

SUMMER 1

Catalogue	Date	Type	Mag	Size	Comments
BOOTES					
NGC5248 <i>SAB(rs)bc</i>	May 16	GX	10.3 <i>13.8</i>	6.2'x4.6'	R13:37.5 D+08:53
NGC5466 <i>Class XII</i>	May 23	GC	9.0	11'	R14:05.5 D+28:32
κ -Bootes Struve1821	May 25	D*	4.6 6.6	A8IV 13.4" F1V	R14:13.5 D+51:47 SAO29046 155ly
NGC5533 <i>SA(rs)ab</i>	May 26	GX	11.8 <i>13.7</i>	3.4'x1.9'	R14:16.1 D+35:21
ι -Bootes Struve I 26	May 26	D*	4.9 7.5	A9V 38.5"	R14:16.2 D+51:22 SAO29071 97ly
Struve1825	May 26	D*	6.5 8.4	F6V 4.4"	R14:16.5 D+20:07 SAO83259
NGC5557 <i>EI</i>	May 27	GX	11.0 <i>12.5</i>	2.2'x2.0'	R14:18.4 D+36:30
Struve 1835	May 28	D*	5.8 6.8	A0V 6.2" F0V	R14:23.4 D+08:27 SAO120426
IC1029 <i>SAb</i>	May 29	GX	11.3 <i>11.4</i>	2.6'x0.5'	R14:32.5 D+49:54
NGC5676 <i>SA(rs)bc</i>	May 29	GX	11.2 <i>13.0</i>	3.7'x1.6'	R14:32.8 D+49:28
NGC5687 <i>S0</i>	May 30	GX	11.8 <i>13.1</i>	2.3'x1.7'	R14:34.9 D+54:29
NGC5689 <i>SB(s)0</i>	May 31	GX	11.9 <i>13.1</i>	3.7'x1.0'	R14:35.5 D+48:45
π -Bootes Struve 1864	Jun 1	D*	4.9 5.8	B9p 5.6" A6V	R14:40.7 D+16:25 SAO101139
ϵ - Bootes Struve 1877	Jun 2	D*	2.5 5.0	K0II 3" A2V	R14:45.0 D+27:04 SAO83500 Izar 160ly orange, green
ξ -Bootes Struve1888	Jun 3	D*	4.7 7.0	G8V 6" K4V	R14:51.2 D+13:44 SAO101250 22ly yellow, red-orange?purple
μ - Bootes Struve I 28	Jun 12	T*	4.5 7.2 7.8	F0V 109" K0 2" K0	R15:24.5 D+37:23 SAO64687 BC Alkalurops 260yr 95ly

SUMMER 2

Catalogue	Date	Type	Mag	Size	Comments
LIBRA					
NGC5728 <i>(R)SB(rs)a</i>	May 28	GX	11.5 <i>13.8</i>	3.7'x2.6'	R14:24.4 D-17:15
H N 28	Jun 6	D*	5.7 8.0	K5 23" M0	R14:57.5 D-21:25 SAO183040 19.26ly
NGC5791 <i>E4/S0</i>	Jun 6	GX	11.9 <i>13.0</i>	2.4'x1.3'	R14:58.8 D-19:16
NGC5796 <i>SA0</i>	Jun 6	GX	11.6 <i>13.1</i>	2.7'x1.7'	R14:59.4 D-16:37
NGC5812 <i>E1/S0</i>	Jun 6	GX	11.2 <i>12.6</i>	2.3'x1.9'	R15:01.0 D-07:27
NGC5861 <i>SB(rs)c</i>	Jun 8	GX	11.6 <i>13.2</i>	2.8'x1.8'	R15:09.3 D-11:19
NGC5878 <i>SAB(s)bc</i>	Jun 9	GX	11.5 <i>12.9</i>	3.0'x1.4'	R15:13.8 D-14:16
NGC5897 <i>Class XI</i>	Jun 10	GC	8.6	12.6'	R15:17.4 D-21:01
NGC5898 <i>SAB0</i>	Jun 10	GX	11.4 <i>13.2</i>	2.6'x2.3'	R15:18.2 D-24:06
NGC5903 <i>SA(s)0</i>			11.1 <i>13.4</i>	3.4'x3.7'	R15:18.6 D-24:04
Struve 1962	Jun 15	D*	6.5 6.6	F8 12" F8	R15:38.7 D-08:47 SAO140671

SUMMER 3

Catalogue	Date	Type	Mag	Size	Comments
DRACO (SUMMER)					
M102 <i>SA0</i>	Jun 7	GX	10.5 <i>13.1</i>	6.6'x3.2'	R15:06.5 D+55:46
NGC5879 <i>SA(rs)bc</i>	Jun 8	GX	11.5 <i>13.5</i>	4.4'x1.6'	R15:09.8 D+57:00
NGC5905 <i>SB@b</i>	Jun 9	GX	12.0 <i>14.4</i>	4.3'x3.3'	R15:15.4 D+55:31
NGC5907 <i>SA(s)c</i>	Jun 9	GX	10.4 <i>13.4</i>	12'x1.7'	R15:15.9 D+56:19
NGC5908 <i>SA(s)b</i>	Jun 10	GX	11.9 <i>13.0</i>	3'x1.2'	R15:16.7 D+55:25
NGC5963 <i>S pec</i>	Jun 14	GX	12.5 <i>14.9</i>	3.7'x2.8'	R15:33.5 D+56:35
NGC5965			11.7 <i>13.3</i>	5.5'x0.9'	R15:34.0 D+56:42
NGC5982 <i>E3</i>	Jun 16	GX	11.1 <i>13.0</i>	3'x2.2'	R15:38.7 D+59:21
NGC5985 <i>SAB(R)b</i>	Jun 16	GX	11.0 <i>13.9</i>	5'x3'	R15:39.6 D+59:20
NGC6015 <i>SA(s)cd</i>	Jun 21	GX	11.2 <i>13.8</i>	6.4'x2.2'	R15:51.4 D+62:19
17 & 16 Dra ADS10129	Jun 30	T*	5.4 6.4 5.5	B9V 3.4" A1V 90" B9V	R16:36.2 D+52:55 SAO30031 400ly
μ -Draconis Struve2130	Jul 8	D*	5.7 5.7	F7V 2.3" F7V	R17:05.3 D+54:28 SAO30239 88ly
Struve 2155	Jul 11	D*	6.8 10.1	F3III 9.8"	R17:16.1 D+60:43 SAO17410
ν -Draconis	Jul 14	D*	4.9 4.9	A4 62" A6	R17:32.2 D+55:11 SAO30450 120ly
ψ -Draconis Struve2241	Jul 17	D*	4.9 6.1	F5IV 30.3" G0V	R17:41.9 D+72:09 SAO8890 72ly yellow, lilac
NGC6503 <i>SA(s)sd</i>	Jul 19	GX	10.2 <i>13.2</i>	7.3'x2.4'	R17:49.4 D70:09 17Mly
NGC6543	Jul 22	PN	8.1 <i>*10.9</i>	18"	R17:58.6 D+66:38 Cat's Eye RM 3,000ly
Struve 2308 41 & 40 Dra	Jul 22	D*	5.7 6.1	F7V 19.3" F7V	R18:00.2 D+80:00
NGC6643 <i>SA(rs)c</i>	Jul 27	GX	11.1 <i>13.0</i>	3.7'x1.8'	R18:19.8 D+74:34
39 Dra ADS11336	Jul 27	T*	5.1 8.0 8.1	A1V 90" 3.7	R18:23.9 D+58:48 SAO30949 190ly
\omicron -Dra ADS11779	Aug 3	D*	4.8 53	K0II 37" G9III	R18:51.2 D+59:23 SAO31218 320ly
UX Dra	Aug 11	* C	5.9- 7.1	C5II	R19:21.6 D+76:34 SAO9404 2,000ly

SUMMER 4

Catalogue	Date	Type	Mag	Size	Comments
HERCULES					
NGC6058	Jun 22	PN	12.9 *13.6	23''	R16:04.4 D+40:41
κ -Herculis Struve2010	Jun 23	D*	5.3 6.5	G8III 28'' K1III	R16:08.1 D+17:03 SAO101951 Mirfak RM 400ly
IC4593	Jun 23	PN	10.7 *11.1	12''	R16:12.2 D+12:04
γ -Herculis H227	Jun 26	D*	3.8 9.8	A9III 41''	R16:21.9 D+19:09 SAO102107
NGC6181 <i>SAB(rs)c</i>	Jun 28	GX	11.9 12.5	2.3'x0.9'	R16:32.3 D+19:50
M13	Jul 1	GC	5.9	16'	R16:41.7 D+36:28 23,500ly
NGC6207 <i>SA(s)c</i>	Jul 2	GX	11.6 12.8	2'x1'	R16:43.1 D+36:50
NGC6210	Jul 2	PN	8.8 *13.7	14''	R16:44.5 D+23:49 3,600ly
NGC6229	Jul 3	GC	9.4	5.4'	R16:47.0 D+47:32
55 Herculis Struve2110	Jul 4	D*	6.1 10.6	18''	R16:55.0 D+25:44
α -Herculis Struve2140	Jul 10	D*	3-4 5.4	M5II 4.7'' G5III	R17:14.6 D+14:23 SAO102680 Rasalgethi 400ly orange, blue-green
δ -Herculis ADS10424	Jul 10	D*	3.1 8.2	A3IV 8.9''	R17:15.0 D+24:50 SAO84951 94ly white, violet
M92	Jul 12	GC	6.5	11'	R17:17.1 D+43:08 25,400ly
ρ -Herculis Struve2161	Jul 12	D*	4.6 5.6	A0V 4.1'' B9III	R17:23.7 D+37:09 SAO66000 400ly
μ -Herculis Struve2220	Jul 18	D*	3.4 10.1	G5IV 33.8''	R17:46.5 D+27:43 SAO85397 27.4ly
NGC6482 <i>E</i>	Jul 19	GX	11.4 12.7	2.1'x1.8'	R17:51.8 D+23:04
95 Her ADS10993	Jul 22	D*	5.0 5.1	A5III 6'' G8III	R18:01.5 D+21:36 SAO085647 380ly
100 Herculis Struve2280	Jul 24	D*	5.9 6.0	A3V 14.2'' A3V	R18:07.8 D+26:06 SAO85752
NGC6574 <i>SAB(rs)bc</i>	Jul 24	GX	12.0 11.8	1.2'x0.8'	R18:11.9 D+14:59

SUMMER 5

Catalogue	Date	Type	Mag	Size	Comments
SCORPIUS					
ξ-Sco Struve1998 Struve1999	Jun 22	D*	4.8	F5IV	R16:04.0 D-11:22 SAO159665 80ly
			7.3	8" F5IV	
		D*	7.4	280" G8V	K5III
			8.1	12" CD	
β-Sco ADS9913	Jun 22	D*	2.6 4.9	B0V 14" B2V	R16:05.0 D-19:48 Graffias 600ly
ν-Sco ADS9951	Jun 23	Q*	4.3	B3V	R16:12.0 D-19:28 SAO159763 440ly
			6.8	0.9" B9	
			6.4	41" B8V	B9V
			7.8	2.3" CD	
NGC6144	Jun 24	GC	9.1	7.4	R16:27.5 D-26:02 RM
α-Sco	Jun 25	D*	1.2	M1	R16:29.4 D-26:26 Antares 520ly RM
			5.4	2.9" B3	
M80 <i>Class II</i>	Jun 26	GC	5.1	32'	R16:36.7 D-23:54 RM 28,000ly
M4 <i>Class IX</i>	Jun 27	GC	6.0	26'	R16:23.6 D-26:32 6,500ly RM
α-Sco	Jun 28	D*	0.9- 1.8	M2I	R16:29.0 D-26:26 Antares 900ly
			5.4		
			NGC6302	Jul 10	
M6 <i>Type II3r</i>	Jul 17	OC	4.2	15'	R17:40.1 D-32.13 Butterfly Nebula 1,500ly RM
			6.2		
<i>NGC6416</i> <i>Type III2m</i>	Jul 18	OC	5.7	30'	R17:44.4 D-32:21
<i>NGC6425</i> <i>Type III1m</i>	Jul 18	OC	7.2	15'	R17:46.9 D-31:32
<i>NGC6451</i> <i>Type I2r</i>	Jul 19	OC	8.2	7'	R17:50.7 D-30:13
M7 <i>Type I3r</i>	Jul 20	OC	3.3	80'	R17:53.9 D-34:49 820ly

SUMMER 6

Catalogue	Date	Type	Mag	Size	Comments
OPHIUCHUS					
ρ -Oph ADS10049	Jun 25	D*	5.3 6.0	B2 3.1" B2	R16:25.6 D-23:27
M107 <i>Class X</i>	Jun 28	GC	8.1	10'	R16:32.5 D-13:03 21,000ly RM
M12 <i>Class IX</i>	Jul 3	GC	6.6	15'	R16:47.2 D-01:57 16,000ly RM
NGC6235	Jul 5	GC	10.0	5.2'	R16:53.5 D-22:11 RM
M10 <i>Class VII</i>	Jul 7	GC	6.6	15'	R16:57.1 D-04:06 14,000ly RM
M62 <i>Class IV</i>	Jul 8	GC	6.5	15'	R17:01.5 D-30:07 RM 20,000ly
M19 <i>Class VIII</i>	Jul 8	GC	6.7	13.5'	R17:02.6 D-26:16 28,000ly
NGC6283	Jul 9	GC	8.2	7.9'	R17:10.2 D-26:35
NGC6309	Jul 10	PN	11.7 *13	20x10"	R17:14.1 D-12:55
NGC6304 <i>Class VI</i>	Jul 10	GC	8.4	6.8"	R17:14.5 D-29:28
36 Oph	Jul 10	T*	5.1 5.1 6.7	K0V 5" K1V 730" K5	R17:15.0 D-26:36 SAO185199 18ly
o-Oph	Jul 11	D*	5.4 6.9	K0II 10" F6IV	R17:18.0 D-14:17 SAO185238 Orange, blue
M9 <i>Class VIII</i>	Jul 12	GC	7.9	9'	R17:19.2 D-18:31
NGC6356 <i>Class II</i>	Jul 12	GC	9.0	2'	R17:23.6 D-17:49
NGC6366	Jul 14	GC	8.9	8.3'	R17:27.7 D-05:05 12,000ly
NGC6369	Jul 14	PN	11.4 *15	30"	R17:29.3 D-23:46 Little Ghost Nebula
NGC6384 <i>SAB(r)bc</i>	Jul 14	GX	10.4 13.9	6.4x4.3'	R17:32.4 D+07:04
M14 <i>Class VIII</i>	Jul 16	GC	7.6	11.7'	R17:37.6 D-03:15 30,000ly
NGC6401 <i>Class VIII</i>	Jul 16	GC	9.5	5'	R17:38.6 D-23:55
61 Oph ADS10750	Jul 17	D*	6.1 6.5	A1IV-V 21"	R17:44.6 D+02:35 SAO12690 460ly
IC4665	Jul 18	OC	4.2	40'	R17:46.3 D+05:43 1,400ly
Collinder 350	Jul 19	OC	6.1	44'	R17:48.1 D+01:18
Barnard's *	Jul 22	*	9.5	10.3"/yr	R17:58 D+04:41
67 Oph	Jul 22	D*	4.0 8.6	B5Ib 55"	R18:00.6 D+02:56 SAO123013 2,000ly
70 Oph	Jul 23	D*	4.2 6.0	K0V 4" K6	R18:05.5 D+02:30 SAO123107 17ly 88yr
NGC6572	Jul 24	PN	9.0 *12.9	16"	R18:12.1 D+06:51 RM 2,000ly RM
NGC6633	Jul 28	OC	4.6 *7.6	27'	R18:27.7 D+06:34 1,000ly
IC4756	Aug 1	OC	5.4	60'	R18:39.0 D+05:27 1,300ly

SUMMER 7

Catalogue	Date	Type	Mag	Size	Comments
SERPENS					
v-SerCd H247	Jul 12	D*	4.3 8.3	A2V 46.3"	R17:20.8 D-12:51 SAO160479 CAUDA
M16 <i>II3m</i>	Jul 27	OC	6.0	35x28"	R18:18.8 D-13:47 (photo neb) RM CAUDA 8,200ly
Struve 2303	Jul 27	D*	6.6 9.1	F2V 2.1"	R18:20.1 D-07:59 SAO142229 CAUDA
59 SerCd Struve2316	Jul 29	D*	5.3 7.6	A0III 3.8" A6V	R18:27.2 D+00:12 SAO123497 CAUDA
IC4756	Aug 1	OC *8.7	5.4	52"	R18:39.0 D+05:27 CAUDA
0-SerCd ADS11853	Aug 4	D*	4.6 5.0	A5V 22.3" A5V	R18:56.2 D+04:12 SAO124068 CAUDA 130ly
M5	Jun 11	GC	5.8	17"	R15:18.6 D+02:05 RM 24,000ly CAPUT RM
5-SerCp Struve1930	Jun 11	D*	5.1 10.1	F8III-IV 11.2"	R15:19.3 D+01:46 SAO120946 CAPUT 81ly
δ-SerCp Struve1954	Jun 15	D*	4.5 5.2	F0IV 4.4" F0IV	R15:34.8 D+10:32 SAO101623 CAPUT 210ly
OStruve300	Jun 16	D*	6.4 9.5	G7.5IIIa 15.3"	R15:40.2 D+12:03 SAO101673 CAPUT
β-SerCp Struve1970	Jun 17	D*	3.7 9.9	A2IV 30.6" A3V	R15:46.2 D+15:25 SAO101725 CAPUT
Struve 1985	Jun 20	D*	7.0 8.1	F8V 6"	R15:56.0 D-02:10 SAO140842 23ly
Struve 2031	Jun 25	D*	7.2 8.7?	F7V 19"	R16:16.3 D-01:39 152ly
CORONA BOREALIS					
ζ-CrB ADS9737	Jun 16	D*	5.0 5.9	B7V 6.3" B9V	R15:39.4 D+36:38 SAO65254 470ly
σ-CrB ADS9979	Jun 24	D*	5.6 6.5	G0V 7.1" G1V	R16:14.7 D+33:52 SAO84019

SUMMER 8

Catalogue	Date	Type	Mag	Size	Comments
SAGITTARIUS					
NGC6440 <i>Class V</i>	Jul 19	GC	9.7	5'	R17:48.9 D-20:22
NGC6445	Jul 19	PN	13.2	34"	R17:49.2 D-20:01
NGC6469		OC	8.2	12'	R17:52.9 D-22:21
M23 <i>I12r</i>	Jul 20	OC	5.5 *9.2	17'	R17:56.8 D-19:01
h5003	Jul 22	T*	5.2 6.9 13.0	5.5" 26"	R17:59.1 D-30:15 Reddish-orange
M20	Jul 22	BN	9.0	20'x20'	R18:02.3 D-23:02
NGC6520	Jul 22	OC	7.6	6'	R18:03.4 D-27:54
M8	Jul 23	BN	5	45'x30'	R18:04.0 D-24:23 RM
M21	Jul 23	OC	5.9	13'	R18:04.6 D-22:30
NGC6530	Jul 23	OC	5.1	14'	R18:05.7 D-24:19 RM
NGC6546	Jul 23	OC	8.0	13'	R18:07.2 D-23:20
NGC6565	Jul 24	PN	11.6	9"	R18:11.9 D-28:11
NGC6563	Jul 24	PN	11.0	48"	R18:12.0 D-33:52
NGC6567	Jul 24	PN	11.0	8"	R18:13.7 D-19:05
Barnard 92	Jul 25	DN		15'x9'	R18:15.5 D-18:14
Barnard 93				12'x2'	R18:16.9 D-18:04
NGC6596	Jul 25	OC	-	10'	R18:17.5 D-16:40 Dens field, dark lanes
M24	Jul 27	OC	4.5	90'	R18:18.4 D-18:25 Small Sgt Star Cloud 9,400ly
M18	Jul 27	OC	6.9 8.6	10'	R18:19.9 D-17:08 3,900ly
M17	Jul 27	OC BN	6.0 9.3	11' 20'x15'	R18:20.8 D-16:11 4,900ly Swan Nebula + OC RM
NGC6624 <i>Class VI</i>	Jul 27	GC	8.0	6'	R18:23.7 D-30:22
21 Sgt	Jul 28	D*	4.9 7.4	1.8"	R18:25.3 D-20:32 Orange - bluish
M28	Jul 29	GC	6.9	11'	R18:24.5 D-24:52
NGC6629	Jul 29	PN	11.3 12.8*	15"	R18:25.7 D-23:12
NGC6638	Jul 29	GC	9.1	5'	R18:30.9 D-25:30
M25	Jul 29	OC	4.6 *6.0	32'	R18:31.6 D-19:15
NGC6642	Jul 29	GC	9.4	4.5'	R18:31.9 D-23:29
NGC6645	Jul 29	OC	8.5 *12	10'	R18:32.6 D-16:54
M22	Jul 30	GC	9.1	24'	R18:36.4 D-23:54
M70	Aug 1	GC	8.0	7.8'	R18:42.2 D-32:18
NGC6716	Aug 4	OC	6.9	10'	R18:54.6 D-19:53
M54	Aug 5	GC	7.7	9'	R18:55.1 D-30:29
NGC6717	Aug 5	GC	9.2	4'	R18:55.1 D-22:42
H N 119	Aug 13	D*	5.6 8.6	8"	R19:29.9 D-26:59 Orange - blue
54 Sgt h599	Aug 16	T*	5.4 11.9 8.9	K2III 38" F8V 45"	R19:40.7 D-16:18 SAO162883

SUMMER 9

Catalogue	Date	Type	Mag	Size	Comments
SAGITTARIUS					
M55	Aug 16	GC	7.0	19'	R19:40.0 D-30:58
NGC6818	Aug 17	PN	9.9	17"	R19:44.0 D-14:09 5,500ly
NGC6822	Aug 17	GX	9.4	10'	R19:44.9 D-14:48 1.6Mly
M75	Aug 22	GC	8.6	6'	R20:06.1 D-21:55

Catalogue	Date	Type	Mag	Size	Comments
SCUTUM					
Struve 2306	Jul 27	D*	7.9 8.6	G9IV-V 10.2"	R18:22.2 D-15:05
Barnard 100 Barnard 101	Jul 29	DN		16' 13'x4'	R18:32.6 D-09:12 R18:32.6 D-08:57
NGC6649	Jul 29	OC	8.9 <i>*11.6</i>	6.6'	R18:33.5 D-10:24
NGC6664		OC	7.8	16'	R18:36.5 D-08:11 3,800ly
δ-Scuti	Aug 1	D*	4.7 9.2	F2III 52.6"	R18:42.3 D-09:03 SAO142515
Struve 2373	Aug 2	D*	7.2 8.2	F2 4.2"	R18:45.9 D-10:30 SAO161805
M26	Aug 2	OC	8.0 <i>*10.3</i>	14'	R18:45.2 D-09:24 5,200ly
Barnard 110 Barnard 111 Barnard 113	Aug 3	DN		11' 15'x5' 11'	R18:50.1 D-04:48 R18:51.4 D-04:19
M11	Aug 3	OC	5.8 <i>*8.0</i>	14'	R18:51.1 D-06:16 6,100ly
NGC6712	Aug 4	GC	8.1	10'	R18:53.1 D-08:42 22,500ly

SUMMER 10

Catalogue	Date	Type	Mag	Size	Comments
SAGITTA					
U Sge	Aug 11	V*	6.6-9.2	3.38dy B8III	R19:18.8 D+19:37 SAO104711
H84	Aug 16	D*	6.5 8.9	28.2"	R19:39.4 D+16:34
ζ-Sge 8-Sge	Aug 18	T*	5.5 8.7 11.0	A3V 8.6" 76"	R19:49.0 D+19:09 SAO105298
Harvard 20	Aug 19	OC	7.7 *8.9	9"	R19:53.1 D+18:20 5,000ly
M71	Aug 19	GC	8.3	7"	R19:53.8 D+18:47 RM 13,000ly
θ-Sge Struve2637	Aug 23	T*	6.5 8.9 7.3	F5IV 11" 88"	R20:09.9 D+20:55 SAO088276 92" BC
NGC6886	Aug 24	PN	11.4	4"	R20:12.7 D+19:59

Catalogue	Date	Type	Mag	Size	Comments
LYRA					
α-Lyrae Vega	Jul 31	T*	0.0 9.5 9.5	A0V 63" 118"	R18:36.9 D+38:47 25ly
ε-Lyrae	Aug 2	Q*	5.0 6.1 5.2 5.5	B2V 2.6" F1V 208" A8V 2.3" F0V	R18:44.3 D+39:40 SAO067310 RM Double-double CD 200ly
NGC6703 SAO	Aug 2	GX	11.3 13.0	2.3'x2.3'	R18:47.3 D+45:33
ζ-Lyrae	Aug 2	D*	4.3 5.9	A0 44" F0IV	R18:45.0 D+37:36 SAO67321 Topaz, green
β-Lyrae	Aug 3	Q* V*	3.4- 4.4 8.6 13.0 9.9	12.9d B7V+A8 46" 47" 67"	R18:50.1 D+33:32 SAO67451 860ly Sheliak C is close double
M57	Aug 4	PN	9.7 *15.3	70x50"	R18:53.6 D+33:02 Ring Nebula RM 2,000ly
δ-Lyrae		D*	4.5 5.6	M4II 630" B2V	R18:54.0 D+36:58 SAO67537 800ly, part of Stephenson-1 OC
13-R Lyrae	Aug 4	V*	3.8-5		R18:55.3 D+43:57
Struve 2470	Aug 8	D*	6.6 8.6	B5V 13.4"	R19:08.8 D+34:46 SAO67870
Struve 2474		D*	6.7 8.8	16.2	R19:09.1 D+34:36 SAO67879 Only 12"NS apart
M56	Aug 10	GC	8.2	7"	R19:16.6 D+30:11 RM 31,000ly
RR-Lyrae	Aug 12	V*	7-8.1	12h A5-F7	R19:25.5 D+42:47

SUMMER 11

Catalogue	Date	Type	Mag	Size	Comments
DELPHINUS					
NGC6891	Aug 25	PN	10.5 <i>12.4</i>	14"	R20:15.2 D+12:42
NGC6905	Aug 26	PN	12.0 <i>*15.5</i>	39"	R20:22.4 D+20:07
NGC6934	Aug 29	GC	9.0	5"	R20:34.2 D+07:24 RM
Struve 2703	Aug 30	T*	8.4 8.4 8.7	K0 25" A5 76"	R20:36.8 D+14:44 700ly
κ -Delphini OStruve533	Aug 31	D*	5.1 11.7	G2IV 28.8"	R20:39.1 D+10:05 SAO126059
Struve 2725	Sep 1	D*	7.5 8.2	K0 6"	R20:46.2 D+15:54 125ly
γ -Delphini Struve2727	Sep 1	D*	4.5 5.5	K1IV 10" A2Ia	R20:46.6 D+16:07 SAO106475 101ly
NGC7006	Sep 5	GC	10.6	3"	R21:01.5 D+16:11 140,000ly
MICROSCOPIUM					
NGC6925	Aug 29	GX	11.3 <i>13.1</i>	4.7'x1.3'	R20:34.3 D-13:59
IC5039 IC5041	Sep 1	GX	12.6 12.5	2.3'x0.7' 2.5'x1.3'	R20:43.2 D-29:51 R20:43.6 D-29:42
α -Mic h5224	Sep 2	D*	5.0 10.0	20.5"	R20:50.0 D-33:47

SUMMER 12

Catalogue	Date	Type	Mag	Size	Comments
CYGNUS					
β-Cygni	Aug 13	D*	3.2 3.4	K3II 34" B8V	R19:30.7 D+27:58 SAO87302 Albireo (RM) 380ly
NGC6811	Aug 15	OC	6.8 *9.9	20"	R19:36.9 D+46:23 4000ly
NGC6819	Aug 16	OC	7.3 *11.5	5"	R19:41.3 D+40:11 RM
16 Cygni	Aug 16	D*	6.0 6.2	G2V 40"	R19:41.8 D+50:32 SAO31898 71ly
NGC6826	Aug 17	PN	9.8 *10.6	30"	R19:44.8 D+50:31 Blinking Planetary RM 5100ly
δ-Cygni Struve2579	Aug 17	D*	2.9 6.3	B9.5IV 2.5" F1V	R19:45.0 D+45:08 SAO48796 270ly
17 Cygni	Aug 17	D*	5.0 9.2	F7V 26"	R19:46.4 D+33:44 SAO68827
NGC6834	Aug 19	OC	9.7	5.0'	R19:52.3 D+29:25 RM
Barnard 145	Aug 21	DN		35'x6'	R20:02.8 D+37:40
NGC6866	Aug 21	OC	7.6 *10.7	7"	R20:03.7 D+44:00 RM 4700ly
NGC6871	Aug 22	OC	5.3 *6.8	20"	R20:05.9 D+35:47
NGC6888	Aug 23	BN		20x10'	R20:12.0 D+38:21 Crescent Nebula
Barnard 343	Aug 25	DN		13'x5'	R20:13.5 D+40:16
NGC6894	Aug 26	PN	12.3 *17.6	42"	R20:16.4 D+30:34
IC4996	Aug 26	OC	7.3 *8.5	5"	R20:16.5 D+37:38
IC1318	Aug 26	BN		240'	R20:22.2 D+40:15
M29	Aug 27	OC	6.6 *8.6	7"	R20:23.9 D+38:32 RM 3700ly
NGC6910		OC	7.3	7.0'	R20:23.1 D+40:47 RM 3700ly
Ruprecht 173	Aug 31	OC	*8.0	50"	R20:41.8 D+35:33 4000ly
NGC6960	Sep 1	BN	7	70x6'	R20:45.7 D+30:43 Veil N. Complex : Filamentary Neb.
IC5070	Sep 2	BN	8	60x50'	R20:51.0 D+44:12 Pelican Neb.
NGC6979	Sep 2	BN		7'x3'	R20:51.2 D+32:10
NGC6974					Veil N. Complex: Pickering's Wisp
NGC6991	Sep 3	OC	5.0	25"	R20:54.9 D+47:25
NGC6992/5	Sep 3	BN	7	60x8'	R20:56.4 D+31:43 Veil N. Complex: Bridal Veil / Network Neb. 1400ly
NGC7000	Sep 5	BN		120x100'	R20:58.8 D+44:20 North America Nebula 500ly?
NGC7026	Sep 6	PN	10.9 *14.8	21"	R21:06.3 D+47:51
NGC7027	Sep 6	PN	8.4 *16.3	15"	R21:07.1 D+42:14
61 Cygni	Sep 6	D*	5.5 6.4	K5V 27" K7V	R21:06.9 D+38:45 SAO070919 11.4ly
NGC7048	Sep 8	PN	12.1 *18.0	61"	R21:14.2 D+46:16

SUMMER 13

Catalogue	Date	Type	Mag	Size	Comments
CYGNUS					
M39	Sep 12	OC	4.6 *6.8	32'	R21:32.2 D+48:26 RM 900ly
Barnard 364 Barnard 157	Sep 12	DN		40' 4'	R21:33.6 D+54:33 R21:33.7 D+54:40
Barnard 164	Sep 16	DN		12'x'6'	R21:46.5 D+51:04
AQUILA					
NGC6781	Aug 11	PN	11.8	1.9'x1.8'	R19:18.4 D+06:33
57-Aquilae	Aug 24	D*	5.7 6.4	B7V 36'' B8V	R20:13.6 D-08:14 SAO143898

Catalogue	Date	Type	Mag	Size	Comments
VULPECULA					
Struve 2445	Aug 7	D*	7.2 8.9	B2V 12.6''	R19:04.6 D+23:20 SAO86779
Struve 2455	Aug 7	T*	7.4 8.5 11.9	F4IV 6.6'' 93.5''	R19:06.9 D+22:10
Struve 2457	Aug 7	D*	7.5 9.0	A7IV 10.3''	R19:07.1 D+22:35 SAO86828
Collinder 399 Brocchi's Cl.	Aug 12	OC	3.6 *5.2	60'	R19:25.4 D+20:11 The Coathanger
Struve 2521	Aug 12	Q*	5.8 10 10 11	K5III 450''	R19:26.5 D+19:53 SAO194839 End of Coathanger 450ly
NGC6800	Aug 12	OC	*10.0	5'	R19:27.2 D+25:08
NGC6802	Aug 13	OC	8.8 *12.9	3.2'	R19:30.6 D+20:16
Struve 2540	Aug 17	D*	7.3 8.8	A3 5.1''	R19:33.1 D+20:25
NGC6823		OC	7.0	12'	R19:43.3 D+22:44 RM
NGC6830	Aug 18	OC	7.9 *9.9	12'	R19:51.0 D+23:04 RM
NGC6834	Aug 18	OC	7.8 *9.7	5'	R19:52.2 D+29:25
M27	Aug 21	PN	7.3 *13.8	8'x4'	R19:59.6 D+22:43 Dumbbell Neb. RM 1,000ly
NGC6885	Aug 24	OC	8.1	7'	R20:12.0 D+26:29
Struve 2653	Aug 24	D*	6.9 9.7	A1m 2.6''	R20:13.7 D+24:14 SAO88377
Burnham 441	Aug 25	D*	6.2 10.7	K0 5.9''	R20:17.5 D+29:09 SAO88473
NGC6940	Aug 29	OC	6.3 *9.3	31'	R20:34.6 D+28:18 2,600ly