

Meeting Date

September 8, 2024

Night Begins

9:30 PM. EDT

Note: Astronomical Twilight Ends

Solar Noon / Midnight

1:30 EDT

Note: on Meeting Date

Moon Quarters

New 09/02, First 09/11, Full 09/17, Last 09/24

Darkest Evenings

08/24 – 09/09 09/22 – 10/08

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>**Bonus**

Saturn's Nighttime Moon Shadow Transits September 2024

Note: Most transits take a little over 2 hours

Date	Day	Start Time	Moon
09/02/24	Mon (Labor Day)	09:25 PM	Tethys
09/02/24	Mon (Labor Day)	10:11 PM	Dione
09/18/24	Sun	01:15 AM	Rhea
09/11/24	Wed	03:20 AM	Dione
09/13/24	Fri	09:07 PM	Dione
09/16/24	Mon	02:33 AM	Tethys
09/17/24	Tue	02:48 AM	Rhea
09/17/24	Tue	11:56 PM	Tethys
09/19/24	Thu	09:11 PM	Tethys
09/22/24	Sun	02:06 AM	Dione
09/26/24	Thu	03:24 AM	Rhea

Featured Constellation: CepheusA selection from Peter Birren's excellent deep-sky fieldbook, *"Objects in the Heavens"*, pages 70-71

CONSTELLATION		COMMON NAME	SEASON,	ON MERIDIAN	ABBREVIATION	
ITEM IDENTIFIER	TYPE	DETAILS	☆☆ SEPARATION / SIZE	RA	DEC	MAG

Cepheus	King of Ethiopia	Autumn	Oct 15	CEP
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"Splendid sweeps and curious groups between (alpha) and the Galaxy."

☆☆ Alderamin α	North Star in 5000 years	3.4'	21:19.0	62°40'	2.5/11
☆☆ Alfirk β	White/blue or green; 595LY	13.3"	21:28.9	70°39'	3/8.6
☆☆ 27/Delta δ	Yellow/blue; Cepheid var. 5.366d	21"	22:29.9	58°31'	4/6.3

☆☆ Erakis®	μ	! Herschel's Garnet Star; red SG 19.5"	21:44.1	58°52'	4/12
Reddest of non-carbon ☆; larger than Jupiter's orbit; in IC1396					
☆☆ Al Kurhah ξ		Yellow white/blue gray	8.5"	22:04.4	64°43' 4/6.4
☆☆ Σ2816/HR8281	☆☆☆	in IC1396	11.7"/20"	21:39.6	57°35' 5-8
☆ S®		Deep red carbon ☆; var 487 days	21:34.9	78°43'	7.5-13
○ NGC6939	OC	70☆; very rich; irregular shape	10'	20:31.9	60°43' 7.8
○ NGC6946	SG	Sab; <i>The Fireworks Galaxy</i> ; rich	11'	20:35.3	60°13' 9.2
Most supernovae; face-on spiral; 40,000LY wide					
○ NGC7023	C/RN	Iris Nebula with mag 7 ☆	5'	21:01.8	68°15' 7.0
○ NGC7142	OC	50☆; large; very rich	12'	21:45.6	65°51' 9.3
Mag11 OC NGC7129 and RN NGC7133 in field					
○○ NGC7160	OC	Sparse; scattered; arrowhead	7'	21:54.2	62°42' 6.1
○ NGC7226	OC	5-6☆; very faint; elliptical	2'	22:11.2	55°29' 9.6
○○ NGC7235	OC	Ruby ☆; only 2☆ (or 30☆?)	5'	22:13.1	57°22' 7.7
○ NGC7261	OC	Large; pretty rich; little comp	5'	22:20.9	58°13' 8.4
○ NGC7380	C/N	Wizard Nebula; 20☆; sparse	20'	22:48.1	58°13' 7.2
○○ NGC7510	OC	60☆; fan-shaped; compressed	6'	23:11.9	60°40' 7.9
○ NGC7538	EN	Brain Nebula; 2 central ☆	10x5'	23:14.3	61°37' 9.5
○ NGC7762	OC	40☆ mag11-15; pretty rich	4'	00:00.9	68°09' 10.0
○ NGC7822	EN	Faint; try H-beta filter	50'x40'	00:04.6	68°44' 10.0
2 separate areas North and South of NGC7762					
○ NGC40	PN	Bow Tie Neb; round; greenish	37"	00:14.1	72°38' 10.5
○ NGC188	OC	120☆; round; 4° from Polaris	15'	00:49.6	85°21' 8.1
2nd oldest known star cluster at 7 billion years					
○ Sh2-129	EN	Flying Bat Nebula; faint	1.7°x1.1°	21:12.3	60°02' 10.0
○○ IC 1396	C/N	The Elephant Trunk Nebula	3°x2.3°	21:39.7	57°35' 3.5
Classic stellar nursery; contains μCEP; use filter; 3000LY					
○ Tr 37	OC	30 ☆; cluster portion of IC1396	50'	21:39.7	57°35' 5.1
○○ Star 11	Ast	Cepheus OB2 Association	10°x5°	21:48.0	61°00' 7.5
○ Berk 94	OC	10☆ around mag10 ☆	3'	22:23.4	55°57' 8.7
○ IC 1470	EN	Comet shaped; "stubby" tail	15'x1'	23:06.0	60°21' 10.0
○ King 19	OC	20☆; near NGC7510	5'	23:09.1	60°37' 9.2
○ Mrk 50	OC	13☆ in 3°; very compressed	4'	23:16.1	60°34' 8.5
○○ 7 Sisters of the Pole	Ast	Pleiades pattern	4°x2°	00:00.0	86°45' 8.5
○ Berk 59	OC	Scattered; poor; mag9 ☆☆	1' sep 10'	00:03.3	67°32' 10.0