



Monthly Notices of the Everglades Astronomical Society



Naples, FL
January 2014

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President's Message

It's a new year with the same old weather we have been dealing with. Whatever happened to those jet-blue winter skies? Hopefully things clear up soon. Typically these next few months are the busiest FAK viewing nights, especially with all our new and part-time residents here. So whoever is in charge of the weather, I would like to dust off my scope!

This Tuesday's meeting should be a full house with Mr. John Fishwick giving the presentation. I don't remember ever dozing off in one of John's presentations. His topics and delivery are very captivating and easy to listen to. Those that have seen some of John's packed rooms before know what I mean and get there early.

Lastly, be sure to check the great publications available on the internet showing current and upcoming celestial events. Some of my favorites are <http://spaceweather.com/> and <http://www.skyandtelescope.com/observing/ataglance>. Another great resource I use is the Android APP "Mobile Observatory" which has an "Events" section that provides a comprehensive list that constantly updates.

Clear Skies,
President
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 |
|------------|-----------|-----------|
| January 25 | 1:47 a.m. | 1:03 p.m. |
| February 1 | 8:17 a.m. | 8:25 p.m. |

Sky Events

Jan 1 - New moon
Jan 7 - First quarter
Jan 15 - Full moon
Jan 23 - Last quarter

Next Meeting

January 14, 2014
Time 7:00 – 9:00 pm
At the Norris Center, Cambier Park

Transit of Jupiter By Jackie Richards

Jupiter currently shines brighter than any other object in the night sky and can be seen above the Eastern horizon after sunset. Of its 67 confirmed satellites or moons, its Galilean moons (Io, Europa, Ganymede and Callisto), in order of increasing distance from Jupiter, are the ones that we see in our telescopes forming an almost straight line. The moons take turns disappearing from our point of view as they pass in front of or behind Jupiter. And sometimes, if we are lucky, we



Transit of Jupiter's moon taken by Rick Piper and Jackie Richards in December 2013. 120 mm Refractor, To You Cam.

actually can see a transit, which is a shadow on Jupiter of one of its moons moving across the planet as can be seen in the photo above taken by Rick Piper and me last month. The photo is actually about 800 video frames stacked in Registax (with lots of help from Todd Strackbein). Photographing so many beautiful objects in the night sky has been a very challenging and fulfilling experience. Thankfully, there are many club members who are willing to share their experiences and knowledge, making the whole process a lot less frustrating. But the final pictures make it worth all the time and effort we put into attempting to get awesome pictures.

Fak Photos



Orion Nebula taken by Rick Piper in December 2013. Orion 80 mm Refractor f5, German Equatorial Mount (GEM), Canon XSi, ISO 800, 10 mins.



Flame Nebula and Horse Head Nebula taken by Rick Piper in December 2013. Orion 80 mm Refractor f5, German Equatorial Mount (GEM), Canon XSi, ISO 800, 10 mins.

Outreach Dates

By Todd Strackbein

We have a busy outreach schedule coming up before our next meeting with Cypress Palm Middle (Jan. 31st), Big Cypress Astronomy Program (Feb. 7th with info found at <http://www.nps.gov/bicy/planyourvisit/winter-2014-astronomy-programs.htm>) and The Boy Scout Camporee (Feb. 8th) just to name a few. Be sure to check your calendar and get with Charlie Paul or me for more info. We will need club participation at these worthwhile events. Additionally, our club was praised for its participation at the Corkscrew Sanctuary After Hours monthly event. The people that tour the boardwalk look forward to taking a peek through our telescopes and always provide positive feedback to the Sanctuary about our presence. You might have noticed the nice article in this past Sunday's Naples Daily News Magazine.

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The Big Picture: GOES-R and the Advanced Baseline Imager

By Kieran Mulvaney

The ability to watch the development of storm systems – ideally in real time, or as close as possible – has been an invaluable benefit of the Geostationary Operational Environmental Satellites (GOES) system, now entering its fortieth year in service. But it has sometimes come with a trade-off: when the equipment on the satellite is focused on such storms, it isn't always able to monitor weather elsewhere.



The Advanced Baseline Imager. Credit: NOAA/NASA

“Right now, we have this kind of conflict,” explains Tim Schmit of NOAA’s National Environmental Satellite, Data, and Information Service (NESDIS). “Should we look at the broad scale, or look at the storm scale?” That should change with the upcoming launch of the first of the latest generation of GOES satellites, dubbed the GOES-R series, which will

carry aloft a piece of equipment called the Advanced Baseline Imager (ABI).

According to Schmit, who has been working on its development since 1999, the ABI will provide images more frequently, at greater resolution and across more spectral bands (16, compared to five on existing GOES satellites). Perhaps most excitingly, it will also allow simultaneous scanning of both the broader view and not one but two concurrent storm systems or other small-scale patterns, such as wildfires, over areas of 1000km x 1000km.

Although the *spatial* resolution will not be any greater in the smaller areas than in the wider field of view, the significantly greater *temporal* resolution on the smaller scale (providing one image a minute) will allow meteorologists to see weather events unfold almost as if they were watching a movie.

So, for example, the ABI could be pointed at an area of Oklahoma where conditions seem primed for the formation of tornadoes. "And now you start getting one-minute data, so you can see small-scale clouds form, the convergence and growth," says Schmit.

In August, Schmit and colleagues enjoyed a brief taste of how that might look when they turned on the GOES-14 satellite, which serves as an orbiting backup for the existing generation of satellites.

"We were allowed to do some experimental imaging with this one-minute imagery," Schmit explains. "So we were able to simulate the temporal component of what we will get with ABI when it's launched."

The result was some imagery of cloud formation that, while not of the same resolution as the upcoming ABI images, unfolded on the same time scale. You can compare the difference between it and the existing GOES-13 imagery here: http://cimss.ssec.wisc.edu/goes/blog/wp-content/uploads/2013/08/GOES1314_VIS_21AUG2013loop.gif

Learn more about the GOES-R series of satellites here: <http://www.goes-r.gov>.

Kids should be sure to check out a new online game that's all about ABI! It's as exciting as it is educational. Check it out at <http://scijinks.gov/abi>

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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>

Winter Star Party Ticket for Sale

Winter Star Party ticket for sale at the early purchase price of \$210 (includes camping). If you are interested, please contact Jackie Richards via email for more details. No, it's not Jackie's ticket.

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EAS 2014 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:
