

## Concard 2011 Observing List

### Evening of 2012 Mar 23 at Karoo Starparty

Sunset 18:38, Twilight ends 19:53, Twilight begins 05:12, Sunrise 06:26, Moon rise 07:57, Moon set 18:52  
 Completely dark from 19:53 to 05:12. New Moon. All times local (GMT+2).

Listing All Classes visible above the perfect horizon and in complete darkness after 19:53 and before 05:12.

Cls	Primary ID	Alternate ID	Con	Mag	Size	Distance	RA 2000	Dec 2000	Begin	Optimum	End	S.A.	Ur. 2	PSA	Difficulty	Optimum EP
Gal	NGC 2997	MCG -5-23-12	Ant	10.1	9.8'x 6.8'		09h45m38.8s	-31°11'28"	19:34	22:05	01:53	20	170	39	detectable	Ultima 42mm
DVar	Delta 1 Aps	Delta 1 Aps	Aps	4.8		770 ly	16h20m20.8s	-78°41'45"	22:47	04:40	05:54	26	216	60	obvious	Ultima 42mm
Glob	NGC 6101		Aps	9.2	5.0'	68000 ly	16h25m49.0s	-72°12'06"	23:01	04:43	05:31	26	207	60	detectable	Ultima 42mm
PNe	NGC 7293	Helix	Aqr	6.3	16.0'	530 ly	22h29m38.5s	-20°50'14"	04:55	05:19	05:31	23	142	77	detectable	Ultima 42mm
Glob	NGC 6981	M 72	Aqr	9.2	6.6'	68000 ly	20h53m28.0s	-12°32'12"	05:02	05:14	05:28	16	124	66	difficult	Ultima 42mm
PNe	NGC 7009	Saturn Nebula	Aqr	8.3	28"	3200 ly	21h04m10.9s	-11°21'48"	03:48	05:16	05:39	16	123	77	obvious	Plössl 10mm
Glob	NGC 7089	M 2	Aqr	6.6	16.0'	49000 ly	21h33m27.0s	-00°49'24"	04:53	05:18	05:30	17	103	77	detectable	Ultima 42mm
Dark	B 133	LDN 531	Aql	6.0			19h06m10.0s	-06°53'45"	03:29	05:15	05:53	16	125	67	unknown	Plössl 4mm
PNe	NGC 6781	PN G041.8-02.9	Aql	11.8	1.9'	2500 ly	19h18m28.1s	+06°32'19"	04:27	05:13	05:27	16	85	65	challenging	E-Lux 2" 40mm 2.0x
Open	NGC 6709	Collinder 392	Aql	7.4	14.0'	3500 ly	18h51m18.0s	+10°19'06"	04:06	05:12	05:32	16	85	65	detectable	Ultima 42mm
Dark	B 142		Aql	5.0	40.0'		19h39m42.0s	+10°31'00"	04:56	05:16	05:31	16	85	64	difficult	Celestron Plössl 15mm
Dark	B 143	Barnard's E	Aql	6.0	30.0'		19h40m42.0s	+10°57'00"	04:59	05:15	05:31	16	85	64	not visible	Celestron Plössl 32mm
Open	NGC 6738	Collinder 396	Aql	8.3	15.0'		19h01m21.0s	+11°36'54"	04:23	05:12	05:30	16	85	65	detectable	Ultima 42mm
Open	NGC 6208	Collinder 313	Ara	9.5	18.0'	3100 ly	16h49m28.0s	-53°43'42"	02:52	04:57	05:24	26	196	58	very challenging	Ultima 42mm
Glob	NGC 6397		Ara	5.3	31.0'	6500 ly	17h40m42.0s	-53°40'24"	00:47	05:04	05:33	26	195	58	easy	Celestron Plössl 32mm
Open	IC 4651	Collinder 327	Ara	8.0	10.0'	2900 ly	17h24m49.0s	-49°56'00"	00:46	05:04	05:35	22	181	58	easy	Ultima 42mm
Open	NGC 6193	Collinder 310	Ara	5.4	14.0'	3800 ly	16h41m20.0s	-48°45'48"	23:50	04:55	05:37	22	182	58	obvious	Ultima 42mm
Doub	30 Ari	HR 764	Ari	7.1		130 ly	02h36m57.9s	+24°38'53"	19:11	19:26	19:38	4	79	4	obvious	Ultima 42mm
Open	NGC 2099	M 37	Aur	6.2	14.0'	4500 ly	05h52m18.0s	+32°33'12"	19:30	19:50	21:13	5	59	12	easy	Ultima 42mm
Open	NGC 1960	M 36	Aur	6.5	10.0'	4300 ly	05h36m18.0s	+34°08'24"	19:28	19:48	21:00	5	59	12	easy	Ultima 42mm
Open	NGC 1912	M 38	Aur	6.8	20.0'	3500 ly	05h28m40.0s	+35°50'54"	19:33	19:47	20:31	5	59	12	detectable	Ultima 42mm
Doub	Epsilon Boo	36 Boo	Boo	2.4		210 ly	14h44m59.2s	+27°04'27"	01:51	03:04	04:16	7	70	44	obvious	Celestron Plössl 9mm 2.0x
Glob	NGC 5466		Boo	9.2	9.0'	52000 ly	14h05m27.0s	+28°32'06"	01:36	02:24	03:12	7	70	44	challenging	Ultima 42mm
DVar	Mu 1 Boo	51 Boo	Boo	4.3		120 ly	15h24m29.3s	+37°22'39"	00:07	03:43	05:53	7	51	53	obvious	Ultima 42mm
DVar	Gamma 1 Cae	HR 1652	Cae	4.6		180 ly	05h04m24.5s	-35°28'59"	19:03	19:49	22:16	19	173	18	obvious	Plössl 10mm 2.0x
Gal	NGC 1679	MCG -5-12-4	Cae	12.2	2.9'x 2.0'		04h49m55.6s	-31°58'02"	19:36	19:53	21:24	19	173	18	difficult	Celestron Plössl 32mm 2.0x
Open	NGC 2682	M 67	Cnc	7.4	25.0'	3000 ly	08h51m18.0s	+11°48'00"	19:36	21:11	23:55	12	94	24	detectable	Ultima 42mm
Open	NGC 2632	M 44	Cnc	3.9	70.0'	610 ly	08h40m24.0s	+19°40'00"	19:32	21:01	23:18	6	74	24	easy	E-Lux 2" 26mm
Glob	NGC 5272	M 3	CVn	6.3	18.0'	42000 ly	13h42m11.0s	+28°22'42"	01:10	02:01	02:53	7	71	44	detectable	Ultima 42mm
Gal	NGC 4736	M 94	CVn	8.7	10.0'x 8.7'	17.0 Mly	12h50m53.1s	+41°07'12"	23:11	01:10	03:09	7	37	43	detectable	Ultima 42mm
Open	NGC 2362	Collinder 136	CMa	3.8	5.0'	4500 ly	07h18m41.0s	-24°57'18"	19:21	20:01	00:11	19	154	27	obvious	E-Lux 2" 40mm
Open	NGC 2287	M 41	CMa	5.0	39.0'	2300 ly	06h46m01.0s	-20°45'24"	19:30	19:57	23:24	19	154	27	easy	Celestron Plössl 32mm 2.0x
Doub	Eta CMi	5 CMi	CMi	5.2		350 ly	07h28m02.1s	+06°56'31"	19:09	20:00	23:03	12	95	25	obvious	Plössl 6mm
Open	Dolidze 26	OCL 516	CMi		23.0'		07h30m06.0s	+11°54'00"	-	-	-	12	95	24	unknown	Ultima 42mm
Glob	NGC 7099	M 30	Cap	6.9	12.0'	39000 ly	21h40m22.0s	-23°10'42"	04:28	05:16	05:30	23	143	77	detectable	Ultima 42mm

Cl	Primary ID	Alternate ID	Con	Mag	Size	Distance	RA 2000	Dec 2000	Begin	Optimum	End	S.A.	Ur. 2	PSA	Difficulty	Optimum EP
DVar	Alpha 1 Cap	5 Cap	Cap	4.3		690 ly	20h17m38.9s	-12°30'30"	04:27	05:17	05:53	16	124	66	obvious	Ultima 42mm
Glob	NGC 2808		Car	6.2	14.0'	26000 ly	09h12m03.0s	-64°51'48"	19:30	21:31	03:04	25	210	40	easy	Ultima 42mm
Open	IC 2602	Collinder 229	Car	1.6	100.0'	520 ly	10h42m58.0s	-64°24'00"	19:29	23:02	04:35	25	210	40	obvious	Plössl 4mm
Open	NGC 2516	Collinder 172	Car	3.3	30.0'	1300 ly	07h58m04.0s	-60°45'12"	19:27	20:19	01:44	24	200	30	obvious	Celestron Plössl 32mm 2.0x
Open	NGC 3114	Collinder 215	Car	4.5	35.0'	3000 ly	10h02m36.0s	-60°07'12"	19:31	22:22	03:49	25	199	40	obvious	Celestron Plössl 32mm 2.0x
Neb	NGC 3372	Eta Carinae Nebula	Car	3.0	120.0'		10h45m06.0s	-59°52'00"	19:30	23:04	04:32	25	199	38	obvious	Ultima 42mm
Open	NGC 3532	Collinder 238	Car	3.4	50.0'	1600 ly	11h05m39.0s	-58°45'12"	19:29	23:25	04:50	25	198	38	obvious	Celestron Plössl 32mm
Open	NGC 3324	Collinder 225	Car	6.7	12.0'	7600 ly	10h37m20.0s	-58°38'30"	19:31	22:57	04:22	25	199	38	easy	Ultima 42mm
PNe	NGC 2867	He 2-27	Car	9.7	12"	6100 ly	09h21m25.3s	-58°18'41"	19:23	21:41	03:04	25	199	39	obvious	Celestron Plössl 9mm 2.0x
Open	NGC 3293	Collinder 224	Car	6.2	6.0'	7600 ly	10h35m51.0s	-58°13'48"	19:26	22:56	04:19	25	199	38	obvious	Ultima 42mm
Open	IC 2581	Collinder 222	Car	5.3	5.0'	8000 ly	10h27m29.0s	-57°37'00"	19:25	22:47	04:10	25	199	39	obvious	E-Lux 2" 40mm
Open	NGC 5281	Melotte 120	Cen	8.2	7.0'	3600 ly	13h46m35.0s	-62°55'00"	20:35	02:06	05:33	25	208	50	easy	Ultima 42mm
DVar	Proxima Centauri	V645 Cen	Cen	10.8		4 ly	14h29m36.2s	-62°40'37"	21:18	02:49	05:52	25	208	50	obvious	Ultima 2" LX 17 mm 2.0x
Open	NGC 3766	Collinder 248	Cen	4.6	9.3'	7200 ly	11h36m14.0s	-61°36'30"	19:26	23:56	05:25	25	198	40	obvious	Ultima 42mm
DVar	Rigel Kentaurus	Alpha 1 Cen	Cen	0.0		4 ly	14h39m30.3s	-60°49'56"	21:32	02:59	06:07	25	197	50	obvious	Ultima 2" LX 17 mm 2.0x
PNe	NGC 3918	Blue Planetary	Cen	8.4	12"	4600 ly	11h50m17.7s	-57°10'57"	19:23	00:09	05:32	25	198	38	obvious	Celestron Plössl 9mm 2.0x
Open	NGC 5662	Collinder 284	Cen	7.7	29.0'	2200 ly	14h35m37.0s	-56°37'06"	23:16	02:55	05:26	25	197	48	difficult	Celestron Plössl 32mm 2.0x
Glob	NGC 5286		Cen	7.4	11.0'	39000 ly	13h46m27.0s	-51°22'24"	21:11	02:06	05:31	21	183	48	easy	Ultima 42mm
Gal	NGC 4945	ESO 219 24	Cen	9.3	20.4'x 4.3'	15.0 Mly	13h05m26.2s	-49°28'15"	21:01	01:24	05:23	21	184	49	detectable	Celestron Plössl 9mm
Open	NGC 5460	Collinder 280	Cen	6.1	35.0'	2200 ly	14h07m27.0s	-48°20'36"	21:56	02:26	05:29	21	183	48	easy	Celestron Plössl 32mm 2.0x
Glob	NGC 5139	Omega Centauri	Cen	3.9	55.0'	16000 ly	13h26m46.0s	-47°28'36"	20:37	01:46	05:32	21	184	49	easy	E-Lux 2" 26mm
Gal	NGC 5128	Centaurus A	Cen	7.8	27.5'x 18.2'	12.0 Mly	13h25m27.7s	-43°01'07"	21:17	01:45	05:27	21	184	49	detectable	Ultima 42mm
Gal	NGC 247	MCG -4-3-5	Cet	9.7	20.0'x 5.0'	8.1 Mly	00h47m08.6s	-20°45'38"	19:21	19:33	19:47	18	158	7	not visible	E-Lux 2" 26mm
Gal	NGC 1068	M 77	Cet	9.7	6.6'x 5.8'	70.0 Mly	02h42m40.8s	-00°00'48"	19:33	19:46	20:05	10	119	6	detectable	Ultima 42mm
PNe	NGC 3195	He 2-44	Cha	11.5	40"	6400 ly	10h09m20.9s	-80°51'31"	19:31	22:28	04:27	25	217	40	detectable	Plössl 10mm
Doub	Delta 1 Cha	HR 4231	Cha	5.5		350 ly	10h45m16.6s	-80°28'11"	19:11	23:04	05:02	25	217	40	obvious	Plössl 4mm 2.0x
DVar	Gamma Cir	Gamma Cir	Cir	4.6		510 ly	15h23m22.6s	-59°19'15"	22:17	03:42	05:56	25	196	59	obvious	Plössl 4mm 2.0x
Open	NGC 5823	Melotte 131	Cir	8.6	12.0'	3900 ly	15h05m30.0s	-55°36'12"	23:01	03:24	05:31	25	196	59	detectable	Ultima 42mm
Glob	NGC 1851		Col	7.1	12.0'	55000 ly	05h14m06.0s	-40°02'48"	19:31	19:54	22:33	19	173	18	easy	Ultima 42mm
Gal	NGC 4254	M 99	Com	10.4	5.1'x 4.6'	70.0 Mly	12h18m49.6s	+14°24'59"	21:52	00:38	03:24	13	91	45	detectable	E-Lux 2" 40mm
Gal	NGC 4501	M 88	Com	10.2	7.8'x 4.8'	70.0 Mly	12h31m59.2s	+14°25'13"	22:05	00:51	03:37	14	91	45	detectable	E-Lux 2" 40mm
Glob	NGC 5024	M 53	Com	7.7	13.0'	65000 ly	13h12m55.0s	+18°10'12"	23:06	01:32	03:59	14	71	45	detectable	Ultima 42mm
Gal	NGC 4382	M 85	Com	10.0	7.6'x 5.9'	70.0 Mly	12h25m24.1s	+18°11'28"	22:19	00:44	03:12	13	72	45	detectable	Ultima 42mm
Gal	NGC 4826	M 64	Com	9.3	10.0'x 5.0'	12.0 Mly	12h56m43.8s	+21°41'00"	23:11	01:16	03:20	7	71	45	detectable	E-Lux 2" 40mm
Gal	NGC 4565	MCG 4-30-6	Com	10.1	14.5'x 2.3'		12h36m20.8s	+25°59'15"	23:30	00:55	02:21	7	72	45	difficult	E-Lux 2" 26mm 2.0x
Open	Collinder 256	Melotte 111	Com	2.9	120.0'	310 ly	12h25m06.0s	+26°06'00"	23:19	00:45	02:10	7	72	45	easy	Plössl 4mm
Glob	NGC 6541		CrA	6.3	15.0'	13000 ly	18h08m02.0s	-43°42'54"	01:23	05:07	05:35	22	181	69	easy	Ultima 42mm
Dark	DC 000.4-019.5		CrA	6.0	10.6'		19h10m16.1s	-37°07'29"	03:04	05:10	05:32	22	163	69	not visible	Ultima 42mm
Neb	Bernes 157		CrA		1.5'		19h01m35.2s	-37°00'55"	02:26	05:10	05:35	22	163	69	unknown	Celestron Plössl 15mm
Neb	NGC 6726	Bernes 160	CrA		2.0'		19h01m42.0s	-36°53'00"	04:07	05:10	05:26	22	163	69	challenging	Ultima 42mm
Doub	HR 6110	HD 147835	CrB	6.4		520 ly	16h22m56.5s	+32°19'59"	00:51	04:41	05:51	8	51	53	obvious	Ultima 42mm
DVar	Sigma CrB	17 CrB	CrB	5.7		71 ly	16h14m40.6s	+33°51'30"	00:43	04:33	05:58	8	51	53	obvious	Plössl 25mm 2.0x
Doub	Zeta 1 CrB	7 CrB	CrB	5.9		440 ly	15h39m22.2s	+36°38'12"	00:23	03:57	05:51	7	51	53	obvious	Plössl 10mm
PNe	NGC 4361	PN G294.1+43.6	Crv	10.9	1.3'	3100 ly	12h24m30.8s	-18°47'06"	20:45	00:44	04:43	21	150	47	detectable	Celestron Plössl 15mm
Doub	HD 109556	SAO 157384	Crv	8.0		360 ly	12h35m43.5s	-12°01'30"	20:47	00:55	05:04	14	131	47	obvious	Ultima 42mm

Cls	Primary ID	Alternate ID	Con	Mag	Size	Distance	RA 2000	Dec 2000	Begin	Optimum	End	S.A.	Ur. 2	PSA	Difficulty	Optimum EP
Doub	Gamma Cr1	15 Cr1	Cr1	4.1		84 ly	11h24m52.8s	-17°41'02"	19:25	23:44	04:04	13	150	36	obvious	Ultima 2" LX 17 mm 2.0x
Dark	Coalsack	DC 300.7-001.0	Cru	6.0	16.0'		12h31m19.0s	-63°44'36"	20:00	00:50	05:21	25	209	50	not visible	Ultima 42mm
Open	NGC 4052	Collinder 251	Cru	8.8	9.0'	3900 ly	12h01m02.0s	-63°13'30"	19:42	00:20	05:15	25	209	50	detectable	Ultima 42mm
Doub	Alpha 1 Cru	HR 4730	Cru	1.4		320 ly	12h26m35.8s	-63°05'57"	19:15	00:46	05:58	25	209	50	obvious	Plössl 6mm
Open	NGC 4609	Collinder 263	Cru	4.5	4.0'	4000 ly	12h42m18.0s	-62°59'42"	19:30	01:01	05:40	25	209	50	obvious	Celestron Plössl 32mm
Open	NGC 4349	Collinder 255	Cru	8.0	5.0'	7100 ly	12h24m08.0s	-61°52'18"	19:33	00:43	05:31	25	198	50	easy	E-Lux 2" 40mm
Open	NGC 4103	Collinder 252	Cru	7.4	6.0'	5300 ly	12h06m40.0s	-61°15'00"	19:32	00:26	05:32	25	198	50	easy	Ultima 42mm
Open	NGC 4755	Jewel Box	Cru	5.2	10.0'	6400 ly	12h53m39.0s	-60°21'42"	19:46	01:13	05:37	25	198	50	obvious	Ultima 42mm
DVar	Albireo	Beta 1 Cyg	Cyg	3.1		390 ly	19h30m43.3s	+27°57'35"	03:29	05:21	05:54	8	66	64	obvious	Ultima 42mm
Dark	B 144		Cyg	1.0	4.5°		19h58m00.0s	+35°18'00"	05:01	05:22	05:34	8	48	62	not visible	Ultima 42mm
Open	NGC 6913	M 29	Cyg	7.5	10.0'	3700 ly	20h23m57.0s	+38°30'30"	05:16	05:28	05:37	9	48	62	difficult	Ultima 42mm
Glob	NGC 6934		Del	8.9	7.1'	62000 ly	20h34m11.0s	+07°24'18"	04:44	05:17	05:29	16	84	64	difficult	Ultima 42mm
Open	Hrr 9		Del		45.0'		20h38m45.0s	+13°27'15"	-	-	-	16	84	64	unknown	Celestron Plössl 32mm
Gal	Large Magellanic Cl	ESO 56 115	Dor	0.8	10.8"x 9.2°	200000 ly	05h23m34.6s	-69°45'22"	19:30	19:58	23:23	24	212	20	easy	Ultima 42mm
Neb	NGC 2074	ESO 57-EN8	Dor	8.5			05h39m06.0s	-69°30'00"	19:14	19:55	23:39	24	212	20	unknown	Plössl 4mm
Open	NGC 1916		Dor	10.4			05h18m36.0s	-69°24'25"	19:17	19:53	23:17	24	212	20	unknown	Plössl 4mm
Open	NGC 1903		Dor	11.9			05h17m22.0s	-69°20'07"	19:21	19:53	23:17	24	212	20	unknown	Plössl 4mm
Neb	NGC 1910	ESO 56-SC99	Dor		54"		05h18m42.0s	-69°14'00"	19:29	19:57	23:18	24	212	20	unknown	Plössl 10mm
Neb	NGC 2100	ESO 57-SC25	Dor	9.6	2.3'		05h42m12.0s	-69°13'00"	19:30	19:58	23:42	24	212	20	easy	Plössl 25mm
Neb	NGC 1984	ESO 56-SC132	Dor				05h27m42.0s	-69°08'00"	19:36	19:54	21:44	24	212	20	unknown	Plössl 4mm
Neb	NGC 2070	Tarantula Nebula	Dor	8.3	5.0'		05h38m36.0s	-69°06'00"	19:29	19:58	23:36	24	212	20	easy	Ultima 42mm
Neb	NGC 1983	ESO 56-SC133	Dor	8.5			05h27m42.0s	-68°59'00"	19:14	19:54	23:27	24	212	20	unknown	Plössl 4mm
Neb	NGC 1858	ESO 56-SC74	Dor				05h09m54.0s	-68°54'00"	19:36	19:53	21:34	24	212	20	unknown	Plössl 4mm
Glob	NGC 1854		Dor	10.0			05h09m20.0s	-68°50'53"	19:17	19:53	23:07	24	212	20	unknown	Plössl 4mm
Neb	NGC 1850	ESO 56-SC70	Dor	9.3	3.4'		05h08m42.0s	-68°46'00"	19:31	19:57	23:07	24	212	20	detectable	Celestron Plössl 32mm
Neb	NGC 2035	ESO 56-EN161	Dor				05h35m30.0s	-67°35'00"	19:34	19:54	21:46	24	212	20	unknown	Plössl 4mm
Neb	NGC 2032	ESO 56-EN160	Dor				05h35m18.0s	-67°34'00"	19:34	19:54	21:46	24	212	20	unknown	Plössl 4mm
Neb	NGC 2029	ESO 56-EN156	Dor				05h35m00.0s	-67°33'00"	19:34	19:54	21:46	24	212	20	unknown	Plössl 4mm
Open	NGC 2004		Dor	9.6			05h30m41.0s	-67°17'10"	19:16	19:54	23:27	24	212	20	unknown	Plössl 4mm
Neb	NGC 1714	ESO 85-EN8	Dor				04h52m06.0s	-66°56'00"	19:36	19:52	21:21	24	212	20	unknown	Plössl 4mm
Glob	NGC 1818		Dor	9.7	2.5'		05h04m14.8s	-66°26'04"	19:31	19:57	22:59	24	212	20	detectable	Plössl 25mm
Neb	NGC 1763	IC 2115	Dor		25.0'		04h56m48.0s	-66°25'00"	-	-	-	24	212	20	unknown	Celestron Plössl 32mm 2.0x
DVar	Gamma Equ	5 Equ	Equ	4.7		110 ly	21h10m20.5s	+10°07'52"	04:19	05:23	05:51	16	83	75	obvious	Plössl 4mm 2.0x
Gal	NGC 1291	MCG -7-7-8	Eri	9.5	9.1'x 6.6'		03h17m18.6s	-41°06'29"	19:34	19:52	20:38	18	190	19	detectable	Ultima 42mm
Gal	NGC 1332	MCG -4-9-11	Eri	11.2	4.5'x 3.4'		03h26m17.2s	-21°20'07"	19:37	19:51	20:14	18	156	17	detectable	E-Lux 2" 26mm
Gal	NGC 1232	Arp 41	Eri	10.6	6.3'x 5.5'		03h09m45.3s	-20°34'51"	19:36	19:50	19:55	18	157	17	difficult	Ultima 42mm
PNe	NGC 1535	Cleopatra's Eye	Eri	9.4	20"	5800 ly	04h14m15.8s	-12°44'22"	19:26	19:51	20:44	11	137	17	obvious	Celestron Plössl 15mm 2.0x
DVar	Omicron 2 Eri	40 Eri	Eri	4.4		16 ly	04h15m14.5s	-07°39'52"	19:11	19:48	20:34	11	137	17	obvious	Ultima 42mm
Gal	NGC 1316	Fornax A radio sour	For	9.4	12.6'x 7.9'		03h22m41.5s	-37°12'27"	19:34	19:52	20:36	18	174	19	detectable	Ultima 42mm
Gal	NGC 1365	MCG -6-8-26	For	10.4	10.5'x 6.2'		03h33m36.4s	-36°08'26"	19:36	19:52	20:46	18	174	19	difficult	Ultima 42mm
Gal	NGC 1097	Arp 77	For	10.2	9.3'x 5.6'		02h46m19.1s	-30°16'30"	19:36	19:50	20:28	18	175	8	difficult	Ultima 42mm
PNe	NGC 1360	M 1-3	For	9.4	6.0'	1300 ly	03h33m14.6s	-25°52'18"	19:35	19:51	20:28	18	156	17	difficult	Ultima 42mm
Open	NGC 2395	Collinder 144	Gem	9.4	14.0'	1700 ly	07h27m12.0s	+13°36'30"	19:39	20:02	21:41	12	95	25	challenging	Ultima 42mm
PNe	NGC 2392	Eskimo Nebula	Gem	8.6	47"	3400 ly	07h29m10.8s	+20°54'42"	19:25	20:02	21:59	5	75	25	obvious	Plössl 10mm
Open	NGC 2129	Collinder 77	Gem	7.0	5.0'	4900 ly	06h01m07.0s	+23°19'20"	19:26	19:52	20:13	5	76	25	obvious	E-Lux 2" 40mm



Cls	Primary ID	Alternate ID	Con	Mag	Size	Distance	RA 2000	Dec 2000	Begin	Optimum	End	S.A.	Ur. 2	PSA	Difficulty	Optimum EP
Doub	Gamma Men	HR 1953	Men	5.2		100 ly	05h31m53.5s	-76°20'24"	19:11	19:56 ■	23:41	24	219	20	obvious	Ultima 42mm
Doub	Iota Mic	HR 7943	Mic	5.1		130 ly	20h48m29.3s	-43°59'20"	04:02	05:18 ■	05:58	23	179	68	obvious	Celestron Plössl 15mm 2.0x
DVar	Alpha Mic	HR 7965	Mic	4.9		380 ly	20h49m58.1s	-33°46'47"	04:20	05:16 ■	05:52	23	161	68	obvious	Celestron Plössl 32mm
Open	NGC 2323	M 50	Mon	7.2	14.0'	3300 ly	07h02m42.0s	-08°23'00"	19:30	19:59 ■	23:19	12	135	27	easy	Ultima 42mm
Open	NGC 2301	Collinder 119	Mon	6.3	14.0'	2800 ly	06h51m45.0s	+00°27'36"	19:29	19:58 ■	22:48	12	115	25	easy	Ultima 42mm
Open	NGC 2239	OCL 512	Mon		15.0'		06h30m57.5s	+04°56'51"	19:30	19:55 ■	22:13	12	116	25	unknown	Ultima 42mm
Neb	NGC 2237	Rosette	Mon	5.5	70.0'x 60.0'		06h32m02.0s	+04°59'10"	19:38	19:56 ■	21:15	12	116	25	challenging	Ultima 42mm
Neb	NGC 2261	Hubble's Variable N	Mon		2.2'x 1.5'		06h39m10.0s	+08°45'00"	19:38	19:56 ■	21:16	12	95	25	challenging	Ultima 42mm
Open	NGC 2264	Collinder 112	Mon	4.1	39.0'	2200 ly	06h40m58.0s	+09°53'42"	19:29	19:56 ■	22:06	12	95	25	obvious	Celestron Plössl 32mm 2.0x
Glob	NGC 4372		Mus	7.2	5.0'	20000 ly	12h25m45.0s	-72°39'12"	19:31	00:46 ■	05:33	25	209	50	easy	Ultima 42mm
Dark	Dark Doodad	DC 301.0-008.6C	Mus	6.0	42.4'		12h27m31.1s	-71°25'12"	19:42	00:47 ■	05:25	25	209	50	difficult	Celestron Plössl 15mm
Glob	NGC 4833		Mus	8.4	12.7'	16000 ly	12h59m34.0s	-70°52'30"	20:40	01:19 ■	05:22	25	209	50	difficult	Ultima 42mm
PNe	NGC 5189	IC 4274	Mus	10.3	2.3'	2000 ly	13h33m33.0s	-65°58'27"	20:34	01:52 ■	05:29	25	208	50	detectable	Plössl 25mm
Open	NGC 6087	Collinder 300	Nor	6.0	14.0'	2900 ly	16h18m50.0s	-57°56'06"	23:14	04:37 ■	05:36	26	196	59	obvious	Ultima 42mm
Open	Collinder 299	Harvard 10	Nor		25.0'	4300 ly	16h18m48.0s	-54°56'00"	-	-	-	26	196	59	unknown	Ultima 42mm
Open	NGC 6067	Collinder 298	Nor	6.5	14.0'	4600 ly	16h13m11.0s	-54°13'06"	23:14	04:32 ■	05:35	26	196	59	easy	Ultima 42mm
Open	NGC 6152	Collinder 304	Nor	8.1	25.0'	3400 ly	16h32m45.0s	-52°38'36"	01:19	04:49 ■	05:30	26	196	58	difficult	Ultima 42mm
Var	Sigma Oct	Sigma Oct	Oct	5.5		270 ly	21h08m48.0s	-88°57'23"	02:08	05:01 ■	05:53	26	220	80	obvious	Plössl 4mm
Open	Collinder 411	Melotte 227	Oct	5.3	70.0'	390 ly	20h17m19.0s	-79°02'00"	02:41	05:07 ■	05:30	26	215	70	detectable	E-Lux 2" 26mm
Glob	NGC 6266	M 62	Oph	6.4	15.0'	26000 ly	17h01m13.0s	-30°06'48"	00:46	05:02 ■	05:37	22	164	58	easy	Ultima 42mm
Dark	B 59	Pipe Nebula	Oph	5.0	60.0'		17h11m06.0s	-27°24'00"	03:44	05:04 ■	05:24	22	146	56	very challenging	Celestron Plössl 32mm
Dark	B 66	LDN 1768	Oph	6.0	8.0'		17h19m48.5s	-26°55'12"	01:52	05:06 ■	05:33	22	146	56	not visible	Ultima 42mm
Dark	B 67		Oph	6.0	13.0'		17h21m00.0s	-26°51'00"	01:53	05:05 ■	05:34	22	146	56	not visible	Ultima 42mm
Dark	B 65	LDN 1772	Oph	6.0	12.0'		17h19m34.3s	-26°44'20"	01:51	05:05 ■	05:33	22	146	56	not visible	Ultima 42mm
Doub	36 Oph	HR 6402	Oph	4.3		20 ly	17h15m20.3s	-26°36'20"	00:57	05:09 ■	06:04	22	146	56	obvious	Ultima 2" LX 17 mm 2.0x
Glob	NGC 6273	M 19	Oph	6.8	17.0'	23000 ly	17h02m38.0s	-26°16'06"	01:12	05:02 ■	05:35	22	146	56	easy	Ultima 42mm
Dark	B 78		Oph	4.0	3.0°		17h32m00.0s	-25°36'00"	02:04	05:07 ■	05:34	22	146	56	not visible	Ultima 42mm
Dark	B 72	Snake Nebula	Oph	6.0	2.5'		17h23m03.8s	-23°33'55"	02:45	05:06 ■	05:30	22	146	56	challenging	Plössl 25mm
Doub	Rho Oph	5 Oph	Oph	4.6		390 ly	16h25m35.1s	-23°26'50"	00:13	04:44 ■	06:03	22	147	57	obvious	Celestron Plössl 9mm 2.0x
Glob	NGC 6171	M 107	Oph	7.8	13.0'	26000 ly	16h32m32.0s	-13°03'12"	01:21	04:50 ■	05:32	15	127	56	detectable	Ultima 42mm
Glob	NGC 6254	M 10	Oph	6.6	20.0'	23000 ly	16h57m09.0s	-04°06'00"	01:43	05:01 ■	05:34	15	107	56	detectable	Ultima 42mm
Glob	NGC 6402	M 14	Oph	7.6	11.0'	23000 ly	17h37m36.0s	-03°14'48"	02:20	05:08 ■	05:33	15	106	56	detectable	Ultima 42mm
Glob	NGC 6218	M 12	Oph	6.1	16.0'	23000 ly	16h47m14.0s	-01°56'48"	01:22	04:58 ■	05:35	15	107	56	easy	Ultima 42mm
Open	IC 4665	Collinder 349	Oph	5.3	70.0'	1100 ly	17h46m18.0s	+05°43'00"	02:51	05:08 ■	05:32	15	86	54	detectable	E-Lux 2" 26mm
Open	NGC 6633	Collinder 380	Oph	5.6	20.0'	1200 ly	18h27m15.0s	+06°30'30"	03:28	05:11 ■	05:34	15	86	65	easy	Ultima 42mm
PNe	NGC 6572	Blue Racquetball	Oph	8.0	15"	3500 ly	18h12m06.4s	+06°51'12"	03:13	05:11 ■	05:43	15	86	65	obvious	Plössl 6mm
Open	NGC 1976	OCL 528	Ori		47.0'	1300 ly	05h35m16.0s	-05°23'24"	-	-	-	11	116	16	unknown	Celestron Plössl 32mm
Neb	NGC 1982	M 43	Ori	9.0	7.0'x 6.0'		05h35m30.0s	-05°16'00"	19:37	19:53 ■	20:54	11	116	16	challenging	Ultima 42mm
Open	NGC 1977	OCL 525.1	Ori		20.0'	1600 ly	05h35m16.0s	-04°49'12"	-	-	-	11	116	16	unknown	Ultima 42mm
Dark	B 33	Horsehead Nebula	Ori	4.0	4.0'		05h40m59.0s	-02°27'30"	19:34	19:53 ■	21:36	11	116	16	not visible	E-Lux 2" 40mm
Neb	NGC 2024	Flame Nebula	Ori		20.0'		05h41m42.0s	-01°51'00"	19:37	19:53 ■	20:54	11	116	16	challenging	Ultima 42mm
Neb	NGC 2068	M 78	Ori	8.0	8.0'		05h46m48.0s	+00°05'00"	19:37	19:53 ■	20:54	11	116	14	challenging	Ultima 42mm
Open	NGC 2169	37 Cluster	Ori	7.0	5.0'	3400 ly	06h08m24.0s	+13°57'54"	19:26	19:54 ■	21:17	11	96	25	obvious	E-Lux 2" 40mm
Gal	NGC 6744	ESO 104 42	Pav	9.1	17.0'x 10.7'		19h09m45.9s	-63°51'28"	02:15	05:08 ■	05:30	26	206	70	detectable	Ultima 42mm
Glob	NGC 6752	Pavo Globular	Pav	5.3	29.0'	20000 ly	19h10m52.0s	-59°58'54"	02:03	05:08 ■	05:31	26	194	69	easy	Celestron Plössl 32mm 2.0x

Cls	Primary ID	Alternate ID	Con	Mag	Size	Distance	RA 2000	Dec 2000	Begin	Optimum	End	S.A.	Ur. 2	PSA	Difficulty	Optimum EP
Glob	NGC 7078	M 15	Peg	6.3	18.0'	42000 ly	21h29m58.0s	+12°10'00"	05:06	05:22	05:32	16	83	75	detectable	Ultima 42mm
DVar	Zeta Per	44 Per	Per	2.8		980 ly	03h54m07.9s	+31°53'01"	19:04	19:33	20:27	4	60	13	obvious	E-Lux 2" 40mm 2.0x
DVar	Zeta Phe	Zeta Phe	Phe	3.9		280 ly	01h08m23.1s	-55°14'44"	19:12	19:45	22:12	24	203	9	obvious	Plössl 4mm
Doub	Iota Pic	HR 1564	Pic	6.4		100 ly	04h50m56.4s	-53°27'34"	19:07	19:49	22:27	24	202	18	obvious	E-Lux 2" 40mm 2.0x
DVar	Alpha Psc	113 Psc	Psc	3.8		140 ly	02h02m02.8s	+02°45'50"	19:13	19:34	20:00	10	119	4	obvious	Plössl 6mm 2.0x
Doub	Beta PsA	17 PsA	PsA	4.3		150 ly	22h31m30.4s	-32°20'46"	03:53	05:21	05:52	23	160	78	obvious	Ultima 42mm
Open	NGC 2477	Collinder 165	Pup	5.7	15.0'	4000 ly	07h52m10.0s	-38°31'48"	19:26	20:14	01:07	19	171	28	obvious	Ultima 42mm
Open	NGC 2451	Collinder 161	Pup	3.7	45.0'	720 ly	07h45m23.0s	-37°57'21"	19:28	20:10	00:59	19	171	28	obvious	Celestron Plössl 32mm
Open	NGC 2546	Collinder 178	Pup	5.2	70.0'	3000 ly	08h12m15.0s	-37°35'42"	19:31	20:32	00:46	20	171	28	detectable	E-Lux 2" 26mm
Glob	NGC 2298		Pup	9.3	5.0'	98000 ly	06h48m59.0s	-36°00'18"	19:31	19:58	23:21	19	172	29	detectable	Ultima 42mm
Open	NGC 2447	M 93	Pup	6.5	10.0'	3400 ly	07h44m30.0s	-23°51'24"	19:27	20:09	00:36	19	153	26	obvious	Ultima 42mm
Open	NGC 2437	M 46	Pup	6.6	20.0'	4500 ly	07h41m46.0s	-14°48'36"	19:29	20:07	00:04	12	135	26	easy	Ultima 42mm
PNe	NGC 2438	PN G231.8+04.1	Pup	11.0	1.1'	3700 ly	07h41m51.4s	-14°43'55"	19:29	20:08	00:03	12	135	26	detectable	Plössl 25mm 2.0x
Open	NGC 2422	M 47	Pup	4.3	25.0'	1600 ly	07h36m35.0s	-14°29'00"	19:27	20:05	00:10	12	135	26	obvious	Ultima 42mm
Open	NGC 2539	Collinder 176	Pup	8.0	9.0'	4400 ly	08h10m37.0s	-12°49'06"	19:29	20:30	00:31	12	134	26	easy	Ultima 42mm
PNe	NGC 2818 PLN		Pyx	11.6			09h16m01.5s	-36°37'37"	19:17	21:35	02:28	20	170	39	unknown	Plössl 4mm
Open	NGC 2818 OCL		Pyx	8.2			09h16m10.0s	-36°37'00"	19:12	21:35	02:29	20	170	39	unknown	Plössl 4mm
DVar	Zeta 1 Ret	HR 1006	Ret	5.5		40 ly	03h17m48.5s	-62°34'23"	19:12	19:50	21:08	24	213	20	obvious	Ultima 42mm
Gal	NGC 1574	ESO 157 22	Ret	11.3	4.2'x 3.0'		04h21m58.8s	-56°58'29"	19:35	19:54	21:55	24	202	19	detectable	Plössl 25mm
DVar	15 Sge	HR 7672	Sge	5.8		58 ly	20h04m05.9s	+17°04'08"	03:36	05:20	05:51	16	84	64	obvious	Ultima 42mm
Glob	NGC 6838	M 71	Sge	8.4	4.0'	16000 ly	19h53m46.0s	+18°46'42"	04:19	05:17	05:34	8	66	64	easy	E-Lux 2" 40mm
Glob	NGC 6723		Sgr	6.8	13.0'	33000 ly	18h59m33.0s	-36°37'54"	02:26	05:10	05:33	22	163	69	easy	Ultima 42mm
Glob	NGC 6637	M 69	Sgr	7.7	9.8'	23000 ly	18h31m23.0s	-32°20'54"	02:19	05:09	05:34	22	163	69	detectable	Ultima 42mm
Glob	NGC 6681	M 70	Sgr	7.8	8.0'	65000 ly	18h43m13.0s	-32°17'30"	02:22	05:10	05:33	22	163	69	easy	Ultima 42mm
Glob	NGC 6809	M 55	Sgr	6.3	19.0'	20000 ly	19h40m00.0s	-30°57'42"	03:14	05:11	05:33	22	162	68	easy	Plössl 4mm 2.0x
Glob	NGC 6715	M 54	Sgr	7.7	12.0'	55000 ly	18h55m03.0s	-30°28'42"	02:52	05:10	05:32	22	163	69	detectable	Ultima 42mm
Dark	B 86	Ink Spot	Sgr	5.0	5.0'		18h02m58.0s	-27°52'06"	02:26	05:08	05:32	22	145	67	not visible	Ultima 42mm
Glob	NGC 6626	M 28	Sgr	6.9	13.8'	16000 ly	18h24m33.0s	-24°52'12"	02:19	05:09	05:34	22	145	67	easy	Ultima 42mm
Neb	NGC 6523	NGC 6526	Sgr	5.0	17.0'x 15.0'		18h04m02.0s	-24°23'14"	01:50	05:08	05:37	22	145	67	obvious	Ultima 42mm
Glob	NGC 6656	M 22	Sgr	5.2	32.0'	9800 ly	18h36m24.0s	-23°54'12"	02:25	05:10	05:33	22	145	67	easy	Celestron Plössl 32mm
Open	NGC 6514	M 20	Sgr	5.2	28.0'	2700 ly	18h02m42.0s	-22°58'18"	01:51	05:09	05:36	22	145	67	easy	Celestron Plössl 32mm 2.0x
Open	NGC 6531	M 21	Sgr	7.2	14.0'	3900 ly	18h04m13.0s	-22°29'24"	02:00	05:08	05:35	22	145	67	easy	Ultima 42mm
Open	M 25	IC 4725	Sgr	6.2	29.0'	2000 ly	18h31m47.0s	-19°07'00"	02:44	05:10	05:33	22	145	67	easy	Celestron Plössl 32mm 2.0x
Open	NGC 6494	M 23	Sgr	5.9	29.0'	2000 ly	17h57m04.0s	-18°59'06"	02:07	05:08	05:33	22	146	56	easy	Celestron Plössl 32mm 2.0x
Open	NGC 6603	M 24	Sgr	11.1	6.0'	12000 ly	18h18m26.0s	-18°24'24"	03:59	05:10	05:25	15	145	67	challenging	Ultima 42mm
Dark	B 92	Black Hole	Sgr	6.0	12.0'		18h15m30.0s	-18°11'00"	02:48	05:10	05:31	15	145	67	not visible	Ultima 42mm
Open	NGC 6618	M 17	Sgr	7.3	25.0'	4200 ly	18h20m47.0s	-16°10'18"	02:57	05:09	05:31	15	126	67	detectable	Ultima 42mm
PNe	NGC 6818	Little Gem	Sgr	10.0	22"	7300 ly	19h43m57.8s	-14°09'12"	03:50	05:13	05:39	16	125	66	obvious	Celestron Plössl 15mm 2.0x
Open	NGC 6231	Collinder 315	Sco	3.4	14.0'	4100 ly	16h54m10.0s	-41°49'30"	00:12	05:00	05:42	22	181	58	obvious	Ultima 42mm
Open	NGC 6124	Collinder 301	Sco	6.3	39.0'	1700 ly	16h25m20.0s	-40°39'12"	00:39	04:44	05:32	22	182	59	detectable	Celestron Plössl 32mm 2.0x
PNe	NGC 6153	He 2-167	Sco	11.5	25"	4300 ly	16h31m30.8s	-40°15'14"	23:51	04:49	05:36	22	165	58	easy	Celestron Plössl 9mm
DVar	Mu 1 Sco	Mu 1 Sco	Sco	2.9		820 ly	16h51m52.2s	-38°02'51"	00:16	05:02	05:59	22	164	58	obvious	Celestron Plössl 15mm
Open	NGC 6281	Collinder 324	Sco	8.4	8.0'	1600 ly	17h04m41.0s	-37°59'06"	00:48	05:02	05:35	22	164	58	easy	Ultima 42mm
PNe	NGC 6302	Bug Nebula	Sco	12.8	1.2'	1800 ly	17h13m44.2s	-37°06'16"	02:40	05:04	05:29	22	164	58	challenging	Plössl 25mm 2.0x
Open	NGC 6475	M 7	Sco	3.3	80.0'	980 ly	17h53m51.0s	-34°47'36"	01:23	05:07	05:36	22	164	58	easy	Celestron Plössl 32mm

Cls	Primary ID	Alternate ID	Con	Mag	Size	Distance	RA 2000	Dec 2000	Begin	Optimum	End	S.A.	Ur. 2	PSA	Difficulty	Optimum EP
Open	NGC 6405	M 6	Sco	4.6	20.0'	1600 ly	17h40m20.0s	-32°15'12"	01:13	05:07	05:39	22	164	58	obvious	Ultima 42mm
Glob	NGC 6121	M 4	Sco	5.4	36.0'	9800 ly	16h23m36.0s	-26°31'30"	00:32	04:42	05:34	22	147	57	easy	Celestron Plössl 32mm
DVar	Antares	Alpha Sco	Sco	1.0		600 ly	16h29m24.5s	-26°25'55"	00:13	04:47	06:07	22	147	57	obvious	Plössl 6mm 2.0x
Glob	NGC 6093	M 80	Sco	7.3	10.0'	36000 ly	16h17m02.0s	-22°58'30"	00:19	04:35	05:34	22	147	57	easy	Ultima 42mm
Doub	Nu Sco	14 Sco	Sco	6.5			16h11m58.5s	-19°27'01"	00:07	04:30	05:56	22	147	57	obvious	Plössl 4mm 2.0x
Gal	NGC 55	MCG -7-1-13	Scl	8.5	30.2'x 3.4'	4.9 Mly	00h15m08.4s	-39°13'13"	19:33	19:38	19:45	18	159	9	very challenging	Celestron Plössl 9mm
Glob	NGC 288		Scl	8.1	13.0'	39000 ly	00h52m45.0s	-26°35'00"	19:26	19:38	19:54	18	158	7	not visible	Ultima 42mm
Gal	NGC 253	Sculptor Galaxy	Scl	7.9	28.2'x 5.5'	13.0 Mly	00h47m33.1s	-25°17'20"	19:30	19:37	19:43	18	158	7	challenging	Ultima 42mm
Open	NGC 6694	M 26	Sct	9.0	7.0'	5200 ly	18h45m18.0s	-09°23'00"	03:08	05:11	05:32	16	125	67	detectable	Ultima 42mm
Dark	B 318		Sct	6.0	60.0'		18h49m42.0s	-06°23'00"	03:27	05:11	05:31	16	125	67	very challenging	Celestron Plössl 32mm
Open	NGC 6705	M 11	Sct	6.1	32.0'	6100 ly	18h51m05.0s	-06°16'12"	03:17	05:11	05:32	16	125	67	easy	Celestron Plössl 32mm 2.0x
Dark	B 119A		Sct	6.0	30.0'		18h54m39.0s	-05°11'00"	03:31	05:11	05:31	16	105	67	very challenging	Celestron Plössl 32mm
Dark	B 111		Sct	6.0	120.0'		18h50m00.0s	-05°00'00"	03:29	05:11	05:31	16	105	67	not visible	Ultima 42mm
Glob	NGC 5904	M 5	Ser	5.7	23.0'	29000 ly	15h18m34.0s	+02°05'00"	00:06	03:37	05:32	14	108	55	easy	Celestron Plössl 32mm 2.0x
Open	NGC 6611	M 16	Ser	6.5	6.0'	5700 ly	18h18m48.0s	-13°48'24"	02:26	05:10	05:39	15	126	67	obvious	Ultima 42mm
Glob	NGC 6539		Ser	8.9	7.9'	130000 ly	18h04m50.0s	-07°35'12"	02:59	05:09	05:30	15	126	67	detectable	Ultima 42mm
Open	IC 4756	Collinder 386	Ser	5.4	39.0'	1600 ly	18h39m00.0s	+05°27'00"	03:36	05:11	05:33	16	105	65	easy	Celestron Plössl 32mm 2.0x
Gal	NGC 3115	Spindle Galaxy	Sex	10.0	7.6'x 3.5'		10h05m14.0s	-07°43'07"	19:35	22:25	02:05	13	133	37	detectable	E-Lux 2" 26mm
Open	Hyades	Collinder 50	Tau	0.8	5.5°	150 ly	04h26m54.0s	+15°52'00"	19:33	19:49	20:48	11	97	15	easy	Ultima 42mm
Open	NGC 1807	Collinder 59	Tau	8.3	15.0'		05h10m43.0s	+16°31'18"	19:36	19:50	20:06	11	97	14	difficult	Ultima 42mm
Open	NGC 1647	Collinder 54	Tau	6.2	40.0'	1800 ly	04h45m55.0s	+19°06'54"	19:35	19:49	20:33	5	77	14	detectable	Celestron Plössl 32mm
Neb	NGC 1952	M 1	Tau	8.4	8.0'		05h34m30.0s	+22°01'00"	19:40	19:51	19:55	5	77	14	very challenging	Ultima 42mm
Open	NGC 1746	Collinder 57	Tau	6.1	42.0'	1400 ly	05h03m50.0s	+23°46'12"	19:35	19:49	20:35	5	77	14	detectable	Celestron Plössl 32mm
Open	M 45	Pleiades	Tau	1.5	120.0'	490 ly	03h47m00.0s	+24°07'00"	19:28	19:44	20:17	4	78	15	easy	Plössl 4mm
PNe	NGC 1514	Crystal Ball Nebula	Tau	10.8	2.0'	2300 ly	04h09m17.0s	+30°46'33"	19:34	19:42	19:56	5	60	13	challenging	E-Lux 2" 40mm 2.0x
Doub	HR 7548	HD 187420	Tel	5.8		350 ly	19h52m37.8s	-54°58'16"	02:52	05:13	05:54	26	194	68	obvious	E-Lux 2" 40mm
Glob	NGC 6584		Tel	7.9	6.6'	42000 ly	18h18m38.0s	-52°12'54"	01:21	05:07	05:34	26	195	69	easy	Ultima 42mm
Open	Hrr 8		Tel		20.0'		18h31m20.0s	-46°19'30"	-	-	-	22	180	69	unknown	Ultima 42mm
Open	NGC 6025	Collinder 296	TrA	6.0	14.0'	2500 ly	16h03m17.0s	-60°25'54"	22:55	04:22	05:36	26	196	60	obvious	Ultima 42mm
Neb	NGC 456	ESO 29-SC38	Tuc		15.0'		01h13m42.0s	-73°18'00"	-	-	-	24	213	10	unknown	Ultima 42mm
Gal	NGC 292	Small Magellanic Cl	Tuc	2.8	5.3'x 3.4°	200000 ly	00h52m38.0s	-72°48'01"	19:33	19:52	22:18	24	204	10	easy	Ultima 42mm
Neb	NGC 346	ESO 51-SC10	Tuc	10.3	5.2'		00h59m06.0s	-72°11'00"	19:38	19:52	20:36	24	204	10	challenging	Ultima 42mm
Glob	NGC 104	47 Tucanae	Tuc	4.0	50.0'	20000 ly	00h24m05.0s	-72°04'54"	19:33	19:52	22:21	24	204	10	easy	Plössl 4mm
Neb	NGC 371	ESO 51-SC14	Tuc	13.8	7.5'		01h03m30.0s	-72°03'00"	19:31	19:52	22:51	24	204	10	not visible	Ultima 42mm
Glob	NGC 362		Tuc	6.8	14.0'	39000 ly	01h03m14.0s	-70°50'54"	19:33	19:52	21:55	24	204	10	detectable	Ultima 42mm
Gal	NGC 5457	M 101	UMa	8.4	21.9'x 21.4'	28.0 Mly	14h03m12.4s	+54°20'53"	00:59	02:22	03:44	2	23	42	not visible	Ultima 42mm
DVar	Mizar	Zeta UMa	UMa	2.1		78 ly	13h23m55.7s	+54°55'31"	00:10	01:43	03:16	2	23	43	obvious	Plössl 25mm
Gal	NGC 3556	M 108	UMa	10.7	5.4'x 1.9'	53.0 Mly	11h11m31.0s	+55°40'26"	22:15	23:31	00:47	2	24	32	not visible	Celestron Plössl 15mm
Open	IC 2488	OCL 789	Vel	7.4	18.0'	3700 ly	09h27m38.0s	-57°00'00"	19:33	21:47	02:40	25	199	39	detectable	Ultima 42mm
Open	IC 2391	Collinder 191	Vel	2.6	60.0'	570 ly	08h40m32.0s	-53°02'00"	19:27	21:00	02:16	25	200	28	obvious	Celestron Plössl 15mm
Open	NGC 3228	Collinder 218	Vel	6.4	5.0'	1800 ly	10h21m22.0s	-51°43'42"	19:27	22:41	03:57	20	199	39	obvious	E-Lux 2" 40mm
Open	NGC 2547	Collinder 177	Vel	5.0	25.0'	1500 ly	08h10m09.0s	-49°12'54"	19:27	20:30	01:40	20	187	28	obvious	Ultima 42mm
Open	IC 2395	Collinder 192	Vel	4.6	18.6'	2600 ly	08h42m30.0s	-48°06'48"	19:27	21:02	02:12	20	187	28	obvious	Ultima 42mm
DVar	Gamma 2 Vel	Gamma 2 Vel	Vel	1.9		840 ly	08h09m31.9s	-47°20'12"	19:05	20:29	01:37	20	187	28	obvious	Ultima 42mm
Glob	NGC 3201		Vel	6.9	20.0'	13000 ly	10h17m37.0s	-46°24'42"	19:34	22:37	03:00	20	186	39	detectable	Ultima 42mm

Cls	Primary ID	Alternate ID	Con	Mag	Size	Distance	RA 2000	Dec 2000	Begin	Optimum	End	S.A.	Ur. 2	PSA	Difficulty	Optimum EP
Neb	NGC 2626	ESO 313-N*4	Vel		5.0'		08h35m30.0s	-40°40'00"	19:29	20:55	01:46	20	187	28	unknown	Ultima 42mm
PNe	NGC 3132	Eight Burst	Vel	8.2	1.4'	3600 ly	10h07m01.8s	-40°26'11"	19:26	22:27	03:26	20	169	39	obvious	Celestron Plössl 15mm
Gal	NGC 4594	M 104	Vir	9.1	9.1'x 5.6'	60.0 Mly	12h39m59.3s	-11°37'22"	20:57	00:59	05:02	14	130	47	easy	Ultima 42mm
Open	Jaws Asterism		Vir				12h38m24.0s	-11°31'16"	22:23	00:58	03:30	14	130	47	unknown	Plössl 4mm
Gal	NGC 4303	M 61	Vir	10.2	6.3'x 5.8'	70.0 Mly	12h21m55.0s	+04°28'29"	21:25	00:41	03:57	13	111	45	detectable	Ultima 42mm
Gal	NGC 4472	M 49	Vir	9.3	9.3'x 7.6'	70.0 Mly	12h29m46.8s	+08°00'01"	21:37	00:49	04:01	13	91	45	detectable	Ultima 42mm
Gal	NGC 4579	M 58	Vir	10.5	5.6'x 4.4'	70.0 Mly	12h37m43.9s	+11°49'06"	21:59	00:56	03:54	14	90	45	detectable	E-Lux 2" 40mm
Gal	NGC 4486	M 87	Vir	9.6	7.9'x 7.4'	70.0 Mly	12h30m49.2s	+12°23'29"	21:55	00:50	03:45	14	91	45	detectable	Ultima 42mm
Gal	NGC 4374	M 84	Vir	10.1	6.3'x 5.5'	70.0 Mly	12h25m03.9s	+12°53'12"	21:51	00:44	03:38	13	91	45	detectable	Ultima 42mm
Gal	NGC 4406	M 86	Vir	9.8	10.0'x 7.4'	70.0 Mly	12h26m12.2s	+12°56'44"	21:54	00:45	03:37	13	91	45	detectable	Ultima 42mm
Doub	Kappa 1 Vol	HR 3301	Vol	5.3		390 ly	08h19m48.9s	-71°30'53"	19:10	20:39	02:21	25	211	30	obvious	Ultima 42mm
Gal	NGC 2442	ESO 59 8	Vol	11.4	5.1'x 3.6'		07h36m23.8s	-69°31'51"	19:34	20:09	00:32	24	211	30	difficult	Celestron Plössl 32mm
Open	Collinder 399	OCL 113	Vul	4.8	89.0'	4200 ly	19h25m24.0s	+20°11'00"	04:24	05:15	05:29	8	66	65	detectable	Plössl 6mm
PNe	NGC 6853	M 27	Vul	7.3	8.0'	1100 ly	19h59m36.3s	+22°43'16"	04:32	05:18	05:34	8	66	64	detectable	Ultima 42mm
Open	NGC 6885	Collinder 417	Vul	5.7	20.0'	1900 ly	20h12m01.0s	+26°28'42"	04:42	05:20	05:34	9	66	64	easy	Ultima 42mm
Open	NGC 6940	Collinder 424	Vul	7.2	25.0'	2500 ly	20h34m26.0s	+28°17'00"	05:12	05:22	05:29	9	66	64	challenging	Ultima 42mm

Symbol Key:

Open	Open Cluster	Doub	Double or Multiple Star	Con	Constellation
Glob	Globular Cluster	Bin	Binary Star (with orbit)	MSS	Major Solar System Object
PNe	Planetary Nebula	Var	Variable Star	Com	Comet
Neb	Diffuse Nebula	DVar	Double & Variable	MP	Minor Planet
Gal	Galaxy	BVar	Binary & Variable		
GalCl	Galaxy Cluster				
Dark	Dark Nebula				
QSO	Quasar				

Observation status: Y = observed, N = not observed, R = re-observe

Quality of opportunity (Q): A = optimum, B = near optimum, F = far from optimum