

Southwest Florida Astronomical Society SWFAS



The Eyepiece May 2017

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A MESSAGE FROM THE PRESIDENT

May is already upon us. Summer heat has arrived. The solar observing sessions and public viewings are winding down this month for the season except for Parks and Rec Day and of course, the Eclipse! We hopefully will get into the rainy season soon, but that will put a further damper on observing.

The weather was not kind to us on our star party night. We will try again at CRP on the 27th. Watch for emails as this could change.

We do now have Jupiter in the evening sky and Saturn is well placed in the morning sky right in the middle of the summer milky way. Venus has become a bright beacon in the morning sky.

I am looking for help with the August eclipse. See my note below.

If you have any ideas for programs over the summer, let Mike McCauley know.

Brian

Program this Month

Fellow Amateur Astronomers:

The South West Florida Astronomical Society is pleased to present SWFAS Vice-President Bruce Dissette as our guest speaker at our May 4th meeting. Anyone who has attended a star party with Bruce Dissette is well aware of his knowledge of the night sky and his passion as an accomplished amateur astronomer. Bruce will talk about Proxima Centauri, a low mass, red dwarf star located just 4.5 light years from earth in the Alpha Centauri star system. Aside from being the closest star to earth, Proxima Centauri made the news in 2016 when astronomers discovered Proxima b, a planet orbiting in its habitable zone.

Bruce's presentation will be at the conclusion of the May meeting of the South West Florida Astronomical Society on May 4th, at 7:30pm, at the Calusa Nature Center and Planetarium in Fort Myers.

Michael J. McCauley
Program Coordinator
SWFAS

Annual Dues

It is Annual Dues time again. Dues are \$20.00 and can be paid at the meeting or mailed to SWFAS, Inc. PO Box 100127 Cape Coral, FL 33910. If you have any question about whether you have paid for 2017, contact Brian Risley or Tim Barrier. I will be emailing out a reminder notice to those that we do not have a record of payment. Dues must be paid by June for 2017 or you will be dropped from the Astronomical League mailings and our mailing list.

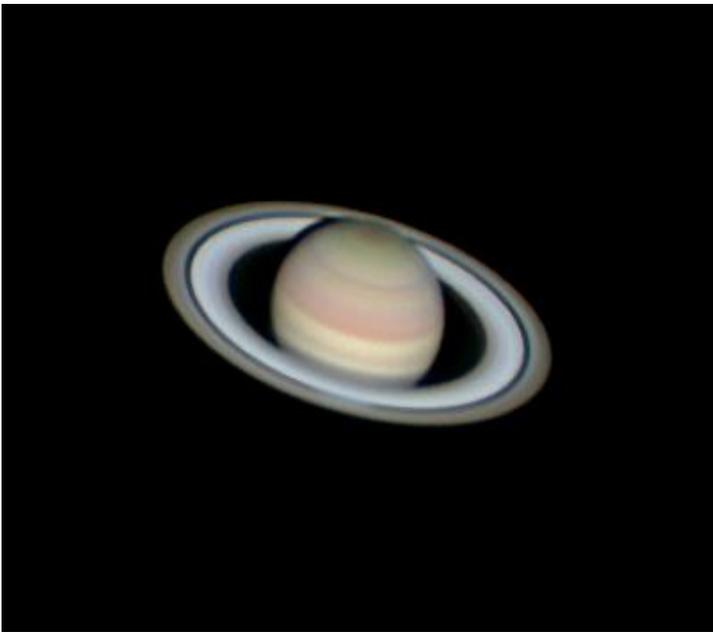
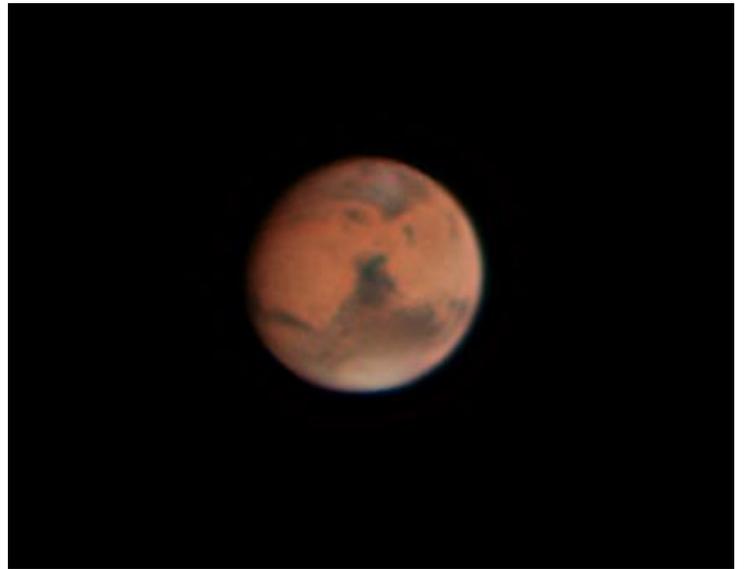
August 21st Solar Eclipse

If you are not traveling to see the eclipse and would be able to help with observing that afternoon from SW Florida, please let Brian Risley know. We have had several people ask about observing events in the area for it and I need to find people to help coordinate these events. The CPC 800 and Celestar 8 will be available for white light solar observing and possibly the Nexstar 6se. We also have a solar filter for the 8" dobsonian as well. We can supply handouts on the eclipse and how to safely observe it. School will have just started, so I don't know if we will be able to do anything with the schools in advance of it. I have been in contact with the News-Press for an article about it to appear before the eclipse, and I would like to be able to direct people to an event.

Photos from Everglades Dark Sky Site by Phil Jansen



Photos from Chuck Pavlick



In the Sky this Month

Moon:

May – 1st Quarter – 3rd; Full – 10th; Last Quarter – 18th; New – 25th.

The Planets:

Mercury is hidden deep in the glow of sunrise.

Venus (magnitude -4.7) shines low in the east as dawn brightens. In a telescope it's a crescent, thickening a little every morning. This week it's at greatest brightness.

Mars (magnitude +1.6, in Taurus) is finally sinking away in the western evening twilight after a year-long apparition. Don't confuse it with slightly brighter Aldebaran, twinkling 7° left of Mars early in the week. Aldebaran is lower left of Mars by week's end.

Jupiter (magnitude -2.4, in Virgo) shines brightly in the southeast at dusk. It's highest for telescopic viewing by about 11 p.m. daylight saving time. Spica, just a trace bluer, hangs 9° below it in twilight, and lower left of it by 11 p.m. In a telescope Jupiter shrinks from 44 to 43 arcseconds across this week, as Earth pulls away ahead of it in our faster orbit.

Saturn (magnitude +0.2, in Sagittarius) rises around 11 p.m. and glows highest in the south before dawn. Redder Antares (magnitude +1.0) twinkles 18° to Saturn's right in the early-morning hours. See how many of Saturn's satellites you can identify in your scope using our [Saturn's Moons tracker](#).

Uranus and Neptune are hidden in the glow of dusk and dawn, respectively.

Eta Aquarid Meteor Shower (May 5/6 peak) Early morning meteor shower. Associated with Comet Halley. Very fast and bright. See article below.

International Space Station: The ISS is visible in the evening skies over Ft Myers

Mon May 1, 5:58 AM	4 min	36°	11° above SSW	31° above E
Tue May 2, 5:08 AM	2 min	15°	15° above SE	11° above E
Wed May 3, 5:51 AM	4 min	58°	23° above WSW	17° above NNE
Thu May 4, 5:02 AM	1 min	49°	49° above ESE	24° above ENE
Fri May 5, 5:45 AM	3 min	19°	17° above WNW	10° above N
Sat May 6, 4:55 AM	2 min	27°	27° above N	11° above NNE
Mon May 8, 4:47 AM	< 1 min	13°	13° above NNW	10° above N

The **Hubble Space Telescope** appears in the Morning from May 12-24 and the evening from 26 through the end of the month. See this link for specific times and routes for both: <http://www.heavens-above.com/>

Southwest Florida Astronomical Society, Inc. Event Schedule 2017

Date	Event	Location	Time/Note
May 4 th , 2017	Monthly Meeting	Calusa Nature Center & Planetarium	7:30pm
May 5 th , 2017	Public Observing	Moore Observatory FSW, Punta Gorda	Dusk
May 20 th , 2017	Solar Observing	Harbour Heights Park Port Charlotte	9am-12noon
May 27 th , 2017	Monthly Star Party	Caloosahatchee Regional Park	Dusk (Arrive before gate closes, park fee)
June 1 st , 2017	Monthly Meeting	Calusa Nature Center & Planetarium	7:30pm
June 2 nd , 2017	Public Observing	Moore Observatory FSW, Punta Gorda	Dusk
June 24 th , 2017	Monthly Star Party	Seahawk Park Cape Coral	Dusk
July 6 th , 2017	Monthly Meeting	Calusa Nature Center & Planetarium	7:30pm
July 15 th , 2017	Parks and Rec Day	Cape Coral Yacht Club	10:00 am – 1:00 pm
July 22 nd , 2017	Monthly Star Party	Seahawk Park Cape Coral	Dusk
August 3 rd , 2017	Monthly Meeting	Calusa Nature Center & Planetarium	7:30pm
Aug 19 th , 2017	Monthly Star Party	Seahawk Park Cape Coral	Dusk
Aug 21 st , 2017	Solar Eclipse	Across America	
Sept 7 th , 2017	Monthly Meeting	Calusa Nature Center & Planetarium	7:30pm
Sept 23 rd , 2017	Monthly Star Party	Seahawk Park Cape Coral	Dusk
Oct 15 th , 2017	Ding Darling Days	Ding Darling National Wildlife Refuge - Sanibel	Solar Observing/Displays
Oct 21 st , 2017	Monthly Star Party	Caloosahatchee Regional Park	Dusk (Arrive before gate closes, park fee)
Nov 18 th , 2017	Monthly Star Party	Seahawk Park Cape Coral	Dusk
Dec 16 th , 2017	Monthly Star Party	Caloosahatchee Regional Park	Dusk (Arrive before gate closes, park fee)

All events are Weather Permitting. If it is cloudy, we may not setup at all. There may be no way to provide advance notice of cancellation.

Monthly Star Parties: These are held at either Caloosahatchee Regional Park (CRP) off SR78 7 miles east of SR31 or at Seahawk Park in Cape Coral. Other than park fees noted, these are free and open to the public.

CRP has a gate that closes at dusk, you can check the county's website for current gate closing times and the status of the park's Northside entrance as that is where we observe from. (They may close the area if there are issues with the trails.) There is a parking fee of \$1/hr or \$5/day at CRP. Park in the main Northside parking lot. We sometimes setup down the dirt road that goes to the east. That area is grassy and may not be level, so one should walk on the dirt road as much as possible and watch their step.

Seahawk Park is in North Cape Coral off Wilmington Blvd. (Nelson Rd or Chiquita Blvd are the nearest cross streets.) There is a brown sign in the center median at the entrance to the park. (GPS may not get you to the park, as some of the local roads have been closed.) You will make a big J hook before getting to the parking area. Seahawk Park is utilized by the Radio Controlled Planes and they have priority. They are usually done by sunset but may be there before sunrise. Park in the lot and transport your equipment to the concrete staging area before the runway. This park is handicap capable as there is level concrete leading from parking to the staging area.

Big Cypress: The Big Cypress Visitor Center is located off US41 5 miles east of SR29 about 25 miles east of Naples. Big Cypress has earned a Dark Sky Park designation. They hold observing events down the road that extends south of the Visitor Center during the winter months. This is a real dark sky site. One of their events this year is timed to a full moon with a penumbral eclipse, so that night will not be dark. Their observing events are free. After the fires of March, it has been decided the site will be closed till next season.

Solar Events: We have daytime solar events where one can safely look at the Sun. Things such as sunspots and prominences may be visible. These are free unless tied to another event that may have an entrance fee.

Rotary Park Star Party: This is a free public star party held at Rotary Park at the south end of Pelican Blvd in South Cape Coral. Park to the west of the main building and walk to where we are setup to the east of the main building. If the weather is bad, we will try again the next night.

Moore Observatory, FSW Punta Gorda Campus: The campus is located off Airport Rd just east of I-75. Go to the right around the lake and park. The observatory is located down the path along the lake. Besides the telescope in the observatory, additional scopes may be setup around the observatory. This is a free event.

Star Party Etiquette: Bright white flashlights are not welcome. We use red flashlights to preserve our night vision. At the parks, please use just your parking lights if possible. As there may be cords and tripod legs that are hard to see in the dark, we ask that all children be well behaved and cautious around the telescopes. If you need help in moving around in the dark, just ask. Someone will be happy to guide you with a red light. If you have a telescope and need help with it, just ask. Someone will be glad to show you how to use it.

Golden Rules to Telescope Observing: Move your eye to the telescope, don't try to move the telescope to your eye! Ladders/chairs are there for your support, the telescopes do not provide support and should not be touched.

Minutes of the Southwest Florida Astronomical Society – April 6, 2017

The regular monthly business meeting of the Southwest Florida Astronomical Society was called to order at 7:30 pm by president Brian Risley in the Calusa Nature Center Planetarium.

Thirty-three people were present.

WINK Television chief meteorologist Jim Farrell presented the program on southwest Florida weather patterns as they relate to astronomy.

At 8:30 pm the business meeting resumed.

Members were reminded that annual dues are now due.

The past events listed in the printed agenda were reviewed.

Upcoming events listed on the printed agenda were discussed.

Any members who have pictures for the newsletter should send them to Chris Rasmussen or Ron Madl. Please re-size them so they do not exceed a maximum of 1920 x 1080 pixels.

Tony Heiner made a motion, seconded by John MacLean, to approve the minutes of the March 2 meeting as published in the April newsletter. The motion carried on a voice vote.

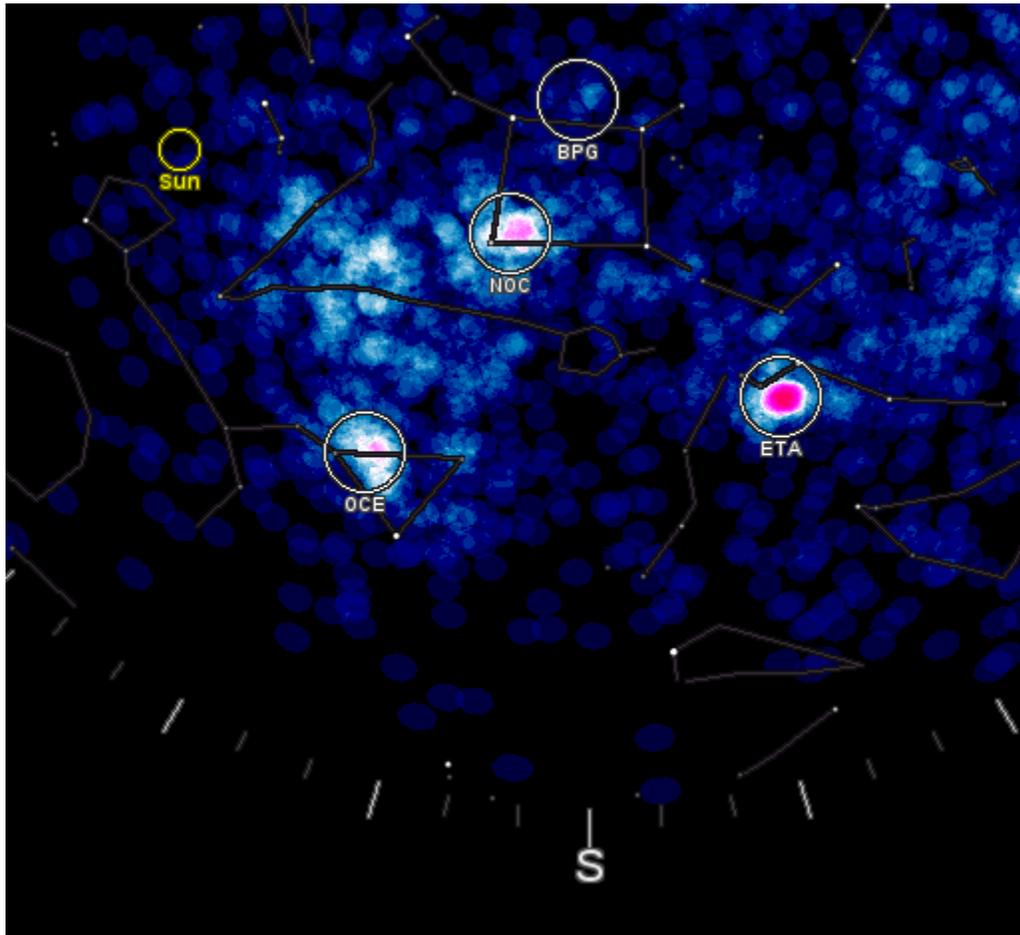
Treasurer Tim Barrier reported a March ending balance of \$2431. Tony Heiner made a motion, seconded by Mary Vilbig, to approve the report. The motion passed on a voice vote.

Equipment Coordinator Brian Risley stated that scopes and equipment are available for checkout now that the rush of seasonal events is over. Contact Brian.

The meeting was adjourned at 8:48 pm.

submitted by Don Palmer, secretary

METEORS FROM HALLEY'S COMET: According to Canada's Meteor Orbit Radar ([CMOR](#)), a "hot spot" has appeared in the constellation Aquarius. This is a sign that the annual [eta Aquarid meteor shower](#) (ETA) is underway. This sky map shows where the radar is detecting pings from incoming meteors in broad daylight on May 1st:



These meteors are pieces of Halley's Comet, hitting Earth's atmosphere at 66 km/s and disintegrating ~100 km above Earth's surface. In the days ahead our planet will cross a network of debris streams from the comet, producing a drizzle of eta Aquarids numbering 10 to 30 meteors per hour in the northern hemisphere and perhaps twice that number in the southern hemisphere.

Two leading meteor forecasters have noted the possibility of [eta Aquarid outbursts](#). Mikhail Maslov says meteor activity could increase on **May 4th** (14h- 18h UT) when Earth grazes a dust trail released by Comet Halley in the year -616. Forecaster Mikiya Sato agrees that that Earth could encounter the -616 dust trail, but later on **May 5th** (05h - 15h UT), possibly with such a gentle graze that no special increase is detectable. In most years the strongest activity is seen around **May 6th**, which may still prove true in 2017.

The best time to look, no matter where you live, is during the dark hours just before dawn when the constellation Aquarius is rising in the east. Monitor [the meteor gallery](#) for sightings.

This article is provided by NASA Space Place.

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NOAA's Joint Polar Satellite System (JPSS) to monitor Earth as never before

By Ethan Siegel

Later this year, an ambitious new Earth-monitoring satellite will launch into a polar orbit around our planet. The new satellite—called JPSS-1—is a collaboration between NASA and NOAA. It is part of a mission called the Joint Polar Satellite System, or JPSS.

At a destination altitude of only 824 km, it will complete an orbit around Earth in just 101 minutes, collecting extraordinarily high-resolution imagery of our surface, oceans and atmosphere. It will obtain full-planet coverage every 12 hours using five separate, independent instruments. This approach enables near-continuous monitoring of a huge variety of weather and climate phenomena.

JPSS-1 will improve the prediction of severe weather events and will help advance early warning systems. It will also be indispensable for long-term climate monitoring, as it will track global rainfall, drought conditions and ocean properties.

The five independent instruments on board are the main assets of this mission:

- The Cross-track Infrared Sounder (CrIS) will detail the atmosphere's 3D structure, measuring water vapor and temperature in over 1,000 infrared spectral channels. It will enable accurate weather forecasting up to seven days in advance of any major weather events.
- The Advanced Technology Microwave Sounder (ATMS) adds 22 microwave channels to CrIS's measurements, improving temperature and moisture readings.
- Taking visible and infrared images of Earth's surface at 750 meter resolution, the Visible Infrared Imaging Radiometer Suite (VIIRS) instrument will enable monitoring of weather patterns, fires, sea temperatures, light pollution, and ocean color observations at unprecedented resolutions.
- The Ozone Mapping and Profiler Suite (OMPS) will measure how ozone concentration varies with altitude and in time over every location on Earth's surface. This can help us understand how UV light penetrates the various layers of Earth's atmosphere.
- The Clouds and the Earth's Radiant System (CERES) instrument will quantify the effect of clouds on Earth's energy balance, measuring solar reflectance and Earth's radiance. It will greatly reduce one of the largest sources of uncertainty in climate modeling.

The information from this satellite will be important for emergency responders, airline pilots, cargo ships, farmers and coastal residents, and many others. Long and short term weather monitoring will be greatly enhanced by JPSS-1 and the rest of the upcoming satellites in the JPSS system.

Want to teach kids about polar and geostationary orbits? Go to the NASA Space Place:
<https://spaceplace.nasa.gov/geo-orbits/>



Caption: Ball and Raytheon technicians integrate the VIIRS Optical and Electrical Modules onto the JPSS-1 spacecraft in 2015. The spacecraft will be ready for launch later this year. Image Credit: Ball Aerospace & Technologies Corp.

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