

2013 TMSP Observer's Challenge

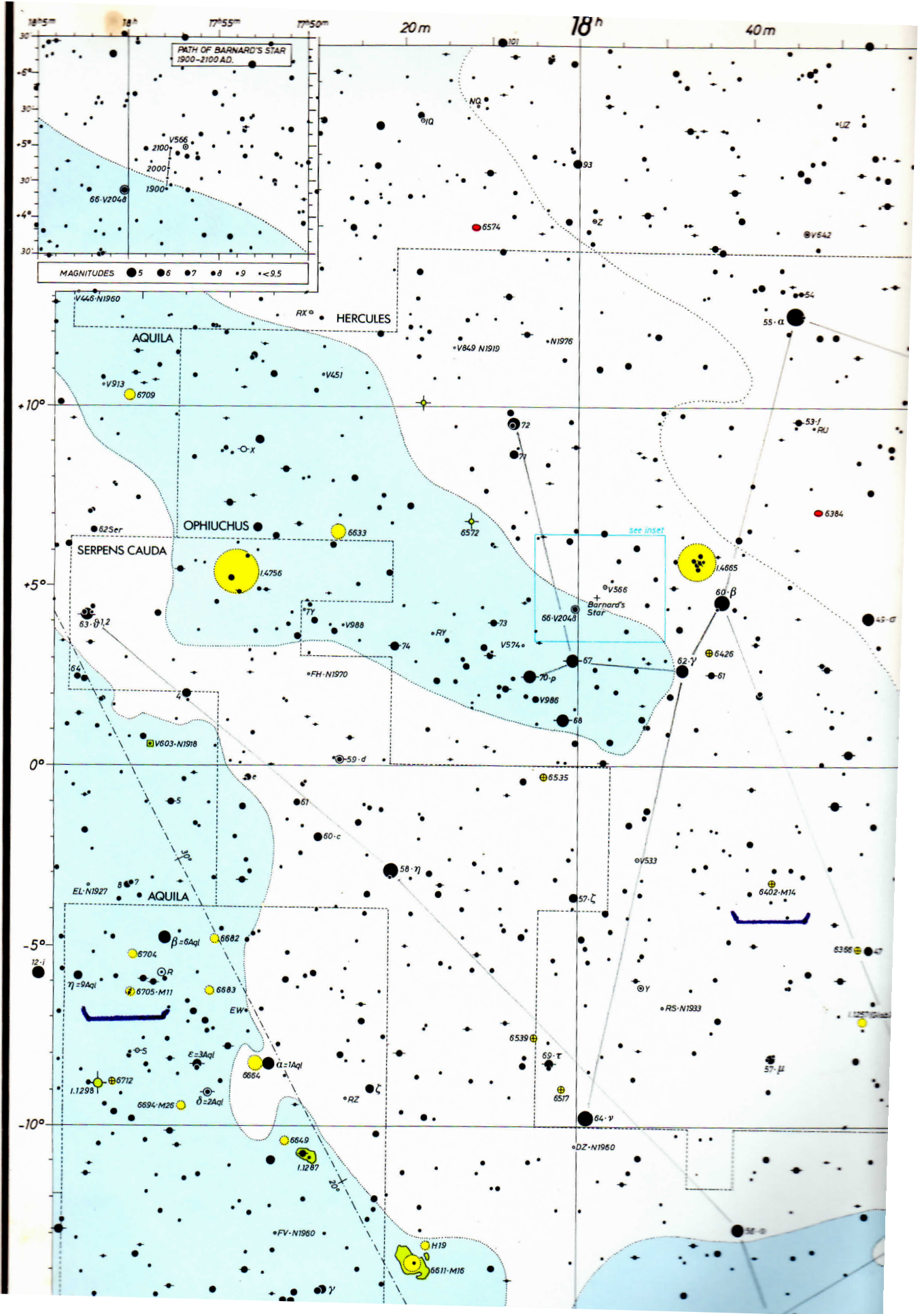
Atlas Page #s

Object	Object Type	Common Name	RA, DEC	Const	Mag	Mag.2	Size	Separation	SA2000	U2000	U2000.2	PSA	Comments
1	Gamma Delphini	Double Star	Struve 2727 +16°10'42"	Del	4.36V	5.03V	9"00	16	1,209	1,84	1,84	64	
2	52 Cygni	Double Star	SFT 2726 20h46m15s.0 +30°46'23"	Cy9	4.2V	8.7V	6"0	9	1,120	1,47	1,47	62	You've looked at the Veil, but have you ever looked at 52 Cygni??
3	NGC 7006	Globular Cluster	Palomar 7 21h02m09s.7 +16°14'44"	Del	10.6V		3'6	16	1,209	1,83	1,83	75	
4	Struve 2690	Double Star	WDS 20312+1116A,BC 20h31m55s.0 +11°18'34"	Del	7.12V	7.39V	17"3	16	1,208	1,84	1,84	64	
5	NGC 6802	Open Cluster	Brocchi's Cluster 19h31m13s.7 +20°17'43"	Vul	8.8V		5'0	8	1,162	1,66	1,66	64	At one end of the Coat Hanger asterism
6	Ara 91	Interacting Galaxies	NGC 5953, 5954 15h35m10s.8 +15°08'31"	Ser	12.1V	1'6x1'4	15	1,199	1,88	1,88	1,88	55	Interacting with ngs5954, w/5951 close by
			PGC 55435 15h34m23s.0 +14°57'59"										
7	70 Ophiuchi	Single Star	Struve 2272 18h06m09s.8 +02°30'19"	Oph	4.03V			15	1,111,249	1,111,106	65	Only 17 LY away and system orbital period is just 88 years.	
8	MU Cap	Variable Star	Herschel's Garnet Star 22h24m11s.5 +57°45'03"	Cap	12.7P	14.1P		3	1,57	1,19	1,19	71	
9	IC 1295	Planetary Nebula	PK 025-04.2 18h55m23s.6 -06°48'18"	Sct	12.5V		1'5	16	11,295	11,125	11,125	67	
10	NGC 281	Diffuse Nebula	Pac Man nebula 00h53m44s.6 +56°41'47"	Gas		35"0x30'0		1	1,36	1,18	1,18	1	Quadruple star in the nebula's center, 8.9m-8.9m 4", 9.7m-9.3m 1.5" HD5005
11	Eta Cassiopeae	Double Star	WDS 00491+5749AB 00h49m55s.7 +57°53'17"	Gas	3.52V	7.38V	13"30	1	1,36	1,18	1,18	1	
12	NGC 7789	Open Cluster	Collinder 460 23h58m13s.1 +56°47'20"	Gas	6.7V	25'0		3	1,35	1,18	1,18	71	
13	NGC 457	Open Cluster	Dragonfly cluster 01h20m27s.4 +58°21'47"	Gas	6.4V	20'0		1	1,36	1,29	1,29	1	Double star Phi Cassiopeae at edge of cluster, yellow/blue 5.1m-7m, 135"
14	NGC 40	Planetary Nebula	Bowtie Nebula 00h13m51s.0 +72°35'44"	Cap	12.3V	1'2		1	1,3	1,8	1,8	1	
15	NGC 6946	Galaxy	C 12 20h35m12s.6 +60°12'14"	Cy9	8.8V	11'5x9'8		3	1,56	1,20	1,20	61	Next to NGC 6939 listed below
16	NGC 6939	Open Cluster	Collinder 423 20h31m49s.7 +60°42'41"	Cap	7.8V	10'0		3	1,56	1,20	1,20	61	
17	NGC 7023	Cluster/Nebulosity	Iris nebula 21h01m49s.9 +68°13'33"	Cap	7.1b	10'0x8'0		3	1,33	1,9	1,9	71	
18	61 Cygni	Double Star	Piazzi's Flying Star 21h07m28s.3 +38°48'27"	Cy9	5.2V	6.05V	31"47	9	1,121	1,47	1,47	73	Red/orange pair 10.4 light years distant, with a high proper motion 1" star who's proper motion was measured
19	Piccol 1	Asterism	Napoleon's Hat 14h20m38s.8 +18°30'28"	Boo	0.0V			7	1,152	1,70	1,70	44	asterism "Napoleon's Hat" just below Arcturus
20	NGC 7008	Planetary Nebula	Felus Nebula 21h00m58s.9 +54°36'01"	Cy9	10.7V	1'4		3	1,56	1,19	1,19	73	Blue and gold double star on edge
21	Le Genill 3	Dark Nebula		Cy9		6.0 degrees							Huge dark area between Cygnus and Caprius. Naked eye or binocular object. NGC 7008 is at the northern edge.

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22	IC 5070	Diffuse Nebula	Pelican Nebula	20h51m31s.4 +44°27'23"	Cy9	8.0b	1° 0x0°.8	9	1, 85	1, 32	62	Pelican Nebula, can you see it? Use nebula filter on your finder
23	RS Cygni	Carbon Star	HD 192443	20h13m55s.7 +38°46'29"	Cy9	6.5V		9	1, 119	1, 48	62	Very red star. Pop in a nebula filter and look for the Crescent to the SW
24	Mankov 1	Asterism	Asterism near XI Bootes	17h58m19s.3 +29°30'07"	Her	0.0V		8	1, 116	1, 68	54	Mini "Teapot" asterism just above XI Hercules
25	Barnard 142	Dark Nebula	Triple Cave Nebula	19h44m21s.8 +10°33'10"	Aql		40".0	16	1, 207	1, 85	64	Use wide field scope or bins, just west of Gamma Aquilae. Keep Gamma out of the field.
				19h42m05s.7 +11°02'12"	Aql		30".0	16	1, 207	1, 85	64	
26	WDS 19088+3446	Double Star	Lyra other double double	19h09m16s.9 +34°47'14"	Lyr	7.03V		8	1, 118	1, 49	63	Use low power
				19h09m36s.0 +34°37'57"	Lyr	6.78V	7.88V	8	1, 118	1, 49	63	
27	NGC 6781	Planetary Nebula	Snowglobe Nebula	19h19m10s.1 +06°34'11"	Aql	11.4v	1".9	16	1, 206	1, 85	65	Large, fairly bright planetary nebula
28	NGC 6756	Open Cluster	Collinder 398	19h09m24s.8 +04°43'56"	Aql	10.6v	4".0	16	1, 11, 251	1, 11, 105	65	Pair of open clusters ½ degree apart
				19h08m13s.5 +04°17'34"	Aql	7.5v	15".0	16	1, 11, 251	1, 11, 105	65	
29	Barnard's Star	Single Star	Hip 87937	17h58m30s.1 +04°41'46"	Oph	9.54V		15	1, 11, 249	1, 11, 106	54	Fastest proper motion of any star. Should appear reddish in the eyepiece. Use the "arrow" of stars in the finder chart as a reference point
30	IC 4685	Open Cluster	Collinder 349	17h46m53s.7 +05°42'57"	Oph	4.2v	1".2	15	1, 203	1, 86	54	
This year the extra object #31 has been added as a challenge object. It has been seen in scopes as small as 6" under perfect conditions however, it lies in a rich star field and has a low surface brightness. Good luck!												
31	IC 10	Galaxy	PGC 1305	00h21m12s.1 +59°21'58"	Cas	10.4v	6".4x5".3	1	1, 35	1, 18	1	

SkyAtlas Map for Barnard's Star



Finder Chart and Image for Barnard's Star

