

SEASON:

SUMMER

CEPHEUS (Cep)

√	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	188			C001				S	Cep	OC	00:44.4	85.2	8.1	14	Ancient (6-7 BYR), 5.8 KLY distant OC; 4° S of Polaris, (Melotte 2)
	40	R110	S019	C002	H001 (4,58)			S	Cep	PN	00:13.0	72.32	10.2	37	Bow Tie PN; unusual red planetary; 11.6m central star;
	7023			C004				S	Cep	RN	21:01.8	68.12	6.8	10x8	Iris Nebula ; RN+OC, ~4° NE of Alp Cep.
	7129	R109	S022				D103	S	Cep	RN	21:44.4	66.1	11.5	7x7	Cosmic Rosebud (Spitzer IR); Two faint hazy knots around 3 B-stars
	6939	R107	S020		H371 (6,42)		D100	S	Cep	OC	20:31.4	60.38	7.8	9	Flying Geese / "Silk Fan" OC; NW flying V-shape of 12-13m *
	6946	R108	S021	C012	H373 (4,76)			S	Cep	G-Sc	20:34.8	60.09	8.9	11.0x9.8	Firecracker Gxy; Faint face-on near NGC 6939; Obs: SN 2017eaw
	7160						D104	S	Cep	OC	21:53.7	62.36	6.1	5	Swimming alligator , young OC in CEP OB-2 (with TR 37); 4° E of Alp Cep
	Tr 37					T105		S	Cep	OC/Neb	21:39.0	57.47	3.5	154x140	Misty Clover OC + Neb 11396 ('Elephant Trunk')

AQUILA (Aql)

√	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	6804						D091	S	Aql	PN	19:31.6	9.13	12.2	~5000	Small "Incredible Shrinking" / Snowball 4-shell PN; ~5° W of Altair
	6781	R095	S003		H358 (3,743)		D090	S	Aql	PN	19:18.4	6.33	11.8	1'49"	Snow globe / Moon Ghost PN; Large, bright 2½° ENE of 19 Aql
	6756				H357 (7,62)		D088	S	Aql	OC	19:08.7	4.42	10.6	4	D88 (D87): Pair of OC; Very small, somewhat dim, 4° WNW of Del Aql
	6755				H356 (7,19)		D087	S	Aql	OC	19:07.8	4.16	7.5	15	D87 (D88): Pair of OC; Large, moderately bright 5.5m 19 Aql
	6778						D089	S	Aql	PN	19:18.4	-1.36	11.9	2000x4000	"Son of M76"; Bipolar PN 5° SSW of Del Aql. (55 SW of 27 Aql); Use OIII
	6751						D086	S	Aql	PN	19:05.9	-5.6	11.9	2400	"Glowing Eye", 1° S of Del Aql; 14m central*;
	6709					T094		S	Aql	OC	18:51.3	10.2	6.7	15	"Flying Unicorn" wide OC, SW of Zeta Aql ; 7x50Bino

DELPHINUS (Del)

√	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	6905						D098	S	Del	PN	20:22.4	20.06	11.1	4200x3500	Blue Flash
	7006			C042	H375 (1,52)			S	Del	GC	21:01.5	16.11	10.6	2.8	3.5° due E of Gam DEL; Very distant (135KLY) halo object
	6891						D095	S	Del	PN	20:15.2	12.42	10.5	>1800	Tiny, bright, triple shell PN, PA ~160°, 12.4m central star
	6934			C047	H370 (1,103)			S	Del	GC	20:34.2	7.24	8.9	5.9	3.5° due S of Eps DEL; Dist. 51 KLY

SCUTUM (Sct)

√	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	6664						D084	S	Sct	OC	18:36.5	-8.11	7.8	12	Santa's Sleigh
	6712	R094	S087		H355 (1,47)	T095		S	Sct	GC	18:53.1	-8.42	8.2	7.2	Small globular; look for PN IC 1295 in field

SERPENS (Ser)

√	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	I-4756					T093		S	Ser	OC	18:39.0	5.26	5	52	Graff's Cluster

CYGNUS (Cyg)

v	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m:s	DEC °,'	m_v	Size "	Comment
	7008				H376 (1,192)	T103		S	Cyg	PN	21:00.5	54.33	10.7	98x75	Coat Button Nebula ; Bright PN in a 5° wide dark neb, 8° NNE of A.Cyg.
	7128				H381 (7,40)			S	Cyg	OC	21:43.9	53.43	9.7	4	Small and dim, condensed OC, 2½° N of 5. mag. Pi Cyg. Dark sky!
	7086				H380 (6,32)			S	Cyg	OC	21:30.5	51.36	8.4	12	Mod. large, dim, condensed, obvious OC, 2° WNW of 5.m Pi Cyg.
	6826	R097	S042	C015	H362 (4,73)			S	Cyg	PN	19:44.8	50.31	9.8	30"	*Blinking Planetary; 10.4-mag central star
	7026						D101	S	Cyg	PN	21:06.3	47.51	10.9	2100	Cheeseburger
	OME-3						D094	S	Cyg	AST	20:05.3	47.32	-	12	Asterism of 9-11m stars 1.5° W of Omi 1-2 Cygni; Alessi J20053+4732
	I-5146			C019				S	Cyg	BN	21:53.5	47.16	-	12x12	Cocoon Nebula
	7062				H379 (7,51)			S	Cyg	OC	21:23.4	46.23	8.3	5	Small, somewhat dim, condensed OC, 2° NW of 4. mag. Rho Cyg.
	6811						D092	S	Cyg	OC	19:37.2	46.23	6.8	15	Smoke Ring
	7048						D102	S	Cyg	PN	21:14.2	46.17	12.1	6100	Peek-a-Boo
	7000	R100	S046	C020	H374 (5,37)			S	Cyg	EN	20:58.8	44.2	-	120x100	*North America N; use filter & low mag.
	6866				H365 (8,59)	T100		S	Cyg	OC	20:03.9	44.09	7.6	15	Pirate Frigate Cluster; Marvelous OC 3½° ESE of 3. mag. Del Cyg.
	7044				H378 (6,24)			S	Cyg	OC	21:13.1	42.29	12	7	Very small, dim, difficult OC, 2° SE of 4. mag. Xi Cyg. Dark sky!
	7027	R101	S047			T104		S	Cyg	PN?	21:07.1	42.14	10.4	0.2x0.3	Magic Carpet Nebula ; Unique protoplanetary nebula;
	I-1318(a)						D097	S	Cyg	BN	20:16.6	41.49	-	45x20	Near Gamma Cygni
							T102	S	Cyg	DN	21:40.0	41	n/a	480x300	Northern Coalsack
	6910				H369 (8,56)		D099	S	Cyg	OC	20:23.2	40.47	6.6	10	Inchworm; Nice, moderately small, but crisp OC, just NNE of Gam Cyg.
	6819	R096	S042			T098		S	Cyg	OC	19:41.3	40.11	7.3	5	Fox Head OC 150*; faint but rich cluster in the Milky Way
	6888	R098		C027				S	Cyg	SNR?	20:12.0	38.21	-	20x10	Crescent Nebula; faint; use nebula filter.
	Cyg-X1						D093	S	Cyg	BH	19:58.4	35.12	(star)	8.8	(star) HDE 226868
	6992	R099b	S045	C033				S	Cyg	SNR	20:56.4	31.43	-	78x8	*Veil Nebula: east half; use filter NGC 6992/5
	6960	R099a	S044	C034				S	Cyg	SNR	20:45.7	30.43	-	70x6	*Veil Nebula: west half; use filter NGC 6960
	6894						D096	S	Cyg	PN	20:16.4	30.34	12.3	>4200	Diamond Ring

HERCULES (Her)

v	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m:s	DEC °,'	m_v	Size "	Comment
	6229						D074	S	Her	GC	16:46.9	47.32	9.4	4.5	"Prize Comet"
	6207		S055		H318 (2,701)		D073	S	Her	Sc	16:43.1	36.5	12.5	3.3x1.2	No definite nucleus
	6210	R090	S056					S	Her	PN	16:44.5	23.49	9.3	14	Turtle Nebula ; very starlike small bluish planetary.
	I-4593						D071	S	Her	PN	16:11.7	12.04	10.7	>1200	White-Eyed Pea
	6210					T078		S	Her	PN	16:44.3	23.48	8.8	0.4	Turtle Nebula

LIBRA (Lib),
LUPUS (Lup)

v	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m:s	DEC °,'	m_v	Size "	Comment
	5897				H312 (6,19)	T076		S	Lib	GC	15:17.2	-21	8.4	11	Ghost Globular
	5986					T077		S	Lup	GC	15:46.0	-37.47	7.6	9.6	Compact, inner halo GC; Brightest * 13m;

OPHIUCHUS (Oph)

v	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	6572	R092	S071			T090		S	Oph	PN	18:12.1	6.51	8.1	0.3	Emerald Nebula ; tiny bright blue oval.
	6633	R093	S072		H350 (8,72)	T092		S	Oph	OC	18:27.7	6.34	4.6	27	Tweedledum OC; wide field cluster; IC 4756 nearby
						T087		S	Oph	Star	17:58.0	4.43	9.5	n/a	Barnard's Star
	6309						D076	S	Oph	PN	17:14.1	-12.55	11.5	>1600	Exclamation Mark/Box PN; 1.5° W of Nu Ser; 11m * to the N; UHC
	6356						D077	S	Oph	GC	17:23.6	-17.49	8.2	10	Moderately condensed, bright GC 4° SE of Eta Oph; stars <14.3m
	6369	R091	S070		H330 (4,11)	T081		S	Oph	PN	17:29.3	-23.46	11.4	0.6	Little Ghost; look for NGC 6309 nearby.
	6293						D075	S	Oph	GC	17:10.2	-26.35	8.2	7.9	Small, condensed GC, 1.2° W of 36 Oph;
	I-4665					T083		S	Oph	OC	17:46.1	5.43	8.3	45	Summer Beehive

SCORPIUS (Sco)

v	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	6144						D072	S	Sco	GC	16:27.2	-26.01	9	9	GC 40' NW of Antares (Alp Sco);
	6302			C069				S	Sco	PN	17:13.7	-37.06	9.6	0.8	Bug PN
	6124			C075				S	Sco	OC	16:25.6	-40.4	5.8	29	Halfway between Zeta Sco and Eta Lupus.
	6231			C076				S	Sco	OC	16:54.0	-41.48	2.6	15	"False comet" OC, 30' N of Zeta Sco; In Sco OB-1. Tr24 OC to the N
	6400					T082		S	Sco	OC	17:40.1	-36.58	8.8	12	Phantom Cluster
	6441					T086		S	Sco	GC	17:50.1	-37.03	7.2	9.6	Silver Nugget Cluster
	6281					T080		S	Sco	OC	17:05.0	-37.53	5.4	8	Moth Wing Cluster
	6242					T079		S	Sco	OC	16:55.3	-39.28	6.4	9	Bright OC, N of Zeta1-2 Sco-> TR24/IC4628

SAGITTARIUS (Sgr)

v	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	6818	R104	S091		H360 (4,51)	T099		S	Sgr	PN	19:44.0	-14.09	9.9	0.8	Little Gem; annular; NGC 6822 0.75 deg S
	6822			C057				S	Sgr	IG	19:44.9	-14.48	8.8	10x9	Bernard's Galaxy
	6589						D081	S	Sgr	RN	18:16.9	-19.47	-	5x3	D81 (D82) pair or RN, 45' NNE of 16 Sgr, and S of M24; Large
	6595						D082	S	Sgr	BN	18:17.1	-19.52	-	4x3	(D81) D82 pair or RN, 45' NNE of 16 Sgr, and S of M24; Smaller
	6445	R102	S089		H334 (2,586)	T084		S	Sgr	PN	17:49.2	-20.01	11.8	0.7	Box Nebula; Small, bright and annular; near M23
	6717						D085	S	Sgr	GC	18:55.1	-22.42	8.4	5.4	Palomar 9
	6638						D083	S	Sgr	GC	18:30.9	-25.3	9.2	7.3	Small, condensed GC, 40' E of Lam Sgr.
	6520	R103	S090		H338 (7,7)	T088		S	Sgr	OC	18:03.4	-27.54	7.6	5	Dead Man's Chest OC; 60*; small; dark neb. B86 in same field
	6522						D078	S	Sgr	GC	18:03.6	-30.02	8.3	9.4	D78(D79): pair GC between Gam and W Sgr; Bright and large: 8.3m, 9.4'
	6528						D079	S	Sgr	GC	18:04.8	-30.03	9.6	3.7	(D78)D79: pair GC between Gam and W Sgr; Faint and small:9.6m, 3.7'
	6563						D080	S	Sgr	PN	18:12.1	-33.52	11	5000x3800	Southern Ring
	6544				H343 (2,197)	T089		S	Sgr	GC	18:07.2	-25	7.5	9.2	Starfish Cluster
	6624				H348 (1,50)	T091		S	Sgr	GC	18:24.0	-30.21	7.6	8.8	45' SE of Del Sgr
	6723					T096		S	Sgr	GC	18:59.3	-36.37	6.8	13	GC 30' NNE of Eps CrA;

VULPECULA (Vul)

v	NGC	RASC	SAC	CALD	HER-400	O-HT	O-SD		Con	Type	R.A. H:m.s	DEC °,'	m_v	Size "	Comment
	6940	R106	S111		H372 (7,8)	T101		S	Vul	OC	20:34.6	28.18	6.3	25	Mothra Cluster ; 60*; fairly rich cluster in Milky Way
	6885			C037	H367 (8,20)			S	Vul	OC	20:12.2	26.29	5.9	7	Loose OC around 20 Vul
	6802	R105			H359 (6,14)			S	Vul	OC	19:30.6	20.16	8.8	3.2	At east end of Brocchi's cluster Cr 399
						T097		S	Vul	Ast	19:25.2	20.11	3.6	30x60	Coathanger, Brocchi's Cluster

