Monthly Notices of the Everglades Astronomical Society

Naples, FL
September 2020

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President's Message

Congratulations to Jackie Richards for her 3rd place Astronomical League Mable Strens Newsletter Editor Award for 2020. She does a fantastic job on the newsletter and is worthy of the recognition.

Our next Zoom meeting is September 8. Vic Farris will be doing a presentation, "An Introduction to Deep Sky Astrophotography: Shooting The Horse Head Nebula." Please join us Tuesday at 7:00 p.m. The link is below.

Clear skies, Robyn and Chris Pritchard

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
Sept. 12	1:00 a.m.	3:13 p.m.
Sept. 19	8:31 a.m.	8:24 p.m.

Sky Events

Sept. 1 - Full Moon
Sept. 10 - Last Quarter
Sept. 17 - New Moon
Sept. 23 - First Quarter

Next Meeting – VIA ZOOM
September 8, 2020 at 7:00 p.m. Eastern

Click on the below link to Join Zoom Meeting
https://us02web.zoom.us/j/3495687507?pwd=RytWL1pzRjRDdHhDSDJvdnh1UVVYZz09

Meeting ID: 349 568 7507
Password: telescope

The Watchtower
By Ted Wolfe

Here is a recent (9hr) image I took down in Chile with my operation which has a lot of interesting features in it. GN 16 05 2 is an area in the "Lupus Cloud" in the Southern Hemisphere.

Here we are looking toward the center of the galaxy with its population of old red/orange stars. A dark cloud of dust bisects the picture, obscuring a large portion of the background star field.

In the foreground a delicate blue reflection nebula is powered by the double star system in the center - 2 type "B" stars circling each other.

Note the diffraction spikes around the 2 bright stars. There should be 8 (2 on the top, 2 on the bottom and 2 on each side). However, the equators of the 2 stars are lined up so precisely with each other that only one shows on each side.

I call the image "The Watchtower".

GN 16 05 2 "The Watchtower" by Ted Wolfe – Chile.

Perseid Meteor Shower

Rick Piper: Zero to ten, I would rate this sky (Colorado) an 8. Bright Milky Way. On 8/11/20 from 11:00 p.m. – 12:00 a.m. – 24 meteors per hour (3 were sporadic). 12:00 a.m. – 12:30 a.m. – 11 meteors x 2 = 22 meteors per hour.

Denise Sabatini: I did see two Perseids. This wasn't planned. One was seen as I was finishing my morning walk. The second one was seen out my front window while I was watching tv. They were both pretty bright.

Chuck Dryer: Photo of Perseid meteors

Perseid Meteors by Chuck Dryer

MORE AWESOME PHOTOS BY EAS MEMBERS

M33 by Chuck Dryer

Jupiter and Jupiter's moon, Callisto, by Chuck Pavlick.

Saturn by Chuck Pavlick. Taken with a mono camera using red, green and blue filters combined to get a color image. Celestron 9.25 scope.

Summer Triangle Corner: Altair

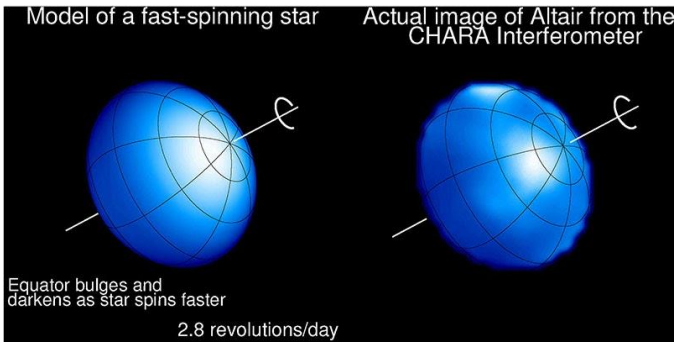
By David Prosper

Altair is the final stop on our trip around the Summer Triangle! The last star in the asterism to rise for Northern Hemisphere observers before summer begins, brilliant Altair is high overhead at sunset at the end of the season in September. Altair might be the most unusual of the three stars of the Triangle, due to its great speed: this star spins so rapidly that it appears "squished."

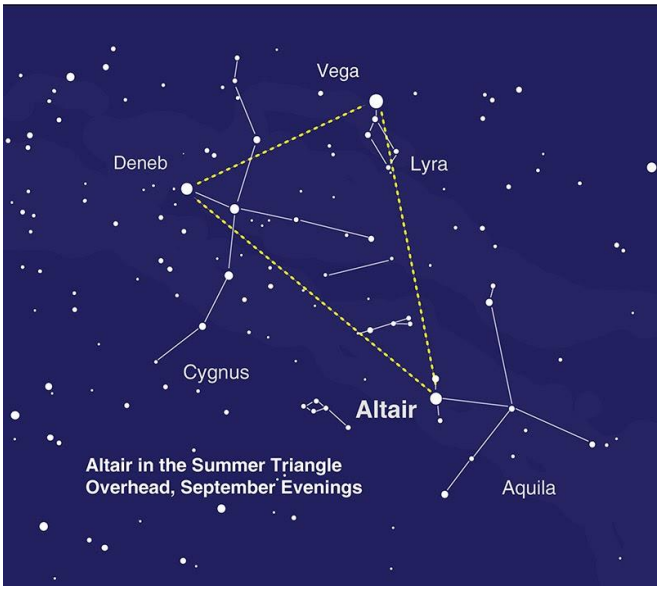
A very bright star, Altair has its own notable place in the mythologies of cultures around the world. As discussed in our previous edition, Altair represents the cowherd Niulang in the ancient Chinese tale of the "Cowherd and the Weaver Girl." Altair is the brightest star in the constellation of Aquila the Eagle; while described as part of an eagle by ancient peoples around the Mediterranean, it was also seen as part of an eagle by the Koori people in Australia! They saw the star itself as representing a wedge-tailed eagle, and two nearby stars as his wives, a pair of black swans. More recently one of the first home computers was named after the star: the Altair 8800.

Altair's rapid spinning was first detected in the 1960s. The close observations that followed tested the limits of technology available to astronomers, eventually resulting in direct images of the star's shape and surface by using a technique called *interferometry*, which combines the light from two or more instruments to produce a single image. Predictions about how the surface of a rapidly spinning massive star would appear held true to the observations; models predicted a squashed, almost "pumpkin-like" shape instead of a round sphere, along with a dimming effect along the widened equator, and the observations confirmed this! This equatorial dimming is due to a phenomenon called *gravity darkening*. Altair is wider at the equator than it is at the poles due to centrifugal force, resulting in the star's mass bulging outwards at the equator. This results in the denser poles of the star being hotter and brighter, and the less dense equator being cooler and therefore dimmer. This doesn't mean that the equator of Altair or other rapidly spinning stars are actually dark, but rather that the equator is dark in comparison to the poles; this is similar in a sense to sunspots. If you were to observe a sunspot on its own, it would appear blindingly bright, but it is cooler than the surrounding plasma in the Sun and so appears dark in contrast.

As summer winds down, you can still take a Trip Around the Summer Triangle with this activity from the Night Sky Network. Mark some of the sights in and around the Summer Triangle at: bit.ly/TriangleTrip. You can discover more about NASA's observations of Altair and other fast and furious stars at nasa.gov.



The image on the right was created using optical interferometry: the light from four telescopes was combined to produce this image of Altair's surface. Image credit: Ming Zhao. More info: bit.ly/altairvsmodel



Altair is up high in the early evening in September. Note Altair's two bright "companions" on either side of the star. Can you imagine them as a formation of an eagle and two swans, like the Koori?

Discover more about brilliant stars and their mysteries at nasa.gov.

This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

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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: _____

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