

Object	Con	Nav Star Number	Date	Local Time	Sideral Time	Quadrant Azimuth	Quadrant Altitude
Alpheratz	And	1					
Ankaa	Phe	2					
Schedar	Cas	3	1/30/2024	20:08	4:47	315.1	47.8
Diphda	Cet	4					
Hamal	Ari	6	1/30/2024	19:54	4:33	255	55.8
Acamar	Eri	7					
Menkar	Cet	8					
Mirfak	Per	9					
Aldebaran	Tau	10	1/30/2024	18:54	3:32	144.8	62
Rigel	Ori	11	2/4/2024	20:12	5:11	180	41.9
Capella	Aur	12	1/30/2024	18:36	3:16	66.5	68.5
Bellatrix	Ori	13	2/4/2024	20:22	5:21	180	55.9
Elnath	Tau	14	1/30/2024	18:42	3:21	104	61.9
Alnilam	Ori	15	2/4/2024	20:37	5:36	180	48.5
Betelgeuse	Ori	16	2/4/2024	20:52	5:51	180	57.1
Sirius	CMa	18					
Adhara	CMa	19					
Procyon	Cmi	20					
Pollux	Gem	21	1/30/2024	18:46	3:25	82	35.5
Pollux	Gem	21	2/4/2024	19:25	4:44	94.5	49.8
Suhail	Vel	23					
Alphard	Hya	25					
Regulus	Leo	26					
Dubhe	UMa	27					
Denebola	Leo	28					
Gamma	Crv	29					
Alioth	UMa	32					
Spica	Vir	33					
Alkaid	UMa	34					
Menkent	Cen	36					
Arcturus	Boo	37					
Zubenelgenubi	Lib	39					
Kochab	Umi	40					
Alphecca	CrB	41					
Antares	Sco	42					
Sabik	Oph	44					
Shaula	Sco	45					
Rasalhague	Oph	46					
Eltanin	Dra	47					
Kaus Australis	Sgr	48					
Vega	Lyr	49					
Nunki	Sgr	50					
Altair	Aql	51					

Deneb	Cyg	53					
Enif	Peg	54					
Alnair	Gru	55					
Fomalhaut	PsA	56					
Markab	Peg	57					
Polaris	UMi		1/28/2024	18:46		0	40
Jupiter 1			1/30/2024	19:53	4:12	228.9	54.6
Jupiter 2							
Jupiter 3							
Jupiter 4							
Jupiter 5							
Saturn 1							
Saturn 2							
Saturn 3							
Saturn 4							
Saturn 5							
Mecury 1							
Mecury 2							
Mecury 3							
Mecury 4							
Mecury 5							
Moon 1							
Moon 2							
Moon 3							
Moon 4							
Moon 5							
Moon 6							
Moon 7							
Moon 8							
Moon 9							
Moon 10							
Moon 11							
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Moon 19							
Moon 20							
Moon 21							
Moon 22							
Moon 23							
Moon 24							
Moon 25							

Nav Stars	10 of 47
Moon Obs	0 of 25
Jupiter Obs	1 of 5
Saturn Obs	0 of 5
Mercury Obs	0 of 5

Calc RA	Calc Dec	Actual RA	Actual Dec	Quadrant Transit	Astrolabe Altitude	Jacob's Staff Alt Staff	Jacob's Staff Alt Cross	Jacob's Staff tan x
		00 08 23	+29 05 26					
		00 26 17	-42 18 22					
		00 40 30	+56 32 14		48.5			
		00 43 35	-17 59 12					
		02 07 10	+23 27 45		56			
		02 58 16	-40 18 17					
		03 02 17	+04 05 23					
		03 24 44	+49 51 40					
		04 35 55	+16 30 33		64.9			
		05 14 32	-08 12 06	Y	42.2			
		05 16 41	+45 59 53		71.5			
		05 25 08	+06 20 59	Y	56.9			
		05 26 18	+28 36 27		63.8			
		05 36 13	-01 12 07	Y	48.2			
		05 55 10	+07 24 25	Y	58.5			
		06 45 09	-16 42 58	Y				#DIV/0!
		06 58 38	-28 58 20	Y				#DIV/0!
		07 39 18	+05 13 30	Y				#DIV/0!
		07 45 19	+28 01 34		36	15.125	11	0.6875
		07 45 19	+28 01 34		49.8			
		09 08 00	-43 25 57					
		09 27 35	-08 39 31	Y				#DIV/0!
		10 08 22	+11 58 02	Y				#DIV/0!
		11 03 44	+61 45 04					
		11 49 04	+14 34 19	Y				#DIV/0!
		12 15 48	-17 32 31	Y				#DIV/0!
		12 54 02	+55 57 35					
		13 25 12	-11 09 41	Y				#DIV/0!
		13 47 32	+49 18 48					
		14 06 41	-36 22 12					
		14 15 40	+19 10 57	Y				#DIV/0!
		14 50 53	-16 02 30	Y				#DIV/0!
		14 50 42	+74 09 20					
		15 34 41	+26 42 53					
		16 29 24	-26 25 55	Y				#DIV/0!
		17 10 23	-15 43 30	Y				#DIV/0!
		17 33 37	-37 06 14					
		17 34 56	+12 33 36	Y				#DIV/0!
		17 56 36	+51 29 20					
		18 24 10	-34 23 05	Y				#DIV/0!
		18 36 56	+38 47 01					
		18 55 16	-26 17 48					
		19 50 47	+08 52 06					





Jacob's Staff arctan x	Jacob's Staff Angle	Activity
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		8, 10, 12
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		12
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		12
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		12

Activity 7	Astrolabe - Alt of Polaris
Activity 8	Alt of Polaris
Quadrant	Elevation bright stars transit
	Alt/Az of moon and planets
Activity 10	<b>Use Astrolabe &amp; Quadrant Measure</b>
	Betelgeuse and Rigel
	Castor and Pollux
	Deneb, Altair, and Vega
	<b>Jacob's Staff &amp; Quadrant</b>
	Venus and just set/bfr rise Sun for 10 months
Activity 12	Use Astrolabe & quadrant to measure 15 transit stars
	Use quadrant to measure alt/az of remaining 15 stars

