

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.		Size	Mag.
	Nebulae (pick 10)		hh mm ss	deg mm ss		(ly)	(pc)	Class	(')	
	NGC 1435	Tempel's Nebula	03 46 10	+23 45 24	Tau	424	130	Ref	30	13.0
	NGC 1931	Minature Orion Nebula	05 31 23	+34 13 59	Aur	6,999	2146	Emi	13	10.1
	M42	Orion Nebula	05 35 17	-05 23 24	Ori	4,384	1344	Emi	60	4.0
	M78	NGC 2068	05 46 46	+00 04 45	Ori	4,403	1350	Ref	8 × 6	8.3
	NGC 2237	Rosette Nebula	06 32 27	+04 47 37	Mon	5,218	1600	Emi	78	9.0
	NGC2264	Cone Nebula	06 40 58	+09 53 44	Mon	2,352	721	Emi	4.1	4.1
	NGC 3372	Carina Nebula	10 45 09	-59 52 04	Car	8,480	2600	Emi/Dark	120	1.0
	Barnard 68		17 22 38	-23 49 34	Sgr	0		Dark	5	N/A
	M20	Trifid Nebula	18 02 42	-22 58 18	Sgr	4,110	1260	Emi	28 x 28	
	M8	Lagoon Nebula	18 03 37	-24 23 12	Sgr	4,077	1250	Emi	90 x 40	6.3
	M16	Eagle Nebula	18 18 48	-13 49 00	Ser	5,675	1740	Emi	70 x 50	4.6
	M17	Omega Nebula	18 20 26	-16 10 36	Sgr	5,545	1700	Emi	11	6.0
	IC5070	Pelican Nebula	20 50 48	+44 21 00	Cyg	1,794	550	Emi	8	8.0
	NGC 7000	North American Nebula	20 58 50	+44 31 00	Cyg	2,593	795	Emi	8	4.0
	IC1396		21 39 06	+57 30 00	Cep	5,545	1700	Emi	3.5	6.0

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.		Size	Mag.
	Open Clusters (pick 10)		hh mm ss	deg mm ss		(ly)	(pc)	Age	(')	
	NGC 884	Double Cluster	02 22 20	+57 08 56	Per	9,589	2940	13 m yrs	14	6.1
	NGC 869	Double Cluster	02 18 58	+57 08 02	Per	6,781	2079	13 m yrs	12	5.3
	M45	Pleiades	03 46 24	+24 06 50	Tau	444	136	100 m yrs	125	4.0
	cw16	Hyades	04 29 47	+16 56 53	Tau	153	47	625 m yrs	625	0.5
	M37	NGC2099	05 52 18	+32 32 42	Aur	4,566	1400	450 m yrs	347	6.0
	m 47		07 36 00	-14 30 00	Pup	5,218	1600	73 m yrs	25	4.4
	M44	Beehive Cluster	08 40 13	+19 37 16	Cnc	610	187	650 m yrs	830	3.7
	NGC 4755	Jewel Box	12 53 40	-60 22 16	Cru	6,419	1968	14 m yrs	14	4.2
	NGC 6231	Baby Scorpion Cluster	16 54 00	-41 50 00	Sco	18,265	5600	6 m yrs	14	2.6
	M6	NGC 6405	17 40 17	-32 16 17	Sco	1,588	487	100 m yrs	4.5	4.2
	M 7	Ptolemy's Cluster	17 53 00	-34 47 00	Sco	3,196	980	224 m yrs	80	3.3
	M 24	Small Sgr Sta Cloud	18 17 00	-18 29 00	Sgr	32,616	10000	220 m yrs	90	2.5
	M 25		18 31 00	-19 07 00	Sgr	6,523	2000	92 m yrs	30	4.6
	M11	Wild Duck	18 51 04	-06 16 19	Sct	6,197	1900	200 m yrs	250	6.3

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.	Size	Mag.
	Main Sequence Stars (pick 35, 5 of each class)		hh mm ss	deg mm ss		(ly)	(pc)	Class	(')
	HD 14633	SAO37987	02 22 54	+41 28 48	And	7,012	2150	O8.5 V	7.5
	Upsilon Ori		05 31 56	-07 18 06	Ori	1,259	386	O9.7 V	4.62
	Sigma Ori		05 38 45	-02 36 00	Ori	1,265	388	O9.5 V	4.07
	Mu Col		05 46 00	-32 18 23	Col	1,895	581	O9.5 V	5.18
	Theta Mus		13 08 07	-65 18 22	Mus	7,404	2270	O7 V	5.53
	Zeta Oph	SAO 160006	16 37 10	-10 34 02	Oph	440	135	O9.5 V	2.6
	10 Lacertae		22 39 16	+39 03 01	Lac	1,800	552	O9 V	4.88
	Alpha Eri	Archernar	01 37 43	-57 14 12	Eri	140	43	B3 Vpe	0.46
	SAO 45864	Algol	03 08 10	+40 57 20	Per	94	29	B8 V	2.1
	Theta 1 Ori	SAO132314	05 35 16	-05 23 23	Ori	1,272	390	B0.5 V	5.1
	Eta UMa	Alkaid	13 47 32	+49 18 48	UMa	104	32	B3 V	1.86
	Beta Cyg	Albireo B	19 30 43	+27 57 35	Cyg	365	112	B8 V	3.1
	Alpha Pav	Peacock	20 25 39	-56 44 06	Pea	55	17	B3 V	1.94
	Alpha Gru	Alnair	22 08 13	-46 57 40	Gru	101	31	B6 V	1.74
	Eta Ori		05 24 29	-2 23 50	Ori	978	300	B1V	3.42
	Mu And		00 56 45	+38 29 58	And	122	37	A5 V	3.87
	Beta Pic		05 47 17	-51 03 59	Pic	63	19	A6 V	3.86
	Alpha CMa	Sirius	06 45 09	-16 43 11	CMa	9	3	A0 Va	-1.4
	Alpha Cir	Xami	14 42 30	-64 58 30	Cir	54	17	A7 Vp	3.18
	Alpha Lyr	Vega	18 36 56	+38 47 04	Lyr	25	8	A0 Va	0
	Alpha Aql	Altair	19 50 47	+08 52 10	Aql	17	5	A7 Vn	0.8
	Alpha PsA	Fomalhaut	33 57 39	-29 37 20	PsA	25	8	A4 V	1.16
	Omega Aur		04 59 15	+37 53 25	Aur	162	50	A1 V	4.95

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.		Size	Mag.
	Main Sequence Stars (pick 35, 5 of each class)		hh mm ss	deg mm ss		(ly)	(pc)	Class	(')	
	Zeta Tuc		00 20 04	-64 52 29	Tuc	15	5	F9.5 V		4.23
	Eta Ari		02 12 48	+21 12 40	Ari	98	30	F5 V		5.23
	Zeta Dor		05 05 31	-57 58 22	Dor	38	12	F7 V		8.93
	Gamma Lep		05 44 28	-22 26 54	Lep	29	9	F6 V		3.59
	Alpha CMi	Procyon	07 39 18	+05 13 19	CMi	11	4	F5 V		0.4
	Gamma Vir	Porrima	12 41 40	-01 26 58	Vir	38	12	F0 V		2.74
	Theta Boo	23 Boo	14 25 12	+51 51 02	Boo	15	5	F7 V		4.1
	Iota Peg	24 Peg	22 07 01	+25 20 43	Peg	38	12	F5 V		3.8
	Sun		--	--	--	--	--	G2 V		-26.7
	Gliese 67	HD 10307	01 41 47	+42 36 48	And	41	13	G1.5 V		4.95
	Tau Cet		01 44 04	-15 56 15	Cet	12	4	G8 V		3.5
	82 Eri		03 19 56	-43 04 11	Eri	20	6	G6 V		4.25
	Beta Com		13 11 52	+27 52 41	Com	30	9	G0 V		4.26
	Alpha Cen		14 39 36	-60 50 02	Cen	4	1	G2 V		1.33
	18 Sco		16 15 37	-08 22 10	Sco	46	14	G2 Va		5.5
	51 Peg	Helvetios	22 57 28	+20 46 08	Peg	51	16	G2 V		5.49
	107 Psc	HIP 7981	01 42 30	+20 15 58	Psc	25	8	K1 V		5.2
	Epsilon Eri	18 Eri	03 32 55	-09 27 30	Eri	10	3	K2 V		3.7
	HD 83443	Kalausi	09 37 12	-43 16 20	Vel	133	41	K0 V		8.23
	HD 100623	HR 4458	11 34 29	-32 49 53	Hya	31	10	K0 V		5.97
	HD 113703		13 06 17	-48 27 48	Cen	401	123	K0 Ve		4.71
	14 Her		16 10 24	+43 49 04	Her	58	18	K0 V		6.61
	Sigma Dra	Alsafi	19 32 22	+69 39 40	Dra	19	6	K0 V		4.7
	61 Cyg A		21 06 54	+38 44 58	Cyg	11	4	K5 V		5.21
	Epsilon ind		22 03 22	-56 47 10	Ind	12	4	K5 V		4.67

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.	Size	Mag.
	Main Sequence Stars (pick 35, 5 of each class)		hh mm ss	deg mm ss		(ly)	(pc)	Class	(')
	Gliese 229		06 10 35	-21 51 53	Lep	19	6	M1 Ve	
	Lalande 21185		11 03 20	+35 58 12	UMa	8	3	M2 V	
	Alpha Lib	Zubenelgenubi	14 50 41	-15 59 50	Lib	75	23	M0 V	
	Gliese 581		15 19 27	-07 43 20	Lib	21	6	M3 V	
	Barnard's Star		17 57 49	+04 41 36	Oph	6	2	M4 V	
	Gliese 725	Struve 2398	18 42 47	+59 37 49	Dra	11	4	M3V	
	Ross 154	V1216 Sgr	18 49 50	-23 50 12	Sgr	10	3	M3.5 V	

	Variable Stars (pick 5)		hh mm ss	deg mm ss		(ly)	(pc)	Class	(')
	Omicron Cet	Mira	02 19 21	-02 58 40	Cet	294	90	M5 - M9	
	VY Pyx		08 54 30	-23 31 19	Pyx	825	253	F3 - F5	
	V0553 Cen		14 46 33	-32 10 15	Cen	1,892	580	F4 - K0	
	R Aql		19 06 22	+08 13 48	Aql	763	234	M5 - M9	
	RR Lyra		19 25 28	+42 47 04	Lyr	881	270	A5 - F7	
	Eta Aql		19 52 29	+01 00 20	Aql	887	272	F6 - G4	
	Delta Cep		22 29 10	+58 24 55	Cep	890	273	F5 - G1	

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.		Size	Mag.
	Red Giant Stars (pick 9)		hh mm ss	deg mm ss		(ly)	(pc)	Class	(')	
	Beta And	Mirach	01 09 44	+35 37 14	And	199	61	M0 III		2.1
	Delta Cet		02 39 29	+00 19 43	Cet	649	199	B2 IV		4.1
	Alpha Tau	Aldebaran	04 35 55	+16 30 33	Tau	67	20	K5III		0.9
	Beta Gem	Pollux	05 16 41	+28 01 34	Gem	34	10	K0 III		1.1
	Alpha Aur	Capella	05 16 41	+45 59 48	Aur	43	13	G3III		0.1
	Gamma Ori	Bellatrix	05 25 08	+06 20 59	Orion	251	77	B2III		1.6
	Epsilon CMa	Adhara	06 58 38	-28 58 20	CMa	404	124	B2 III		7.5
	HD 93521		10 48 24	+37 34 13	LMi	4,958	1520	O9.3 III ⁿⁿ		7.03
	Alpha Vir	Spica	13 25 12	-11 09 41	Vir	251	77	B1 III		0.97
	Alpha Boo	Arcturus	14 15 40	+19 10 57	Boo	37	11.26	K1.5III		0.0
	Alpha Oph	Rasalhague	17 34 56	+12 33 36	Oph	49	15	A5 IV		2.07
	Zeta CMi		07 51 42	+01 46 01	CMi	815	250	B8 II		5.13
	Beta Cyg	Albireo A	19 30 43	+27 57 35	Cyg	6,337	1943	K2 II		3.21
	Beta Cep	Alfirk	21 28 40	+70 33 39	Cep	2,250	690	B1 IV		3.16
	Eta Peg	Matar	22 43 00	+30 13 16	Peg	215	66	G2 II		2.95
	Beta Peg	Scheat	23 03 46	+28 04 58	Peg	196	60	M2.5 III ^{le}		2.4
	Omega Psc		23 59 19	+06 51 48	Psc	104	32	F4 IV		4.01
	Carbon Stars (pick 10)		hh mm ss	deg mm ss		(ly)	(pc)		(')	
	R Scl	SAO 193122	01 26 58	-32 32 35	Scl	1,177	361			5.8 - 8.8
	TW Hor		03 12 33	-57 19 18	Hor	1,370	420			5.5 - 6.0
	R Lep	Hind's Crimson Star	04 59 36	-14 48 23	Lep	1,500	460			5.5 - 11.7
	W Ori	HD 32736	05 05 23	+01 10 39	Ori	1,305	400			5.8 - 10.0
	UU Aur	SAO 59280	06 36 33	+38 26 44	Aaur	1,112	341			7.8-10
	X Cnc	SAO 98230	08 55 23	+17 13 53	Cnc	1,859	570			5.6-7.5
	U Ant		10 35 13	-39 33 45	Ant	903	277			5.3 - 6.0
	U Hya	HD 92055	10 37 33	-13 23 04	Hya	678	208			4.5 - 6.2
	SS Vir		12 25 14	+00 46 11	Vir	2,283	700			6.0 - 9.6
	Y CVn	La Superba	12 45 08	+45 26 25	CVn	1,011	310			7.4-10
	V Aql		19 04 24	-05 41 05	Aql	1,305	400			6.7 - 7.2
	Mu Cep	Herschel's Garnet Star	21 43 30	+58 46 48	Cep	1,373	421			3.4-5.1
	TX Psc		23 46 24	+03 29 13	Psc	783	240			4.9 - 5.5

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.		Size	Mag.
	Planetary Nebulae (pick 10)		hh mm ss	deg mm ss		(ly)	(pc)		(')	
	NGC 1360	Robin's Egg Nebula	03 33 15	-25 52 18	For	1,402	430		11 7.5	9.4
	NGC 2392	Eskimo Nebula	07 29 11	+20 54 45	Gem	5,218	1600		0.3	9.1
	NGC 3132	Southern Ring Nebula	10 07 02	-40 26 11	Vel	2,038	625		62 x 43	9.9
	NGC 3242	Ghost of Jupiter	10 24 46	-18 38 32	Hyd	1,402	430		0.5	8.6
	M97	Owl Nebula, NGC 3587	11 14 48	+55 01 08	Uma	2,038	625		3.3	9.9
	NGC 3918	Blue Planetary	11 50 18	-57 10 57	Cen	4,892	1500		0.3	8.5
	NGC 5189	Spiral Planetary Nebula	13 33 33	-65 58 27	Mus	1,957	600		90 x 62	9.5
	NGC 5315		13 53 57	-66 30 51	Cir	6,849	2100		9.8	9.8
	NGC 5882		15 16 50	-45 38 59	Lup	7,828	2400		13	9.4
	NGC 6210	Turtle Nebula	16 44 30	+23 48 02	Her	5,545	1700		0.7 x 0.5	9.3
	NGC 6369	Little Ghost Nebula	17 29 21	-23 45 34	Oph	2,609	800		0.5	9.9
	NGC 6543	Cat's Eye Nebula	17 58 33	+66 38 01	Dra	3,262	1000		0.6 x 0.5	8.1
	M57	Ring Nebula, NGC 6822	18 53 35	+33 01 47	Lyr	2,283	700		3.8	8.8
	NGC 6826	Blinking Planetary	19 44 48	+50 31 29	Cyg	1,999	613		0.7 0.6	8.8
	M27	Dumbbell Nebula, NGC 6853	19 59 36	+22 43 18	Vul	1,207	370		8.0 x 5.6	6.7
	NGC 7009	Saturn Nebula	21 04 11	-11 21 47	Aqr	3,001	920		0.7 x 0.5	8
	NGC 7293	Helix Nebula	21 04 11	-20 50 11	Aqr	652	200		25	7.3
	NGC 7662	Blue Snowball	21 04 11	+42 32 06	And	4,077	1250		0.5	8.3

Done	Name	Alternate Names	RA (J2000)	Dec (J2000)	Con.	Dist.	Dist.		Size	Mag.
	Supergiant Stars (pick 9)		hh mm ss	deg mm ss		(ly)	(pc)	Class	(')	
	Alpha UMi	Polaris	02 31 49	+89 15 51	UMi	447	137	F7 Ib		1.98
	Beta Ori	Rigel	05 14 32	-08 12 06	Ori	1,008	309	B8 Ia		6.7
	Zeta Ori	Alnitak	05 40 46	-01 56 34	Ori	1,262	387	O9.5 Iab		1.77
	Alpha Ori	Betelgeuse	05 55 10	+07 24 26	Ori	548	168	M1 Ia		0.5
	VY CMa	HD 58061	07 22 58	-25 46 03	CMa	3,816	1170	M5 Iae		6.5
	Zet Pup	Naos	08 03 35	-40 00 11	Pup	1,076	330	O4 I		2.2
	Lambda Vel	Suhail	09 08 00	-43 25 57	Vel	545	167	K4 I		2.1 - 2.3
	Alpha Sco	Antares	16 29 24	-26 25 55	Sco	554	170	M1.5 Iab		1.1
	Alpha Her	Rasalgethi	17 14 39	+14 23 25	Her	359	110	M5 Ib		2.7 - 4.0
	Beta Dra	Rastaban	17 30 26	+52 18 05	Dra	382	117	G2 Ib		2.8
	Mu Cep	Herschel's Garnet Star	21 43 30	+58 46 48	Cep	1,373	421	M2 I		3.4 - 5.1
	Wezen	Delta CMa	07 08 23	-26 23 35	CMa	1,598	490	F8 Ia		1.8
	VV Cep A	HD 208816	21 56 39	+63 37 32	Cep	3,320	1018	M2 Iab		4.8
	RW Cep	SAO 34387	22 03 27	+55 57 48	Cep	12,789	3921	K2 0		8.6

	Supernove Remnants (pick 2)		hh mm ss	deg mm ss		(ly)	(pc)		(')	
	LMC N49	DEM L 190	05 26 01	-66 05 06	Dor	159,816	49,000		~1.5	12.71
	M1	Crab Nebula	05 34 32	+22 00 52	Tau	6,523	2000		7 X 5	9
	NGC 2736	Pencil Nebula	09 00 17	-45 54 57	Vela	815	250		30 x 7	12.0
	NGC 6960	Veil Nebula	20 45 42	+30 43 00	Cyg	1,468	450		70 x 6	10.6
	NGC 6992/6995	Veil Nebula	20 56 18	+31 45 00	Cyg	1,468	450		60 x 30	10.6

	Other Items from Original List		hh mm ss	deg mm ss		(ly)	(pc)		(')	
	HD 139341	SAO 64800	15 36 03	+39 48 08	Boo	71	22			6.5
	NGC 6530	Col 362	18 05 11	-24 20 54	Sgr	4,357	1336		4.6	4.6

Name	Notes
NGC 1435	Nebulosity associated with the Pleiades
NGC 1931	Mixed emission-reflection nebula
M42	Includes the Trapezium
M78	Reflection nebula Containing 45 T Tauri stars
NGC 2237	HII region
NGC2264	Cone is in southern part of object, the Christmas Tree cluster is at the north
NGC 3372	Region of bright and dark nebulosity.
Barnard 68	Requires dark skies
M20	HII region
M8	Includes young open cluster NGC 6530
M16	Cluster associated with star forming nebula
M17	Also called Horseshoe or Swan Nebula
IC5070	Associated with the North American Nebula, req's dark skies, diffuse
NGC 7000	Visible unaided eye under dark skies
IC1396	A cluster with associated nebulosity. Region includes the 'Elephant Trunk'

Name	Notes
NGC 884	Great sight in a wide-field telescope!
NGC 869	Great sight in a wide-field telescope!
M45	Close, bright. 440 ly away
Melotte 25	Nearest cluster after the Ursa Major moving group
M37	
Messier 47	
M44	One of the largest, nearest, and brightest of the open clusters
NGC 4755	One of the youngest open clusters
NGC 6231	
M6	Also called the Butterfly Nebula
Messier 7	
Messier 24	
Messier 25	
M11	

Name	Notes
HD 14633	Part of a mutiple
Upsilon Ori	
Sigma Ori	
Mu Col	
Theta Mus	
Zeta Oph	
10 Lacertae	
Alpha Eri	
SAO 45864	Eclipsing Binary
Theta 1 Ori	40 Solar Masses
Eta Uma	
Beta Cyg	Beautiful – the blue star
Alpha Pav	
Alpha Gru	
Eta Ori	
Mu And	
Beta Pic	
Alpha CMa	Brightest star in the nightttime sky
Alpha Cir	
Alpha Lyr	
Alpha Aql	
Alpha PsA	
Omega Aur	

Name	Notes
Zeta Tuc	
Eta Ari	
Zeta Dor	
Gamma Lep	
Alpha CMi	
Gamma Vir	
Theta Boo	
Iota Peg	
Sun	Proper filter required
Gliese 67	
Tau Cet	
82 Eri	
Beta Com	
Alpha Cen	
18 Sco	
51 Peg	
107 Psc	
Epsilon Eri	
HD 83443	
HD 100623	
HD 113703	
14 Her	
Sigma Dra	
61 Cyg A	
Epsilon ind	

Name	Notes
Gliese 229	
Lalande 21185	
Alpha Lib	
Gliese 581	
Barnard's Star	
Gliese 725	
Ross 154	Flare Star

Omicron Cet	Long period "Mira type"
VY Pyx	Short period "Delta Cepheid type"
V0553 Cen	Short period "Delta Cepheid type"
R Aql	Long period "Mira type"
RR Lyra	Short period "RR Lyra type"
Eta Aql	Short period "Delta Cepheid type"
Delta Cep	Short period "Delta Cepheid type"

Name	Notes
Beta And	Red Giant
Delta Cet	Blue Giant
Alpha Tau	Orange giant
Beta Gem	Orange giant
Alpha Aur	Yellow Giants
Gamma Ori	Blue Glant
Epsilon CMa	Blue Giant
HD 93521	Blue Glant
Alpha Vir	Blue Giant
Alpha Boo	Red Giant
Alpha Oph	Blue-White Giant
Zeta CMi	Blue Giant
Beta Cyg	Orange giant
Beta Cep	Blue Supergiant
Eta Peg	Yellow Giants
Beta Peg	Red Giant
Omega Psc	Blue Glant

R Scl	
TW Hor	
R Lep	
W Ori	
UU Aur	
X Cnc	
U Ant	
U Hya	
SS Vir	
Y CVn	
V Aql	
Mu Cep	
TX Psc	

Name	Notes
NGC 1360	
NGC 2392	
NGC 3132	
NGC 3242	
M97	
NGC 3918	
NGC 5189	
NGC 5315	
NGC 5882	
NGC 6210	
NGC 6369	
NGC 6543	Includes central white dwarf
M57	White dwarf in center requires large telescope
NGC 6826	
M27	
NGC 7009	
NGC 7293	One of the nearest PNs
NGC 7662	

Name	Notes
Alpha UMi	Yellow-White Supergiant
Beta Ori	Blue Supergiant
Zeta Ori	
Alpha Ori	Red Supergiant
VY CMa	Red Supergiant
Zet Pup	Blue supergiant
Lambda Vel	Red supergiant
Alpha Sco	Small amplitude variable
Alpha Her	Red Supergiant
Beta Dra	Yellow Supergiant
Mu Cep	Red supergiant
Wezen	
VV Cep A	Red Supergiant
RW Cep	Orange Supergiant

LMC N49	In the Large Magellanic Cloud
M1	Supernova 1054 CE
NGC 2736	Part of the Vela Supernova Remnant
NGC 6960	Western component
NGC 6992/6995	Eastern component

HD 139341	A double star
NGC 6530	Imbedded in M8 (Lagoon Neb)