | PGC 19813    | Galaxy  | GEM | 13.8 | 13.4 | 2.8' | 06 53.8 | +19 18 | 138 | S        |     |      |  |
| UGC 3685   | PGC 20250    | Galaxy  | LYN | 12   | 14.3 | 3.3' | 07 09.0 | +61 36 | 21  | SBb      |     |      |  |
| UGC 3691   | PGC 20214    | Galaxy  | GEM | 11.9 | 12.7 | 2.2' | 07 08.0 | +15 10 | 183 | Sc       |     |      | several blue patches along edge                            |
| UGC 3697   | PGC 20348    | Galaxy  | CAM | 13.5 | 12.2 | 3.5' | 07 11.4 | +71 50 | 21  | Sbp      |     |      | <b>Integral sign galaxy</b> ;disturbed                     |
| UGC 3730   | PGC 20460    | Galaxy  | CAM | 12.5 | 14.4 | 2.7' | 07 14.3 | +73 29 | 7   | Ring     |     |      | Chaotic; UGC 3705 at 9' 14.4mag 1.5'X1.4'                  |
| UGC 3826   | PGC 20927    | Galaxy  | CAM | 13.5 | 15.9 | 3.5' | 07 24.5 | +61 42 | 21  | S(B)d    |     |      |  |
| UGC 3912   | PGC 21303    | Galaxy  | CMI | 12.8 | 13.4 | 1.8' | 07 34.2 | +04 32 | 229 | Ir+      |     |      |  |
| UGC 3946   | PGC 21450    | Galaxy  | CMI | 13.1 | 12.9 | 1.3' | 07 38.0 | +03 18 | 229 | Ir+      |     |      | vF companion north preced                                  |
| UGC 3964   | PGC 21535    | Galaxy  | MON | 13.1 | 13.6 | 1.7' | 07 40.3 | -01 35 | 229 | S(B)dm   |     |      |  |
| UGC 3973   | Mkn 79       | Galaxy  | LYN | 13.9 | 11   | 1.4' | 07 42.5 | +49 49 | 69  | SBb      |     |      | Seyfert  |



## 7000 DSO List (sorted by name)

| NAME     | OTHER              | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns | bs | SAC NOTES   |
|----------|--------------------|--------|-----|------|------|-------|---------|--------|-----|---------|----|----|---|
| UGC 3974 | PCG 21600          | Galaxy | GEM | 13.1 | 16.4 | 3.1'  | 07 41.9 | +16 48 | 184 | Ir-     |    |    |   |
| UGC 3975 | PGC 21698          | Galaxy | CAM | 13.6 | 14.1 | 1.4'  | 07 44.8 | +72 48 | 7   | SBdm    |    |    |   |
| UGC 4013 | Mkn 10             | Galaxy | CAM | 13.3 | 13.8 | 2'    | 07 47.5 | +60 56 | 43  | Sb      |    |    | Seyfert;vF companion on east side                 |
| UGC 4238 | MCG +13-06         | Galaxy | CAM | 12.7 | 13.9 | 2.4'  | 08 11.5 | +76 26 | 7   | SBd     |    |    |   |
| UGC 4260 | PGC 22955          | Galaxy | LYN | 13.5 | 14.3 | 1.7'  | 08 11.2 | +46 28 | 69  | Ir-     |    |    |   |
| UGC 4305 | Holmberg II        | Galaxy | UMA | 11.1 | 14.8 | 7.6'  | 08 19.2 | +70 43 | 22  | Ir+     |    |    | dwarf irregular                                   |
| UGC 4393 | MCG +08-16         | Galaxy | LYN | 12.4 | 13.6 | 2.5'  | 08 26.1 | +45 58 | 70  | SB      |    |    |   |
| UGC 4499 | PGC 24242          | Galaxy | UMA | 13   | 14.6 | 2.6'  | 08 37.6 | +51 39 | 44  | S(B)dm  |    |    | Mrk 94 superimposed 0.7' south foll               |
| UGC 4543 | PGC 24493          | Galaxy | LYN | 13.8 | 15.6 | 3.6'  | 08 43.3 | +45 44 | 70  | Sdm     |    |    |   |
| UGC 4559 | PGC 24530          | Galaxy | CNC | 13.2 | 13.5 | 3'    | 08 44.2 | +30 07 | 102 | Sb+     |    |    |   |
| UGC 4687 | PGC 25227          | Galaxy | UMA | 13.7 | 12.4 | 0.8'  | 08 58.9 | +66 28 | 22  | Pec     |    |    | vF companion south                                |
| UGC 4749 | PGC 25473          | Galaxy | UMA | 13.5 | 12.6 | 0.9'  | 09 04.5 | +51 37 | 44  | S       |    |    |   |
| UGC 4787 | PGC 25644          | Galaxy | LYN | 13.7 | 13.6 | 2.3'  | 09 07.5 | +33 16 | 103 | Sdm     |    |    |   |
| UGC 4797 | PGC 25679          | Galaxy | HYA | 13.9 | 15.1 | 2.5'  | 09 08.1 | +05 56 | 187 | S       |    |    |   |
| UGC 4841 | MCG +12-09         | Galaxy | CAM | 12.4 | 14.3 | 2.8'  | 09 14.8 | +74 14 | 8   | S(B)d   |    |    | Ho III  |
| UGC 4922 | PGC 26304          | Galaxy | UMA | 13.4 | 14.9 | 3.9'  | 09 18.6 | +47 52 | 71  | Sm      |    |    |   |
| UGC 5028 | PGC 26849          | Galaxy | UMA | 13.8 | 12.4 | 0.7'  | 09 27.8 | +68 25 | 23  | SBdm pe |    |    | P w UGC 5029 sep 70" E-W                          |
| UGC 5139 | Holmberg I         | Galaxy | UMA | 12.5 | 14.9 | 3.5'  | 09 40.5 | +71 11 | 23  | Ir+     |    |    | Dwarf in <b>M81</b> group                         |
| UGC 5238 | PGC 28087          | Galaxy | SEX | 13.7 | 14.2 | 2.5'  | 09 46.9 | +00 30 | 233 | S(B)d   |    |    |   |
| UGC 5249 | PGC 28148          | Galaxy | SEX | 13.2 | 13.7 | 2.4'  | 09 47.8 | +02 37 | 233 | SBc     |    |    |   |
| UGC 5349 | MCG +06-22         | Galaxy | LMI | 13.7 | 14.4 | 2.5'  | 09 58.1 | +37 18 | 104 | Sm      |    |    |   |
| UGC 5364 | <b>Leo III</b>     | Galaxy | LEO | 12.6 | 15.4 | 4.9'  | 09 59.4 | +30 45 | 104 | Ir+     |    |    | Local Group dwarf irregular                       |
| UGC 5373 | <b>Sextans B d</b> | Galaxy | SEX | 11.3 | 14.3 | 5.1'  | 10 00.0 | +05 20 | 234 | Ir+     |    |    | dwarf irregular , <b>sextans B dwarf</b>          |
| UGC 5393 | PGC 29036          | Galaxy | LMI | 14   | 14.7 | 2.3'  | 10 01.7 | +33 08 | 104 | SBm     |    |    |   |
| UGC 5425 | NGC 3107           | Galaxy | LEO | 13.4 | 12.4 | 0.7'  | 10 04.4 | +13 37 | 189 | Sbc     |    |    |   |
| UGC 5459 | MCG +09-17         | Galaxy | UMA | 12.6 | 13.8 | 4.2'  | 10 08.1 | +53 05 | 45  | Sc      |    |    |   |
| UGC 5460 | PGC 29469          | Galaxy | UMA | 12.9 | 14.5 | 2.5'  | 10 08.1 | +51 50 | 45  | SBd     |    |    | vF companion 6' east                              |
| UGC 5470 | <b>Leo I</b>       | Galaxy | LEO | 10.2 | 14.8 | 10.7' | 10 08.4 | +12 18 | 189 | dE3     |    |    | dwarf elliptical in Local Group;0.3' N of Regulus |
| UGC 5522 | PGC 29835          | Galaxy | LEO | 12.6 | 14.3 | 3'    | 10 13.9 | +07 01 | 189 | Sc      |    |    |   |
| UGC 5588 | PGC 30263          | Galaxy | LEO | 14   | 12   | 0.4'  | 10 20.9 | +25 22 | 144 | Pec     |    |    | In NGC 3209 group;high surface brightness         |
| UGC 5612 | PGC 30484          | Galaxy | UMA | 12.1 | 14.2 | 3.4'  | 10 24.0 | +70 53 | 24  | SB+     |    |    | vF comp west                                      |
| UGC 5688 | PGC 30983          | Galaxy | UMA | 13.2 | 15.3 | 3.6'  | 10 30.4 | +70 04 | 24  | S(B)+   |    |    | Part of chain of faint gals w knots               |
| UGC 5707 | MCG +07-22         | Galaxy | UMA | 13.4 | 14.8 | 2.5'  | 10 31.3 | +43 08 | 72  | S(B)c   |    |    |   |
| UGC 5708 | PGC 31037          | Galaxy | SEX | 13.2 | 13.9 | 3.4'  | 10 31.2 | +04 29 | 235 | S(B)d   |    |    |   |
| UGC 5829 | PGC 31923          | Galaxy | LMI | 13.5 | 15.4 | 4.6'  | 10 42.6 | +34 27 | 105 | Ir+     |    |    |   |
| UGC 5953 | Mrk 155            | Galaxy | UMA | 13   | 11.1 | 0.6'  | 10 51.3 | +44 34 | 73  | Pec     |    |    |   |
| UGC 5998 | Mrk 156            | Galaxy | UMA | 13.9 | 12.5 | 0.9'  | 10 53.2 | +50 17 | 46  | Pec     |    |    | Disrupted pair?                                   |
| UGC 6029 | Mrk 157            | Galaxy | UMA | 13.2 | 12.9 | 0.9'  | 10 55.0 | +49 44 | 73  | Pec     |    |    | UGC 6013 group                                    |
| UGC 6104 | PGC 33276          | Galaxy | LEO | 13.7 | 13.1 | 1.5'  | 11 01.8 | +16 36 | 191 | Sbc     |    |    |   |
| UGC 6112 | PGC 33333          | Galaxy | LEO | 13.3 | 13.9 | 2.3'  | 11 02.5 | +16 44 | 191 | Sd      |    |    | P w UGC 6104                                      |
| UGC 6161 | PGC 33625          | Galaxy | UMA | 13.5 | 14.6 | 2.6'  | 11 06.8 | +43 44 | 73  | SBdm    |    |    | vF companion 3' east                              |
| UGC 6162 | MCG +09-18         | Galaxy | UMA | 13.2 | 14.3 | 2.5'  | 11 06.8 | +51 12 | 46  | Sc      |    |    | Mislabeled on U2000 as UGC 6163                   |
| UGC 6171 | PGC 33660          | Galaxy | LEO | 13.9 | 14.2 | 2.2'  | 11 07.2 | +18 34 | 146 | Ir+     |    |    |   |
| UGC 6253 | <b>Leo II</b>      | Galaxy | LEO | 12   | 17.3 | 12'   | 11 13.5 | +22 10 | 146 | dE0     |    |    | Memb Local Group;Dwarf elliptical                 |
| UGC 6345 | PGC 34696          | Galaxy | LEO | 13.4 | 15.3 | 3.8'  | 11 20.2 | +02 32 | 236 | Ir+     |    |    | NGC 3640 group                                    |
| UGC 6399 | PGC 34971          | Galaxy | UMA | 13.7 | 14.4 | 3.3'  | 11 23.4 | +50 55 | 46  | Sm      |    |    |   |
| UGC 6446 | MCG +09-19         | Galaxy | UMA | 12.9 | 15.1 | 4'    | 11 26.6 | +53 44 | 46  | Sd      |    |    |   |
| UGC 6456 | PGC 35286          | Galaxy | DRA | 13.7 | 13.8 | 1.4'  | 11 28.0 | +78 59 | 9   | Pec     |    |    | Eruptive  |
| UGC 6520 | Mrk 175            | Galaxy | UMA | 13.1 | 12.9 | 1.6'  | 11 32.5 | +62 30 | 25  | SB      |    |    | north preced of 2                                 |
| UGC 6534 | PGC 35675          | Galaxy | UMA | 12.8 | 13.1 | 3'    | 11 33.2 | +63 17 | 25  | Sd      |    |    |   |
| UGC 6591 | NGC 3762           | Galaxy | UMA | 12.6 | 12.4 | 1.9'  | 11 37.4 | +61 46 | 106 | Sdm     |    |    |   |
| UGC 6616 | PGC 36137          | Galaxy | UMA | 13.1 | 14.7 | 2.3'  | 11 39.4 | +58 16 | 47  | Sd      |    |    |   |
| UGC 6628 | MCG +08-21         | Galaxy | UMA | 12.7 | 14.8 | 3.4'  | 11 40.1 | +45 55 | 74  | Sm      |    |    |   |
| UGC 6637 | Mrk 1507           | Galaxy | UMA | 14   | 12.4 | 0.8'  | 11 40.4 | +28 23 | 107 | Pec     |    |    |   |
| UGC 6667 | PGC 36343          | Galaxy | UMA | 13.5 | 13.8 | 3.4'  | 11 42.4 | +51 36 | 47  | Sc      |    |    |   |
| UGC 6670 | PGC 36355          | Galaxy | LEO | 12.9 | 13.8 | 4.2'  | 11 42.4 | +18 19 | 147 | Ir+     |    |    | compact core                                      |
| UGC 6697 | PGC 36466          | Galaxy | LEO | 13.6 | 12.9 | 1.9'  | 11 43.8 | +19 57 | 147 | Sm      |    |    |   |
| UGC 6711 | PGC 36542          | Galaxy | DRA | 13.2 | 11.9 | 0.7'  | 11 44.5 | +69 44 | 25  | Pec     |    |    |   |
| UGC 6719 | PGC 36574          | Galaxy | LEO | 13.6 | 13.4 | 1.3'  | 11 44.7 | +20 07 | 147 | Sc      |    |    |   |
| UGC 6725 | PGC 36609          | Galaxy | LEO | 12.9 | 13.5 | 1.8'  | 11 45.1 | +20 26 | 147 | S0      |    |    |   |
| UGC 6780 | PGC 36887          | Galaxy | VIR | 13   | 14.1 | 3.4'  | 11 48.9 | -02 02 | 237 | Sd pec  |    |    |   |
| UGC 6817 | PGC 37050          | Galaxy | UMA | 13.1 | 14.9 | 4.1'  | 11 50.8 | +38 52 | 107 | Ir+     |    |    |   |
| UGC 6840 | PGC 37164          | Galaxy | UMA | 13.9 | 13.8 | 2.3'  | 11 52.1 | +52 06 | 47  | SB(rs)m |    |    |   |
| UGC 6903 | PGC 37444          | Galaxy | VIR | 12.3 | 14.1 | 2.5'  | 11 55.7 | +01 15 | 237 | S(B)c   |    |    |   |

## 7000 DSO List (sorted by name)

| NAME      | OTHER               | TYPE   | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class    | ns | bs | SAC NOTES  |
|-----------|---------------------|--------|-----|------|------|-------|---------|--------|-----|----------|----|----|--|
| UGC 6917  | MCG +09-20          | Galaxy | UMA | 12.6 | 14.6 | 3.5'  | 11 56.5 | +50 25 | 47  | SBm      |    |    |  |
| UGC 6930  | MCG +08-22          | Galaxy | UMA | 12.1 | 14.6 | 4.4'  | 11 57.3 | +49 16 | 74  | S(B)d    |    |    |  |
| UGC 6955  | PGC 37689           | Galaxy | UMA | 13.3 | 15.9 | 5.3'  | 11 58.4 | +38 04 | 107 | Ir+      |    |    |  |
| UGC 6983  | PGC 37735           | Galaxy | UMA | 12.4 | 14.6 | 3.4'  | 11 59.2 | +52 42 | 47  | SB(rs)cd |    |    |  |
| UGC 7020  | Mrk 195             | Galaxy | UMA | 13.2 | 14.6 | 2.1'  | 12 02.6 | +41 03 | 25  | SA       |    |    |  |
| UGC 7089  | PGC 38356           | Galaxy | UMA | 13.9 | 14.6 | 3.4'  | 12 05.9 | +43 08 | 74  | Sm       |    |    |  |
| UGC 7125  | PGC 38567           | Galaxy | CVN | 13.7 | 14.9 | 4.7'  | 12 08.7 | +36 48 | 107 | Sm       |    |    |  |
| UGC 7239  | PGC 39067           | Galaxy | VIR | 13.3 | 14.6 | 2.2'  | 12 14.2 | +07 46 | 193 | Ir+      |    |    |  |
| UGC 7257  | PGC 39150           | Galaxy | CVN | 13.6 | 13.7 | 1.7'  | 12 15.0 | +35 57 | 107 | Sm       |    |    | south following of 2 w 0.6' sep                  |
| UGC 7321  | PGC 39432           | Galaxy | COM | 13.4 | 14.8 | 5.3'  | 12 17.5 | +22 32 | 148 | Sd       |    |    |  |
| UGC 7332  | PGC 39474           | Galaxy | VIR | 13.5 | 14.6 | 2.3'  | 12 18.0 | +00 26 | 238 | Ir+      |    |    |  |
| UGC 7408  | PGC 39918           | Galaxy | CVN | 13.1 | 14.2 | 2.3'  | 12 21.3 | +45 49 | 74  | Ir+      |    |    |  |
| UGC 7490  | PGC 40367           | Galaxy | DRA | 12.7 | 15.1 | 3.3'  | 12 24.3 | +70 20 | 25  | SAm      |    |    |  |
| UGC 7557  | PGC 40807           | Galaxy | VIR | 12.9 | 15.1 | 3.1'  | 12 27.2 | +07 15 | 193 | Sm       |    |    | Member of Virgo group of galaxies                |
| UGC 7577  | MCG +07-26          | Galaxy | CVN | 12.3 | 14.7 | 3.9'  | 12 27.6 | +43 29 | 75  | Ir+      |    |    | P w UGC 7608                                     |
| UGC 7599  | PGC 41020           | Galaxy | CVN | 12.3 | 14.7 | 1.8'  | 12 28.5 | +37 13 | 108 | Sm       |    |    |  |
| UGC 7608  | PGC 41063           | Galaxy | CVN | 13.3 | 15.8 | 3.5'  | 12 28.7 | +43 13 | 75  | Ir+      |    |    |  |
| UGC 7639  | PGC 41239           | Galaxy | CVN | 13.8 | 15.1 | 3.2'  | 12 29.9 | +47 31 | 75  | Ir+      |    |    |  |
| UGC 7690  | MCG +07-26          | Galaxy | CVN | 12.6 | 13.6 | 2'    | 12 32.4 | +42 42 | 75  | Ir+      |    |    |  |
| UGC 7698  | PGC 41636           | Galaxy | CVN | 12.6 | 16.1 | 6.5'  | 12 32.9 | +31 32 | 108 | Ir+      |    |    | Low Surface Brightness                           |
| UGC 7699  | MCG +06-28          | Galaxy | CVN | 12.5 | 13.8 | 3.8'  | 12 32.8 | +37 37 | 108 | SBc      |    |    |  |
| UGC 7739  | Holmberg VII        | Galaxy | VIR | 14   | 14.3 | 1.3'  | 12 34.7 | +06 18 | 194 | Ir-      |    |    |  |
| UGC 7911  | PGC 42910           | Galaxy | VIR | 12.9 | 14.4 | 2.4'  | 12 44.5 | +00 29 | 239 | SBm      |    |    |  |
| UGC 7941  | PGC 43052           | Galaxy | DRA | 13.9 | -    | 2.9'  | 12 46.1 | +64 34 | 26  | Sd       |    |    |  |
| UGC 7943  | PGC 43106           | Galaxy | VIR | 13.1 | 14.5 | 2.5'  | 12 46.7 | +05 58 | 194 | Scd      |    |    |  |
| UGC 8041  | New 4               | Galaxy | VIR | 12   | 13.8 | 3.2'  | 12 55.2 | +00 07 | 239 | SBd      |    |    |  |
| UGC 8053  | PGC 44089           | Galaxy | VIR | 13.7 | 14.2 | 1.7'  | 12 55.8 | +04 01 | 239 | S(B)dm   |    |    |  |
| UGC 8058  | Mrk 231             | Galaxy | UMA | 13.6 | 13.7 | 1.7'  | 12 56.2 | +56 52 | 48  | Sc pec   |    |    | Compact core fine streamers                      |
| UGC 8146  | MCG +10-19          | Galaxy | UMA | 13.8 | 13.9 | 3.7'  | 13 02.1 | +58 42 | 48  | Sc       |    |    |  |
| UGC 8153  | PGC 45071           | Galaxy | VIR | 13.5 | 14.4 | 1.6'  | 13 03.1 | +04 00 | 239 | Sd       |    |    |  |
| UGC 8201  | PGC 45372           | Galaxy | DRA | 12.5 | 15.1 | 3.4'  | 13 06.3 | +67 42 | 26  | Ir+      |    |    |  |
| UGC 8246  | MCG +06-29          | Galaxy | CVN | 13.9 | 14.6 | 3.3'  | 13 10.0 | +34 11 | 109 | SBc      |    |    |  |
| UGC 8290  | PGC 45884           | Galaxy | COM | 13.7 | 14.1 | 1.5'  | 13 12.6 | +22 50 | 150 | Sm pec   |    |    | P w NGC 5012                                     |
| UGC 8303  | Holmberg VII        | Galaxy | CVN | 13.1 | 14.6 | 2.5'  | 13 13.3 | +36 13 | 109 | Ir+      |    |    | MCG +06-29-061                                   |
| UGC 8313  | PGC 45992           | Galaxy | CVN | 14   | 13.6 | 2.4'  | 13 13.8 | +42 12 | 76  | SB(s)c   |    |    |  |
| UGC 8320  | MCG +08-24          | Galaxy | CVN | 12.4 | 14   | 3.8'  | 13 14.4 | +45 55 | 76  | Ir+      |    |    |  |
| UGC 8323  | Mrk 450             | Galaxy | CVN | 13.8 | 13.3 | 1'    | 13 14.8 | +34 53 | 150 | Ir+      |    |    |  |
| UGC 8385  | PGC 46563           | Galaxy | VIR | 13.6 | 14.6 | 2.5'  | 13 20.7 | +09 47 | 195 | S(B)+    |    |    |  |
| UGC 8507  | PGC 47506           | Galaxy | COM | 13.9 | -    | 1.4'  | 13 31.0 | +19 27 | 150 | Pec      |    |    | cigar-shaped w faint envl                        |
| UGC 8508  | MCG +09-22          | Galaxy | UMA | 13.9 | 14.3 | 1.4'  | 13 30.8 | +54 55 | 49  | Ir+      |    |    |  |
| UGC 8597  | PGC 48012           | Galaxy | CVN | 13.8 | 14.3 | 1.9'  | 13 36.3 | +46 13 | 76  | SB+      |    |    |  |
| UGC 8614  | PGC 48122           | Galaxy | BOO | 12.7 | 14.5 | 3.4'  | 13 37.4 | +07 39 | 196 | Ir+      |    |    |  |
| UGC 8658  | PGC 48392           | Galaxy | UMA | 13.1 | 14.8 | 2.8'  | 13 40.7 | +54 20 | 49  | SAB(rs)c |    |    |  |
| UGC 8733  | PGC 48989           | Galaxy | CVN | 13.4 | 14.6 | 2.5'  | 13 48.6 | +43 24 | 76  | SBcd     |    |    | disturbed?                                       |
| UGC 8837  | Holmberg IV         | Galaxy | UMA | 13.4 | 15.1 | 4'    | 13 54.8 | +53 54 | 49  | Ir+      |    |    | In <b>M101</b> group;MCG +09-23-017              |
| UGC 8839  | PGC 49497           | Galaxy | BOO | 13.1 | 15.5 | 4.0'  | 13 55.4 | +17 47 | 151 | Ir-      |    |    |  |
| UGC 8995  | PGC 50194           | Galaxy | BOO | 13.4 | 14.2 | 2.3'  | 14 04.9 | +08 49 | 196 | S(B)dm   |    |    |  |
| UGC 9057  | PGC 50587           | Galaxy | VIR | 13.5 | 14   | 3'    | 14 10.2 | -02 34 | 242 | SBdm     |    |    |  |
| UGC 9169  | PGC 51207           | Galaxy | BOO | 13   | 14.3 | 3.9'  | 14 19.8 | +09 22 | 197 | Ir+      |    |    |  |
| UGC 9240  | PGC 51472           | Galaxy | BOO | 12.9 | 14.1 | 1.8'  | 14 24.7 | +44 30 | 77  | Ir+      |    |    |  |
| UGC 9242  | MCG +07-30          | Galaxy | BOO | 13.5 | 13.8 | 5'    | 14 25.3 | +39 32 | 77  | Sc       |    |    | many knots                                       |
| UGC 9291  | PGC 51713           | Galaxy | BOO | 13   | 14.3 | 2.8'  | 14 28.6 | +39 00 | 77  | Sd       |    |    |  |
| UGC 9310  | PGC 51809           | Galaxy | VIR | 14   | 14   | 2.3'  | 14 30.0 | +03 13 | 242 | SBdm     |    |    |  |
| UGC 9380  | PGC 52092           | Galaxy | VIR | 13.7 | 14.3 | 1.9'  | 14 34.6 | +04 16 | 242 | Ir+      |    |    |  |
| UGC 9749  | <b>Ursa Minor I</b> | Galaxy | UMI | 10.9 | 17.8 | 27.3' | 15 08.8 | +67 12 | 28  | dE6      |    |    | Member Local Group, <b>Ursa minor dwarf</b>      |
| UGC 9799  | PGC 54526           | Galaxy | SER | 14   | 13.5 | 2.1'  | 15 16.7 | +07 01 | 199 | E5       |    |    | Brightest in cluster                             |
| UGC 9837  | MCG +10-22          | Galaxy | DRA | 13.3 | 14.4 | 2'    | 15 23.8 | +58 03 | 50  | S(B)c    |    |    |  |
| UGC 9858  | PGC 55104           | Galaxy | BOO | 12.8 | 14   | 4.4'  | 15 26.6 | +40 34 | 78  | S(B)b+   |    |    |  |
| UGC 9912  | PGC 55506           | Galaxy | SER | 13.5 | 14.5 | 1.7'  | 15 35.1 | +16 33 | 199 | SBdm     |    |    |  |
| UGC 9941  | PGC 55660           | Galaxy | SER | 13.8 | 14.6 | 1.3'  | 15 38.4 | +12 57 | 199 | Ir+      |    |    |  |
| UGC 9977  | PGC 55821           | Galaxy | SER | 13.2 | 13.7 | 3.9'  | 15 42.0 | +00 42 | 244 | Sc       |    |    |  |
| UGC 10020 | PGC 55973           | Galaxy | SER | 13.5 | 14.4 | 2.3'  | 15 45.8 | +20 35 | 155 | Sd       |    |    | Faint * near nucleus                             |
| UGC 10041 | PGC 56111           | Galaxy | SER | 13   | 14.6 | 3.0'  | 15 49.0 | +05 11 | 245 | S(B)dm   |    |    |  |
| UGC 10054 | PGC 55887           | Galaxy | UMI | 13.7 | 14.7 | 2.5'  | 15 44.0 | +81 50 | 11  | SBdm     |    |    | south foll of 2;may be disturbed by vF companion |

## 7000 DSO List (sorted by name)

| NAME           | OTHER              | TYPE    | CON | MAG  | S.B. | SIZE  | RA      | DEC    | U2K | Class   | ns | bs  | SAC NOTES  |
|----------------|--------------------|---------|-----|------|------|-------|---------|--------|-----|---------|----|-----|--|
| UGC 10200      | PGC 57098          | Galaxy  | HER | 13.6 | -    | 0.7'  | 16 05.7 | +41 21 | 79  | Pec     |    |     | North of 2;disturbed?;very diffuse                     |
| UGC 10290      | PGC 57590          | Galaxy  | SER | 13.3 | 14.4 | 1.8'  | 16 14.5 | +00 49 | 245 | Sm      |    |     |  |
| UGC 10736      | PGC 59668          | Galaxy  | DRA | 13.9 | 14.9 | 3.1'  | 17 08.1 | +69 28 | 29  | S(B)dm  |    |     |  |
| UGC 10806      | PGC 60052          | Galaxy  | HER | 13.2 | 13.8 | 2.5'  | 17 18.9 | +49 52 | 81  | SB(s)dm |    |     |  |
| UGC 10822      | <b>Draco Dwarf</b> | Galaxy  | DRA | 9.9  | 17.2 | 33.5' | 17 20.2 | +57 55 | 52  | dE3     |    |     | Member of Local Group;dwarf elliptical                 |
| UGC 10862      | PGC 60346          | Galaxy  | OPH | 12.7 | 14.7 | 2.7'  | 17 28.2 | +07 26 | 203 | SB(rs)c |    |     |  |
| UGC 11074      | PGC 61214          | Galaxy  | OPH | 13.3 | 14.2 | 2.3'  | 17 59.1 | +07 09 | 204 | Sd      |    |     |  |
| UGC 11093      | PGC 61300          | Galaxy  | OPH | 13.7 | 13.4 | 3.1'  | 18 01.9 | +06 58 | 204 | Scd     |    |     |  |
| UGC 11124      | MCG +06-40         | Galaxy  | HER | 12.7 | 14.5 | 2.7'  | 18 07.5 | +35 33 | 116 | SBc     |    |     |  |
| UGC 11141      | PGC 61534          | Galaxy  | OPH | 13.2 | 14.4 | 2.8'  | 18 11.8 | +12 05 | 204 | Sdm     |    |     |  |
| UGC 11152      | PGC 61558          | Galaxy  | HER | 13.6 | 14.4 | 2.5'  | 18 12.5 | +18 36 | 159 | SBdm    |    |     | south preced of 2                                      |
| UGC 11465      | PGC 63529          | Galaxy  | CYG | 13.8 | 13   | 1.3'  | 19 41.7 | +50 38 | 55  | S(B)0   |    |     |  |
| UGC 11557      | MCG +10-29         | Galaxy  | CEP | 13.2 | 14.5 | 2.1'  | 20 24.0 | +60 12 | 55  | S(B)dm  |    |     |  |
| UGC 11651      | PGC 65775          | Galaxy  | VUL | 13.9 | 14.8 | 3.4'  | 20 57.3 | +25 58 | 164 | Sdm     |    |     |  |
| UGC 11909      | PGC 68029          | Galaxy  | LAC | 12.3 | 12.9 | 3'    | 22 06.3 | +47 15 | 87  | S pec   |    |     |  |
| UGC 12074      | PGC 69126          | Galaxy  | PEG | 13.4 | 11.7 | 0.6'  | 22 33.1 | +08 05 | 212 | Pec     |    |     | compact w loops  |
| UGC 12178      | PGC 69650          | Galaxy  | PEG | 13.1 | 14.7 | 3.4'  | 22 45.1 | +06 26 | 213 | S(B)dm  |    |     |  |
| UGC 12221      | PGC 69841          | Galaxy  | CEP | 14   | 14.4 | 2.3'  | 22 49.9 | +82 54 | 14  | Sd      |    |     |  |
| UGC 12350      | PGC 70433          | Galaxy  | PEG | 14   | 14.6 | 2.6'  | 23 05.3 | +16 51 | 213 | Sm      |    |     | pair in contact total size 3'X2'                       |
| UGC 12588      | MCG +07-48         | Galaxy  | AND | 13.2 | 14.2 | 1.9'  | 23 24.7 | +41 20 | 88  | Sdm     |    |     |  |
| UGC 12613      | <b>Pegasus Dw</b>  | Galaxy  | PEG | 12   | -    | 4.6'  | 23 28.6 | +14 45 | 214 | Ir+     |    |     | dwarf Member Local Group , <b>pegasus dwarf</b>        |
| UGC 12632      | PGC 71596          | Galaxy  | AND | 12.1 | 15.1 | 4.9'  | 23 30.0 | +41 00 | 88  | Sm      |    |     |  |
| UGC 12682      | PGC 71801          | Galaxy  | PEG | 14   | 14.3 | 1.4'  | 23 34.9 | +18 14 | 169 | Ir+     |    |     |  |
| UGC 12710      | PGC 71932          | Galaxy  | PEG | 13.9 | 13.9 | 1.3'  | 23 37.5 | +18 00 | 169 | Ir+     |    |     | very chaotic   |
| UGC 12732      | PGC 72087          | Galaxy  | PEG | 13.3 | 15.5 | 3'    | 23 40.6 | +26 14 | 169 | Sm      |    |     |  |
| UGC 12843      | MCG +03-60         | Galaxy  | PEG | 13.3 | 14.5 | 3'    | 23 55.6 | +17 56 | 125 | S(B)dm  |    |     | * superimposed 0.4' north foll center                  |
| UGC 12856      | PGC 72977          | Galaxy  | PEG | 13.9 | -    | 1.6'  | 23 56.8 | +16 50 | 170 | Ir+     |    |     | disturbed w many knots                                 |
| UGCA 205       | <b>Sextans A</b>   | Galaxy  | SEX | 11.5 | 15   | 5.9'  | 10 11.0 | -04 43 | 234 | Ir      |    |     | MCG -01-26-030   |
| vdB 1          | LBN 578            | Brt Neb | CAS | -    | -    | 5'    | 00 10.6 | +58 46 | 227 | R       |    |     |  |
| vdB 8          | LBN 643            | Brt Neb | CAS | -    | -    | 3.6'  | 02 51.5 | +67 49 | 17  | R       |    |     |  |
| vdB 14         | LBN 681            | Brt Neb | CAM | -    | -    | 46'   | 03 30.3 | +59 34 | 38  | R       |    |     |  |
| vdB 15         | LBN 684            | Brt Neb | CAM | -    | -    | 40'   | 03 29.5 | +58 54 | 39  | R       |    |     |  |
| vdB 16         | LBN 746            | Brt Neb | ARI | -    | -    | 11'   | 03 28.3 | +29 47 | 94  | R       |    |     |  |
| vdB 20         | IC 349             | Brt Neb | TAU | 11.6 | -    | 70.0' | 03 46.0 | +24 10 | 132 | R       |    |     | <b>Electra nebulosity</b>                              |
| vdB 23         |                    | Brt Neb | TAU | 11.9 | -    | 27'   | 03 47.5 | +24 06 | 132 | R       |    |     | <b>Alcyone nebulosity</b>                              |
| vdB 24         |                    | Brt Neb | PER | -    | -    | 9'    | 03 49.6 | +38 59 | 95  | R       |    |     |  |
| vdB 26         | LBN 828            | Brt Neb | TAU | -    | -    | 11'   | 04 13.6 | +10 13 | 178 | R       |    |     |  |
| vdB 29         | LBN 792            | Brt Neb | TAU | -    | -    | 10'   | 04 48.2 | +29 46 | 96  | R       |    |     |  |
| vdB 31         | LBN 798            | Brt Neb | AUR | -    | -    | 9'    | 04 55.8 | +30 34 | 96  | R       |    |     |  |
| vdB 37         | LBN 850            | Brt Neb | ORI | -    | -    | 12'   | 05 18.1 | +13 26 | 180 | R       |    |     |  |
| vdB 38         | Ced 44             | Brt Neb | ORI | -    | -    | 20'   | 05 21.4 | +08 25 | 180 | R       |    |     |  |
| vdB 49         | LBN 894            | Brt Neb | ORI | -    | -    | 6'    | 05 39.2 | +04 07 | 226 | R       |    |     |  |
| vdB 80         | LBN 1015           | Brt Neb | MON | -    | -    | 5.8'  | 06 30.9 | -09 39 | 272 | R       | 6  |     |  |
| vdB 96         | Ced 96             | Brt Neb | CMA | -    | -    | 10'   | 07 19.9 | -24 02 | 319 | R       |    |     |  |
| vdB 97         |                    | Brt Neb | PUP | -    | -    | 10'   | 07 32.2 | -17 03 | 274 | R       |    |     |  |
| vdB 98         | Ced 101            | Brt Neb | PUP | -    | -    | 10'   | 07 36.6 | -25 18 | 319 | R       |    |     |  |
| vdB 107        | Ced 132            | Brt Neb | SCO | -    | -    | 85'   | 16 29.2 | -26 27 | 336 | R       |    |     | <b>Antares</b> involved;not IC 4606?                   |
| vdB 111        | LBN 88             | Brt Neb | OPH | -    | -    | 12'   | 17 19.0 | +06 05 | 202 | R       |    |     |  |
| vdB 123        | LBN 96             | Brt Neb | SER | -    | -    | 10'   | 18 30.4 | +01 14 | 250 | R       |    |     |  |
| vdB 126        | Ced 16             | Brt Neb | VUL | -    | -    | 7'    | 19 26.2 | +22 45 | 161 | R       |    |     |  |
| vdB 128        |                    | Brt Neb | CYG | -    | -    | 8'    | 20 04.5 | +32 14 | 119 | R       |    |     |  |
| vdB 133        | LBN 218            | Brt Neb | CYG | -    | -    | 10'   | 20 31.0 | +36 57 | 120 | R       |    |     |  |
| vdB 140        | Ced 191            | Brt Neb | CEP | -    | -    | 12'   | 21 17.4 | +58 37 | 56  | R       |    |     |  |
| vdB 143        | Ced 194            | Brt Neb | CEP | -    | -    | 8'    | 21 37.0 | +68 11 | 33  | R       |    |     |  |
| vdB 145        |                    | Brt Neb | CYG | -    | -    | 9'    | 21 43.7 | +48 55 | 86  | R       |    |     |  |
| vdBH 81        |                    | Brt Neb | ARA | -    | -    | 6'    | 17 04.0 | -51 05 | 433 | R       |    |     |  |
| VY CMA         |                    | Brt Neb | CMA | 10.8 | -    | 0.2'  | 07 23.0 | -25 46 | 319 | R       |    | 7.5 | Discovered w/ 7"                                       |
| Waterloo 6     |                    | Opn CL  | VEL | 8.4  | -    | 2.2'  | 08 40.4 | -46 09 | 397 | II 3 p  | 8  | 9.2 |  |
| Wild's triplet |                    | Galaxy  | VIR | 13.3 | -    | 3'    | 11 46.6 | -03 52 | 237 |         |    |     | A 13.4 m; B 12.9 m and C 13.5 m, <b>wild's triplet</b> |