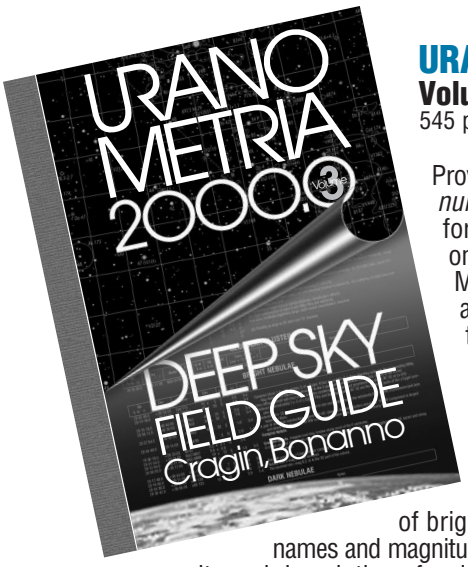


URANOMETRIA 2000.0
Volume 3 Deep Sky Field Guide
545 pages

Provides basic catalog data, in easy to use, *numerically ordered chart-by-chart tables* for the 30,000+ nonstellar objects plotted on the 220 *Uranometria 2000.0* charts. Most useful to telescope users of any aperture, CCD imagers and astrophotographers, this data includes precise coordinates, magnitude, and size for each object, as well as data specific to the various types of objects, such as: surface brightness, luminosity class and position angles for galaxies; number of stars and magnitude of brightest star for open clusters; alternate names and magnitude of central stars for planetary nebulae; opacity and descriptions for dark nebulae; concentration class for globular clusters; type and color for bright nebulae, etc. Notes are provided for 23,358 objects and include a description of each object and the direction to and magnitude of nearby stars, using either the GSC or Tycho catalogs. Such information can pinpoint the object's location, especially useful for very faint objects. The notes also provide, where applicable, common names, as well as alternate catalog names. The notes also give the direction and distance to nearly 1,000 nearby nonstellar objects (usually galaxies) that are *not* plotted on the charts (these *"challenge objects"* are usually quite faint).

(Continued from previous page)

48 **OPEN CLUSTERS** 48

RA h m s	Dec ° ′ ″	Name	Mag	Diam ′	No. ★	B ★	Type	Notes
20 18 07.0	+40 43 56	Cr 419	5.4	4.5			cl	Few stars; moderate brightness range; not well detached.
20 08 12.0	+36 33 00	Do 1		6	10		cl:	(A) Mostly E-W scattering of brighter stars in rich Milky Way field.
20 15 27.0	+36 49 00	Do 3		7	40		cl	Moderately rich in stars; moderate brightness range; no central concentration; detached; involved in nebulosity. (A) Condensation in Milky Way.
20 17 46.6	+36 45 00	Do 4		9	20		cl:	(A) Possible cluster involved with nebula Sh2-104.
20 20 29.0	+39 22 00	Do 5		10	30		cl	(A) Loose cluster of bright stars involved in nebulosity.
20 03 00.0	+37 41 00	Do 37	8				ast	(A) Group of about 10 brighter stars.
20 16 12.0	+37 55 00	Do 39		1 2	40		cl	Moderately rich in stars; moderate brightness range; not well detached; involved in nebulosity. (A) Scattering of bright stars with many fainter stars in background and very rich Milky Way field (or nebulosity).
20 18 12.0	+37 51 00	Do 40		5	12		cl	Few stars; small brightness range; no central concentration; detached; involved in nebulosity.
20 19 12.0	+37 45 00	Do 41		1 1			cl	Few stars; small brightness range; not well detached. (A) About 9 bright stars, with Be 85 on W side.
20 19 39.7	+38 08 00	Do 42		8	20		cl	Few stars; small brightness range; no central concentration; detached; involved in nebulosity. (A) Has prominent chain of 10 stars NNE to SSW.
20 21 42.0	+39 57 00	Do 43		20			ast	Few stars; moderate brightness range; not well detached. Probably not a cluster. (A) Scattering of stars, including 5 brighter ones on south side. Surrounded by bright nebulae.
20 41 44.2	+36 37 15	Do 47		5	15		cl	
20 05 35.0	+40 40 00	DoDz 10		24	40	7.1	cl	Few stars; moderate brightness range; not well detached; involved in nebulosity. (A) Scattered cluster in rich Milky Way and bright nebula.
20 10 03.0	+34 57 42	IC 1310		3	12	14.0	cl	
20 16 31.7	+37 39 00	IC 4996	7.3	7	56	8.0	cl	Few stars; large brightness range; slight central concentration; detached; involved in nebulosity.
19 20 52.7	+37 46 00	NGC 6791	9.5	10	380	15.0	cl	Rich in stars; moderate brightness range; strong central concentration; detached. (A) Very rich cluster - appears as a sparse globular cluster on DSS image.
19 41 18.0	+40 11 00	NGC 6819	7.3	5	929	11.0	cl	Moderately rich in stars; small brightness range; strong central concentration; detached.
19 52 13.0	+29 24 30	NGC 6834	7.8	6	128	11.0	cl	Moderately rich in stars; moderate brightness range; slight central concentration; detached.
19 56 28.1	+32 20 55	NGC 6846	14.2	0.8	40	12.8	cl	Few stars; small brightness range; not well detached.
20 06 27.0	+35 47 00	NGC 6871	5.2	30	66	6.8	cl	Few stars; moderate brightness range; slight central concentration; detached; involved in nebulosity. (A) About a dozen bright stars over a 30′ field of rich Milky Way. Dark nebulae on SW side.
20 07 48.5	+38 14 00	NGC 6874	7.7	7	20	10.0	cl?	
20 11 18.0	+35 51 00	NGC 6883	8.0	35	30		cl	Moderately rich in stars; moderate brightness range; not well detached; involved in nebulosity.
20 23 12.0	+40 47 00	NGC 6910	7.4	10	66	9.6	cl	Moderately rich in bright and faint stars with a strong central concentration; detached; involved in nebulosity. Visual mag = 6.6 if bright star on NW included.
20 24 06.0	+38 30 00	NGC 6913	6.6	10	81	9.0	cl	= **M 29**. Moderately rich in bright and faint stars; detached; involved in nebulosity. (A) 30 bright stars, about 100 stars total.
20 04 52.0	+29 12 54	Ro 4	10.0	6	30		cl	(A) 3 patches of bright nebulosity on W side, including IC 4954/55.
20 10 00.0	+33 46 00	Ro 5		50	15		cl	Few stars; moderate brightness range; not well detached; involved in nebulosity. (A) Scattering of bright stars over 50′ rich Milky Way field.
20 28 49.0	+39 20 00	Ro 6		24	30		cl	(A) Scattering of bright stars in strong nebulosity. Identification difficult.
20 11 31.1	+35 38 23	Ru 172		5	20	12.0	cl	(A) Slight condensation of stars in rich Milky Way and nebulosity.
20 41 41.2	+35 33 00	Ru 173		40	20	8.0	cl	Few stars; moderate brightness range; slight central concentration; detached.
20 43 28.3	+37 01 49	Ru 174		2	10	14.0	cl	
19 42 24.0	+38 39 00	SkiffJ1942.3+3839		3	12		cl?	(A) Possibly as large as 50 stars over 10′ diameter.
19 51 01.9	+32 14 35	SSWZ94 6		1			cl	

GLOBULAR CLUSTERS

RA h m s	Dec ° ′ ″	Name	Total V m	B ★ V m	HB V m	Diam ′	Conc. Class Low = 12 High = 1	Notes
19 16 35.5	+30 11 05	NGC 6779	8.4	13.2	16.3	8.8	10	= **M 56**.

BRIGHT NEBULAE

RA h m s	Dec ° ′ ″	Name	Dim Maj x min	Type	BC	Color	Notes
20 02 48.0	+36 58 00	Ced 174	15 x 5	E	3-5	3-4	
20 14 18.0	+39 54 00	IC 1318(a)	40 x 30	E	4-5	3-4	Centered about 1.6× W, slightly S of γ Cygni. It has an undefined outline, blending well with the surrounding Milky Way field; some filamentary structure in the S part and a conspicuous dark patch, B 343 in the N end.
20 19 18.0	+40 44 00	IC 1318(c)	40 x 25	E	2-5	3-4	Very diffuse overall with four or five brighter condensations, the most prominent one about 30′ SE of Cr 419.
20 26 12.0	+40 30 00	IC 1318(d)	50 x 30	E	1-5	3-4	Centered approximately 1× E of γ Cygni. This and the bright patch 45′ SE are the brightest parts of the γ Cygni complex.
20 27 54.0	+40 00 00	IC 1318(e)	45 x 30	E	1-5	3-4	Centered 1.5× SE of γ Cygni. Comparable in size and brightness to the nebulosity 0.75× NW. A prominent dark lane separates them.
20 04 48.0	+29 15 00	IC 4954/55	3 x 3	R	2-5	1-4	A pair of detached nebulosities aligned NW-SE; distance between centers about 3′5. The SE component is largest and about 3′ in diameter; the NW component appears to be double, aligned nearly N-S.
19 36 18.0	+29 33 00	Mi 92	0.2 x 0.1	R	2-5		**Footprint Nebula**.
20 01 54.0	+33 31 00	NGC 6857	0.6 x 0.6				
20 12 00.0	+38 21 00	NGC 6888	18 x 13	E	1-5	3-4	**Crescent Nebula**. Irregular oval ring, broken along most of the E perimeter.
20 00 00.0	+35 17 00	Sh2-101	18 x 10	E	1-5	3-4	A crown-shaped nebula with many faint stars involved; extended NNE-SSW. It is brightest in the SE sector and along the E perimeter.
20 17 48.0	+36 44 00	Sh2-104	7 x 7	E	2-5	3-4	
20 19 06.0	+39 21 00	Sh2-108	110 x 60	E	3-5	3-4	The SW part of the γ Cygni nebular complex.
20 04 36.0	+32 15 00	vdB 128	8 x 8	R	3-5	2-4	Nebula with a mag 5.6 star involved.
20 30 42.0	+36 56 00	vdB 133	10 x 10	R	2-5	1-4	The involved star, mag 6.2, is in the SE part of the nebula.

DARK NEBULAE

RA h m s	Dec ° ′ ″	Name	Dim Maj x min	Opacity	Notes
19 58 41.4	+35 20 00	B 144	30 x 30	1	**Fish on the Platter**. Large, semi-vacant region.
20 02 49.3	+37 41 00	B 145	35 x 6	4	Sharply defined E and W.
20 03 29.0	+36 01 00	B 146	1 x 1	6	Very small.
20 06 50.3	+35 23 00	B 147	20 x 8	5	Very narrow sinuous dark lane E and W.
19 50 01.3	+34 17 00	B 341	30 x 1	3	Narrow, dark lane; E and W.
20 13 26.0	+40 17 00	B 343	13 x 5	5	Elongated; NW and SE; sharpest at SE end.
20 16 12.2	+40 13 00	B 344	7 x 3	3	Dusky spot, like an arrowhead, pointed SW.
20 28 27.8	+39 55 00	B 347	4.0 x 0.7	4	Dark streak in nebulous cloud.
20 24 48.0	+40 10 00	LDN 889	180 x 20	4	Wide lane E of γ Cygni.

Galaxies
- R.A. and Dec. all confirmed on DSS
- Name
- Visual Magnitude
- Dimensions all confirmed on DSS
- Surface brightness
- Type and DDO luminosity class
- Position angles confirmed on DSS
- Notes nearby stars, NSOs, all confirmed on DSS

Galaxy Clusters
- R.A. and Dec.
- Name
- Mag 10 Brightest Galaxy
- Number of Galaxies
- Diameter
- Notes

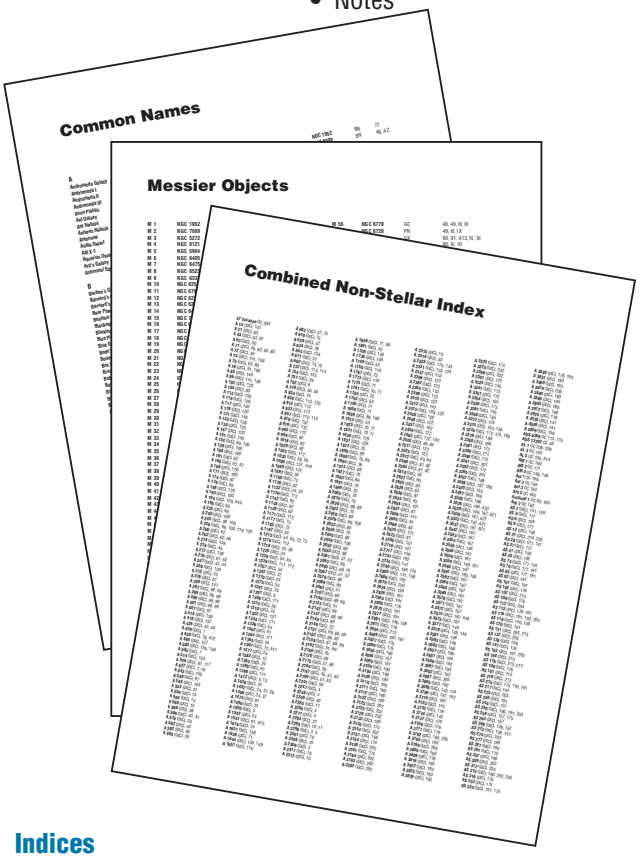
Open Clusters / Star Clouds
- R.A. and Dec. all confirmed on DSS
- Name
- Magnitude
- Diameter
- Number of Stars
- Brightest Star Magnitude
- Type
- Notes

Globular Clusters
- R.A. and Dec.
- Name
- Total Visual Magnitude
- Brightest Star Visual Magnitude
- Horizontal Branch Visual Magnitude
- Diameter
- Concentration Class
- Notes

Bright Nebulae
- R.A. and Dec.
- Name
- Dimensions
- Brightness
- Color
- Notes

Dark Nebulae
- R.A. and Dec.
- Name
- Dimensions (major and minor axis)
- Opacity
- Notes (from E.E. Barnard's Atlas and Catalog)

Planetary Nebulae
- R.A.and Dec. all confirmed on DSS
- Name
- Diameter
- Photographic Magnitude
- Visual Magnitude
- Magnitude of Central Star
- Alternate Name (precedence given to PK)
- Notes



Indices
Messier Object Index keyed to map number (Vol. 1, 2, 3)
Common Name Index keyed to map number (Vol. 1, 2, 3)
Complete Non-Stellar Object Index (Volume 3 only).