



Howard Astronomical League

Member Meeting – February 12, 2026

HAL Winter 2026 Auction

Bid

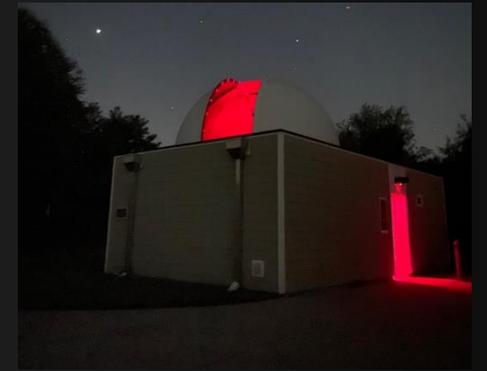
Experience ends in:

0 01 45 00
DAYS HRS MINS SECS



Agenda

- Welcome & Introductions
- Book of the Month
- Auction Update
- Events Calendar
- ALCOR Information
- Presentation: Black Hole Research at Greenbank Observatory
Mr. Arjun Sundar
- Did You Know? HAL's Seestar Loaner Program
- Artemis – More Than a Deja Vue
- Shallow Skies
- Member Astrophotos
- Auction Winners





Welcome to HAL!



A little about me...

- Member of HAL since 2014 (but was also a member in the early days)
- Have served on Board in VP capacity last 4 years
- Infrequent attendance prior to Zoom due to distance
 - Live in Towson
 - “*and your name is?*”
- Former dentist & software developer – now retired
- Big into planetary imaging
 - Webmaster for ALPO website
 - “Shallow Skies” slides
- Unable to sustain long periods of projected speaking (hence the microphone 🎤)



Book of the Month

Title:

American Moonshot:
John F. Kennedy and the Great Space Race

Author:

Douglas Brinkley (2019)

Length: 548 pages

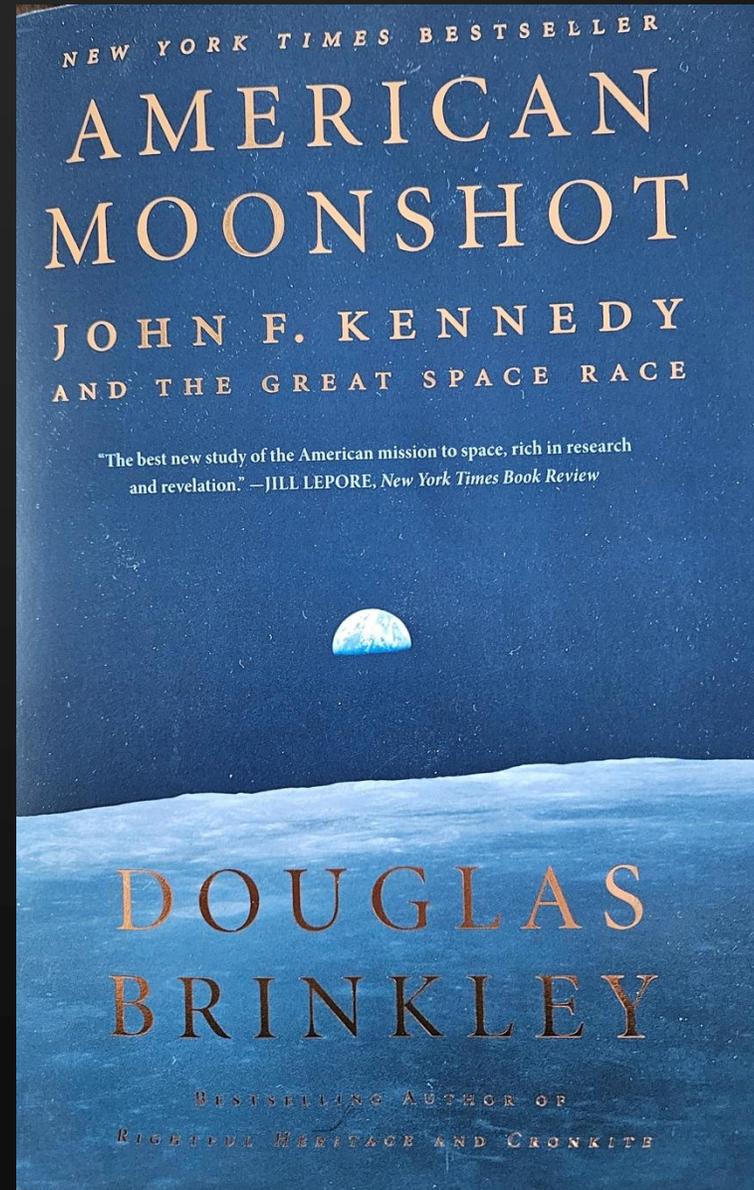
Audience Level:

Beginner Friendly

Intermediate

Experienced

February, 2026





HAL Winter 2026 Auction

<https://go.rallyup.com/9d4d9a>



Bidding ends at 8:45 p.m.

- Last moment bid strategy = **risky!**

Pickup at a HAL Star Party (or here if item is present) by end of March

- Victor may be able to work with you for alternative pickup
- Absolutely **no shipping!!**

Telescopes & Mounts

Astro-Tech AT130EDT OTA

iOptron CEM70 Center-Balanced Equatorial Mount

iOptron Tri-Pier – Heavy-Duty Telescope Pier/Tripod

Cameras & Imaging Gear

- ZWO ASI2600MM Monochrome Camera
- ZWO ASI174MM mini Camera
- ZWO ASIAIR Plus
- ZWO 7 x 2" Electronic Filter Wheel
- Optolong 2" Filter Set (LRGB, H-Alpha, SII, OIII)

Accessories & Tools

- Astro-Tech 0.8x Reducer/Field Flattener
- ZWO Electronic Automatic Focuser (EAF)
- ZWO Off-Axis Guider (OAG)
- Astrozap AZ-1513 Full-Aperture Glass Solar Filter
- ZWO 1.25" Non-Rotating Helical Focuser



Star Parties

Scheduled

Date	Event
Mar 14	Members-only Star Party
Mar 28	Public Star Party
Apr 18	Members-only Star Party
Apr 25	Public Star Party

Impromptu

Jan 7

- Ernie, Sam, Evelyn , Todd, Paul, Bill

Jan 20 – COLD!

- Bill, Ruth and Eric, Todd, Jose, Wayne





The Astronomical League & You

- **What is the Astronomical League (AL)?**
 - A nonprofit federation of nearly 300 astronomy clubs and individual members
- **How do I join?**
 - As a member of HAL, you are automatically a member of the AL!





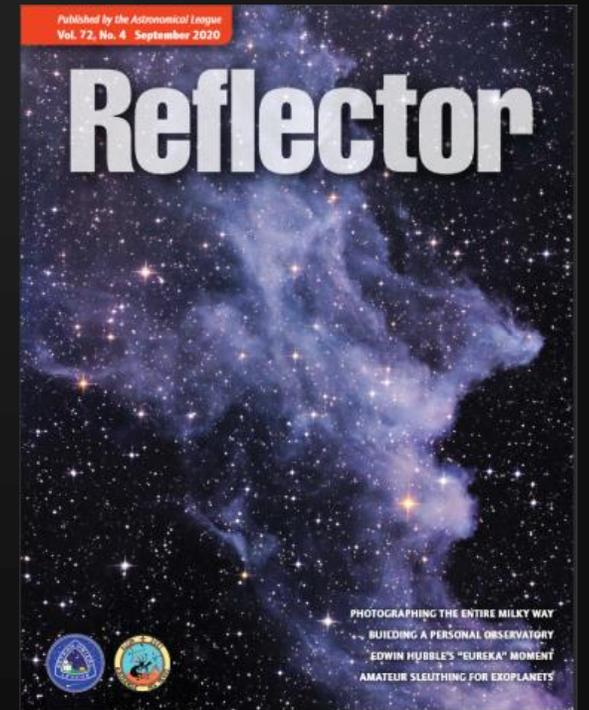
AL Benefits

- **Reflector Magazine**

- Every member receives this full color quarterly magazine that is published for League members by League members.

- **Night Sky Tools**

- Materials to assist you in your journey under the stars
 - Monthly sky maps
 - Timely observing activities
 - Outreach Downloads
 - Observing Briefs
 - Topical Flyers
 - Introductory guide: "Take your first steps."





AL Benefits

• Observing Programs

- The AL has over 60 Observing Programs for recognizing celestial objects or completing activities. Different programs are directed at specific expertise levels.

• Annual League Awards

- The AL recognizes individuals who are dedicated to amateur astronomy via awards in several different areas: Newsletter Editor, Webmaster, Volunteer, and Observer.

• Youth in Astronomy Awards

- The AL offers 2 youth research awards, 2 service awards, 3 imaging awards, and 3 communications awards – all recognizing the achievements of young astronomers.

Name	AL awards
Marc Feuerberg	Arp Peculiar Galaxies, Visual (35); Binocular Messier (648); Caldwell Silver (81); Deep Sky Binocular (187); Double Star (264); Globular Cluster (53); Herschel 400 (331); Lunar (594); Master Observer (77); Messier & Messier (H) (2161); Universe Sampler (79 (T))
Steve Jaworivsky	Arp Peculiar Galaxies, Visual (72V); Asteroid Gold (47); Binocular Messier (68); Caldwell Silver (20); Comet Observers Gold (29); Deep Sky Binocular (24); Double Star (249); Globular Cluster (40); Herschel II Observing Award (56-M); Herschel 400 (88); Lunar (448); Master Observer (38); Messier & Messier (H) (902)
ZoAnn Lapinsky-Macon	Binocular Messier (596); Caldwell Silver (30); Lunar (259); Messier and Messier (H) (1766); Planetary Transit Venus 2004 (1); Solar System (29); Universe Sampler (41) (T)
Chris Miskiewicz	Sunspotters (141); Outreach (Outreach-06580); Stellar (0658S)
Richard Orr	Caldwell Silver (26); Caldwell Gold (5)
Steve Berte	Carbon Star Program certificate (124); Double Star Program (671)
Ian Slepian	Honorary Messier Certificate (observed all 110 Messier objects)
Ernie Wright	Lunar and Lunar Binocular Observing Program certificates (1194; 1194B)
Jim Tomney	Jupiter Observing Program certificate (6)



HAL Membership Benefit Spotlight

HAL Seestar s50 Loaner Program

 **Hands-on access to a SeestarS50 smart telescope for HAL members**

- The unit is a compact, app-controlled “smart telescope” designed to make astrophotography incredibly easy. Instead of manually aligning, focusing, or processing images, the Seestar handles nearly everything automatically.

 **Operated Entirely from a Phone or Tablet**

- You control the telescope through the app installed on your mobile device:
 - - Finds and tracks objects for you
 - - Shows live stacking images as they improve
 - - Lets you save photos directly to your device
 - - Provides guided observing suggestions

[HAL Meeting on Seestar:](https://youtu.be/H7bTkRcGNMc?si=indJ3M-znGAY8wNp)

<https://youtu.be/H7bTkRcGNMc?si=indJ3M-znGAY8wNp>





Seestar S50 – Feels Like Cheating 😄





How to Sign Up

- Open only to adult members of HAL (18 or older)
- You can find all the information on the HAL website at <https://howardastro.org/seestar-loaner-program/>
- You will use a Google sign-up sheet
 - Review your obligations as the person who is checking out the unit
 - Complete the form with your contact information
- Requests are processed chronologically
- Usually pick up at a HAL monthly meeting and return at the following meeting (~ one month usage)
- The president or observatory director will notify you when it is your turn for using the Seestar.



Pulsar Search Collaboratory at the Green Bank Observatory

Arjun Meenashi Sundar





Arjun Meenashi Sundar



Currently a sophomore at Marriotts Ridge High School, Arjun has been an active HAL member since 2021, though many of us have known him far longer. A familiar face at public star parties since 2016, he has become a cornerstone of our outreach efforts, running the Solar System Table, where his enthusiasm and clear explanations have inspired countless visitors of all ages.

In 2022, Arjun delivered his first presentation to HAL at our February meeting on "Quantum Tunneling in Nuclear Fusion". His scientific curiosity is always evident, including a focus on the future of asteroid mining.

Beyond astronomy, Arjun hobbies include classical guitar and visual art, including joining the International Association of Astronomical Artists (IAAA) as a student member.



Artemis Science: Visualizing NASA's Next Lunar Flyby

*Artemis II Visualization Lead **Ernie Wright** has simulated views of the flyby using detailed topographic maps of the lunar terrain and photorealistic lighting scenarios. The Artemis II crew members are using these visualizations to prepare for their historic mission, which will pave the way for future exploration of the Moon's surface and beyond.*

<https://youtu.be/wdF4wyTarrI?si=yXxM45iIXUXszARt>



Shallow Skies for Feb-Mar 2026

- Although it's cold outside, this time of year is excellent for getting started learning about the constellations!







Total Lunar Eclipse for March 3, 2026

Key Points

- Totality occurs extremely low on the western horizon, with Moon setting during totality
 - Best viewing requires a clear, unobstructed western horizon
- Next (decent) total lunar eclipse is June 2029

Phase	Time	Altitude
Penumbral begins	3:44 AM	34°
Partial begins	4:50 AM	20°
Totality begins	6:04 AM	5.7°
Maximum eclipse	6:33 AM	0.5°
Moonset	6:38 AM	—



Member Astrophotos



Large Magellanic Cloud

Nikon 200 mm lens w ASI 294 MC pro camera on RST-135e mount.
50 minutes uv/ir cut and 70 minutes Ha/OIII filters - **Victor Sanchez**

M 81 - BODE'S GALAXY - OCTOBER 2025



Camera: ASI585MC Pro | Scope: SV503ED 80 mm | F/L: 560 mm | Capture: NINA | Process: Siril, Affinity Photo 2

Wes Ferwerda



Crab Nebula	8-inch RC	ASI294MM-P, 2x2
January 20, 2026	LRGB (48,22,24,24)x3min	Gain 0 (4.1e/ADU)
Alpha Ridge Park	5h54m exposure time	Wayne Baggett



M33 & NGC604

- Celestron 8
EDGEHD at f7
- ASI294MC OSC
- Integration time:
2h 8m
- Spruce Knob
Mountain, WV

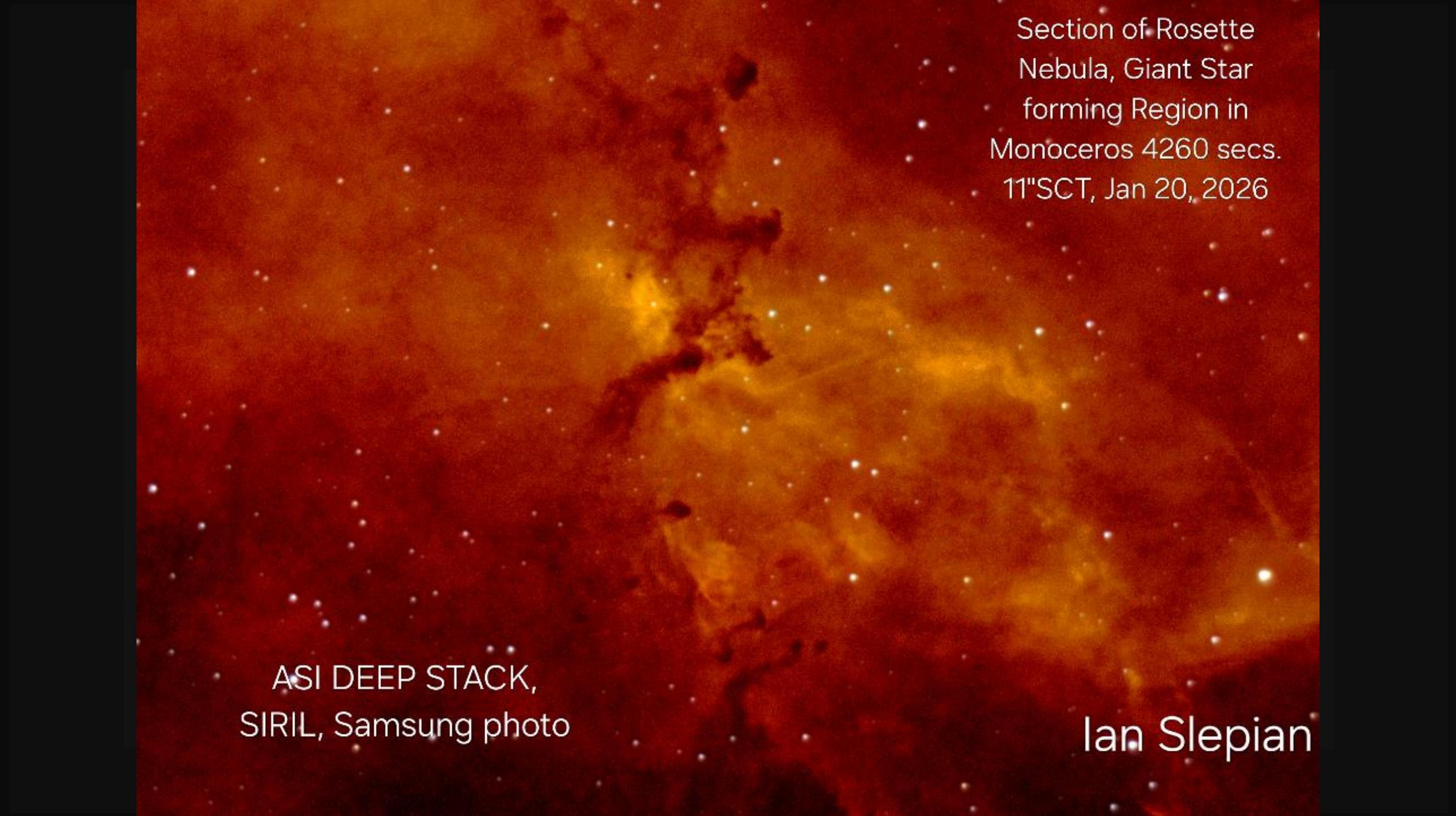
Rich Friedrich

Venus & Saturn

- Jan 15, 2025
- Columbia area

Daniel Maletz





Section of Rosette
Nebula, Giant Star
forming Region in
Monoceros 4260 secs.
11"SCT, Jan 20, 2026

ASI DEEP STACK,
SIRIL, Samsung photo

Ian Slepian

CALDWELL 7, GALAXY IN CAMELOPARDALIS,
82.5 MIN TOTAL EXP., IN 11" SCT,
ASI DEEPSTACK, SIRIL, PIXLR EXPRESS
1/22/2026



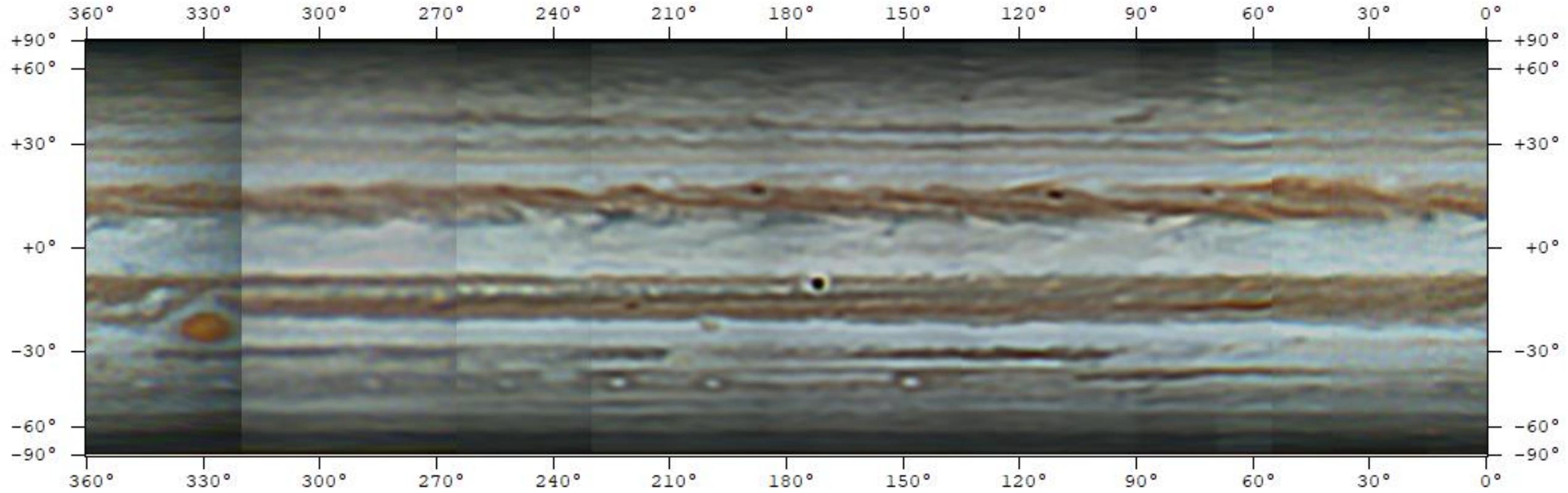
Ian Slepian



Jupiter January 7-8, 2026

Jim Tomney

Jupiter January 7-8, 2026



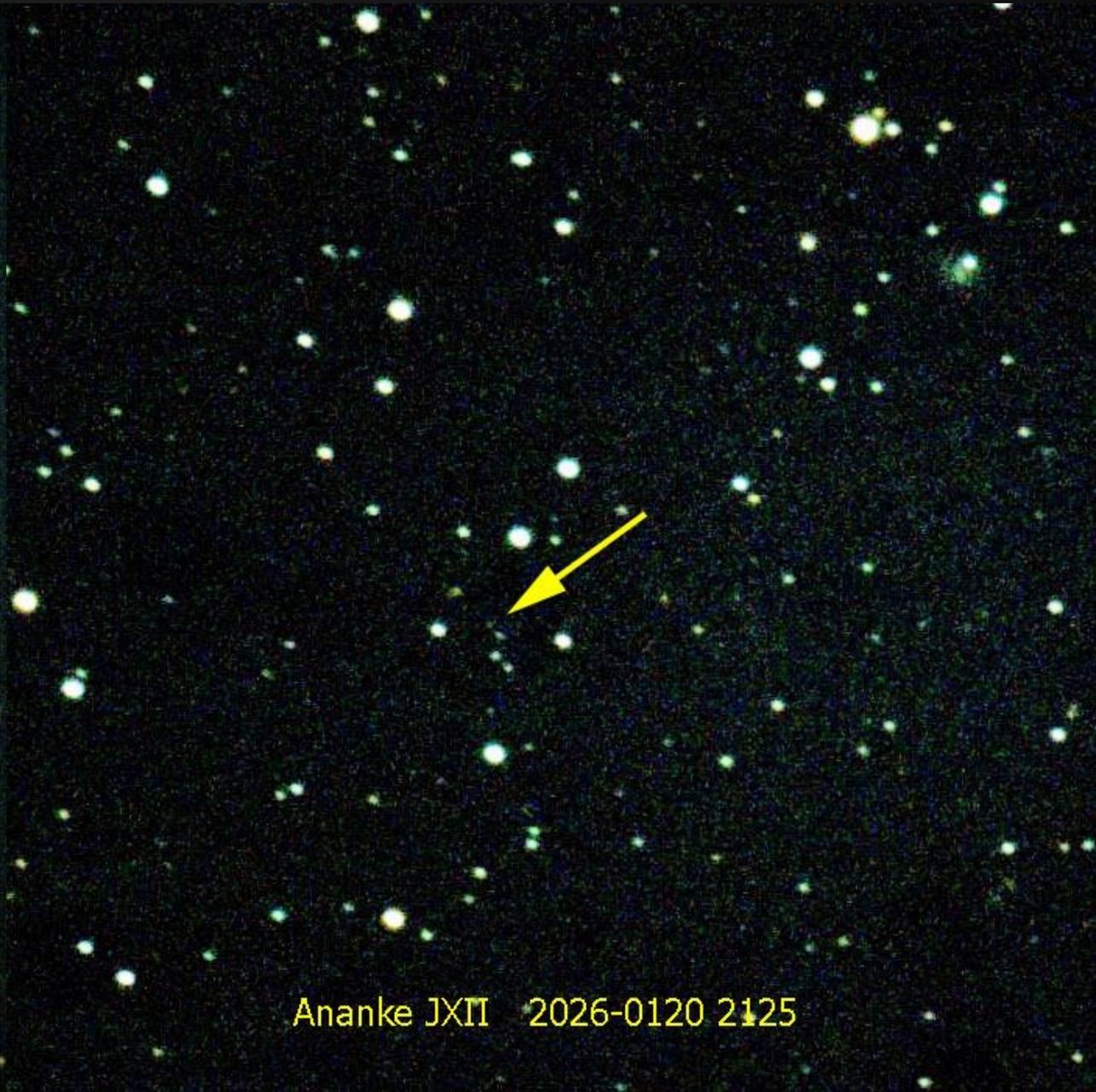
Longitudes in System 3, planetographic latitudes
Lambert cylindrical equal-area projection

25cm Newtonian f\6,
2.5x TV Barlow
QHY5III462 at 125fps

Faint Moons Imaged by Steve Gauss



Ananke JXII 2026-0120 2009



Ananke JXII 2026-0120 2125

Jovian Moons
Amalthea (mag 14)
& Thebe (mag 16)
Imaged by Ken Everhart

Amalthea and Thebe

09 February 2026
02h 42m UTC

Hanover,
Maryland

Seeing: 3 - Average
Altitude: 73°

Amalthea
Distance:
406,905,000 Miles
Size: 0.1"
Phase Angle: 6.1°
Constellation: Gemini

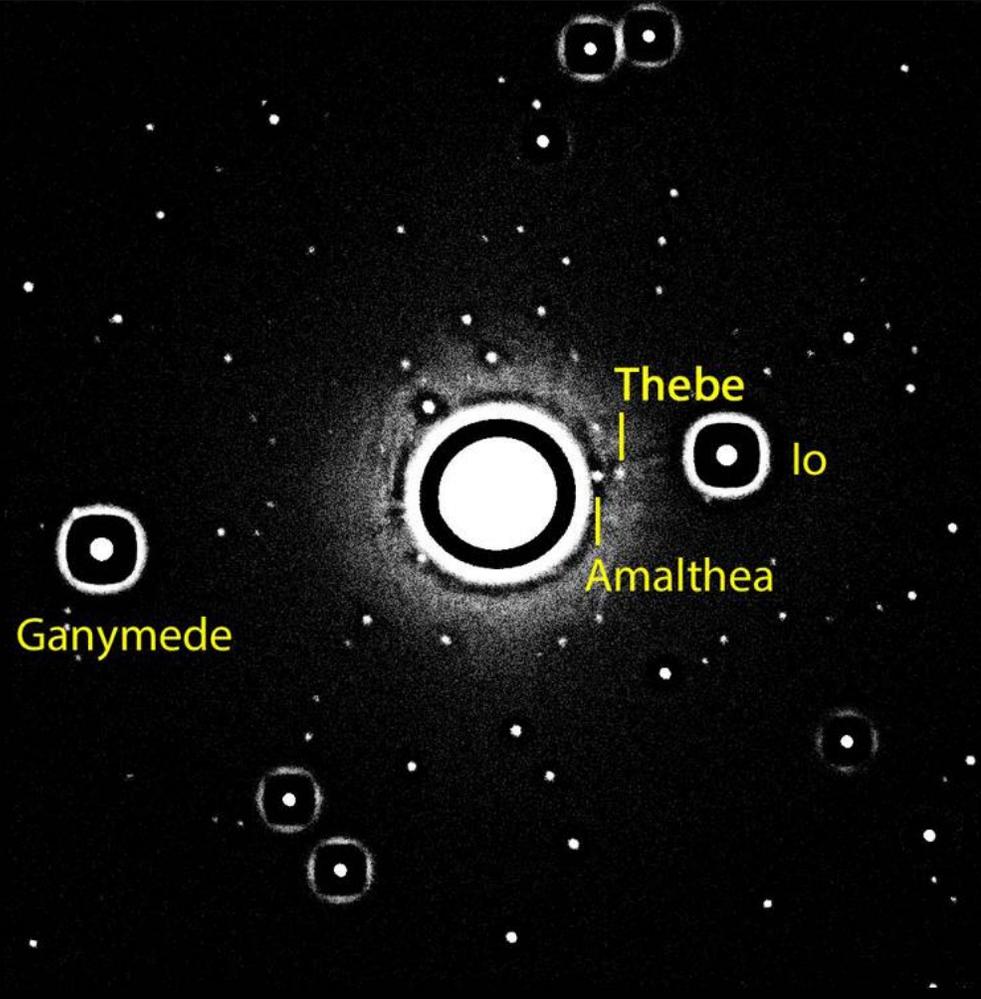
Thebe
Distance:
406,914,000 Miles
Size: 0.0"
Phase Angle: 6.1°
Constellation: Gemini

Telescope:
Meade LX-850 14"

Camera:
ZWO ASI2600MM

Lum 50 X 2 secs. 200 Gain

Processing:
Pixinsight
Photoshop.





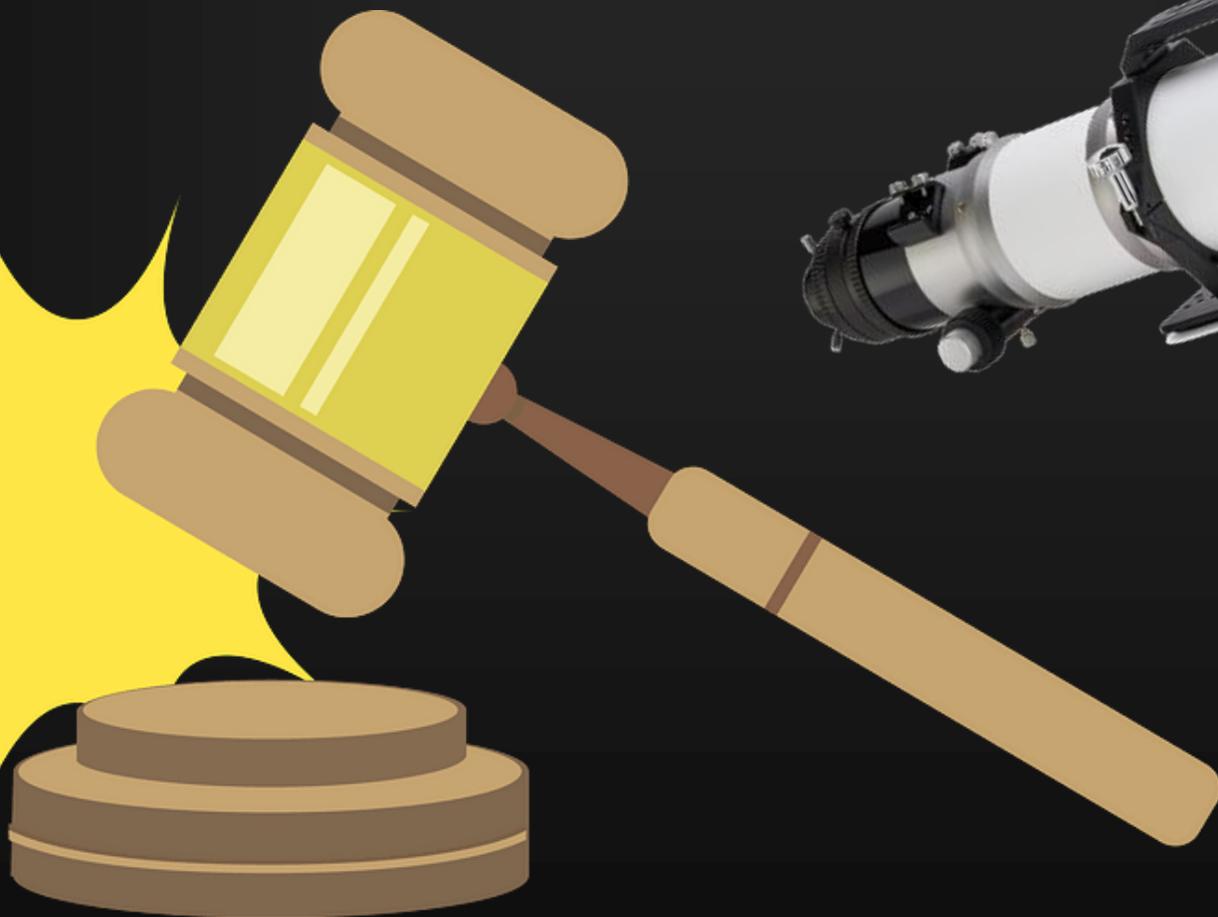
IC 410 & IC 405
“Tadpole Nebula and
Flaming Star Nebula”
Ernie Morse



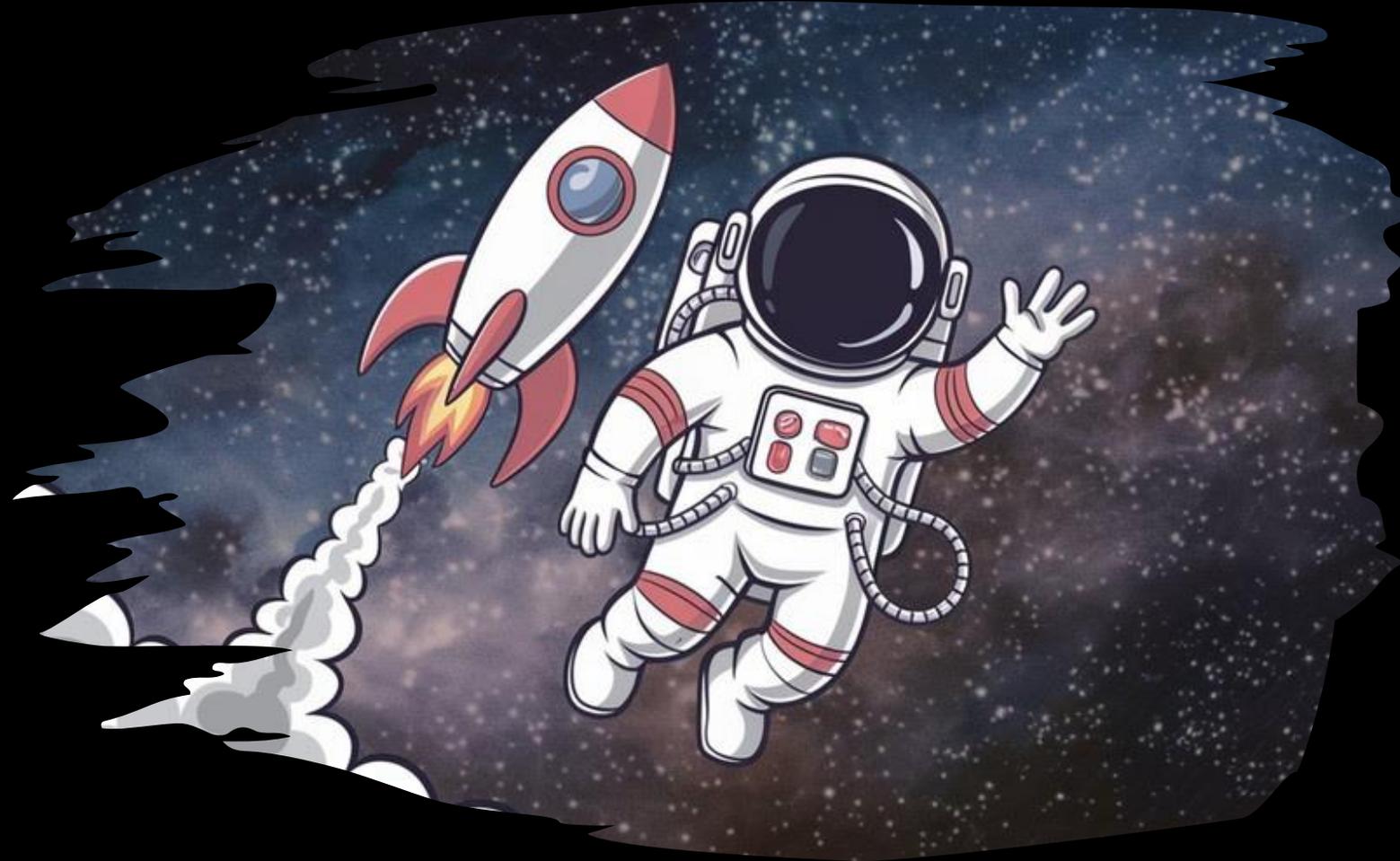
IC 1805
"Heart Nebula"
Ernie Morse



Auction Winners!



Thanks for Joining Us!



Be safe heading home – see you next month



HAL Planning Meeting: March 2, 2026

HAL Members Meeting: March 12, 2026