



Monthly Notices of the Everglades Astronomical Society



Naples, FL
May 2015

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President's Message

We are entering the time of the year where summer weather patterns bring us rain and higher humidity in the late afternoons. That usually means we will get some good seeing later in the evenings for planets. Make sure you take advantage to observe Saturn which will be nicely positioned for most of the summer. Saturn and the moon make wonderful targets that always leave lasting memories with first time viewers. Consider sharing the view with your neighbors and especially with our young future astronomers.

I'd also like to share some exciting new outreach opportunities. The EAS was invited to put together items for a display at the Central Library. Charlie Paul got things started this past week. The display case should be a great outreach resource available to us for at least a few months. It will be interesting to find out how many people pass through and learn about EAS for the first time. We also are finally getting our partnership with the YMCA Naples kicked off. Members will have the opportunity to share our passion for the night sky with youth during the "Parents night out" programs. This will likely include nighttime viewing on the YMCA's new rooftop deck in conjunction with other activities occurring. We will let everyone know dates when established.

This Tuesday's meeting we have a recent new member, John Fuller, who will be giving the presentation. Over the past several years John has been working with high school students in a NASA-sponsored program through the Lunar and Planetary Institute researching the lunar surface using LROC, the Lunar Reconnaissance Orbiting Camera. He will be sharing info on the program at his presentation. A few months back, the EAS worked with John at the Naples Seacrest School Science Saturday event. Parents and children came out to experience a variety of science-related interactive displays/demonstrations. Please come and show your support of our fellow EAS member. See you all on Tuesday.

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
May 9	After midnight	
May 16	4:33 a.m.	5:45 p.m.

Sky Events

May 3 - Full moon
May 11 - Last quarter
May 17 - New Moon
May 25 - First Quarter
May 11, 17,
24 & 27 - Single Transits of Jupiter
May 22-23 - Saturn at Opposition

Next Meeting

May 12, 2015: Time 7:00 – 9:00 pm
Norris Center, Cambier Park

A Great Fak Night - By Jackie Richards



M51 by Chuck Pavlick. Celestron 9.25 Edge w/Lepus 0.62 reducer; SBIG 8300c; 11 @ 360 seconds; 5/9/15 at the Fak.

We had a fantastic night at the Fak this past Saturday night with approximately 20 people in attendance. Although our night sky was threatened early on by smoke from prescribed fires in the area, everything cleared out nicely for us by sundown. Chuck Pavlick was imaging M51 (the Whirlpool Galaxy) and its companion (NGC 5195) in the constellation Canes Venatici, as can be seen in the above photo. Former President, Mike Usher, had his 20" Dob out for everyone's viewing pleasure. Many other club members set up their telescopes and imaging equipment and we all enjoyed a clear sky for a change. We even had some former members return to the Fak after many years.

Last month's Fak picnic did not give us good skies but it's always a good time when club members get together and talk about astronomy. Below are some photos from this year's Fak Picnic.



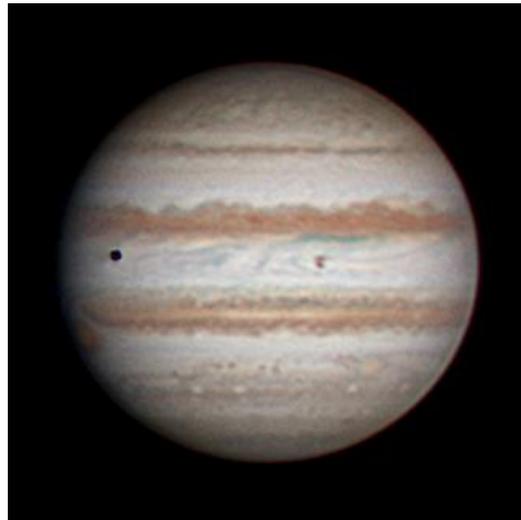
Sunset at Fak Picnic 2015. Photo by Todd Strackbein.

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Other Pictures



Fak Picnic 2015. Photo by Todd Strackbein.



Jupiter, Io and Io's shadow by Chuck Pavlick. 4/18/15.
Scope: Celestron 9.25 Edge and 2x Televue Barlow; Camera: DMK21Au618.



Fak Picnic 2015. Photo by Jackie Richards.



Conservancy 4/17/15. Ted Wolfe and Denise Sabatini.



Conservancy 4/17/15. Rick Piper, Charlie Paul and Denise Sabatini.

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Is the Most Massive Star Still Alive?

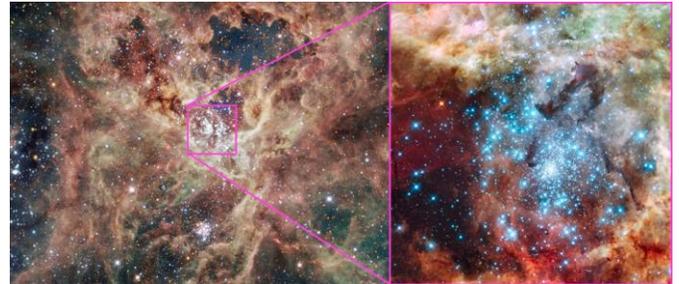
By Ethan Siegel

The brilliant specks of light twinkling in the night sky, with more and more visible under darker skies and with larger telescope apertures, each have their own story to tell. In general, a star's color correlates very well with its mass and its total lifetime, with the bluest stars representing the hottest, most massive and *shortest-lived* stars in the universe. Even though they contain the most fuel overall, their cores achieve incredibly high temperatures, meaning they burn through their fuel the fastest, in only a few million years instead of roughly ten billion like our sun.

Because of this, it's only the youngest of all star clusters that contain the hottest, bluest stars, and so if we want to find the most massive stars in the universe, we have to look to the largest regions of space that are actively forming them right now. In our local group of galaxies, that region doesn't belong to the giants, the Milky Way or Andromeda, but to the Large Magellanic Cloud (LMC), a small, satellite galaxy (and fourth-largest in the local group) located 170,000 light years distant.

Despite containing only one percent of the mass of our galaxy, the LMC contains the Tarantula Nebula (30 Doradus), a star-forming nebula approximately 1,000 light years in size, or roughly seven percent of the galaxy itself. You'll have to be south of the Tropic of Cancer to observe it, but if you can locate it, its center contains the super star cluster NGC 2070, holding more than 500,000 unique stars, including many hundreds of spectacular, bright blue ones. With a maximum age of two million years, the stars in this cluster are some of the youngest and most massive ever found.

At the center of NGC 2070 is a very compact concentration of stars known as R136, which is responsible for most of the light illuminating the entire Tarantula Nebula. Consisting of no less than 72 O-class and Wolf-Rayet stars within just 20 arc seconds of one another, the most massive is R136a1, with 260 times the sun's mass and a luminosity that outshines us by a factor of *seven million*. Since the light has to travel 170,000 light years to reach us, it's quite possible that this star has already died in a spectacular supernova, and might not even exist any longer! The next time you get a good glimpse of the southern skies, look for the most massive star in the universe, and ponder that it might not even still be alive.



Images credit: ESO/IDA/Danish 1.5 m/R. Gendler, C. C. Thöne, C. Féron, and J.-E. Ovaldsen (L), of the giant star-forming Tarantula Nebula in the Large Magellanic Cloud; NASA, ESA, and E. Sabbi (ESA/STScI), with acknowledgment to R. O'Connell (University of Virginia) and the Wide Field Camera 3 Science Oversight Committee (R), of the central merging star cluster NGC 2070, containing the enormous R136a1 at the center.

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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 2015 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:
