



Monthly Notices of the Everglades Astronomical Society



Naples, FL
November 2015

Officers: **President:** Todd Strackbein (tstrackbein@gmail.com); **VP/Secretary:** Denise Sabatini (dsabatini2@embarqmail.com);
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/clubs/eas> **Webmaster:** Martin Zombeck (mvz@alum.mit.edu)

President's Message

I'm excited the season is now getting into full swing. Our calendar is starting to get filled with some fun events, and weather is starting to cooperate. The morning skies have been clear with some spectacular views of Jupiter, Mars and Venus in the east. Familiar favorites are also visible in the evening sky along with several meteor events. Hope to make some FAK viewings soon.

I believe the next event is the Family Fun Night on the roof of the YMCA on the 20th which will include the moon nicely placed for viewing. The event flyer sports our club emblem and should provide us with some exposure to young area families. We will talk about more at the meeting.

This is also the month where we welcome back our seasonal members. Always glad to see the familiar faces return and fill the seats at the Norris Center. Our presenter for this month's meeting is John Fuller. I will be there with refreshments for during the break just before the presentation.

Consider as a holiday gift you can get someone an EAS club shirt or hat. Those items are on sale at every meeting.

As a reminder for the second month, don't forget your Winter Star Party tickets which have gone on sale to the general public. Attendance should be up again and may sell out. If interested don't waste time and get your ticket! Link is below. <http://www.scas.org/wsp/registration/form.php>

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
Nov. 7	3:07 a.m.	3:28 p.m.
Nov. 14	9:09 a.m.	8:16 p.m.

Sky Events

Nov. 3	- Last quarter
Nov. 5	- Taurids Meteor Shower
Nov. 11	- New Moon
Nov. 17	- Leonids Meteor Shower
Nov. 18	- First Quarter
Nov. 25	- Full moon
Dec. 13	- Geminids Meteor Shower

Next Meeting

November 10, 2015: Time 7:00 – 9:00 pm
Norris Center, Cambier Park

Meteor Showers By Jackie Richards

We are hoping to get good weather for upcoming Fak nights so that club members will have more opportunities to take pictures of the night sky like the one below of the Trifid Nebula taken by Chuck Pavlick on Oct. 12th. In addition, we



Photo of the Trifid Nebula by Chuck Pavlick, Celestron Edge 9.25 w/Lepus 0.62 reducer; AP Mach 1; SBIG 8300 c; 16 @300 seconds. October 12, 2015

are hoping for clear skies to view these upcoming upcoming meteor showers: the Leonids Meteor Shower, peaking on November 17-18 and the Geminids Meteor shower, peaking on December 13-14 (with up to 120 multi-colored meteors possible). This weekend, we changed our Fak night from Saturday to Friday as the sky was clear on Friday night. Chuck Pavlick took the below picture of the Bubble Nebula that night and we saw about a dozen meteors during the Taurids meteor shower which peaked on November 5-6.



The Bubble Nebula by Chuck Pavlick taken at the Fak. 11/6/15. Celestron Edge 9.25 w/Lepus 0.62 reducer; AP Mach 1 w/Orion mini guider w/PHD guiding; SBIG 8300 c; 12 @420 seconds.

Also see photos by Chuck Pavlick of the moon below.



Photo of the Moon by Chuck Pavlick 10/22/15.

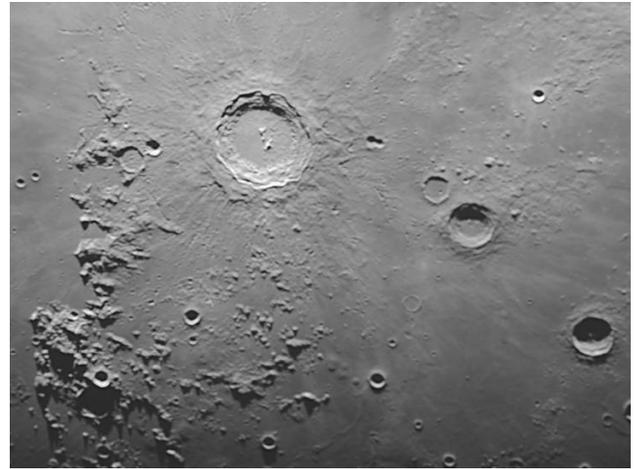


Photo of the Moon by Chuck Pavlick 10/22/15.

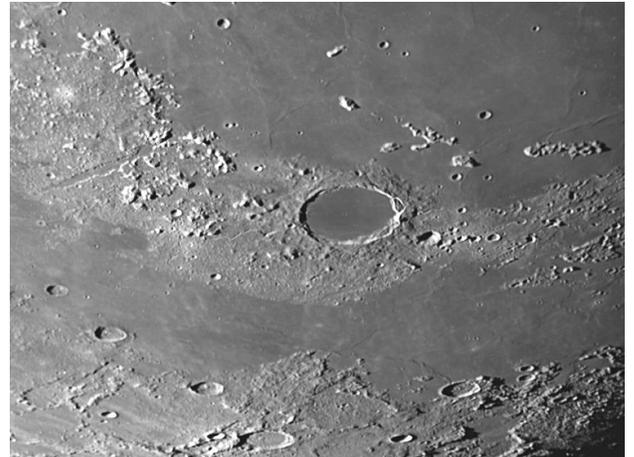


Photo of the Moon by Chuck Pavlick 10/22/15.

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Published Articles by EAS Members

Ted Wolfe's article in the Naples News/Collier Citizen on October 28, 2015, Looking up: A Crabby Nebula: Exploding Star with a Beating Heart:

<http://www.naplesnews.com/community/collier-citizen/looking-up-a-crabby-nebula-exploding-star-with-a-beating-heart-232c4ba0-2b4d-7ade-e053-0100007f142e-338007821.html>

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

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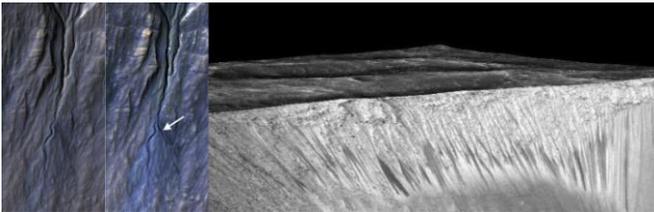


How we know Mars has liquid water on its surface

by Ethan Siegel

Of all the planets in the solar system other than our own, Mars is the one place with the most Earth-like past. Geological features on the surface such as dried up riverbeds, sedimentary patterns, mineral spherules nicknamed "blueberries," and evidence of liquid-based erosion all tell the same story: that of a wet, watery past. But although we've found plenty of evidence for molecular water on Mars in the solid (ice) and gaseous (vapor) states, including in icecaps, clouds and subsurface ices exposed (and sublimated) by digging, that in no way meant there'd be water in its liquid phase today.

Sure, water flowed on the surface of Mars during the first billion years of the solar system, perhaps producing an ocean a mile deep, though the ocean presence is still much debated. Given that life on Earth took hold well within that time, it's conceivable that Mars was once a rich, living planet as well. But unlike Earth, Mars is small: small enough that its interior cooled and lost its protective magnetic field, enabling the sun's solar wind to strip its atmosphere away. Without a significant atmosphere, the liquid phase of water became a virtual impossibility, and Mars became the arid world we know it to be today.



Images credit: NASA/JPL-Caltech/Univ. of Arizona, of a newly-formed gully on the Martian surface (L) and of the series of gullies where the salt deposits were found (R).

But certain ions—potassium, calcium, sodium, magnesium, chloride and fluoride, among others—get left behind when the liquid water disappears, leaving a “salt” residue of mineral salts (that may include table salt, sodium chloride) on the surface. While pure liquid water may not persist at standard Martian pressures and temperatures, extremely salty, briny water can indeed stay in a liquid state for extended periods under the conditions on the Red Planet. It's more of a "sandy crust" like you'd experience on the shore when the tide goes out than the flowing waters we're used to in rivers on Earth, but it means that under the right temperature conditions, liquid water does exist on Mars today, at least in small amounts.

The measured presence and concentration of these salts, found in the dark streaks that come and go on steep crater walls, combined with our knowledge of how water behaves under certain physical and chemical conditions and the observations of changing features on the Martian surface supports the idea that this is the action of liquid water. Short of taking a sample and analyzing it in situ on Mars, this is the best current evidence we have for liquid water on our red neighbor. Next up? Finding out if there are any single-celled organisms hardy enough to survive and thrive under those conditions, possibly even native to Mars itself!

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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:

Email:
