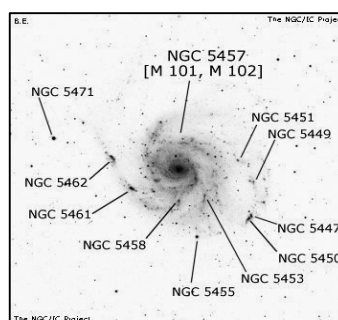
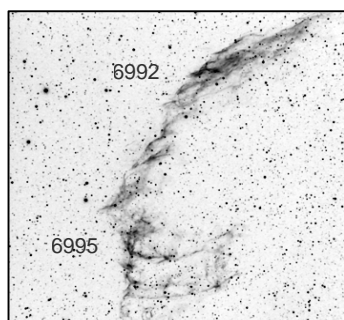
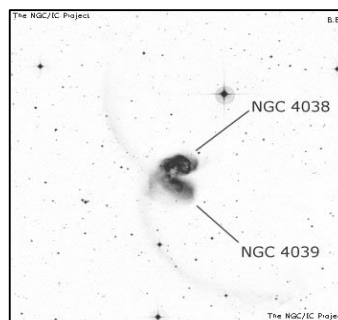
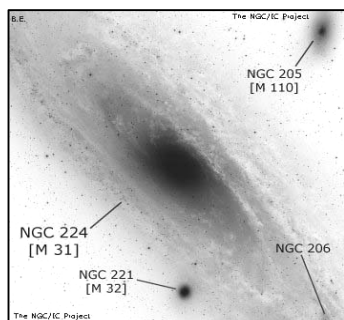


# DEEP SKY OBJECTS ILLUSTRATED OBSERVING GUIDE

List of 7000 deepsky objects from SAC catalog

List of select 666 deepsky objects with Images

(declination limit: -60 degrees south)



### Notes Explanations:

<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 uranometria2000 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 Explanations :

#### **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: nebulosity 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 666 DSO list

Objects from the following catalogs plotted:

(overall 666 DSOs)	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)
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Objects with Declination lower than -60° weren't plotted

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

### General notes and copyright notices for 666 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 700 objects are plotted. Objects which appear in images are marked bold in main DSO list.