



Monthly Notices of the Everglades Astronomical Society



Naples, FL
June 2020

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President's Message

If you did not attend the March, 2020, meeting, you may not have heard that as of June 30, 2020, I will be stepping down as president. I still plan to be in service to the club and be more active in observing. It has been an absolute joy to serve as president. I have had the opportunity to get to know many of you and even learn your names.

Robyn and Chris Pritchard will be assuming the roles of Co-President. Should they need any help, I will be available (if they want my advice). Please give them any assistance you can. One thing that I needed more than anything was help in planning the programs for the monthly meetings. You could volunteer to give one, line up a speaker, or suggest speakers and topics.

I am surely hoping that by the July meeting things will be getting back to some sense of normalcy. I always look so forward to the July and August meetings because it gives me an opportunity to talk to you on a personal level. In the meantime, please stay well.

Remember, you can count on me to continue to serve as a member of this amazing society.

Clear skies, Denise

Dates for Observing

Usually the best times to observe are moonless nights. Below is a list of upcoming Saturday nights that you may wish to enjoy the night sky from home until things get back to normal.

Date	Moonrise	Moonset
June 13	1:56 a.m.	1:49 pm.
June 20	5:59 a.m.	8:03 p.m.

Sky Events

June 5	- Full Moon
June 12	- Last Quarter
June 20	- New Moon
June 28	- First Quarter

Next Meeting – June Meeting CANCELLED

SpaceX / Dragon Launch & Docking with ISS By Jackie Richards

It was such a pleasure to witness (not in person but on TV) the launching of SpaceX's Crew Dragon capsule powered by Falcon 9 rocket from the Kennedy Space Center. Astronauts



Picture of my TV screen minutes before the Dragon capsule docked with the ISS on the NASA channel.

Doug Hurley and Bob Behneken were the first NASA astronauts to be launched from U.S. soil since the Space Shuttle program ended in 2011 and this was the first time a private company flew astronauts into orbit. The NASA channel provided excellent coverage of all stages of the mission. I took many pictures on the TV of the different stages like the one above of the Dragon capsule minutes before docking with the ISS. Now more than ever, I'd like to witness a launch in person.

The next launch I know of will be in July when the next Mars rover named Perseverance will be launched to begin its long journey to Mars to explore the Martian surface and try to answer questions about the potential for ancient life on Mars. I'd like to see that launch.



Solar prominences by Chuck Pavlick on 5/5/20.

FABULOUS PHOTOS BY EAS MEMBERS



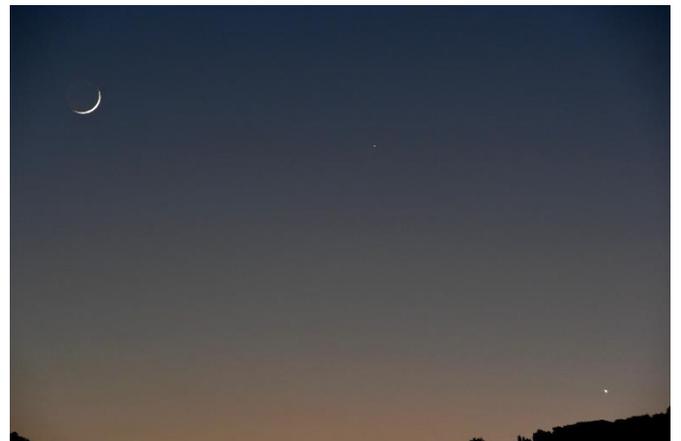
M51 by Chuck Pavick on 5/22/20. He wrote: The last several clear nights we've had I decided to try M51 from my light-polluted back yard. Galaxies are hard to do in light pollution. There are filters I can use on nebula but they don't help on galaxies. This is 5 hours of imaging time.



By Ted Wolfe: Here is my latest image from Chile. A 9 1/2 hour rendition of "the one Messier missed" - the classic NGC4565.



By John Pigman: Attached is a photo of the full moonrise over Naples Airport taken on February 9th of this year. This shot was taken from the hilltop in Baker Park and there was some smoke in the air giving the moon an unusual color.



By Henri Troch. Venus, Mercury and the Moon on 5/21/20.

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Summer Triangle Corner: Vega

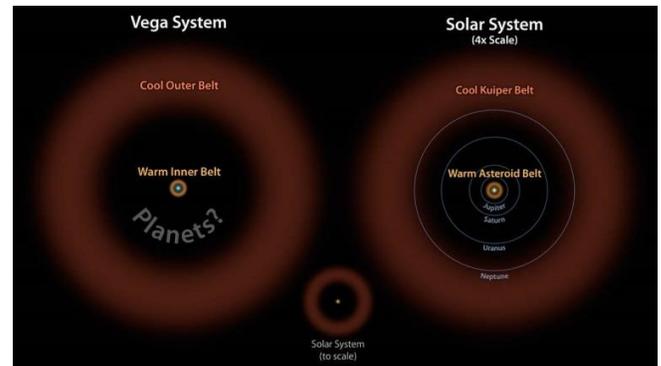
By David Prosper and Vivian White

If you live in the Northern Hemisphere and look up during June evenings, you'll see the brilliant star **Vega** shining overhead. Did you know that Vega is one of the most studied stars in our skies? As one of the brightest summer stars, Vega has fascinated astronomers for thousands of years.

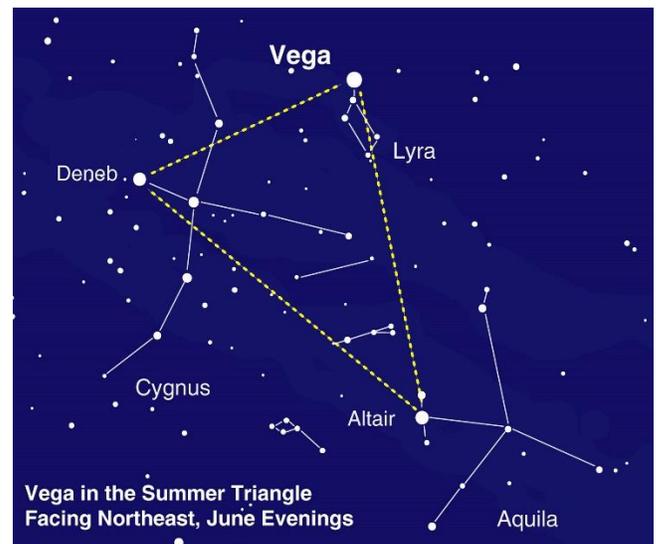
Vega is the brightest star in the small Greek constellation of Lyra, the harp. It's also one of the three points of the large "Summer Triangle" asterism, making Vega one of the easiest stars to find for novice stargazers. Ancient humans from 14,000 years ago likely knew Vega for another reason: it was the Earth's northern pole star! Compare Vega's current position with that of the current north star, Polaris, and you can see how much the direction of Earth's axis changes over thousands of years. This slow movement of axial rotation is called **precession**, and in 12,000 years Vega will return to the northern pole star position. Bright Vega has been observed closely since the beginning of modern astronomy and even helped to set the standard for the current magnitude scale used to categorize the brightness of stars. Polaris and Vega have something else in common, besides being once and future pole stars: their brightness varies over time, making them **variable stars**. Variable stars' light can change for many different reasons. Dust, smaller stars, or even planets may block the light we see from the star. Or the star itself might be unstable with active sunspots, expansions, or eruptions changing its brightness. Most stars are so far away that we only record the change in light, and can't see their surface.

NASA's TESS satellite has ultra-sensitive light sensors primed to look for the tiny dimming of starlight caused by transits of extrasolar planets. Their sensitivity also allowed TESS to observe much smaller pulsations in a certain type of variable star's light than previously observed. These observations of **Delta Scuti** variable stars will help astronomers model their complex interiors and make sense of their distinct, seemingly chaotic, pulsations. This is a major contribution towards the field of astroseismology: the study of stellar interiors via observations of how sound waves "sing" as they travel through stars. The findings may help settle the debate over what kind of variable star Vega is. Find more details on this research, including a sonification demo that lets you "hear" the heartbeat of one of these stars, at: bit.ly/DeltaScutiTESS

Interested in learning more about variable stars? Want to observe their changing brightness? Check out the website for the American Association of Variable Star Observers (AAVSO) at aavso.org. You can also find the latest news about Vega and other fascinating stars at nasa.gov.



Vega possesses two debris fields, similar to our own solar system's asteroid and Kuiper belts. Astronomers continue to hunt for planets orbiting Vega, but as of May 2020 none have been confirmed. More info: bit.ly/VegaSystem Credit: NASA/JPL-Caltech



Can you spot Vega? You may need to look straight up to find it, especially if observing after midnight.

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EAS 2020 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: _____

Phone: _____

Email: _____