



Monthly Notices of the Everglades Astronomical Society



Naples, FL
February 2016

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President's Message

Another great Winter Star Party (WSP) in the books. Join us at tomorrow night's meeting where members will share their stories about their attendance at the WSP.

At the February meeting, Ted Wolfe will take us through his "adventure" in moving his telescope from Naples to the remote Atacama Desert in northern Chile. As the first American to be in the northern Atacama, Ted will describe his journey, with its ups and downs.

In addition to Ted's presentation, the door prize at our meeting will be the meteorite which I won at this year's WSP (photo below) found in Atacama, Chile. You don't want to miss this meeting. Hope to see you there.



Meteorite won by Todd Strackbein at the WSP. Todd is donating it back to the EAS and it will be the door prize for tomorrow night's meeting.

Clear Skies, Todd Strackbein

Dates for the "Fak"

Usually the best times to go out to the Fakahatchee Strand viewing site are moonless nights. Below is a list of upcoming Saturday nights that you will often find fellow club members out there enjoying the skies with you (weather permitting).

Date	Moonrise	Moonset
Feb. 27	10:47 p.m.	9:44 a.m.
Mar. 5	3:55 a.m.	3:13 p.m.

Sky Events

- Feb. 8 - New Moon
- Feb. 15 - First Quarter
- Feb. 16 - Ganymede's shadow begins to cross Jupiter at 11 p.m. Ganymede, itself, will begin its transit about two hours later
- Feb. 22 - Full Moon
- Mar. 1 - Last Quarter

Next Meeting

February 16, 2016: Time 7:00 – 9:00 pm
Norris Center, Cambier Park

WSP 2016 By Jackie Richards

A great time was had again by all who attended this year's WSP. Attendees from the EAS were Todd Strackbein, Rick Piper, Charlie Paul (and sons, Jon and James), Mike Usher,



Back row: Jakob Coray, Bob Gurnitz, Lou Tancredi & Bob Francis.

Middle row: Todd Strackbein and Mike Usher.

Front row: James Paul, Charlie Paul, Jon Paul, Rick Piper and Jackie Richards. All are left to right. Photo taken during door prizes and provided by Bob Francis.



Eta Carinae Nebula (NGC 3372) taken by Rick Piper and Jackie Richards at the WSP 2/13/16. Orion 80 mm Refractor f/5; German Equatorial Mount, Canon t5i; ISO 6400; 1@70 seconds.

Jackie Richards, Bob Gurnitz (and grandson, Jakob Coray, age 17), Lou Tancredi, Chuck Pavlick, Eric Uthus, Bob Francis (and brother Jim Francis), Armando Merlo and Victor Farris. It was a cold and windy week but that didn't stop anyone from taking advantage of the crystal clear skies we had most of the week. Several EAS members won prizes this year. They are: Bob Gurnitz (Star Shoot Solar System IV Camera by Orion), Charlie Paul's son, Jon (Ohio sky calendar), Todd Strackbein, (meteorite), Chuck Pavlick (portable charger for iPhones, iPods and Samsung), and Victor Farris (solar binoculars).



Rick Piper photographing Eta Carinae at the WSP. Photo by Jackie Richards (with the assistance of a red light).

Bob Gurnitz's grandson, Jakob Coray, took first prize for a radio telescope that he built and transported to the WSP, set up and used at the WSP to monitor sudden ionospheric disturbances as explained by Bob Gurnitz and Jakob Coray: When a solar flare occurs on the Sun a blast of intense ultraviolet and x-ray radiation hits the dayside of the Earth after a propagation time of about 8 minutes. This high energy radiation is absorbed by atmospheric particles, raising them to excited states and knocking electrons free in the process of photo ionization. The low altitude Ionospheric layers (D region and E region) immediately increase in density over the entire dayside. The Ionospheric disturbance enhances

VLF radio propagation. Scientists on the ground can use this enhancement to detect solar flares; by monitoring the signal strength of a distant VLF transmitter, sudden Ionospheric disturbances (SIDs) are recorded and indicate when solar flares have taken place. Jakob was monitoring Radio Station NAA from Cutler, Maine. The station provides one-way communication to submarines in the Navy's Atlantic Fleet, both on the surface and submerged. It transmits at a frequency of 24 kHz with input power of up to 1.8 megawatts, and is one of the most powerful radio transmitters in the world. After about 72 hours of operation, Jakob began to receive data representing C Class Solar flares. His data was fully corroborated by data taken by the GOES-15 satellite which monitors Solar X-Rays. For this Jakob won the prize for the best "photograph" in the category of Sun / Moon / Planets.

On a final note, a special thanks goes out to our club President, Todd Strackbein, for his continued service as a volunteer at the WSP.



Comet Catalina C2013/US10 taken by Armando Merlo at the WSP.



NGC 4565 (Needle Galaxy) taken at the WSP by Chuck Pavlick. Celestron Edge 9.25 w/Lepus 0.62 reducer; AP Mach 2 w/Orion mini guider w/PHD guiding; SBIG 8300c; 18@420 seconds; processed in Pixinsight.

Published Articles by EAS Members

Ted Wolfe's article in the Naples News/Collier Citizen on February 3, 2016, Looking up: Put a ring on it. Dying star hatches spectacular planetary nebula

<http://www.naplesnews.com/community/collier-citizen/looking-up-put-a-ring-on-it-dying-star-hatches-spectacular-planetary-nebula-2adfa36b-7de5-062c-e053--367575021.html>

TO VIEW THE ABOVE ARTICLE, PRESS "CTRL" AND LEFT CLICK BUTTON.

The below link provides previous articles in the Collier Citizen by Ted Wolfe that appeared over past years.

<http://search.naplesnews.com/jmg.aspx?k=looking+up+ted+wolfe>

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Special Note from EAS member, Bart Thomas

EAS member, Eric Uthus, donated a 12.5" truss DOB telescope to Naples High School (NHS) recently. The telescope was used in the early morning by EAS member and NHS student, Josh Black. He was busy showing the early morning planets and moon to fellow students at NHS. Below is a picture of some of the students and the newly-donated scope. Thanks so much Eric for your donation. We will put it to good use.



Students at Naples High School with the 12.5" truss DOB telescope donated by Eric Uthus.

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Mike Usher's telescope. 20" Newtonian f/5. Photo by Mike Usher.



Chuck Pavlick with door prize (portable charger for iPhones, iPods and Samsung). WSP 2016. Photo by Bob Francis.



Jim Francis (Bob Francis' brother) at WSP 2016. Photo by Bob Francis.

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The Closest New Stars To Earth

By Ethan Siegel

When you think about the new stars forming in the Milky Way, you probably think of the giant star-forming regions like the Orion Nebula, containing thousands of new stars with light so bright it's visible to the naked eye. At over 400 parsecs (1,300 light years) distant, it's one of the most spectacular sights in the night sky, and the vast majority of the light from galaxies originates from nebulae like this one. But its great luminosity and relative proximity makes it easy to overlook the fact that there are a slew of much closer star-forming regions than the Orion Nebula; they're just much, much fainter.

If you get a collapsing molecular cloud many hundreds of thousands (or more) times the mass of our sun, you'll get a nebula like Orion. But if your cloud is only a few thousand times the sun's mass, it's going to be much fainter. In most instances, the clumps of matter within will grow slowly, the neutral matter will block more light than it reflects or emits, and only a tiny fraction of the stars that form—the most massive, brightest ones—will be visible at all. Between just 400 and 500 light years away are the closest such regions to Earth: the molecular clouds in the constellations of Chamaeleon and Corona Australis. Along with the Lupus molecular clouds (about 600 light years distant), these dark, light-blocking patches are virtually unknown to most sky watchers in the northern hemisphere, as they're all southern hemisphere objects.



Image credit: NASA and ESA Hubble Space Telescope. Acknowledgements: Kevin Luhman (Pennsylvania State University), and Judy Schmidt, of the Chamaeleon cloud and a newly-forming star within it—HH 909A—emitting narrow streams of gas from its poles.

In visible light, these clouds appear predominantly as dark patches, obscuring and reddening the light of background stars. In the infrared, though, the gas glows brilliantly as it forms new stars inside. Combined near-infrared and visible light observations, such as those taken by the Hubble Space Telescope, can reveal the structure of the clouds as well as the young stars inside. In the Chameleon cloud, for example, there are between 200 and 300 new stars, including over 100 X-ray sources (between the Chamaeleon I and II clouds),

approximately 50 T-Tauri stars and just a couple of massive, B-class stars. There's a third dark, molecular cloud (Chamaeleon III) that has not yet formed any stars at all.

While the majority of new stars form in large molecular clouds, the closest new stars form in much smaller, more abundant ones. As we reach out to the most distant quasars and galaxies in the universe, remember that there are still star-forming mysteries to be solved right here in our own backyard.

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Items For Sale or Trade or Wanted:

http://www.naples.net/clubs/eas/equipment_sales.html

Useful links (software, telescope making, telescope and equipment suppliers, astronomical data sources, iPhone and iPad Apps and more):

<http://www.naples.net/clubs/eas/links.html>

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EAS 2016 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 1868, Marco Island, Florida, 34146.

Name: _____

Address: _____

Phone: _____

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