

PREFACE

After completing the Messier list, most observational astronomy references encourage the amateur to tackle the NGC list. This is quite a task! Especially when one considers that many of them are only visible in the southern hemisphere and even more of them are beyond the reach of most amateur telescopes.

Therefore, I have taken the trouble to compile, with the aid of Burnham's Celestial Handbook, all NGC objects that are 13th magnitude or brighter and are north of declination -30 degrees. This, of course, is something any ambitious astronomer could do, but because the New General Catalogue progresses numerically according to right ascension, it consequently progresses numerically through several constellations at the same time. So the amateur tackles the NGC objects head on but has no idea as to the ones which he is missing. For instance, tonight Walt Azimuth found NGC 4371 in Virgo. Last night, he found NGC 4374 (M84) in Virgo. Should he be looking for NGC 4372? Not unless he has a two-way fare to Australia! He'll find it there at declination -72 degrees in the constellation Musca. Or how about the gap between NGC 7293 and NGC 7331? Should he look for, say, 7217? I hope his telescope has at least 14 inches of aperture. This galaxy, one of Stephan's quintet, is at magnitude 15.3!

To relieve Walt's problem, this catalogue lists the NGC objects in numerical order and lists only those that the average North American amateur astronomer will be able to find. This should be a convenient "next step" after the Messier list. It is also ten times larger, listing 1166 objects.

There are six exceptions to the -30° rule. They are Messier objects M6, M7, M54, M55, M62, and M70. These are included because of their inclusion in the Messier catalogue.

Magnitudes are based on Burnham's Celestial Handbook. Star clusters, in general, are given the magnitude of their brightest component. Therefore, the integrated brightness of the cluster may be one or two magnitudes brighter.

Constellation names are abbreviated as follows (only applicable abbreviations are given, i.e. those in this catalogue. For a complete list, refer to table five in Menzel's Field Guide to the Stars and Planets):

Andromeda	And	Leo	Leo
Antlia	Ant	Leo Minor	LMi
Aquarius	Aqr	Lepus	Lep
Aquila	Aql	Libra	Lib
Aries	Ari	Lynx	Lyn
Auriga	Aur	Lyra	Lyr
Bootes	Boo	Monoceros	Mon
Camelopardalis	Cam	Ophiuchus	Oph
Cancer	Cnc	Orion	Ori
Canes Venatici	CVn	Pegasus	Peg
Canis Major	CMa	Perseus	Per
Capricornus	Cap	Pisces	Psc
Cassiopeia	Cas	Puppis	Pup
Cepheus	Cep	Pyxis	Pyx
Cetus	Cet	Sagitta	Sge
Coma Berenices	Com	Sagittarius	Sgr
Corvus	Crv	Scorpius	Sco
Crater	Crt	Sculptor	Scl
Cygnus	Cyg	Scutum	Sct
Delphinus	Del	Serpens	Ser
Draco	Dra	Sextans	Sex
Eridanus	Eri	Taurus	Tau
Fornax	For	Triangulum	Tri
Gemini	Gem	Ursa Major	UMa
Hercules	Her	Ursa Minor	UMi
Hydra	Hya	Virgo	Vir
Lacerta	Lac	Vulpecula	Vul

Deep-sky object types are abbreviated as follows:

- | | | |
|-----------------------|----|---|
| bright diffuse nebula | dn | |
| planetary nebula | pn | |
| open cluster | oc | |
| globular cluster | gc | |
| elliptical galaxy | eg | } 77% of the objects are in these categories. |
| spiral galaxy | sg | |
| barred spiral galaxy | bg | |
| irregular galaxy | ig | |
| supernova remnant | sr | (only one-The Crab Nebula(M1, NGC 1952)) |
| multiple star | ms | (only one-"Messier's Mistake", M73 which, oddly enough, has NGC specification 6994) |

Not wishing to imply that one would never see objects south of -30° or dimmer than 13.0 magnitude, I have left two columns of empty space for other NGC objects not listed. Happy hunting!

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Cory Martin
Council Bluffs, Iowa
August 12, 1983

NGC	M	type	con	mag	NGC	M	type	con	mag	NGC	M	type	con	mag
23		bg	Peg	12.9	598	M33	sg	Tri	6.5	1058		sg	Per	12.5
24		sg	Scl	12.2	613		bg	Scl	11.1	1068	M77	sg	Cet	10.0
40		pn	Cep	10.5	615		sg	Cet	12.6	1073		bg	Cet	12.0
45		sg	Cet	12.1	628	M74	sg	Psc	11.0	1079		sg	For	12.6
103		oc	Cet	11.0	636		eg	Cet	12.6	1084		sg	Eri	11.1
128		eg	Psc	12.8	637		oc	Cas	10.0	1087		sg	Cet	11.2
129		oc	Cas	9.0	650	M76	pn	Per	11.0	1090		sg	Cet	12.8
133		oc	Cas	10.0	651	M76	pn	Per	11.0	1140		ig	Eri	12.8
146		oc	Cas	11.0	654		oc	Cas	11.0	1156		ig	Ari	12.5
147		eg	Cas	12.1	659		oc	Cas	12.0	1169		sg	Per	13.0
150		bg	Scl	12.2	663		oc	Cas	7.0	1172		eg	Eri	13.0
151		sg	Cet	12.4	670		eg	Tri	13.0	1179		sg	Eri	13.0
157		sg	Cet	11.1	672		bg	Tri	11.6	1187		bg	Eri	11.3
175		bg	Cet	12.8	681		sg	Cet	12.9	1199		eg	Eri	12.7
178		bg	Cet	12.9	697		sg	Ari	12.5	1201		sg	For	11.8
185		eg	Cas	11.8	701		sg	Cet	12.7	1209		eg	Eri	12.6
188		oc	Cep	11.0	718		sg	Psc	12.6	1220		oc	Per	11.0
205	M110	eg	And	10.8	720		eg	Cet	11.7	1232		sg	Eri	10.7
210		sg	Cet	12.0	741		eg	Psc	13.0	1241		bg	Eri	13.0
214		sg	And	12.8	750		eg	Tri	13.0	1245		oc	Per	9.0
221	M32	eg	And	9.5	752		oc	And	8.0	1255		sg	For	12.1
224	M31	sg	And	5.0	753		sg	And	12.9	1270		eg	Per	12.7
225		oc	Cas	9.0	772		sg	Ari	12.0	1275		sg	Per	13.0
245		sg	Cet	12.9	777		eg	Tri	13.0	1292		sg	For	12.8
246		pn	Cet	8.5	779		sg	Cet	11.8	1297		eg	Eri	13.0
247		sg	Cet	10.7	788		sg	Cet	12.6	1300		bg	Eri	11.3
253		sg	Scl	7.0	821		eg	Ari	12.7	1302		bg	For	11.4
255		sg	Cet	12.8	864		sg	Cet	12.0	1309		sg	Eri	11.8
274		eg	Cet	13.0	869		oc	Per	7.0	1325		sg	Eri	12.5
275		bg	Cet	13.0	877		sg	Ari	12.5	1332		eg	Eri	11.2
278		sg	Cas	11.6	884		oc	Per	7.0	1337		sg	Eri	12.4
288		gc	Scl	7.2	890		eg	Tri	12.7	1342		oc	Per	8.0
309		sg	Cet	12.5	891		sg	And	12.2	1353		sg	Eri	12.4
337		bg	Cet	12.2	895		sg	Cet	12.2	1357		sg	Eri	12.5
357		bg	Cet	13.0	908		sg	Cet	12.2	1359		bg	Eri	12.5
404		eg	And	11.9	922		bg	For	12.3	1371		bg	For	12.2
428		sg	Cet	11.7	925		sg	Tri	12.0	1376		sg	Eri	12.9
436		oc	Cas	10.0	936		bg	Cet	11.3	1385		sg	For	11.8
450		sg	Cet	12.6	941		sg	Cet	12.9	1395		eg	Eri	11.3
457		oc	Cas	8.0	949		sg	Tri	12.8	1398		bg	For	10.7
470		sg	Psc	12.4	957		oc	Per	11.0	1400		eg	Eri	12.4
474		eg	Psc	12.8	958		sg	Cet	13.0	1407		eg	Eri	11.4
488		sg	Psc	11.2	972		sg	Ari	12.3	1415		sg	Eri	12.8
514		sg	Psc	12.3	976		sg	Ari	12.7	1417		sg	Eri	12.9
520		ig	Psc	12.4	991		sg	Cet	12.7	1421		sg	Eri	12.0
521		bg	Cet	13.0	1022		sg	Cet	12.0	1426		eg	Eri	12.7
524		eg	Psc	11.8	1023		eg	Per	11.0	1439		eg	Eri	12.9
533		eg	Cet	13.0	1027		oc	Cas	8.0	1440		sg	Eri	13.0
559		oc	Cas	10.0	1035		sg	Cet	12.8	1452		bg	Eri	13.0
578		sg	Cet	11.7	1039	M34	oc	Per	6.0	1453		eg	Eri	12.8
581	M103	oc	Cas	8.0	1042		sg	Cet	12.5	1461		sg	Eri	12.8
584		eg	Cet	11.5	1052		eg	Cet	11.6	1501		pn	Cam	12.0
596		eg	Cet	12.2	1055		sg	Cet	12.0	1502		oc	Cam	8.0

NGC	M	type	con	mag	NGC	M	type	con	mag	NGC	M	type	con	mag
1507		bg	Eri	12.9	2194		oc	Ori	9.0	2452		pn	Pup	13.0
1513		oc	Per	9.0	2196		sg	Lep	12.6	2455		oc	Pup	12.0
1514		pn	Tau	11.0	2207		sg	CMA	12.3	2460		sg	Cam	12.7
1518		bg	Eri	12.2	2215		oc	Mon	11.0	2482		oc	Pup	10.0
1521		eg	Eri	13.0	2217		bg	CMA	12.0	2489		oc	Pup	11.0
1528		oc	Per	6.0	2223		bg	CMA	12.7	2500		bg	Lyn	12.2
1530		sg	Cam	13.0	2232		oc	Mon	6.0	2506		oc	Mon	11.0
1535		pn	Eri	9.0	2236		oc	Mon	11.0	2509		oc	Pup	10.0
1569		ig	Cam	11.8	2244		oc	Mon	5.0	2523		bg	Cam	12.7
1600		eg	Eri	12.4	2251		oc	Mon	10.0	2525		bg	Pup	12.3
1625		bg	Eri	13.0	2259		oc	Mon	12.0	2527		oc	Pup	11.0
1637		sg	Eri	11.4	2261		dn	Mon	10.0	2533		oc	Pup	12.0
1640		bg	Eri	12.5	2264		oc	Mon	6.0	2537		sg	Lyn	12.3
1647		oc	Tau	6.5	2266		oc	Gem	11.0	2539		oc	Pup	11.0
1659		sg	Eri	13.0	2268		sg	Cam	12.2	2541		sg	Lyn	12.0
1664		oc	Aur	11.0	2276		sg	Cep	12.4	2545		sg	Cnc	13.0
1667		sg	Eri	12.9	2280		sg	CMA	12.7	2548	M48	oc	Hya	5.5
1700		eg	Eri	12.2	2281		oc	Aur	7.0	2549		eg	Lyn	12.1
1726		eg	Eri	13.0	2283		sg	CMA	12.8	2552		ig	Lyn	12.5
1744		bg	Lep	12.3	2287	M41	oc	CMA	6.0	2571		oc	Pup	9.0
1746		oc	Tau	6.0	2300		eg	Cep	12.2	2587		oc	Pup	9.0
1758		oc	Tau	8.0	2301		oc	Mon	6.0	2608		sg	Cnc	12.8
1778		oc	Aur	10.0	2304		oc	Gem	10.0	2610		pn	Hya	13.0
1784		bg	Lep	12.6	2309		oc	Mon	12.0	2613		sg	Pyx	10.9
1807		oc	Tau	7.5	2314		eg	Cam	12.9	2627		oc	Pyx	11.0
1817		oc	Tau	8.0	2323	M50	oc	Mon	6.0	2632	M44	oc	Cnc	4.5
1832		sg	Lep	12.3	2324		oc	Mon	11.0	2633		bg	Cam	12.6
1857		oc	Aur	8.0	2325		sg	CMA	12.9	2639		sg	UMA	12.5
1883		oc	Aur	13.0	2336		sg	Cam	12.4	2642		bg	Hya	12.7
1893		oc	Aur	9.0	2339		sg	Gem	12.5	2646		eg	Cam	12.8
1904	M79	gc	Lep	8.4	2343		oc	Mon	10.0	2654		sg	UMA	12.7
1907		oc	Aur	10.0	2347		sg	Cam	12.7	2655		sg	Cam	11.6
1912	M38	oc	Aur	8.0	2353		oc	Mon	10.0	2672		eg	Cnc	12.6
1952	M1	sr	Tau	9.0	2355		oc	Gem	12.0	2681		sg	UMA	11.3
1960	M36	oc	Aur	9.0	2360		oc	CMA	9.0	2682	M67	oc	Cnc	7.0
1961		sg	Cam	11.6	2362		oc	CMA	4.0	2683		sg	Lyn	10.6
1976	M42	dn	Ori	5.0	2366		ig	Cam	12.6	2685		sg	UMA	12.2
1981		oc	Ori	8.0	2371		pn	Gem	12.5	2693		eg	UMA	13.0
1982	M43	dn	Ori	6.0	2372		pn	Gem	12.5	2701		sg	UMA	12.5
2017		oc	Lep	7.0	2374		oc	CMA	6.0	2712		bg	Lyn	12.7
2022		pn	Ori	12.0	2383		oc	CMA	12.0	2713		bg	Hya	12.7
2068	M78	dn	Ori	8.0	2392		pn	Gem	8.0	2715		sg	Cam	12.1
2099	M37	oc	Aur	9.0	2403		sg	Cam	8.8	2732		sg	Cam	12.9
2126		oc	Aur	11.0	2419		gc	Lyn	11.5	2742		sg	UMA	12.5
2129		oc	Gem	8.0	2420		oc	Gem	9.0	2748		sg	Cam	12.4
2139		sg	Lep	12.2	2421		oc	Pup	11.0	2763		sg	Hya	12.7
2146		sg	Cam	11.6	2422	M47	oc	Pup	5.0	2768		eg	UMA	11.6
2149		dn	Mon	12.5	2423		oc	Pup	12.0	2775		sg	Cnc	11.5
2158		oc	Gem	11.0	2437	M46	oc	Pup	8.0	2776		sg	Lyn	12.0
2168	M35	oc	Gem	5.5	2438		pn	Pup	11.0	2781		sg	Hya	12.7
2169		oc	Ori	8.0	2440		pn	Pup	11.5	2782		sg	Lyn	12.4
2179		sg	Lep	13.0	2441		sg	Cam	12.7	2784		eg	Hya	11.8
2192		oc	Aur	12.0	2447	M93	oc	Pup	7.0	2787		sg	UMA	12.0

NGC	M	type	con	mag	NGC	M	type	con	mag	NGC	M	type	con	mag
2793		sg	Lyn	12.9	3124		sg	Hya	12.8	3423		sg	Sex	11.7
2798		bg	Lyn	13.0	3125		eg	Ant	13.0	3430		sg	LMi	12.2
2811		bg	Hya	12.4	3145		bg	Hya	12.5	3432		sg	LMi	12.0
2815		bg	Hya	12.9	3147		sg	Dra	11.3	3433		sg	Leo	12.9
2835		bg	Hya	12.0	3158		eg	LMi	12.9	3437		sg	Leo	12.6
2841		sg	Uma	10.3	3162		sg	Leo	12.3	3445		sg	Uma	12.9
2844		sg	Lyn	13.0	3166		sg	Sex	11.5	3448		sg	Uma	12.6
2848		sg	Hya	12.8	3169		sg	Sex	11.4	3458		sg	Uma	13.0
2855		sg	Hya	12.5	3175		sg	Ant	12.1	3485		bg	Leo	12.8
2859		bg	LMi	12.2	3177		sg	Leo	12.8	3486		sg	LMi	11.2
2865		eg	Hya	12.5	3184		sg	Uma	10.5	3489		eg	Leo	11.3
2880		eg	Uma	12.7	3185		bg	Leo	12.7	3495		sg	Leo	12.7
2889		sg	Hya	12.4	3187		bg	Leo	13.0	3504		sg	LMi	11.6
2903		sg	Leo	9.7	3190		sg	Leo	12.0	3510		sg	LMi	12.8
2907		sg	Hya	12.9	3193		eg	Leo	12.0	3511		sg	Crt	11.9
2935		bg	Hya	12.4	3198		sg	Uma	11.0	3512		sg	LMi	12.8
2942		sg	LMi	12.9	3200		sg	Hya	12.8	3513		bg	Crt	12.0
2950		sg	Uma	12.0	3206		bg	Uma	13.0	3516		sg	Uma	12.4
2962		sg	Hya	12.9	3226		eg	Leo	12.7	3521		sg	Leo	10.2
2964		sg	Leo	11.9	3227		sg	Leo	11.6	3547		sg	Leo	12.9
2967		sg	Sex	12.4	3242		pn	Hya	8.9	3549		sg	Uma	12.8
2968		ig	Leo	12.8	3245		eg	LMi	11.8	3556	M108	sg	Uma	10.8
2974		eg	Sex	12.0	3254		sg	LMi	12.5	3583		sg	Uma	12.2
2976		sg	Uma	10.8	3259		ig	Uma	12.7	3585		eg	Hya	11.3
2983		bg	Hya	12.6	3274		sg	Leo	13.0	3587	M97	pn	Uma	11.0
2985		sg	Uma	11.3	3277		sg	LMi	12.5	3593		sg	Leo	12.0
2986		eg	Hya	12.2	3287		bg	Leo	12.8	3596		sg	Leo	12.2
2990		sg	Sex	13.0	3294		sg	LMi	11.6	3607		eg	Leo	11.2
2992		sg	Hya	13.0	3301		bg	Leo	12.3	3608		eg	Leo	12.2
2993		sg	Hya	13.0	3309		eg	Hya	12.7	3610		eg	Uma	11.6
2998		sg	Uma	12.8	3310		ig	Uma	11.0	3611		sg	Leo	12.6
3003		bg	LMi	12.1	3319		bg	Uma	11.8	3613		eg	Uma	11.7
3021		sg	LMi	13.0	3320		sg	Uma	12.9	3614		sg	Uma	12.9
3031	M81	sg	Uma	8.0	3329		sg	Dra	12.9	3619		sg	Uma	12.7
3032		sg	Leo	12.8	3338		sg	Leo	11.6	3623	M65	sg	Leo	10.3
3034	M82	ig	Uma	9.2	3344		sg	LMi	11.0	3626		sg	Leo	11.4
3041		sg	Leo	12.7	3346		sg	Leo	12.4	3627	M66	sg	Leo	9.7
3044		sg	Sex	12.6	3348		eg	Uma	12.0	3628		sg	Leo	10.3
3052		sg	Hya	13.0	3351	M95	bg	Leo	11.0	3629		sg	Leo	12.9
3054		sg	Hya	12.6	3353		sg	Uma	13.0	3630		eg	Leo	12.8
3055		sg	Sex	12.5	3359		bg	Uma	11.0	3631		sg	Uma	11.5
3056		eg	Ant	12.8	3367		sg	Leo	12.1	3637		bg	Crt	12.8
3065		sg	Uma	12.9	3368	M96	sg	Leo	10.2	3640		eg	Leo	11.6
3067		sg	Leo	12.7	3370		sg	Leo	12.4	3642		sg	Uma	11.9
3077		eg	Uma	11.0	3377		eg	Leo	11.4	3646		sg	Leo	11.8
3078		eg	Hya	12.2	3379	M105	eg	Leo	10.6	3655		sg	Leo	12.5
3079		bg	Uma	11.4	3384		eg	Leo	11.0	3659		sg	Leo	12.9
3081		sg	Hya	12.8	3389		sg	Leo	12.2	3664		bg	Leo	12.9
3089		sg	Ant	13.0	3395		sg	LMi	12.4	3665		eg	Uma	12.1
3091		eg	Hya	12.7	3396		eg	LMi	12.8	3666		sg	Leo	12.6
3098		eg	Leo	13.0	3403		sg	Dra	12.9	3672		sg	Crt	11.8
3109		ig	Hya	11.2	3412		eg	Leo	11.6	3673		bg	Hya	12.9
3115		eg	Sex	10.0	3414		sg	LMi	12.1	3675		sg	Uma	11.4

NGC	M	type	con	mag	NGC	M	type	con	mag	NGC	M	type	con	mag
3681		sg	Leo	12.6	3985		bg	UMa	12.9	4189		sg	Vir	12.7
3684		sg	Leo	12.4	3992	M109	bg	UMa	10.9	4192	M98	sg	Com	11.0
3686		sg	Leo	12.0	3995		sg	UMa	12.9	4203		eg	Com	11.7
3687		sg	UMa	13.0	3998		eg	UMa	11.6	4212		sg	Com	12.0
3689		sg	Leo	12.8	4008		eg	Leo	12.9	4214		ig	CVn	10.5
3690		sg	UMa	12.1	4013		sg	UMa	12.7	4215		sg	Vir	12.8
3705		sg	Leo	12.2	4024		eg	Crv	12.9	4216		sg	Vir	10.9
3717		sg	Hya	12.6	4026		eg	UMa	11.9	4217		sg	CVn	11.9
3718		bg	UMa	11.8	4027		sg	Crv	11.6	4220		sg	CVn	12.3
3720		eg	Leo	13.0	4030		sg	Vir	11.2	4224		sg	Vir	12.8
3726		sg	UMa	11.3	4032		ig	Com	13.0	4233		eg	Vir	13.0
3729		bg	UMa	12.5	4033		eg	Crv	12.8	4234		bg	Vir	13.0
3732		eg	Crt	12.9	4036		eg	UMa	11.6	4235		sg	Vir	12.7
3735		sg	Dra	12.6	4037		bg	Vir	12.8	4236		sg	Dra	10.7
3738		ig	UMa	12.1	4038		sg	Crv	11.0	4237		sg	Com	12.6
3756		sg	UMa	12.3	4041		sg	UMa	11.7	4242		sg	CVn	11.5
3769		sg	UMa	12.5	4045		sg	Vir	12.8	4244		sg	CVn	10.7
3773		eg	Leo	13.0	4047		sg	UMa	12.8	4245		bg	Com	12.3
3780		sg	UMa	12.6	4050		bg	Crv	12.5	4251		sg	Com	11.3
3782		bg	UMa	12.9	4051		sg	UMa	11.2	4254	M99	sg	Com	10.4
3810		sg	Leo	11.5	4062		sg	UMa	12.2	4256		sg	Dra	13.0
3813		sg	UMa	12.6	4064		sg	Com	12.8	4258	M106	sg	CVn	9.0
3818		eg	Vir	12.9	4085		sg	UMa	12.8	4260		bg	Vir	12.7
3865		sg	Crt	13.0	4088		sg	UMa	11.1	4261		eg	Vir	11.7
3872		eg	Leo	12.9	4094		sg	Crv	13.0	4262		sg	Com	12.6
3877		sg	UMa	12.0	4096		sg	UMa	11.5	4267		eg	Vir	12.0
3885		sg	Hya	12.9	4100		sg	UMa	11.9	4270		sg	Vir	13.0
3887		sg	Crt	11.6	4102		sg	UMa	12.2	4273		sg	Vir	12.3
3888		sg	UMa	13.0	4105		eg	Hya	12.0	4274		sg	Com	11.5
3892		sg	Crt	12.9	4106		eg	Hya	12.5	4278		eg	Com	11.4
3893		sg	UMa	11.0	4111		eg	CVn	11.6	4281		eg	Vir	12.2
3894		eg	UMa	13.0	4116		bg	Vir	12.3	4283		eg	Com	12.9
3898		sg	UMa	11.9	4123		bg	Vir	12.0	4290		bg	UMa	12.7
3900		bg	Leo	12.5	4124		sg	Vir	12.5	4291		eg	Dra	12.4
3904		eg	Hya	11.9	4125		eg	Dra	11.1	4293		sg	Com	11.7
3912		sg	Leo	13.0	4128		sg	Dra	12.9	4294		bg	Vir	12.6
3917		sg	UMa	12.8	4129		bg	Vir	12.9	4298		sg	Com	11.9
3923		eg	Hya	11.1	4136		sg	Com	12.1	4299		bg	Vir	12.9
3936		sg	Hya	13.0	4138		eg	CVn	12.3	4302		sg	Com	12.9
3938		sg	UMa	11.2	4143		eg	CVn	12.1	4303	M61	sg	Vir	10.2
3941		eg	UMa	11.3	4144		sg	UMa	12.4	4307		sg	Vir	13.0
3945		sg	UMa	11.9	4145		sg	CVn	12.2	4314		bg	Com	11.6
3949		sg	UMa	11.5	4147		gc	Com	11.0	4319		bg	Dra	13.0
3952		ig	Vir	13.0	4150		eg	Com	12.6	4321	M100	sg	Com	10.4
3953		bg	UMa	11.1	4151		bg	CVn	11.2	4324		sg	Vir	12.5
3955		sg	Crt	12.8	4152		sg	Com	12.7	4339		eg	Vir	12.6
3956		sg	Crt	12.6	4157		sg	UMa	12.0	4340		bg	Com	13.0
3957		eg	Crt	12.9	4158		sg	Com	12.9	4342		sg	Vir	13.0
3962		eg	Crt	12.0	4160		sg	CVn	12.6	4346		eg	CVn	12.4
3963		sg	UMa	12.7	4162		sg	Com	12.6	4350		eg	Com	11.9
3976		sg	Vir	12.4	4168		eg	Vir	12.6	4361		pn	Crv	10.5
3981		sg	Crt	12.7	4178		bg	Vir	12.0	4365		eg	Vir	11.0
3982		sg	UMa	11.8	4179		eg	Vir	11.7	4369		sg	CVn	12.4

NGC	M	type	con	mag	NGC	M	type	con	mag	NGC	M	type	con	mag
4371		sg	Vir	11.8	4504		sg	Vir	12.3	4654		sg	Vir	11.2
4374	M84	eg	Vir	10.5	4517		sg	Vir	11.4	4656		ig	CVn	11.0
4377		eg	Com	12.9	4519		bg	Vir	12.4	4658		bg	Vir	12.4
4378		sg	Vir	12.8	4522		sg	Vir	12.9	4660		eg	Vir	12.2
4379		eg	Com	13.0	4526		eg	Vir	10.7	4665		sg	Vir	11.8
4380		sg	Vir	12.8	4527		sg	Vir	11.3	4666		sg	Vir	11.4
4382	M85	eg	Com	10.5	4532		ig	Vir	12.1	4670		eg	Com	12.7
4383		eg	Com	12.9	4535		bg	Vir	10.7	4684		sg	Vir	12.2
4385		sg	Vir	12.9	4536		sg	Vir	11.0	4688		sg	Vir	13.0
4386		eg	Dra	12.8	4540		ig	Com	12.9	4689		sg	Com	11.7
4388		bg	Vir	12.0	4546		eg	Vir	11.4	4691		bg	Vir	11.8
4389		bg	CVn	12.8	4548		bg	Com	10.9	4694		eg	Vir	12.6
4394		bg	Com	12.0	4550		eg	Vir	12.6	4697		eg	Vir	10.5
4395		sg	CVn	11.0	4551		eg	Vir	13.0	4698		sg	Vir	11.8
4402		sg	Vir	13.0	4552	M89	eg	Vir	11.0	4699		sg	Vir	10.3
4406	M86	eg	Vir	10.5	4559		sg	Com	10.5	4700		bg	Vir	12.5
4412		bg	Vir	12.8	4561		sg	Com	12.5	4701		sg	Vir	12.8
4414		sg	Com	11.0	4564		eg	Vir	12.1	4710		sg	Com	12.0
4417		eg	Vir	12.2	4565		sg	Com	10.5	4713		sg	Vir	12.3
4419		bg	Com	12.2	4567		sg	Vir	12.0	4725		bg	Com	10.5
4420		bg	Vir	12.5	4568		sg	Vir	11.9	4731		bg	Vir	12.2
4424		bg	Vir	12.5	4569	M90	sg	Vir	11.1	4736	M94	sg	CVn	8.9
4425		sg	Vir	12.9	4570		eg	Vir	11.8	4742		eg	Vir	12.0
4429		sg	Vir	11.3	4571		sg	Com	12.2	4747		sg	Com	12.8
4433		sg	Vir	12.9	4578		sg	Vir	12.5	4750		sg	Dra	12.2
4435		eg	Vir	11.8	4579	M58	sg	Vir	10.5	4753		eg	Vir	10.6
4438		sg	Vir	11.0	4580		sg	Vir	12.8	4754		sg	Vir	11.8
4442		eg	Vir	11.6	4586		sg	Vir	12.7	4760		eg	Vir	12.5
4448		sg	Com	11.7	4589		eg	Dra	12.1	4762		sg	Vir	11.5
4449		ig	CVn	10.5	4590	M68	gc	Hya	8.0	4765		sg	Vir	12.9
4450		sg	Com	11.1	4592		sg	Vir	12.4	4771		sg	Vir	12.9
4454		bg	Vir	12.8	4593		bg	Vir	12.1	4772		sg	Vir	12.6
4455		sg	Com	13.0	4594	M104	sg	Vir	8.2	4775		sg	Vir	11.6
4457		bg	Vir	11.7	4596		sg	Vir	12.0	4781		bg	Vir	11.7
4458		eg	Vir	13.0	4597		bg	Vir	12.9	4782		eg	Crv	12.9
4459		sg	Com	11.7	4602		sg	Vir	12.4	4783		eg	Crv	12.9
4460		eg	CVn	12.6	4605		sg	UMa	10.9	4786		eg	Vir	12.7
4461		sg	Vir	12.2	4606		eg	Vir	13.0	4790		bg	Vir	12.5
4462		sg	Crv	13.0	4608		sg	Vir	12.1	4793		sg	Com	12.4
4469		bg	Vir	12.5	4612		sg	Vir	12.6	4800		sg	CVn	12.2
4472	M49	eg	Vir	10.1	4618		sg	CVn	11.2	4808		sg	Vir	12.5
4473		eg	Vir	11.3	4621	M59	eg	Vir	11.0	4814		sg	UMa	12.5
4474		eg	Com	12.8	4631		sg	CVn	12.5	4818		sg	Vir	12.1
4477		bg	Com	11.6	4632		sg	Vir	12.1	4825		eg	Vir	12.9
4478		eg	Vir	12.4	4635		sg	Com	13.0	4826	M64	sg	Com	8.6
4485		eg	CVn	12.5	4636		eg	Vir	10.8	4845		sg	Vir	12.6
4486	M87	eg	Vir	10.1	4638		eg	Vir	12.2	4856		bg	Vir	11.4
4487		sg	Vir	12.0	4639		bg	Vir	12.2	4861		ig	CVn	12.8
4490		sg	CVn	10.1	4643		bg	Vir	11.6	4866		sg	Vir	12.0
4494		eg	Com	10.9	4647		sg	Vir	12.0	4891		sg	Vir	13.0
4496		bg	Vir	12.0	4649	M60	eg	Vir	10.0	4899		sg	Vir	12.7
4501	M88	sg	Com	10.5	4651		sg	Com	11.4	4900		sg	Vir	11.9
4503		eg	Vir	12.8	4653		sg	Vir	12.7	4902		bg	Vir	11.6

NGC	M	type	con	mag	NGC	M	type	con	mag	NGC	M	type	con	mag
4904		bg	Vir	12.8	5324		sg	Vir	12.6	5669		sg	Boo	12.5
4914		eg	CVn	13.0	5328		eg	Hya	12.9	5676		sg	Boo	11.9
4915		eg	Vir	13.0	5334		bg	Vir	12.5	5678		sg	Dra	12.1
4928		sg	Vir	12.9	5350		sg	CVn	12.9	5687		sg	Boo	12.7
4933		sg	Vir	12.8	5351		sg	CVn	13.0	5689		bg	Boo	12.6
4939		sg	Vir	12.2	5353		eg	CVn	12.3	5690		sg	Vir	12.9
4941		sg	Vir	12.2	5354		eg	CVn	13.0	5691		sg	Vir	13.0
4951		sg	Vir	12.7	5363		ig	Vir	11.1	5694		gc	Hya	11.0
4958		sg	Vir	11.5	5364		sg	Vir	11.5	5701		bg	Vir	12.8
4981		sg	Vir	12.2	5371		sg	CVn	11.5	5713		sg	Vir	11.8
4984		bg	Vir	11.9	5376		sg	UMa	13.0	5728		bg	Lib	12.4
4995		sg	Vir	11.8	5377		sg	CVn	12.0	5740		sg	Vir	12.6
4999		bg	Vir	12.8	5383		bg	CVn	12.7	5746		sg	Vir	11.7
5005		sg	CVn	10.8	5389		sg	UMa	13.0	5750		bg	Vir	12.6
5012		sg	Com	12.6	5395		sg	CVn	12.7	5757		bg	Lib	12.6
5016		sg	Com	12.8	5406		sg	CVn	13.0	5768		ig	Lib	12.9
5018		eg	Vir	12.2	5422		sg	UMa	13.0	5775		bg	Vir	12.3
5024	M53	gc	Com	8.0	5426		sg	Vir	12.7	5791		sg	Lib	13.0
5033		sg	CVn	11.0	5427		sg	Vir	12.0	5792		sg	Lib	12.9
5044		eg	Vir	12.2	5430		sg	UMa	12.8	5796		eg	Lib	12.8
5053		gc	Com	10.5	5448		sg	UMa	12.3	5806		sg	Vir	12.4
5054		sg	Vir	11.9	5457	M101	sg	UMa	9.0	5812		eg	Lib	12.6
5055	M63	sg	CVn	9.8	5466		gc	Boo	9.0	5813		eg	Vir	12.1
5061		eg	Hya	11.7	5468		sg	Vir	12.4	5820		eg	Boo	12.8
5068		bg	Vir	11.6	5473		eg	UMa	12.6	5831		eg	Vir	12.7
5077		eg	Vir	12.4	5474		ig	UMa	11.9	5838		sg	Vir	11.9
5084		eg	Vir	12.4	5480		sg	UMa	12.6	5846		eg	Vir	11.5
5085		sg	Hya	12.3	5485		sg	UMa	12.6	5850		bg	Vir	12.0
5087		eg	Vir	12.4	5493		sg	Vir	12.5	5854		sg	Vir	12.6
5101		bg	Hya	12.5	5496		sg	Vir	12.8	5861		sg	Lib	12.4
5112		sg	CVn	12.6	5523		sg	Boo	12.8	5864		sg	Vir	12.8
5116		sg	Com	12.9	5533		sg	Boo	12.6	5866		eg	Dra	11.1
5134		sg	Vir	12.4	5534		bg	Vir	13.0	5878		sg	Lib	12.6
5135		bg	Hya	12.8	5548		sg	Boo	12.9	5879		sg	Dra	12.2
5147		sg	Vir	12.1	5556		bg	Hya	12.5	5885		sg	Lib	12.4
5170		sg	Vir	12.6	5557		eg	Boo	12.6	5897		gc	Lib	10.0
5172		sg	Com	12.5	5566		bg	Vir	11.4	5898		eg	Lib	12.6
5194	M51	sg	CVn	8.7	5576		eg	Vir	11.9	5899		sg	Boo	12.4
5195		ig	CVn	11.0	5584		sg	Vir	12.2	5903		eg	Lib	12.8
5198		eg	CVn	12.9	5585		sg	UMa	11.6	5904	M5	gc	Ser	6.2
5204		ig	UMa	11.9	5595		sg	Lib	12.4	5907		sg	Dra	11.0
5230		sg	Vir	12.9	5597		sg	Lib	12.6	5908		sg	Dra	13.0
5236	M83	sg	Hya	8.0	5600		sg	Boo	12.4	5915		sg	Lib	12.5
5247		sg	Vir	11.9	5614		sg	Boo	12.9	5921		bg	Ser	12.0
5248		sg	Boo	11.0	5631		sg	UMa	12.5	5936		bg	Ser	12.9
5272	M3	gc	CVn	6.0	5633		sg	Boo	12.8	5949		sg	Dra	12.9
5273		eg	CVn	12.7	5634		gc	Vir	10.0	5962		sg	Ser	11.9
5297		sg	CVn	13.0	5638		eg	Vir	12.5	5970		sg	Ser	12.4
5300		sg	Vir	12.3	5645		bg	Vir	12.9	5982		eg	Dra	12.4
5301		sg	CVn	13.0	5653		sg	Boo	12.9	5984		bg	Ser	13.0
5308		sg	UMa	12.6	5660		sg	Boo	12.3	5985		sg	Dra	12.0
5313		sg	CVn	13.0	5665		sg	Boo	12.7	6015		sg	Dra	11.8
5322		eg	UMa	11.3	5668		sg	Vir	12.3	6052		sg	Her	13.0

NGC	M	type	con	mag	NGC	M	type	con	mag	NGC	M	type	con	mag
6058		pn	Her	12.0	6530		oc	Sgr	7.0	6800		oc	Vul	10.0
6070		sg	Ser	12.5	6531	M21	oc	Sgr	7.0	6802		oc	Vul	11.0
6093	M80	gc	Sco	8.0	6535		gc	Ser	11.0	6803		pn	Aql	11.0
6106		sg	Her	12.9	6537		pn	Sgr	12.0	6804		pn	Aql	13.0
6118		sg	Ser	12.3	6539		gc	Ser	12.0	6809	M55	gc	-Sgr	7.0
6121	M4	gc	Sco	7.4	6543		pn	Dra	8.6	6811		oc	Cyg	9.0
6144		gc	Sco	10.0	6544		gc	Sgr	9.0	6814		sg	Aql	12.2
6171	M107	gc	Oph	9.0	6546		oc	Sgr	11.0	6815		oc	Vul	9.0
6181		sg	Her	12.5	6553		gc	Sgr	10.0	6818		pn	Sgr	10.0
6205	M13	gc	Her	5.7	6565		pn	Sgr	13.0	6819		oc	Cyg	10.0
6207		sg	Her	12.3	6567		pn	Sgr	11.5	6822		ig	Sgr	11.0
6210		pn	Her	12.3	6568		oc	Sgr	11.0	6823		oc	Vul	10.0
6217		sg	UMi	12.0	6572		pn	Oph	9.0	6826		pn	Cyg	8.8
6218	M12	gc	Oph	8.0	6574		sg	Her	12.8	6830		oc	Vul	9.0
6229		gc	Her	8.7	6583		oc	Sgr	12.0	6834		oc	Vul	11.0
6235		gc	Oph	10.0	6603	M24	oc	Sgr	10.0	6835		eg	Sgr	13.0
6239		bg	Her	12.9	6611	M16	dn	Ser	6.5	6838	M71	gc	Sge	9.0
6254	M10	gc	Oph	7.0	6613	M18	oc	Sgr	8.0	6842		pn	Vul	13.0
6266	M62	gc	-Sco	6.5	6618	M17	dn	Sgr	6.0	6853	M27	pn	Vul	8.0
6273	M19	gc	Oph	7.0	6626	M28	gc	Sgr	8.0	6864	M75	gc	Sgr	8.0
6284		gc	Oph	10.0	6629		pn	Sgr	10.5	6866		oc	Cyg	8.0
6287		gc	Oph	10.0	6633		oc	Oph	5.0	6879		pn	Sge	11.0
6293		gc	Oph	8.0	6637	M69	gc	Sgr	7.5	6884		pn	Cyg	12.5
6304		gc	Oph	9.0	6638		gc	Sgr	9.5	6885		oc	Vul	6.0
6309		pn	Oph	11.5	6642		gc	Sgr	8.0	6886		pn	Sge	11.0
6316		gc	Oph	10.0	6643		sg	Dra	12.0	6891		pn	Del	10.0
6325		gc	Oph	12.0	6644		pn	Sgr	12.0	6905		pn	Del	12.0
6333	M9	gc	Oph	8.0	6645		oc	Sgr	9.0	6907		bg	Cap	12.1
6340		sg	Dra	12.4	6649		oc	Sct	9.0	6910		oc	Cyg	6.5
6341	M92	gc	Her	6.5	6656		gc	Sgr	6.0	6913	M29	oc	Cyg	7.0
6342		gc	Oph	11.0	6664		oc	Sct	9.0	6934		gc	Del	9.0
6355		gc	Oph	10.0	6681	M70	gc	-Sgr	8.0	6939		oc	Cep	12.0
6356		gc	Oph	8.5	6682		oc	Sct	8.0	6940		oc	Vul	8.0
6366		gc	Oph	12.0	6683		oc	Sct	8.0	6946		sg	Cep	11.1
6369		pn	Oph	11.0	6694	M26	oc	Sct	9.5	6951		bg	Cep	12.3
6384		sg	Oph	12.3	6703		eg	Lyr	13.0	6981	M72	gc	Aqr	8.6
6401		gc	Oph	11.0	6704		oc	Sct	12.0	6994	M73	ms	Aqr	10.5
6402	M14	gc	Oph	9.0	6705	M11	oc	Sct	6.0	6997		oc	Cyg	8.0
6405	M6	oc	-Sco	6.0	6709		oc	Aql	8.0	7000		dn	Cyg	12.0
6412		sg	Dra	12.2	6712		gc	Sct	9.0	7006		gc	Del	11.5
6426		gc	Oph	12.0	6715	M54	gc	-Sgr	9.0	7008		pn	Cyg	12.0
6439		pn	Sgr	13.0	6720	M57	pn	Lyr	9.0	7009		pn	Aqr	8.0
6440		gc	Sgr	10.0	6741		pn	Aql	12.0	7026		pn	Cyg	12.0
6445		pn	Sgr	13.0	6751		pn	Aql	12.0	7027		pn	Cyg	9.0
6469		oc	Sgr	9.0	6755		oc	Aql	12.0	7048		pn	Cyg	11.0
6475	M7	oc	-Sco	5.0	6756		oc	Aql	10.5	7062		oc	Cyg	12.0
6482		eg	Her	12.2	6760		gc	Aql	11.0	7078	M15	gc	Peg	6.5
6494	M23	oc	Sgr	7.0	6774		oc	Sgr	12.0	7082		oc	Cyg	10.0
6503		sg	Dra	11.0	6778		pn	Aql	13.0	7086		oc	Cyg	9.0
6514	M20	dn	Sgr	5.0	6779	M56	gc	Lyr	8.0	7089	M2	gc	Aqr	6.0
6517		gc	Oph	12.0	6781		pn	Aql	12.5	7092	M39	oc	Cyg	5.0
6520		oc	Sgr	9.0	6790		pn	Aql	11.5	7099	M30	gc	Cap	8.0
6523	M8	dn	Sgr	5.0	6791		oc	Lyr	11.0	7127		oc	Cyg	10.0

