



Monthly Notices of the Everglades Astronomical Society



Naples, FL
January 2017

Officers: President: Denise Sabatini (dsabatini2@embarqmail.com); **VP/Secretary:**
Treasurer: Bob Gurnitz; **Newsletter Editor:** Jackie Richards (jmrichards2005@yahoo.com)
Mailing Address: P. O. Box 1868, Marco Island, FL 34146
Fak Coordinator & information on viewing: Charlie Paul (cpaul651@earthlink.net) 410-8192
Home Page: <http://naples.net/~nfn19284/eas/> **Webmaster:** Mike Usher (usher34105@earthlink.net)

President's Message

Now that the holiday season is behind us, I am looking forward to our very busy and active new year. May this year be filled with peace, love, and clear skies.

Our December meeting was packed with discussion, fun, and knowledge. Mike, as always, provided a great trivia contest. Some of the answers were surprising. There was a winning team, but my understanding is that it wasn't by much.

The January meeting will be filled with some very pertinent information. We are extremely fortunate to have as our guest speaker Chap Percival. Chap is the author of *GO SEE THE ECLIPSE and Take a Kid with You*. Chap's mission is to convince as many people as possible to witness the August solar eclipse. I encourage you to write down all your questions to ask him.

For the past couple of meetings, some great discussions occurred just prior to our break. I would like to make this a regular part of the meeting. If you have any observations you would like to report to the group, or if you have any questions or topics that you would like to discuss, please share them with us. Of course, I'll have to set a time limit as we have to be out of the room by 9:00 P.M.

We have several special events coming up this winter and spring. We always need people to help man the displays. Not only do you get a chance to meet with the public and spread your passion for astronomy with them, but it is also a good opportunity to get to know the members of our club. I seriously hope that you will consider participating.

Clear skies,
Denise Sabatini

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
Jan. 21	1:49 a.m.	1:18 p.m.
Jan. 28	7:33 a.m.	6:59 p.m.

Sky Events

Jan. 3, 4 - Quadrantid Meteor Shower
Jan. 5 - First Quarter
Jan. 12 - Full Moon
Jan. 19 - Last Quarter
Jan. 27 - New Moon

Next Meeting

January 10, 2017: Time 7:00 – 9:00 pm
Norris Center, Cambier Park

We Found Comet 45P/Honda By Jackie Richards

We got our first glimpse of Comet 45P/Honda-Mrkos-Pajdusakova (a/k/a Comet 45P/Honda) shortly after sundown on New Year's Eve at the Fak. Robyn Pritchard was the first to spot the comet. It was located just to the left of the crescent moon on 12/31/16. Below is a picture of the comet taken by Armando Merlo.



Comet 45P/Honda-Mrkos-Pajdusakova taken by Armando Merlo on 12/31/16 at the Fak.

Comet 45P/Honda is a periodic comet which returns every 5.25 years (which is what the “P” in its name references).

Other comets to look forward to over the next eight months which are expected to be at 10th magnitude or brighter include Comet 2P/Encke, C/2016 U1 (NEOWISE), 41P/Tuttle-Giacobini-Kresak, C/2015 ER61 (PanSTARRS) and C/2015 V2 (Johnson).

On another note, check out our brand new EAS website created by Mike Usher and his daughter, Christina. They did an amazing job! Mike Usher has taken on the role of webmaster. The new EAS website is located at <http://naples.net/~nfn19284/eas/>.

* * *

THIRD ANNUAL STAR QUEST TRIVIA GAME

Hosted by Mike Usher

Another fun meeting last month when the below teams participated in Mike Usher’s Star Quest trivia game. Both teams did great! They are ALL winners.



Star Quest 2017.



Star Quest 2017.

* * *

Published Articles by EAS Members

Ted Wolfe’s article in the Naples News/Collier Citizen on December 27, 2016: Looking Up: Boom goes the star: Supernova explosion in distant galaxy.

<http://www.naplesnews.com/story/news/local/communities/collier-citizen/2016/12/27/looking-up-boom-goes-star-supernova-explosion-distant-galaxy/95883500/>

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>

* * *

UPCOMING EAS EVENTS

EAS members volunteer time and knowledge at many events throughout the year. Below is a list of upcoming public events at which the EAS will be present. Volunteers are needed at these events. You can help out even if you don’t have a scope. Those with scopes need breaks for meals so extra help is required to watch equipment and to help out at our booth. If you would like to volunteer at any of these events, please contact Charlie Paul.

January 21st – Collier Seminole State Park (nighttime event) – 7:00 p.m. – 9:00 p.m.

Jan. 21st – Big Cypress National Preserve (nighttime event) – 7:00 p.m. – 9:00 p.m.

Jan. 28th – Super Science Saturday (solar event) – 9:00 a.m. – 2:00 p.m.

Feb. 4th – Seacrest Day School (solar event) 10:30 – 1:30

April 22nd – Conservancy earth Day Event (solar event) 10:00 a.m. – 4:00 p.m.

* * *

Interactive Site for
best solar eclipse locations
Contributed by Bart Thomas

http://xjubier.free.fr/en/site_pages/solar_eclipses/TSE_2017_GoogleMapFull.html?Lat=33.6647&Lng=-80.7789&Zoom=9&Map='ROADMAP'&OMap=0



NGC 1566 taken by Ted Wolfe. 13 hour image. Chile



M43 (Running Man Nebula) taken by Chuck Pavlick in Dec. 2016; Camera: Starlight Xpress SX25C; Scope: Celestron Edge 9.25 w/Lepus Reducer; Orion Skyglow filter; 7@240 seconds



Thor's Helmet by Emilio Robau taken in December 2016.

* * *



Big Science in Small Packages By Marcus Woo

About 250 miles overhead, a satellite the size of a loaf of bread flies in orbit. It's one of hundreds of so-called CubeSats—spacecraft that come in relatively inexpensive and compact packages—that have launched over the years. So far, most CubeSats have been commercial satellites, student projects, or technology demonstrations. But this one, dubbed MinXSS ("minks") is NASA's first CubeSat with a bona fide science mission.

Launched in December 2015, MinXSS has been observing the sun in X-rays with unprecedented detail. Its goal is to better understand the physics behind phenomena like solar flares – eruptions on the sun that produce dramatic bursts of energy and radiation.

Much of the newly-released radiation from solar flares is concentrated in X-rays, and, in particular, the lower energy range called soft X-rays. But other spacecraft don't have the capability to measure this part of the sun's spectrum at high resolution—which is where MinXSS, short for Miniature Solar X-ray Spectrometer, comes in.

Using MinXSS to monitor how the soft X-ray spectrum changes over time, scientists can track changes in the composition in the sun's corona, the hot outermost layer of the sun. While the sun's visible surface, the photosphere, is about 6000 Kelvin (10,000 degrees Fahrenheit), areas of the corona reach tens of millions of degrees during a solar flare. But even without a flare, the corona smolders at a million degrees—and no one knows why.

One possibility is that many small nanoflares constantly heat the corona. Or, the heat may come from certain kinds of waves that propagate through the solar plasma. By looking at how the corona's composition changes, researchers can determine which mechanism is more important, says Tom Woods, a solar scientist at the University of Colorado at Boulder and principal investigator of MinXSS: "It's helping address this very long-term problem that's been around for 50 years: how is the corona heated to be so hot."

The \$1 million original mission has been gathering observations since June.

The satellite will likely burn up in Earth's atmosphere in March. But the researchers have built a second one slated for launch in 2017. MinXSS-2 will watch long-term solar activity—related to the sun's 11-year sunspot cycle—and how variability in the soft X-ray spectrum affects space weather, which can be a hazard for satellites. So the little-mission-that-could will continue—this time, flying at a higher, polar orbit for about five years.



Astronaut Tim Peake on board the International Space Station captured this image of a CubeSat deployment on May 16, 2016. The bottom-most CubeSat is the NASA-funded MinXSS CubeSat, which observes soft X-rays from the sun—such X-rays can disturb the ionosphere and thereby hamper radio and GPS signals. (The second CubeSat is CADRE — short for CubeSat investigating Atmospheric Density Response to Extreme driving - built by the University of Michigan and funded by the National Science Foundation.) Credit: ESA/NASA

* * *

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>

* * *

EAS 2017 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: _____

Email: _____