



**Monthly Notices
of the
Everglades
Astronomical Society**
Naples, FL
January 1, 2025



Officers: President: Paul Leopold **Treasurer:** Kathy James
Home Page: <https://evergladesastronomicalsociety.org/Home.php>

President's Message

Happy New Year! Our President, Paul Leopold, is “down under” traveling to Australia and New Zealand. Stay tuned next month for his letter.

A Note on the Monthly Newsletter

Thanks to John Meggers last month for his article on Astrofest, and to Chuck Dryer this month for his article on New Mexico.

Keep your articles, stories, and photographs—both astrophotographs and images taken at outreach events—coming.

Please submit your notes, articles, and images for next month's newsletter by the 25th of this month.

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UPCOMING EAS MEETINGS

Our monthly meetings are the 2nd Tuesday of each month and usually start at 7pm.

January 14, 2025: NOTE THE EARLY START TIME 6:30 – 7:30 pm

Guest Speaker: Dan Mints from the Amateur Astronomers Association of Princeton (AAAP) will discuss setting up his telescope for remote imaging in Texas.

Location: North Collier Government Center
2335 Orange Blossom Dr., Naples, FL

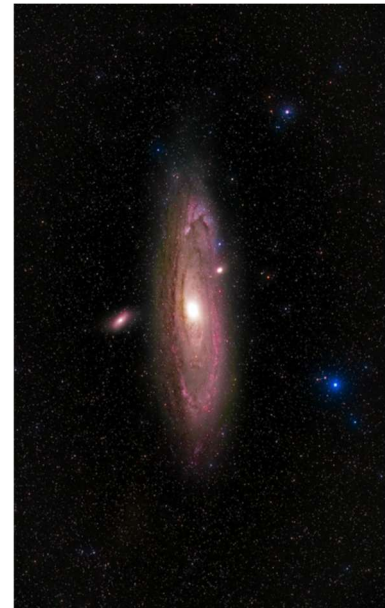


Photo by Dan Mints, AAAP

February 11, 2025 NOTE THE EARLY START TIME, LOCATION TBD

6:30 – 7:30 pm

Guest Speaker: Dr. Mario Motta, retired Cardiologist, amateur astrophotographer, telescope maker, former board member of Dark Sky International, and renowned expert on Light Pollution will discuss Light Pollution and its impact on health.

****All meetings are accessible via ZOOM:
Meeting ID: 349 568 7507
Passcode: telescope

Please do NOT share this info with non-club members.

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CLUB NEWS

EAS 2024-2025 Dues

Did you know that only active members that have paid dues are registered with the Astronomical League and receive the *Reflector* magazine?

Thanks to everyone who has paid their dues. If you have not done so already, please make sure to bring \$20 to a club meeting or mail your check for the 2025 club year to:

Kathy James
270 Naples Cove Dr. #3206
Naples, FL 34110

A New Mexico Astronomy Sampler Chuck Dryer

I had an opportunity to visit New Mexico in December. While it was the wrong time to visit from an astronomy perspective (too much Moon and outside of Milky Way season) I really enjoyed the visit and learned a few things. A follow up visit is on the list!

Have you heard of Archaeo, Ethno or Cultural Astronomy? Cultural Astronomy encompasses Archaeo (astronomical knowledge and practices which examines archaeological evidence like ancient structures, rock art, and written records) and Ethno (astronomical beliefs and practices of living cultures) astronomy. Archaeoastronomy has found that the “Circle of Life” spiral present in petroglyphs and Native American artwork can represent a solar calendar. The spiral also can represent migration, water, life, and spirituality. I don’t know if there is significance in the direction of the spiral.



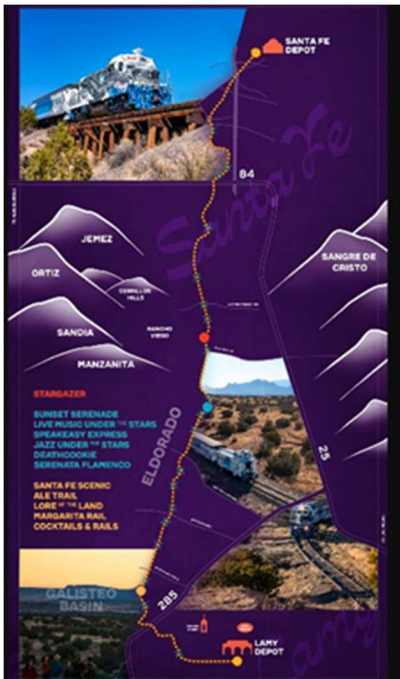
Petroglyph National Monument

The spirals were used to determine the summer and winter solstices and the spring and autumn equinoxes. At the solstice a shadow or narrow beam of light would bisect the spiral. These events were critical to their agrarian economy giving guidance to the proper planting and harvesting times. Astronomy developed in many cultures when agriculture took “root.”



Puye Cliffs

A nice activity in Santa Fe is to take the Stargazer train on the Sky Railway.



I did my best to take some photos but tripods are not allowed so it's my best handheld shot.

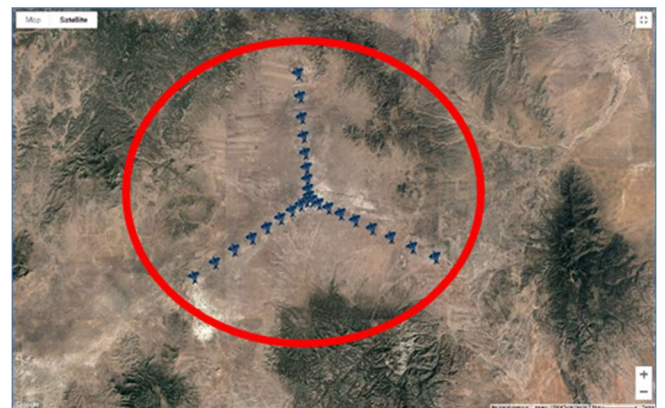


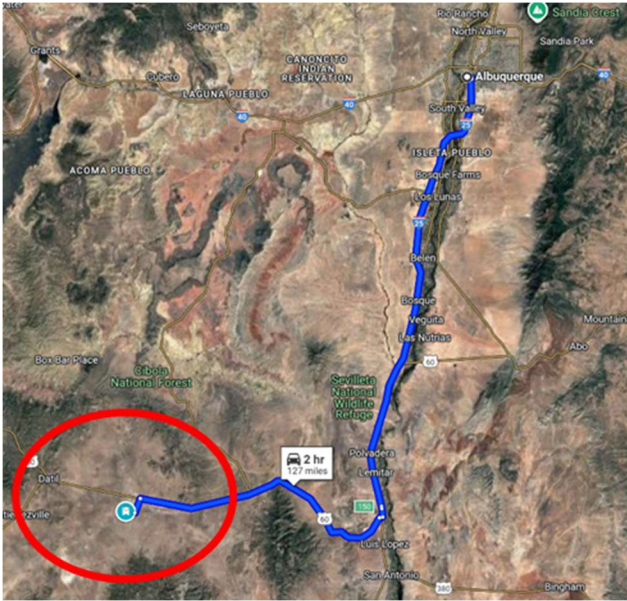
The train runs on an old spur line from Santa Fe to Lamy, New Mexico. In 2019 it was purchased by local enthusiasts including Bill Banowsky; owner of Violet Crown Cinemas and a filmmaker; George RR Martin, the novelist, co-creator of Meow Wolf, and savior of the Jean Cocteau Theater. They were joined by several others, including author Douglas Preston and artist Gary Oakley.

A more modern telescope is the Very Large Array in Magdalena, New Mexico. Twenty-seven Radio Telescopes spread over a 100 square mile area SW of Albuquerque. It's an odd site to see at 7,000 feet in the high plains desert.

There are a number of theme focused train rides, one of which is the Stargazer. The ride is narrated by a local astronomy professor (The Cowboy Astronomer) and travels a few miles from Santa Fe into the Galisteo Basin. The skies were dark but the moon was quite strong. We did see a few Geminid meteors.

Each antenna is 25m in diameter and the combined array has an effective resolution of 22mi in diameter. The next generation Very Large Array (ngVLA) may have 244, 59-foot (18-meter) dishes spread over 5,505 miles (8,860 km).





Besides the Astronomy, there's great cuisine and wonderful art in Santa Fe. A great place to visit and learn.



Big Cypress and Other Viewing

- 1) **Who is going to the Southern Cross Winter Star Party in the Keys? Let's chat about this at the January meeting and coordinate our presence there.**
- 2) Don't forget Monica Starks is organizing an astrophotography trip down to Chile. This first appeared in our October newsletter but the trip to San Pedro de Atacama in Chile from September 18-26, 2025. Space is limited. There are more details at: <https://www.peterzelinka.com/deep-space-workshop-chile-2>. Of course, you can email Monica directly if you have any questions: monica@ishootphotographytravel.com.
- 3) We have the following sungazing/stargazing outreach dates with the public. Please bring your telescope and enjoy sharing the skies with our community. (Sungazing is typically 2pm-4pm):
 - January 16 @ First Baptist Academy
 - January 21 @ Calusa Park Elementary School
 - January 25, 2025 @ Collier Seminole
 - February 22 @ Collier Seminole
 - March 29 @ Collier Seminole
- 4) Over at Cape Canaveral, a SpaceX Falcon 9 rocket will launch the Thuraya 4 satellite on January 2nd. Exact time is not yet available.



Stay up-to-date with weather and viewing opportunities on the GroupMe app.

Dark Skies Update **By Rich Sherman**

How many EAS Members are also members of Dark Sky International? As amateur astronomers, we should have a significant interest in supporting this organization. It is easy to join, and any contribution is welcome. Visit <https://darksky.org/>.

Did you know that there are now 233 International Dark Sky Places worldwide, including the recent addition of Cottonwood Canyon State Park in Oregon? These Dark Sky Places are located in 33 countries on six continents and cover more than 176,000 square kilometers.

Dark Sky International also has published its Principles of Responsible Tourism which means:

1. Use light responsibly
2. Protect the environment
3. Support the well-being of residents
4. Honor local and First People cultures
5. Adhere to local regulations, and
6. Foster sustainable economic growth

Finally, the January 2025 edition of *Sky & Telescope* includes a short snippet on the Chinese firm, “Shanghai Spacecom Satellite Technology” which plans to launch 10,000 LEO (“low earth orbit”) communication satellites. The firm recently launched its first 18. The article notes:

“There are, however, no regulation in place as yet that govern satellite brightness. [The Chinese firm’s satellites] at their current brightness would seriously interfere with astronomical research as well as aesthetic appreciation of the night sky.”

Earlier in the article, *Sky & Telescope* noted these satellites have a magnitude of 4, so they will be visible to the naked eye streaking across the sky for those living outside of light polluted cities.

The Cellular Challenge of Spaceflight **By Rich Sherman**

In a November article titled, “The Wrong Stuff,” the *Economist* discussed human cell damage when traveling in space. The subtitle of the article said it all, “Going into orbit sends cells haywire. Scientist are trying to understand why.”

The mitochondria are the parts of cells that generate most of the chemical energy those cells use to perform their biochemical reactions. We inherit our mitochondria DNA from our mothers. However, spaceflight damages mitochondria and since mitochondria are the engines that power almost all of our cells, the impacts are felt throughout the body, causing numerous problems, including “accelerated ageing.”

In trying to discern why spaceflight is so damaging to humans, researchers have arrived at an interesting question in cellular biology: “whether the influence of Earth’s magnetic field might be an important factor for chemical reactions upon which mitochondria rely to produce energy. Neither Mars nor the Moon, two possible places for establishing space colonies, possesses a magnetic field like that of Earth.”

If you would like a copy of the article, please email me at rjsheerman@hotmail.com. As a subscriber, I can share five articles per month for free.

Planet Viewing **By Rich Sherman**

The Moon will occult Mars on the night of January 13th at 9:17pm local time and reappear at 9:32pm here in southwest Florida. You will probably need binoculars or a telescope to see it, otherwise the Moon’s brightness will likely block out your view of Mars several minutes before occultation.

Mars is at opposition on January 16, 2025.

Venus reaches greatest eastern elongation on January 10, 2025, and will be a good evening sky target. After the 10th, Venus will appear as a crescent which can be a surprising sight during outreach events.

Saturn’s rings flip hemispheres on March 23, 2025. For those who like to photograph the planets, this

might make an interesting image with the rings nearly invisible on this date.

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ASTRO NEWS & NOTES

“Star Parties”

- The Southern Cross Winter Star Party takes place January 27, 2025 to February 2, 2025 at the Girl/Boy Scout camps on Scout Key, FL from. Mike Usher has a wealth of information on the event, so please contact him with questions. To register, visit: <https://www.scas.org/winter-star-party/?y=2025>
- Texas Star Party (90 mins. SW of Dallas): 4/24/2025 to 4/27/2025, more info at <https://texasstarparty.org/>
- Grand Canyon Star Party (Grand Canyon N.P.): 6/21-6/28/2025, more info at <https://www.nps.gov/grca/planyourvisit/grand-canyon-star-party.htm>

- Green Bank Star Quest (West VA): 6/25/2025-6/28/2025, more info at <https://greenbankstarquest.org/>
- Stellafane (Vermont): first week in August, more info at <https://stellafane.org/convention/>

Articles of Interest

NASA’s Perseverance Rover reaches top of Jezero Crater (cool photos here):
<https://www.jpl.nasa.gov/news/nasas-perseverance-rover-reaches-top-of-jezero-crater-rim/>

NASA’s solar probe makes closest approach to Sun in history:
<https://www.bbc.com/news/articles/cgrwdxpljyxo>

NASA outlines latest Moon to Mars plans:
<https://www.nasa.gov/news-release/nasa-outlines-latest-moon-to-mars-plans-in-2024-architecture-update/>

NASA Researchers Discover More Dark Comets:
<https://www.jpl.nasa.gov/news/nasa-researchers-discover-more-dark-comets/>

ASTRO IMAGES FROM EAS MEMBERS:

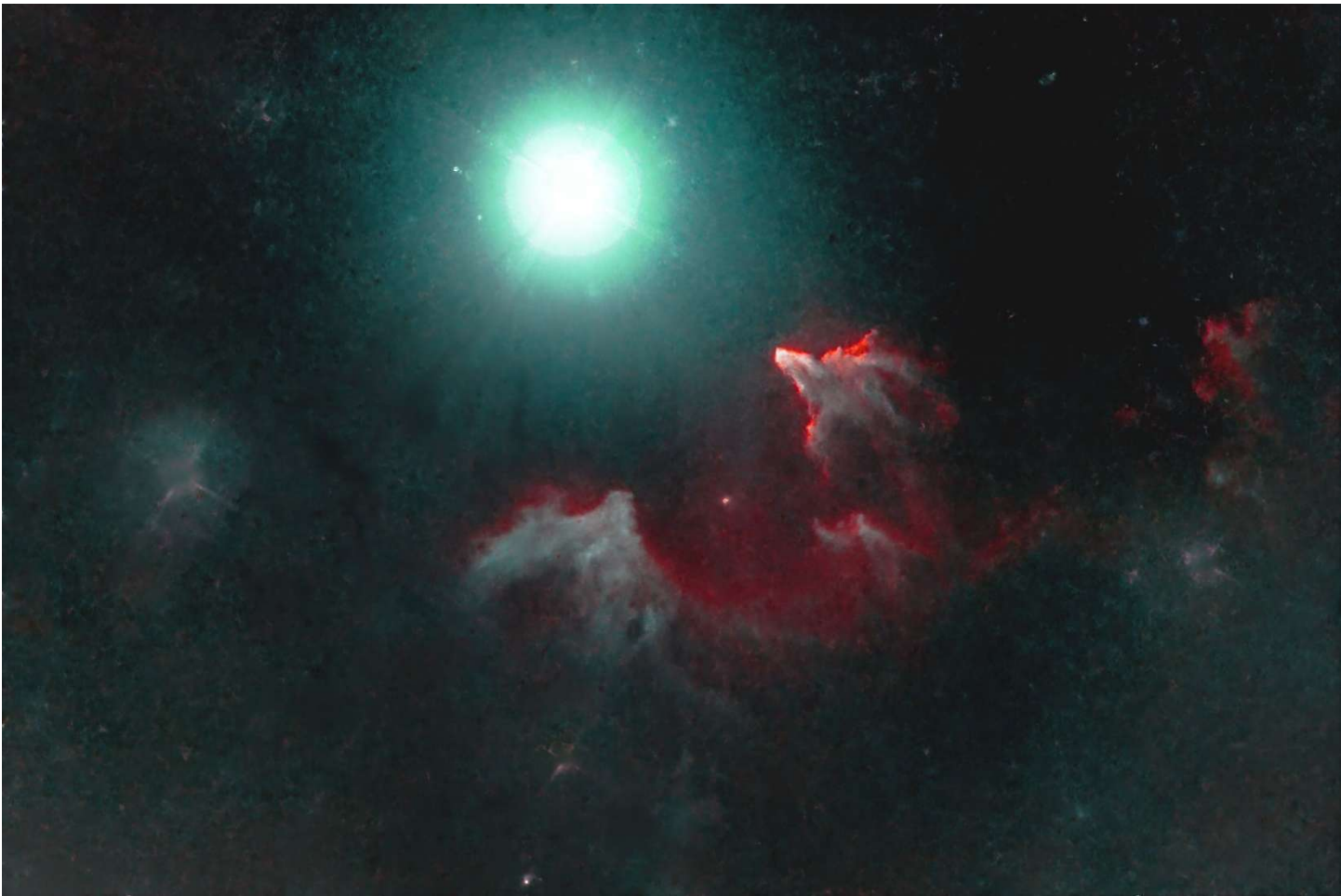
For inclusion in future newsletters, please send your images to Rich at RJSherman@hotmail.com. Please include at a minimum:

- the name and/or catalog number of the object (e.g., “M33” or “Triangulum Galaxy”)
- the date of the image
- the location where you took the image
- the telescope you used to take the image

Additional information such as the camera, the number of frames, the filter you used, the number of exposures, and the length of each exposure are also very welcome.



EAS Outreach event as Orion Rises at Big Cypress Boardwalk by John Pigman
12/7/2024



IC59 "Ghost of Cassiopeia" by Armando Merlo



47 Tucanae (NGC104) by Ted Wolfe
Atacama Desert, Chile 11/19/2024
12.5" PlaneWave CDK Astrograph
ZWO ASI 6200 camera
24-minute LRGB image



The Double Cluster in Perseus by Howard Wesley
Big Cypress, FL 12/3/2024
Seestar S50



Sliver moon with Earthshine by Rich Sherman
Esterro, FL 12/3/2024
Nikon d800 and 500mm lens
ISO 400 f/5.6 at 1/15 of a sec.



NGC 55 "String of Pearls" by Rich Sherman
Big Cypress, FL 12/3/2024
SkyWatcher 550mm f/5.5 telescope
ZWO 2600 camera
Pixinsight and Lightroom



Helix Nebula by Robyn Pritchard
Big Cypress, FL 12/3/2024
Seestar S50



M42 by Howard Wesley
Big Cypress, FL 12/3/2024
Seestar S50



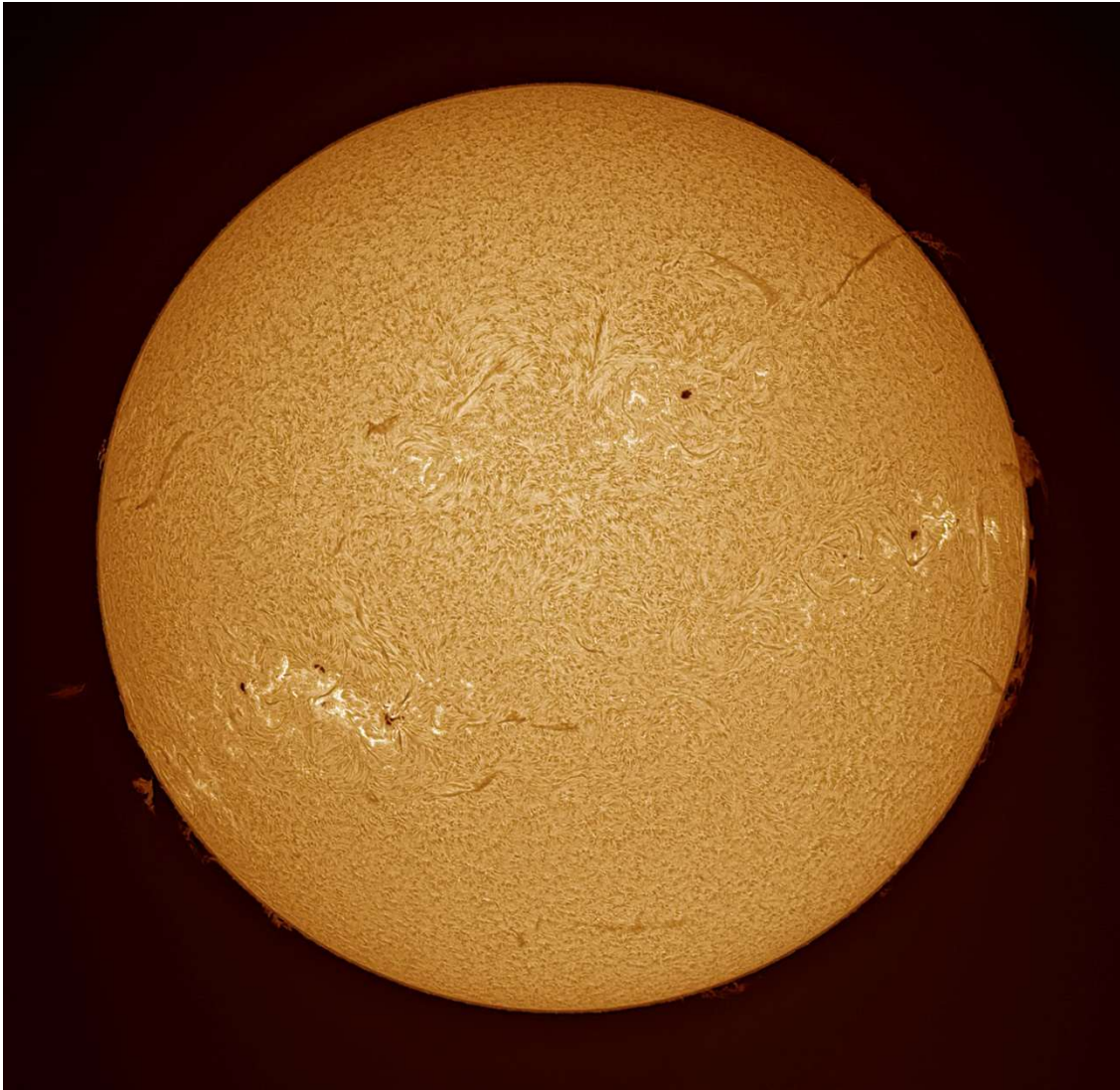
M8, The Lagoon Nebula by Rich Sherman
Big Cypress, FL 10/25/2024
SkyWatcher 550mm f/5.5 telescope
ZWO 2600 camera
Pixinsight and Lightroom



The Moon and Venus by Henri Troch
December 2024



Jupiter, Aldebaran and The Pleiades by Henri Troch
December 2024



The Sun by Chuck Pavlick
November 2024
Lunt 60 THA, ASI 1600mm,
ASICap and Autostakkert (best 75% of 400 frames)
Registax and Photoshop