Monthly Notices of the Everglades Astronomical Society

Naples, FL
December 2017

Officers: **President:** Denise Sabatini (dsabatinik2@embarqmail.com); VP/**Secretary:**
Treasurer: Victor Farris (vfarris01@gmail.com); **Newsletter Editor:** Jackie Richards (jmrichards2005@yahoo.com)
Mailing Address: P. O. Box 1451, Marco Island, FL 34146
Fak Coordinator & information on viewing: Mike Usher (usher34105@earthlink.net)
Home Page: http://naples.net/~nfn19284/eas/ **Webmaster:** Mike Usher (usher34105@earthlink.net)

President's Message

I'm beginning to sound like a broken record, but I must. The Norris Center is still not available to us for the December meeting. Therefore, we will be at the Fleischmann Park facility.

This is a call to everyone to check to see if you have the club's banner. Since Lovers Key was our first event for this year, it is estimated that it was last used in the winter or spring of 2017.

Dr. Irwin's presentation for the November meeting was packed with information on her current research on the radio aspect of galaxies. It was a great talk and greatly appreciated.

Our December meeting is always interesting. Mike Usher is going to present his annual trivia game show. This program not only teaches us a lot, but it gives us a chance to communicate with each other. I hope you will partake in this fun-filled night.

Good wishes are being sent out to Charlie Paul for a speedy recovery. Charlie has been my mentor and I greatly appreciate his support over the years.

See you soon,
Denise

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
Dec. 9		12:22 p.m.
Dec. 16	5:34 a.m.	4:46 p.m.

Sky Events

December 3 - Full Moon
December 10 - Last Quarter
December 13/14 - Geminid Meteor Shower (Peak)
December 17 - New Moon
December 21/22 - Ursid Meteor Shower (Peak)
December 26 - First Quarter

Next Meeting

December 12, 2017: Time 7:00 – 9:00 pm
Fleischmann Park, 1600 Fleischmann Blvd., Naples
(Just south of the Coastland Mall on corner of Goodlette)

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Imaging with Narrow Band Filters from a Light Polluted Sky by Chuck Pavlick

I've used a one-shot color camera for years with good results under a dark site but in Cape Coral, where I live, I have the Walmart nebula to the south, Lowes nebula to the north, Burger

Image of the Pac-Man Nebula (NGC 281) by Chuck Pavlick at the Fak using red, green and blue filters.

King and car wash nebulae to the west and the Ft. Myers nebula to the east, plus all of the lights from neighbors' insecurity lights. I can never see the Milky Way even on the best nights. This makes it very hard to take photos of the night sky at such a light-polluted location. I tried a broadband light pollution filter and had pretty good results on the brighter objects but on the faint stuff, it was still difficult. In February of this year, I came across a deal I couldn't turn down. An observatory came up for sale, the price was fantastic and the person only lived a mile away from me which made it easy to pick it up. With the observatory at home and using my one-shot color camera, I was able to take many more shots of objects which is needed to get any good results from a very light-polluted sky, but it was still not good enough. I decided to buy a mono camera with a set of narrow band filters. I was always hesitant about a mono camera because of all the time I would have to put into one image shooting through all of the different filters but with the observatory I would have plenty of time. This has opened up another door for me. I can now image faint nebula from my back yard with good results. The filters I am using are 7nm Hydrogen alpha, Oxygen III and Sulfur II. With this combination I can get the colors that the people processing the Hubble shots use, which is called the Hubble Palette. If you look at the shot of the pillars of creation by Hubble (click on the below link), you can see what I mean.
https://en.wikipedia.org/wiki/Pillars_of_Creation.

These are false-color images. They are intended to make the picture more revealing of the different elements and structure and not just making it more appealing to the eye. The photo on page 1 is an example of the Pac-Man Nebula I took from the Fak using red, green and blue filters, and the below image is from my backyard using the Ha, SII and OIII filters.

Image of the Pac-Man Nebula taken in Cape Coral by Chuck Pavlick using the Ha, SII and OIII filters.

I always liked the standard images better but after doing the research on why they use these false colors, I am hooked on the Hubble Palette.

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Reminder – EAS Dues

While the EAS is a not-for-profit corporation, it still has monthly and yearly expenses. Yearly dues remain at $20 which benefit you and your entire family. Please be reminded to pay your 2018 dues as soon as you can. Thank you.

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Reminder – January 2018 Meeting is All about the Eclipse

Next month's (January) meeting will be entirely devoted to the 2017 Solar Eclipse. Members will be able to share and compare stories of their experiences at that meeting. Please bring any photos and be prepared to share your experience. Also, if you have an eclipse t-shirt, please wear it to the meeting.

Photo of the diamond ring effect taken by Rick Piper at the 2017 solar eclipse.

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Photo of the sun and moon taken by Todd Strackbein with a drone on 11/18/17.

9-hour exposure of NGC 253, The Sculptor Galaxy, taken by Ted Wolfe from Chile.

Photo by Todd Strackbein of Ted Wolfe showing the sun at Lovers Key on 12/2/17.

Photo by Todd Strackbein of club members (Bob Francis, Mike Usher, Ted Wolfe and Denise Sabatini) at Lover's Key on 12/2/17.

Published Articles by EAS Members

Ted Wolfe's article in the Naples News/Collier Citizen on November 21, 2017: Looking Up: The cat's paw nebula is home to old, new and upcoming stars

http://www.naplesnews.com/story/news/local/communities/collier-citizen/2017/11/21/looking-up-cats-paw-nebula-home-old-new-and-upcoming-stars/885415001/

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://www.naplesnews.com/search/Ted%20Wolfe/

To view all of Ted Wolfe's photos, visit his website @ www.tedwolfe.com .

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Studying Storms from the Sky

By Teagan Wall

The United States had a rough hurricane season this year. Scientists collect information before and during hurricanes to understand the storms and help people stay safe. However, collecting information during a violent storm is very difficult.

Hurricanes are constantly changing. This means that we need a lot of really precise data about the storm. It's pretty hard to learn about hurricanes while inside the storm, and instruments on the ground can be broken by high winds and flooding. One solution is to study hurricanes from above. NASA and NOAA can use satellites to keep an eye on storms that are difficult to study on the ground.

In Puerto Rico, Hurricane Maria was so strong that it knocked out radar before it even hit land. Radar can be used to predict a storm's path and intensity—and without radar, it is difficult to tell how intense a storm will be. Luckily, scientists were able to use information from a weather satellite called GOES-16, short for Geostationary Operational Environmental Satellite – 16.

The "G" in GOES-16 stands for geostationary. This means that the satellite is always above the same place on the Earth, so during Hurricane Maria, it never lost sight of the storm. GOES-16's job as a weather satellite hasn't officially started yet, but it was collecting information and was able to help.

From 22,000 miles above Earth, GOES-16 watched Hurricane Maria, and kept scientists on the ground up to date. Knowing where a storm is—and what it's doing—can help keep people safe, and get help to the people that need it.

Hurricanes can also have a huge impact on the environment—even after they're gone. To learn about how Hurricane Irma affected the Florida coast, scientists used images from an environmental satellite called Suomi National Polar-orbiting Partnership, or Suomi-NPP. One of the instruments on this satellite, called VIIRS (Visible Infrared Imaging Radiometer Suite), took pictures of Florida before and after the Hurricane.

These images of Florida and the Bahamas were captured by a satellite called Suomi-NPP. The image on the left was taken before Hurricane Irma and the image on the right was taken after the hurricane. The light color along the coast is dirt, sand and garbage brought up by the storm. Image credit: NASA/NOAA

Hurricane Irma was so big and powerful, that it moved massive amounts of dirt, water and pollution. The information captured by VIIRS can tell scientists how and where these particles are moving in the water. This can help with recovery efforts, and help us design better ways to prepare for hurricanes in the future.

By using satellites like GOES-16 and Suomi-NPP to observe severe storms, researchers and experts stay up to date in a safe and fast way. The more we know about hurricanes, the more effectively we can protect people and the environment from them in the future.

To learn more about hurricanes, check out NASA Space Place: https://spaceplace.nasa.gov/hurricanes/

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EAS 2018 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: _____