

SBO Catalog Number	Common Name	Object Type	Con stel lation	Epoch 2000		Visible Mag	Appar Size or Separation	Distance Light Years	Description or Comments	Alternate Catalog Name
				R. A. h m s	Dec deg ' "					
401	delta And	*	And	00 39 20	+ 30 51 42	3.27	-	160	K3 III + red dwarf, 100x & .02x Lo	BS 165
520	55 Psc	**	Psc	00 39 56	+ 21 26 18	6+9	6.6"	360	Orange + blue, KO III +F3 V, 700 AU	BS 167
32	M32	Ell Gal	And	00 42 46	+ 40 52 12	10	3' x 3'	2.2 M	Companion to M 31, 2000 ly across	NGC 221
31, 201	M31 Andromeda	Spl Gal	And	00 42 46	+ 41 16 12	4.5	240' x 60'	2.2 M	Milky Way "twin", 15deg from edge-on, 300B *	NGC 224
202	NGC 253	Spl Gal	Sci	00 47 32	- 25 17 48	7.5	22' x 6'	7.5 M	Sc, high tilt, next brightest gal after M 31	NGC 253
203	eta Cas	**	Cas	00 49 06	+ 57 49 00	4+8	12"	18	Yellow + red/purple, 500 y period, 65 AU	BS 219
402	beta And	*	And	01 09 44	+ 35 37 12	2.06	-----	75	Mirach, MO IIIa + dwarf, 75x & .002x Lo	BS 337
103	M 103	Open Cl	Cas	01 33 16	+ 60 42 42	7	6' x 6'	8,000	40 * > 14mag, 14 ly across, "arrowhead	NGC 581
33	M 33 Pinwheel	Spl Gal	Tri	01 33 55	+ 30 39 42	7	60' x 60'	2.3 M	Sc, member Local Group, low surface brightness	NGC 598
74	M 74	Spl Gal	Psc	01 36 39	+ 15 47 36	10.5	8' x 8'	20M	Sc, starlike center, hint of arms	NGC 628
76	M 76 Barbell	Plt Neb	Per	01 41 59	+ 51 34 36	12	1.5' x 0.8'	3,400	Irregular, 16.5mag *, faintest Messier object	NGC 650
204	gamma Ari	**	Ari	01 53 32	+ 19 17 36	5+5	9"	125	White + white, A1 p + B9 V, 340 AU	BS 545,6
205	alpha Psc	**	Psc	02 02 03	+ 02 45 48	4+5	1.8""	650	White + white, AO +A3, 350 AU app. separation	BS 595,6
206, 403	gamma And	* **	And	02 03 55	+ 42 19 48	2+5+6	10", 0.5"	250	Orange + blue(2), 61 year period, 800 & 30 AU	BS 603,4
523	6 Tri	**	Tri	02 12 22	+ 30 18 12	5+7	3.6"	800	Bluish + yellow, F5 III + G5 III, 850 AU	BS 642
521	66 Cet	* *	Cet	02 12 47	- 02 23 36	6+8	16"	72	Blue + yellow, F8 V + G4 V (solar-type star)	BS 650
207	NGC 869 "h"	Open Cl	Per	02 19 04	+ 57 08 54	4.5	45' x 45'	7,400	Half of "Double Cluster", 7 M yr old cluster	NGC 869
208	NGC 884 "chi"	Open Cl	Per	02 22 28	+ 57 06 48	4.5	45' x 45'	7,400	Older (11 M yr) half of "Double Clstr", w/ red star	NGC 884
209	iota Cas	***	Cas	02 29 04	+ 67 24 12	5+7+8	2.5", 7"	800	Yellow + blue/white +blue/white	BS 707
34	M 34	Open Cl	Per	02 42 01	+ 42 46 24	6	30' x 30'	1,400	Loose, 12 stars > 9mag	NGC 1039
77	M 77	Spl Gal	Cet	02 42 41	- 00 01 36	10.5	6' x 6'	30 M	Seyfert galaxy, starlike nucleus	NGC 1068
210	gamma Cet	**	Cet	02 43 18	+ 03 14 12	4+6	3"	63	Blue + yellow, A3 V + F2, 60 AU separation	BS 804
522	eta Per	* *	Per	02 50 42	+ 55 53 42	4+9	28"	540	Yellowish + bluish (M3 supergiant primary)	BS 834
211	theta Eri	**	Eri	02 58 16	- 40 18 18	3+4	9"	93	White + white, A4 III + A1 V, 250 AU	BS 897,8
517	Struve 320	**	Cep	03 06 08	+ 79 25 06	6+9	4.8"	410	Orange + blue, M1 III + F7 IV	BS 881
404	alpha Per	*	Per	03 24 19	+ 49 51 42	1.8	-----	570	F5 Ib, 4000 x Lo, in cluster of 100 stars	BS 1017
45	M 45 Pleiades	Open Cl	Tau	03 47 29	+ 24 06 18	1.6	90' x 60'	400	Seven Sisters, 200+ stars 3-16 mag., w/refl. neb.	OC1 421
212	32 Eri	**	Eri	03 54 17	- 02 57 12	5+6	7"	800	Yellow + blue/green, G8 III + A2 V, 1,700 AU	BS 1211,2
515	Struve 67	**	Cam	03 57 08	+ 61 06 30	5+8	1.7"	220	Gold + green, K3 supergiant + A0 dwarf	BS 1205
213	NGC 1535	Plt Neb	Eri	04 14 16	- 12 44 18	9.3	0.4' x 0.3'	?	Small pale blue/green disk, 11.5 mag center star	NGC 1535
509	Aldebaran	*	Tau	04 35 55	+ 16 30 36	0.85	-----	60	K5 III, orange/red, alpha Tau, "eye of the bull"	BS 1457
405	iota Aur	*	Aur	04 57 00	+ 33 10 00	2.69	-----	330	K3 II, 750 x Lo	BS 1577
214, 505	Rigel	**	Ori	05 14 32	- 08 12 06	0+7	10"	900	B8 supergiant, 50 Mo, 57,000 x Lo	BS 1713
504	Capella	*	Aur	05 16 41	+ 49 59 54	0.08	-----	45	Spect bin (G + F), 0.8 AU, 104d period, 6 Mo	BS 1708
79	M 79	Glob Cl	Lep	05 24 14	- 24 31 42	8.5	3' x 3'	54,000	Compact Center	NGC 1904
215	eta Ori	**	Ori	05 24 29	- 02 23 48	4+5	1.5"	460	Close pair, white + white, B1 V + B2e, 210 AU	BS 1788
38	M 38	Open Cl	Aur	05 28 41	+ 35 50 12	7	20' x 20'	4,200	100 stars, cruciform shape, 21 ly across	NGC 1912
1	Crab Nebula	Sprnva	Tau	05 34 30	+ 22 01 00	8.4	6' x 4'	6,000	1,054 A.D. supernova remnant, .03s pulsar, 10x7 ly	NGC 1952

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216	lambda Ori	**	Ori	05 35 08	+ 09 56 06	4+6	4.5"	460	White + white, O8e + B0.5 V, 620 AU		BS 1879,80
217	Trapezium	****	Ori	05 35 15	- 05 23 12	5+7+7+8	8,12,14,20"	1,900	Theta-1 Ori, young hot O + B0 stars exciting M 42		BS 1893-6
42, 218	M 42 Orion Neb.	Dif Neb	Ori	05 35 20	- 05 23 12	4	66' x 60'	1,900	H II, 30,000y old, 30 ly across, stellar nursery		NGC 1976
219	iota Ori	**	Ori	05 35 26	- 05 54 36	3+7	11.5"	130	O9 III primary, 450 AU apparent separation		BS 1899
43	M 43 NE Ori Nel	Dif Neb	Ori	05 35 32	- 05 16 06	9	15' x 15'	1,900	Detached portion of M 42, sep. by a dark lane		NGC 1982
36	M 36	Open Cl	Aur	05 36 09	+ 34 08 00	6.5	12' x 12'	4,100	60 stars 9-14 mag., 14 ly across		NGC 1960
220	sigma Ori	*** *	Ori	05 38 46	- 02 36 00	4+6+7+10	11,12,42"	1,400	All O & B stars, 35 Mo primary w/ companion		BS 1931,2
221	zeta Ori	** *	Ori	05 40 46	- 01 56 36	2+4+9	2.5", 58"	1,600	East star of "belt", excites emission nebula		BS 1948,9
78	M 78	Dif Neb	Ori	05 46 47	+ 00 03 30	8.3	8' x 6'	1,600	reflection nebula, 2-3 ly across, wispy		NGC 2068
37, 222	M37	Open Cl	Aur	05 52 20	+ 32 32 18	6	20' x 20'	4,600	150 stars to 12.5 mag., 28 ly across		NGC 2099
507	Betelgeuse	*	Ori	05 55 10	+ 07 24 24	0.5	-----	600	Red M1 supergiant, variable, 3+ AU radius		BS 2061
406	beta Aur	*	Aur	05 59 32	+ 44 56 54	1.9	-----	85	A2 IV, 4d eclipsing binary, 0.09 AU separation		BS 2088
223	theta Aur	**	Aur	05 59 43	+ 37 12 42	3+8	3.5"	110	B9 V + solar type, 800y period, 110 AU app. sep.		BS 2095
35, 224	M 35	Open Cl	Gem	06 08 50	+ 24 20 42	5.5	30' x 30'	2,800	120 stars > 13 mag., compact 4' cluster 30' to SW		NGC 2168
525	epsilon Mon	* *	Mon	06 23 46	+ 04 35 36	4+6	13"	130	Bluish + yellowish, A5 IV + F5 V		BS 2298,9
225	beta Mon	***	Mon	06 28 49	- 07 02 00	5+5+6	7.4", 2.8"	155	All are yellow/white B3, 350 & 150 AU app. sep.		BS 2356-8
226	UU Aur	* (red)	Aur	06 36 33	+ 38 26 42	5.29	-----	650	C5 II carbon star, variable 5-7 mag. in 2/3 yr		BS 2405
228, 501	Sirius	**	CMa	06 45 09	- 16 43 00	-1.46	8"	8.6	A1 V + white dwarf, 20 AU sep., 51 yr period		BS 2491
227	12 Lyn	***	Lyn	06 46 14	+ 59 26 30	5+6+8	1.7", 8"	300	A3 V primary, 150 & 700 AU apparent separation		BS 2470
41	M41	Open Cl	CMa	06 47 04	- 20 45 42	5	32' x 32'	2,400	Red star in center, 20 ly across, near 6 mag. star		NGC 2287
407	theta Gem	*	Gem	06 52 47	+ 33 57 42	3.6	-----	155	A3 III, 0.021" annual parallax		BS 2540
524	mu CMa	**	CMa	06 56 07	- 14 02 36	5+8	3"	?	Yellowish + bluish, G5 III + A2		BS 2593
50	M 50	Open Cl	Mon	07 02 54	- 08 20 12	7	16' x 16'	3,000	50 stars 12-16 mag., 13 ly across		NGC 2323
229	delta Gem	**	Gem	07 20 07	+ 21 59 00	4+8	6"	53	Yellow + red/purple, F2 IV primary, 100AU sep.		BS 2777
230	NGC2392 Eskim	Plt Neb	Gem	07 29 18	+ 20 54 54	8.3	0.7' x 0.7'	3,000?	Mottling, 1700 yr old, 0.6 ly dia, Brt center star		NGC 2392
231, 408	Castor	** *	Gem	07 34 36	+ 31 53 18	2+3+10	2", 60"	48	Wh +wh+orange; 30, 900 AU (each is spect. bin.)		BS 2890,1
47	M 47	Open Cl	Pup	07 36 33	- 14 28 24	4.5	25' x 25'	1,600	50 stars, 12 ly across, contains 7.4" double star		NGC 2422
232	kappa Pup	**	Pup	07 38 50	- 26 48 12	4+5	10"	325	White + white (B5 IV + B6 V), primary is double		BS 2948,9
506	Procyon	*	CMi	07 39 18	+ 05 13 30	0.38	-----	11	F5 IV, 0.292" parallax, 1.25" proper motion / yr.		BS 2943
46, 233	M 46	Open Cl	Pup	07 41 51	- 14 49 36	6.5	28' x 28'	5,400	200 stars > 14 mag., dim planetary in foreground		NGC 2437
93	M 93	Open Cl	Pup	07 44 34	- 23 52 42	6.5	18' x 18'	?	60 stars 8 - 13 mag.		NGC 2447
512	Pollux	*	Gem	07 45 19	+ 28 01 36	1.14	-----	35	K0 IIb, 11 x Ro, 35 x Lo, beta Gemini		BS 2990
234	zeta Cnc	***	Cnc	08 12 13	+ 17 38 54	6+6+6	6, 1, 0.2"	84	60, 18 yr periods for close pairs; 150, 25, 5 AU		BS 3208-10
48	M 48	Open Cl	Hya	08 13 38	- 05 47 36	5.5	30' x 30'	1,500	60 stars, missing Messier obj. (misplaced 5 deg.)		NGC 2548
44	M 44 Praesepe	Open Cl	Cnc	08 40 02	+ 19 59 42	4	60' x 60'	525	Beehive, 350 stars to 17 mag., 40 ly across		NGC 2632
235	iota Cnc	* *	Cnc	08 46 41	+ 28 45 42	4+7	31"	190	Yellow/orange + blue, G8 III + A3 V, 1800 AU		BS 3474,5
67, 236	M 67	Open Cl	Cnc	08 51 04	+ 11 48 24	7.5	15' x 15'	2,250	Yellow stars 10 - 15 mag., 10 billion yr old cluster		NGC 2682
409	iota UMa	**	UMa	08 59 12	+ 48 02 30	3+10	5"	43	Primary is A7 IV, secondary has 36 yr binary		BS 3569

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Number			lation	h m s	deg ' "		Separation	Years	Comments	Name
410	alpha Lyn	*	Lyn	09 21 03	+ 34 23 36	3.13	-----	130	K7 IIIab, 110 x Lo, .22" proper motion / yr.	BS 3705
81, 237	M 81	Spl Gal	UMa	09 55 39	+ 69 03 54	8.5	21' x 10'	7 M	Sb spiral, bright nucleus, 1 deg. from M82	NGC 3031
82, 238	M 82	Irr Gal	UMa	09 55 52	+ 69 40 54	9.5	9' x 4'	7 M	Dark lane, chaotic, exploding	NGC 3034
239	gamma Leo	**	Leo	10 19 58	+ 19 50 30	3+4	4.3"	150	Yellow + yellow, K0 III + G0 III, 407 yr. period	BS 4057,8
411	mu UMa	*	UMa	10 22 20	+ 41 30 00	3.05	-----	93	M0 III, spectral binary with 2/3 yr. period	BS 4069
240	NGC 3242	Plt Neb	Hya	10 24 48	- 18 38 36	9	0.7' x 0.6'	2,500?	Bright, apparent size of Jupiter, actual 0.6 ly	NGC 3242
95	M 95	BSp Gal	Leo	10 43 55	+ 11 42 06	11	3' x 3'	25 M	Bar is 1.4' x 0.3' with circular arms	NGC 3351
96	M 96	Spl Gal	Leo	10 46 43	+ 11 49 06	10.5	6' x 4'	25 M	Bright center, oval shape	NGC 3368
105	M 105	Ell Gal	Leo	10 47 49	+ 12 35 06	11	2' x 2'	25 M	2 more members of Leo cluster within 15'	NGC 3379
412	psi UMa	*	UMa	11 09 40	+ 44 29 54	3.01	-----	130	1 III, yellow giant 85 x Lo	BS 4335
108	M 108	Spl Gal	UMa	11 11 33	+ 55 40 54	11	8' x 1'	25 M	Sc spiral nearly edge-on, dark & light nodules	NGC 3556
97	M 97 Owl Neb	Plt Neb	UMa	11 14 45	+ 55 01 48	12	3' x 3'	2,600	1.5 ly across, round, 14 mag. center star	NGC 3587
241	xi UMa	**	UMa	11 18 11	+ 31 31 48	4+5	2.9"	24	White + white, both G0 V, 60 yr. period, 21 AU	BS 4374,5
65	M 65	Spl Gal	Leo	11 18 54	+ 13 05 48	10.5	8' x 1.5'	35 M	Sa spiral, tight arms, lens shaped	NGC 3623
66	M 66	Spl Gal	Leo	11 20 12	+ 12 59 48	10	8' x 2.5'	35 M	Sb spiral, mottled appearance	NGC 3627
109	M109	BSp Gal	UMa	11 57 36	+ 53 22 42	11	7' x 4'	35 M	Barred spiral, nucleus pear shaped	NGC 3992
98	M 98	Spl Gal	Com	12 13 52	+ 14 54 42	11	8' x 2'	37 M	Nearly edge-on, bright nucleus, mottled	NGC 4192
99	M 99	Spl Gal	Com	12 18 52	+ 14 25 42	10.5	4' x 4'	48 M	Face-on, hint of spirals, 50,000 ly across	NGC 4254
106	M106	Spl Gal	CVn	12 18 56	+ 47 18 42	9.5	19' x 8'	25M	25 deg. from edge-on, bright nucleus	NGC 4258
61	M 61	Spl Gal	Vir	12 21 59	+ 04 28 42	10.5	5' x 5'	70 M	Starlike nucleus, 3 spiral arms show as patches	NGC 4303
40	M 40	**	UMa	12 22 18	+ 58 05 12	9	49"	?	Double star mistaken for nebula in 17th Century	Winnecke 4
100	M 100	Spl Gal	Com	12 22 58	+ 15 49 42	10.5	5' x 5'	40 M	Sc spiral, starlike nucleus, diffuse patch	NGC 4321
84	M 84	Ell Gal	Vir	12 25 04	+ 12 53 42	11	2' x 2'	40 M?	Type E0, appears similar to unresolved glob	NGC 4374
85	M 85	Ell Gal	Com	12 25 28	+ 18 11 42	10.5	4' x 2'	44 M	Irregular oval, 45,000 ly across, foreground star	NGC 4382
86	M 86	Ell Gal	Vir	12 26 16	+ 12 56 42	11	2' x 1'	40 M?	E1 elliptical, well-defined edges	NGC 4406
514	3C273	Quasar	Vir	12 29 05	+ 02 03 12	12.8	-----	3,000 M	Nearest, brightest quasar, 0.158 red shift	3C 273
49	M 49	Ell Gal	Vir	12 29 46	+ 08 00 42	10	3' x 2'	70 M	E4 galaxy, bright center with halo	NGC 4472
242	delta Crv	* *	Crv	12 29 52	- 16 30 54	3+8	24"	135	White + lilac, B9.5 V primary, 1000 AU	BS 4757
87	M 87	Ell Gal	Vir	12 30 52	+ 12 23 42	11	3' x 3'	50 M?	Giant elliptical w/jet, radio+x-ray, 790 Billion Mo	NGC 4486
88	M 88	Spl Gal	Com	12 32 04	+ 14 25 42	11	5' x 2.5'	40 M	Starlike core, irregular brightness shows arms	NGC 4501
243	24 Com	* *	Com	12 35 07	+ 18 22 36	5+7	20"	1,600	Orange + blue/green, K2 III + A9 V	BS 4791,2
91	M 91	BSp Gal	Com	12 35 28	+ 14 29 42	11.5	4' x 4'	40 M?	Missing Messier object, visually appears oval	NGC 4548
89	M 89	Ell Gal	Vir	12 35 40	+ 12 33 42	11.5	2' x 2'	40 M?	Slightly oval elliptical	NGC 4552
90	M 90	Spl Gal	Vir	12 36 52	+ 13 09 48	11	7' x 3'	40 M?	Diffuse central region, arms not visible	NGC 4569
58	M 58	Spl Gal	Vir	12 37 46	+ 11 49 48	11	4.5' x 3.5'	70 M	Oval core with mottled halo, fairly bright	NGC 4579
68	M 68	Glob Cl	Hya	12 39 26	- 26 45 12	9	10' x 10'	40,000	12th mag. stars and fainter	NGC 4590
104, 244	M104 Sombrero	Spl Gal	Vir	12 39 54	- 11 37 12	9.5	6' x 2'	40 M	Bright, edge-on, nuclear bulge, dark dust rim	NGC 4594

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245	gamma Vir	**	Vir	12 41 40	- 01 27 00	4+4	4"	33	Wh + wh, 172 yr. period, 0.4" periastron in 2008	BS 4825,6	
59	M 59	Ell Gal	Vir	12 42 04	+ 11 38 48	11.5	2.6' x 1.6'	40 M?	E4, hazy oval patch, 250 Bil stars, 24,000 ly across	NGC 4621	
60	M 60	Ell Gal	Vir	12 43 40	+ 11 33 48	10.5	3' x 3'	50 M?	11 mag. spiral NGC 4647 5' W of M 60	NGC 4649	
246	Y Cvn	* (red)	CVn	12 45 08	+ 45 26 24	4.99	-----	1,600	Carbon star, spectral type C7 I	BS 4846	
516	Struve 1694	* *	Cam	12 49 10	+ 83 24 54	5+6	22"	3,300	Al III shell + (A0 V + A2 V)	BS 4892,3	
94, 247	M 94	Spl Gal	CVn	12 50 59	+ 41 07 54	9.5	7' x 3'	14.5 M	Bright center, hint of arms, 33,000 ly across	NGC 4736	
248, 413	Cor Caroli	* *	CVn	12 56 01	+ 38 19 00	3+6	20"	120	Both blue/white, A0 + F0 V, 720 AU app. sep.	BS 4914,5	
64, 249	M 64 Black-Eye	Spl Gal	Com	12 56 44	+ 21 40 54	9	6' x 3'	12 M	Sb, good detail, dark patch is "black eye"	NGC 4826	
53	M 53	Glob Cl	Com	13 12 55	+ 18 10 00	8.5	3.3' x 3.3'	60,000	60 ly across, 12th mag. stars easily resolved	NGC 5024	
63	M 63 Sunflower	Spl Gal	CVn	13 15 49	+ 42 02 12	10	10' x 6'	15 M	Grainy-looking central condensation	NGC 5055	
250	Mizar (w/Alcor)	** *	UMa	13 23 56	+ 54 55 24	2+4,4	15", 12'	88	Alcor is 12' away; compare visual vs. telescope	BS 5054,5	
510	Spica	*	Vir	13 25 12	- 11 09 42	0.98	-----	275	Eclipsing binary (B1 III + B2 V), 4 day period	BS 5056	
51, 251	M 51 Whirlpool	Spl Gal	CVn	13 29 57	+ 47 11 18	10	11' x 7'	14 M	Bright Sc, spiral arm bridge to colliding galaxy	NGC 5194	
83	M 83	Spl Gal	Hya	13 37 07	- 29 51 36	8.5	10' x 8'	8 M	4 supernovas in M 83 in 50 years	NGC 5236	
3, 252	M 3	Glob Cl	CVn	13 42 15	+ 28 22 30	7	10' x 10'	30,000	45,000 stars, very rich, 90 ly across	NGC 5272	
414	eta UMa	*	UMa	13 47 32	+ 49 18 48	1.86	-----	93	B3 V, end star of "dipper handle"	BS 5191	
101	M 101	Spl Gal	UMa	14 03 17	+ 54 21 48	8.5	22' x 22'	15 M	Sc face-on, very open, arms visible	NGC 5457	
102	M 102 = M 101	Spl Gal	UMa	14 03 17	+ 54 21 48	8.5	22' x 22'	15 M	Sc face-on, very open, arms visible	NGC 5457	
502	Arcturus	*	Boo	14 15 40	+ 19 11 00	-0.04	-----	34	K1 III, very large proper motion, 2.29" / yr.	BS 5340	
415	gamma Boo	**	Boo	14 32 05	+ 38 18 30	3.03	-----	130	A7 III slightly variable	BS 5435	
253	epsilon Boo	**	Boo	14 44 59	+ 27 04 30	3+5	3"	200	Yellow + blue, K0 II + A2 V, 180 AU app. sep.	BS 5505,6	
254	xi Boo	**	Boo	14 51 23	+ 19 06 06	5+7	7"	22	Yellow + red, 150 yr. period, 50 AU app. sep.	BS 5544	
416	delta Boo	* *	Boo	15 15 30	+ 33 18 54	3+7	105"	140	G8 III with distant G0 V companion (Sun-like)	BS 5681	
5, 255	M 5	Glob Cl	Ser	15 18 34	+ 02 05 36	7	12' x 12'	30,000	100 ly across, contains 100 RR Lyra stars	NGC 5904	
256	mu Boo	* **	Boo	15 24 30	+ 37 21 48	4+6+8	108", 2"	95	B9 V + G1 V, latter double (43 AU, 260 yr. period)	BS 5733,4	
257	delta Ser	**	Ser	15 34 48	+ 10 32 18	4+4	4"	150	Both type F0 IV, white, 180 AU apparent sep.	BS 5788,9	
258	zeta CrB	**	CrB	15 39 22	+ 36 38 12	5+6	6"	220	Bluish + greenish, B7 V + B9 V	BS 5833,4	
259	xi Sco	*** **	Sco	16 04 22	- 11 22 24	5+5	1", 7"	80	** * with another 12" ** 4.5' from the triple	BS 5977,8	
260	beta Sco	* *	Sco	16 05 26	- 19 48 12	3+5	14"	360	Both blue/white, B1 V + B2 V, 1,500 AU app. sep.	BS 5984,5	
261	nu Sco	** **	Sco	16 11 59	- 19 27 18	4+6+7+8	42", 2", 1"	400	Colorful double double	BS 6026,7	
80	M 80	Glob Cl	Sco	16 17 06	- 22 59 42	8.5	3' x 3'	36,000	Strong central concentration of stars	NGC 6093	
417	tau Her	*	Her	16 19 44	+ 46 18 48	3.89	-----	300?	B5 IV	BS 6092	
4, 262	M 4	Glob Cl	Sco	16 23 38	- 26 30 30	7.5	14' x 14'	10,000	Loose, open, appears to have chains of stars	NGC 6121	
263, 511	Antares	**	Sco	16 29 24	- 26 25 54	1+6	3"	520	Red M1 supergiant + emerald green B4 V comp.	BS 6134	
107	M 107	Glob Cl	Oph	16 32 30	- 13 02 12	10	3' x 3'	10,000	50 ly across, discovered by Mechain in 1782	NGC 6171	
264	16 - 17 Dra	* **	Dra	16 36 13	+ 52 54 48	6+6+7	90", 3"	330	B9.5 V + (B9 V + A1 V)	BS 6184-6	
13, 265	M 13 Hercules	Glob Cl	Her	16 41 42	+ 36 27 12	7	23' x 23'	25,000	170 ly dia., 200,000+ stars, 500x local star density	NGC 6205	
266	NGC 6210	Plt Neb	Her	16 44 33	+ 23 47 18	9.5	0.3' x 0.3'	?	Small bright planetary, featureless blue disk	NGC 6210	

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R. A. h m s	Dec deg ' "										
12, 267	M 12	Glob Cl	Oph	16 47 12	- 01 57 42	8	8' x 8'	16,000	10 - 15 mag. stars, 80 ly across, grainy nucleus		NGC 6218
10, 268	M 10	Glob Cl	Oph	16 57 07	- 04 06 18	7.5	8' x 8'	16,000	Similar to M 12, 3 degrees away		NGC 6254
62	M 62	Glob Cl	Oph	17 01 17	- 30 07 12	8	6' x 6'	18,000	Compact, grainy central region		NGC 6266
19	M 19	Glob Cl	Oph	17 02 33	- 26 15 06	8.5	6' x 6'	20,000	30 ly across, similar to M 62, 4 degrees away		NGC 6273
269	alpha Her	**	Her	17 14 39	+ 14 23 24	3+5	4.5"	430	Orange + blue/green, M5 lb + (G5 III + F2 V)		BS 6406,7
270	delta Her	**	Her	17 15 02	+ 24 50 24	3+9	10"	95?	Optical double (unrelated stars), white + purple		BS 6410
418	pi Her	*	Her	17 15 03	+ 36 48 36	3.16	-----	400	K3 IIab, 750x Lo		BS 6418
92, 271	M 92	Glob Cl	Her	17 17 10	+ 43 08 24	7.5	12' x 12'	28,000	100 ly across, concentrated bright center		NGC 6341
527	omicron Oph	**	Oph	17 18 01	- 24 17 12	5+7	10"	250	K0 II - III + F6 IV - V		BS 6424,5
9	M 9	Glob Cl	Oph	17 19 17	- 18 31 30	9	3' x 3'	26,000	Oval ctr, 14th mag. stars, 7,500 ly from gal. nuc.		NGC 6333
272	rho Her	**	Her	17 23 41	+ 37 08 48	5+6	4"	?	Attractive with small aperture, B9.5 III + A0 V		BS 6484,5
273	nu Dra	* *	Dra	17 32 13	+ 55 10 42	5+5	62"	95	A4 + A6 V, white, evenly matched stars		BS 6554,5
14	M 14	Glob Cl	Oph	17 37 37	- 03 16 54	9.5	3' x 3'	23,000	Circular, 15th mag. stars, 55 ly across		NGC 6402
6, 274	M 6 Butterfly	Open Cl	Sco	17 40 02	- 32 12 48	4.5	30' x 26'	2,000	Coarse, 80+ stars 7-11 mag., blue/white w/1 red		*NGC 6405
518	psi Dra	* *	Dra	17 41 57	+ 72 09 12	5+6	30"	60	F5 IV + G0 V, 55 AU apparent separation		BS 6636,7
526	90 Her	**	Her	17 53 18	+ 40 00 30	5+8	1.6"	240	K3 III primary, difficult uneven pair		BS 6677
7, 275	M 7	Open Cl	Sco	17 53 58	- 34 48 18	3.5	60' x 60'	800	80+ stars > 10 mag., many yellow & orange stars		NGC 6475
23, 276	M 23	Open Cl	Sgr	17 56 58	- 19 01 12	6	25' x 25'	4,500	30 ly across, 120 stars 10th mag. and fainter		NGC 6494
277	NGC 6543	Plt Neb	Dra	17 58 35	+ 66 38 00	9	0.4' x 0.4'	1,700	Ring-shaped, 11th mag. center star, 0.2 ly across		NGC 6543
278	95 Her	**	Her	18 01 30	+ 21 35 42	5+5	6"	400	Pale red & green (colors change), G5 III + A5 III		BS 6729,30
20	M 20 Trifid	Dif Neb	Sgr	18 02 19	- 23 02 00	6	29' x 27'	5,000	3-lobed emission+refl. neb., O7 ** in ctr is source		NGC 6514
8, 279	M 8 Lagoon Neb	Dif Neb	Sgr	18 03 08	- 24 23 00	5	60' x 35'	5,200	Emis. neb. (O5 star) 30 ly dia., w/lane, open clust		NGC 6523
21	M 21	Open Cl	Sgr	18 04 37	- 22 29 54	7	12' x 12'	3,000	10 ly across, 40 stars > 12th magnitude		NGC 6531
280	70 Oph	**	Oph	18 05 27	+ 02 30 00	4+6	2"	16	Yel + red, 88 yr per., 10 AU app. sep, K0 V prim.		BS 6752
281	NGC 6572	Plt Neb	Oph	18 12 07	+ 06 50 24	9.5	0.3" x 0.3"	?	Small, bright, blue		NGC 6572
24	M 24	Open Cl	Sgr	18 18 28	- 18 24 24	11.5	90' x 60'	?	Milky Way patch with 4' dia. 11th mag. open cl		NGC 6603
16	M 16 Eagle Neb.	Dif Neb	Ser	18 18 49	- 13 46 24	6.5	30' x 30'	8,000	Emis. neb. w/dark patches, open cl, 2 Myrs old		NGC 6611
18	M 18	Open Cl	Sgr	18 19 57	- 17 07 18	8	12' x 12'	6,000	Cluster of 12 stars, loose		NGC 6613
17, 282	M 17 Omega	Dif Neb	Sgr	18 20 44	- 16 10 18	7	25' x 25'	5,700	Emis. neb., horseshoe shaped, w/faint open cl		NGC 6618
28	M 28	Glob Cl	Sgr	18 24 32	- 24 52 12	8.5	15' x 15'	15,000	14 - 16 mag. stars, 65 ly across		NGC 6626
69	M 69	Glob Cl	Sgr	18 31 20	- 32 20 54	9	3' x 3'	25,000	Compact core, 14-16 mag stars, 8th mag frgrnd *		NGC 6637
25	M 25	Open Cl	Sgr	18 31 42	- 19 14 00	6.5	40' x 40'	2,000	86 stars loosely scattered, many colors		IC 4725
22, 283	M 22	Glob Cl	Sgr	18 36 19	- 23 55 42	6.5	18' x 18'	10,000	Nearby glob., 70K stars 11-15 mag., 50 ly across		NGC 5626
284, 419, 503	Vega	* *	Lyr	18 36 56	+ 38 47 00	0+10	70"	26	A0 V, faint comp. is unrelated star, alpha Lyra		BS 7001
70	M 70	Glob Cl	Sgr	18 43 14	- 32 18 30	9	3' x 3'	65,000	Compact, 14 - 17 mag. stars, 60 ly across		NGC 6681
285	epsilon Lyr	** **	Lyr	18 44 21	+ 39 38 30	5+5+5+6	208,2.3,2.7"	150	Double double, all white A or F type stars		BS 7051-4
26	M 26	Open Cl	Sct	18 45 22	- 09 23 24	9.5	11' x 11'	5,000	90 stars 12-15 mag., 16 ly across		NGC 6694

SBO Catalog Number	Common Name	Object Type	Con stel lation	Epoch 2000			Visible Mag	Appar Size or Separation	Distance Light Years	Description or Comments	Alternate Catalog Name
R. A. h m s	Dec deg ' "										
11, 286	M 11	Open Cl	Sct	18 51 02	- 06 16 12	7	12' x 12'	6,000	Rich & compact, 600 stars 9-12 mag., 21 ly across	NGC 6705	
57, 287	M 57 Ring Neb	Plt Neb	Lyr	18 53 32	+ 33 01 54	9.5	1.3' x 1.0'	1,500	Smoke ring 0.5 ly dia., 14 mag. star 100K deg K	NGC 6720	
54	M 54	Glob Cl	Sgr	18 55 12	- 30 28 06	8.5	3' X 3'	50,000	Compact, 14 mag. stars	NGC 6715	
288	theta Ser	* *	Ser	18 56 14	+ 04 12 12	5+5	23"	130	Both white A5 V stars, 900 AU apparent sep.	BS 7141,2	
56	M 56	Glob Cl	Lyr	19 16 34	+ 30 10 42	9.5	5' x 5'	40,000	No bright core, well-resolved 11-14 mag. stars	NGC 6779	
289	Albireo	* *	Cyg	19 30 44	+ 27 57 48	3+5	35"	200	Vivid orange + blue, (K3 II + B0.5 V) + B8 V	BS 7417,8	
55, 290	M 55	Glob Cl	Sgr	19 40 05	- 30 56 30	7	15' x 15'	20,000	Rich, 90 ly across, w/ conspicuous bright star	NGC 6809	
291	NGC 6818	Plt Neb	Sgr	19 43 54	- 14 08 24	10	0.4' x 0.3'	?	Bright uniform blue disk	NGC 6818	
293	NGC 6826	Plt Neb	Cyg	19 44 52	+ 50 31 42	9	0.5' x 0.4'	?	Blinking planetary (see M&M) 11 mag. ctr star	NGC 6826	
292, 420	delta Cyg	**	Cyg	19 44 58	+ 45 07 54	3+6	2"	270	B9.5 IV + F1 V (230 deg p.a.), 400 yr apparent pe	BS 7528	
508	Altair	*	Aql	19 50 47	+ 08 52 06	0.77	-----	16	A7 V, 6.5 hr. rotation per. (equat 2x polar dia.)	BS 7557	
71	M 71	Glob Cl	Sge	19 53 43	+ 18 46 54	8.5	6' x 6'	8,500	Nearby, once thought to be open cl, "V" shape	NGC 6838	
27, 294	M 27	Plt Neb	Vul	19 59 35	+ 22 43 06	7.5	8' x 4'	900	Greenish, hourglass shaped, 2 ly dia, 13mag star	NGC 6853	
75	M 75	Glob Cl	Sgr	20 06 10	- 21 55 42	9.5	5' x 5'	100,000	Remote glob, extremely compact core	NGC 6864	
29	M 29	Open Cl	Cyg	20 23 55	+ 38 31 54	9	6' x 7'	7,200	Sparse, 6 stars > 9.5 mag. form dipper shape	NGC 6913	
528	49 Cyg	**	Cyg	20 41 03	+ 32 18 24	6+9	2.8"	?	G8 IIb primary + A type secondary	BS 7921	
421, 513	Deneb	*	Cyg	20 41 26	+ 45 16 48	1.25	-----	1,600	A2 lae, 25 x Mo, 60,000 x Lo	BS 7924	
295	gamma Del	**	Del	20 46 39	+ 16 07 30	4+5	10"	125	Yellow + pale green, K1 IV + F7 V	BS 7947,8	
72	M 72	Glob Cl	Aqr	20 53 28	- 12 32 18	10	2' x 2'	60,000	Small, loose globular 35 ly across	NGC 6981	
73	M 73	****	Aqr	20 58 58	- 12 37 12	9	1.2' x 1.2'	?	4 stars, thought to resemble a nebula by Messier	NGC 6994	
296	NGC7009 Satur	Plt Neb	Aqr	21 04 16	- 11 22 00	8.5	0.4' x 0.2'	3,900	Blue/green ellip. disk, v faint extensions	NGC 7009	
297	61 Cyg	* *	Cyg	21 06 54	+ 38 44 42	5+6	28"	11	Both orange, K5 V + K7 V, 5.26"/yr. prop. motion	BS 8085,6	
422	tau Cyg	**	Ctg	21 14 47	+ 38 02 42	3.72	0.8"	75	F2 IV spectra, 20 AU true sep., 50 yr. period	BS 8130	
299	beta Cep	* *	Cep	21 28 40	+ 70 33 42	3+8	14"	240	Both blue/white, B1 IV primary, very unequal	BS 8238	
15, 298	M 15	Glob Cl	Peg	21 30 00	+ 12 10 36	7.5	12' x 12'	40,000	Rich, contains 14th mag. 1" planetary nebula	NGC 7078	
39	M 39	Open Cl	Cyg	21 32 12	+ 48 26 42	5.5	30' x 30'	900	Sparse, open, best in binoculars	NGC 7092	
2, 300	M 2	Glob Cl	Aqr	21 33 29	- 00 49 18	7.5	10' x 10'	50,000	175 ly across, appears to contain dark lane	NGC 7089	
30	M 30	Glob Cl	Cap	21 40 19	- 23 11 12	8.5	6' x 6'	40,000	Slightly oval, unusual globular, 12-16 mag. stars	NGC 7099	
301	mu Cep	* (red)	Cep	21 43 30	+ 58 46 48	4.08	-----	1,00	Herschel's garnet star, M2 lae, semiregular	BS 8316	
302	zeta Aqr	**	Aqr	22 28 50	- 00 01 12	5+5	1.8"	150	Both white, F3 V + F6 IV, 80 AU apparent sep.	BS 8558,9	
303	delta Cep	* *	Cep	22 29 10	+ 58 24 54	4+8	41"	1,000	Primary is prototype Cepheid var., 5.4 day period	BS 8571	
423	eta Peg	* *	Peg	22 43 00	+ 30 13 18	2.94	91"	360	G2 II + F0 V spect. binary + optical dbl (w/comp)	BS 8650	
519	94 Aqr	* *	Aqr	23 19 07	- 13 27 30	5+7	13"	82	G5 IV primary + K2 companion	BS 8866	
52	M 52	Open Cl	Cas	23 24 13	+ 61 35 18	8	12' x 12'	7,000	Rather rich, 200 stars 9-15 mag., red star at edge	NGC 7654	
304	NGC 7662	Plt Neb	And	23 25 54	+ 42 32 12	9	0.5' x 0.4'	5,600	Slightly elliptical, ring shaped with 2nd ring	NGC 7662	
424	lambda And	*	And	23 37 34	+ 46 27 30	3.82	-----	80	G8 IV-V variable, spect. binary 20 day period	BS 8961	
305	19 (TX) Psc	* (red)	Psc	23 46 23	+ 03 29 12	5.04	-----	1,000?	C5 II, very red, in circlet of Pisces	BS 9004	