Monthly Notices of the Everglades Astronomical Society

Naples, FL
December 2019

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President's Message

Although I am not a fan of light pollution, I love seeing the lights of this season. I usually take my daily walk first thing in the morning. This time of year, I add a second walk after dark to enjoy all the work my neighbors have put into decorating their homes. The brightest light I enjoy, though, is the 250 watt glow on every child's face.

Carole Leher's presentation on the James Webb Telescope was so interesting and informative. She was a great speaker. In addition to updating us on the JWT, she also provided information on the status of the Hubble Telescope. Thanks, Carole.

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Dates for Observing

Usually the best times to observe are moonless nights. Below is a list of upcoming Saturday nights that you will likely find fellow club members out there enjoying the skies with you (weather permitting). We will let you know the new location.

Date	Moonrise	Moonset
Dec. 21	2:27 a.m.	2:23 p.m.
Dec. 28	9:15 a.m.	8:10 p.m.

Sky Events

Dec. 3 - First Quarter
Dec. 11 - Full Moon
Dec. 13/14 - Geminid Meteor Shower Peak
Dec. 18 - Last Quarter
Dec. 21/22 - Ursid Meteor Shower Peak
Dec. 25 - New Moon

Next Meeting

December 17, 2019: Time 7:00 – 9:00 pm
Norris Center, Naples

Mercury Transit is Huge Success at Local Schools

By Jackie Richards

The Mercury Transit (when Mercury can be seen moving across the sun) took place on November 11 from 7:35 a.m. – 1:04 p.m. and EAS member, Bart Thomas, coordinated the event at two local schools, Beacon High School and Bethune Education

Bart Thomas, EAS Member and Coordinator of the Mercury Transit, at Beacon H.S. on 11/11/19. The sun (with Mercury transiting across it) can be seen on the poster board at the other end of the photo.

Center. EAS members that volunteered at Beacon High School were Rick Piper, Ted Wolfe, Mike Usher, Bart Thomas, Bob Francis and Kevin Francis. I was not able to volunteer as I had to work that day but I did slip away from work for an hour to check it out. Volunteers at the Bethune Education Center were Denise Sabatini, Kathy James, Ricky James and Gail Stevens.

500+ students were able to see the Mercury Transit at Beacon High School and 100+ students at the Bethune Education Center.

We are so lucky to have had so many volunteers for this event. We have many upcoming events that require volunteers. If you are available and would like to help out at one of these events, please contact Denise Sabatini.

Kudos to Bart Thomas for coordinating this wonderful event.

Rick Piper at Beacon H.S. for the Mercury Transit on 11/11/19.

Ted Wolfe at Beacon H.S. for the Mercury Transit on 11/11/19.

Mike Usher at Beacon H.S. for the Mercury Transit on 11/11/19.

Bob and Kevin Francis at Beacon H.S. for the Mercury Transit on 11/11/19.

President's Message

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Our December meeting will be our annual trivia meeting. Mike Usher always does a great job of challenging us to dust off the cob webs in our brains. This is not only an informative presentation, but it is a lot of fun. If you are here, join in on the fun.

Requests for our participation in community events continue. To those of you who have participated, I thank you. For those who have considered volunteering at these community events, let me know.

Please mark your calendars for all of our upcoming meetings. The schedule so far is as follows: January, Joel Banow, a journalist who covered the space program; February, Ted Wolfe

will present a talk on his southern observatory, and March, a panel discussion on the planned Messier Marathon.

Whether you are staying here or traveling this season, I wish you a happy and safe holiday season.

Denise

PHOTOS BY EAS MEMBERS


Mercury Transit by Chuck Pavlick on 11.11.19


M1 (Crab Nebula) by Eric Uthus


M45 (Pleiades) by Eric Uthus

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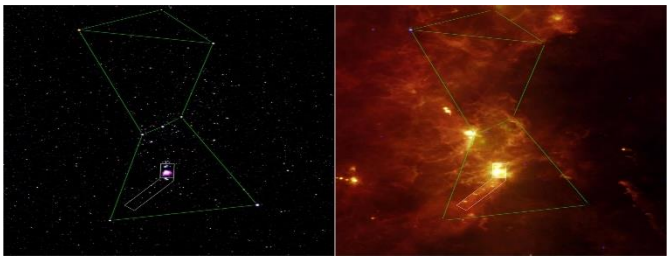
NASA Night Sky Notes

The Orion Nebula: Window Into a Stellar Nursery
By David Prosper

Winter begins in December for observers in the Northern Hemisphere, bringing cold nights and the return of one of the most famous constellations to our early evening skies: Orion the Hunter!

Orion is a striking pattern of stars and is one of the few constellations whose pattern is repeated almost unchanged in the star stories of cultures around the world. Below the three bright stars of Orion's Belt lies his sword, where you can find the famous Orion Nebula, also known as M42. The nebula is visible to our unaided eyes in even moderately light-polluted skies as a fuzzy "star" in the middle of Orion's Sword. M42 is about 20 light years across, which helps with its visibility since it's roughly 1,344 light years away! Baby stars, including the famous "Trapezium" cluster, are found inside the nebula's whirling gas clouds. These gas clouds also hide "protostars" from view: objects in the process of becoming stars, but that have not yet achieved fusion at their core.

The Orion Nebula is a small window into a vastly larger area of star formation centered around the constellation of Orion itself. NASA's Great Observatories, space telescopes like Hubble, Spitzer, Compton, and Chandra, studied this area in wavelengths we can't see with our earthbound eyes, revealing the entire constellation alight with star birth, not just the comparatively tiny area of the nebula. Why then can we only see the nebula? M42 contains hot young stars whose stellar winds blew away their cocoons of gas after their "birth," the moment when they begin to fuse hydrogen into helium. Those gas clouds, which block visible light, were cleared away just enough to give us a peek inside at these young stars. The rest of the complex remains hidden to human eyes, but not to advanced space-based telescopes.



This image from NASA's Spitzer missions shows Orion in a different light – quite literally! Note the small outline of the Orion Nebula region in the visible light image on the left, versus the massive amount of activity shown in the infrared image of the same region on the right. Image Credit: NASA/JPL-Caltech/IRAS /H. McCallon. From bit.ly/SpitzerOrion

We put telescopes in orbit to get above the interference of our atmosphere, which absorbs many wavelengths of light. Infrared space telescopes, such as Spitzer and the upcoming James Webb Space Telescope, detect longer wavelengths of light that allow them to see through the dust clouds in Orion, revealing hidden stars and cloud structures. It's similar to the infrared goggles firefighters wear to see through smoke from burning buildings and wildfires.

Learn more about how astronomers combine observations made at different wavelengths with the Night Sky Network activity, 'The Universe in a Different Light," downloadable from bit.ly/different-light-nsn. You can find more stunning science and images from NASA's Great Observatories at nasa.gov.

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.org to find local clubs, events, and more!

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EAS 2020 DUES

For the bargain price of only $20.00 per family, all this can be yours this year:

- Meet with your fellow astronomy enthusiasts at least 10 times a year;
- Learn about astronomy and telescopes. Check out our club scope;
- Many opportunities to view planets, nebulae and other celestial objects (even if you don't have your own telescope); and
- Enjoy the many astronomy programs at our regular monthly meetings.

Don't miss out! Fill out this form (please print clearly) and send it with your $20 check to the Everglades Astronomical Society, P. O. Box 1451, Marco Island, Florida, 34146.

Name: _____

Address: _____

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Phone: _____

Email: _____