

Meeting Date

December 14, 2025

Night Begins

6:42 PM EST

Note: Astronomical Twilight Ends

Solar Noon / Midnight

12:26 EST

Note: on Meeting Date

Moon Quarters

Full 12/04, Last 12/11, New 12/19, First 12/27

Darkest Evenings

12/09 – 12/25

Note: 2 days before Last thru 2 days before First

Viewing Resources

Evening Sky Maps

<http://skymaps.com/>

Astronomy Forecasts

<https://clearoutside.com/forecast/42.82/-83.14>http://oaklandastronomy.net/ambient_RH.html

Peter Birren's Deep-Sky Fieldbooks

<http://www.birrendesign.com/astro.html>**Featured Constellation: Taurus**A selection from Peter Birren's excellent deep-sky fieldbook, *"Objects in the Heavens"*, pages 120-121

CONSTELLATION	COMMON NAME	SEASON, ON MERIDIAN	ABBREVIATION
ITEM IDENTIFIER	TYPE	DETAILS	☆☆ SEPARATION / SIZE RA DEC MAG
Taurus	<i>the Bull</i>	Winter Jan 15	TAU
<i>"An interesting constellation containing two beautiful groups familiar to the first beginner in stellar astronomy, The Pleiades, and Hyades. Neither of these, however, is sufficiently concentrated to make a good telescopic object, excepting in an unusually large field."</i>			
☆☆ Aldebaran® α	Gold/pale red; 65LY	30.8" 04:37.1 16°33' .9/12	
Eye of the Bull; Pioneer 10 (1973) will reach ☆ in 2M Years			
☆☆ El Nath β	4.5x larger than Sun; 130LY	33.4" 05:27.5 28°37' 1.67	
☆ Alcyone η	Queen Who Wards off Evil Storms; Brightest in Pleiades	2.86	
☆☆ Chamukuy $\theta_{1,2}$	Yellow/blue	5.6' 04:29.8 16°01' 3.4/4	
☆☆ 94/Tau τ	White/blue; 510LY	63" 04:43.4 23°00' 4.2/7	
☆☆ 52/Phi ϕ	Red-yellow/blue; 110LY	49.6" 04:21.6 27°24' 5/7.5	
☆☆ 59/Chi χ	White/blue	19.5" 04:23.8 25°40' 5.5/8.5	
☆☆ 118	☆☆☆; white/yellow/yel	5"/12.7" 05:30.5 25°10' 6-7/12	
☆☆ $\Sigma 430$	☆☆☆; orange primary	26"/37" 03:41.6 05°12' 6-10	
○ M1 1952	SNR Crab Neb; oblong; pale	6'x4' 05:35.7 22°02' 8.4	
First seen on Earth 1054; 6200LY away; 6LY wide			
○○ M45 MEL22	C/N !! Pleiades, Seven Sisters, Daughters of Pleione; 499☆ to mag14 of 3,000☆ group; Brilliant naked eye cluster; 380LY; 13LY wide	2° 03:48.2 24°11' 1.2	
○ NGC1432	RN Maia nebula	30'x30' 03:47.0 24°26' 3.9	
○ NGC1435	RN Merope nebula	21'x9' 03:47.3 23°51' 4.2	
○ NGC1514	PN Crystal Ball Neb; 9☆ in 3' dia	2.3'x2' 04:10.5 30°50' 10.2	
○○ NGC1647	OC 200☆; scattered; diamond-shape	40' 04:47.1 19°08' 6.4	

○○ NGC1746	OC	20☆; bright; U-shape; 2 groups	42'	05:05.0	23°48'	6.1
○○ NGC1807	OC	20☆ mag 8-9; pretty rich	15'	05:11.9	16°32'	7.0
○○ NGC1817	OC	60☆ mag 10-14; small spread	16'	05:13.4	16°42'	7.7
○○ Star 16	Ast	<i>Davis' Dog</i> ; use binocs	3.5°x1.5°	04:22.5	21°25'	7.5
○○ Mel 25	OC	<i>Hyades, the Bull's Face,</i> <i>Taurus Moving Cluster</i> ; closest cluster to earth; 151LY	5.5°	04:28.0	15°55'	0.5
○ Cz 18	OC	15☆ m10; old; 3110LY	10'	04:27.8	30°57'	10.0
○○ Cr 65	OC	15☆; loose lines; <i>Stingray Ast.</i>	220'	05:27.2	16°43'	3.0