



“CAPE FEAR SKIES”

Cape Fear Astronomical Society Newsletter

Wilmington, NC and Surrounding Areas

July 2019



Vice President's Report

July will be a moderately busy month for public events. We have our regularly scheduled session at Carolina Beach State Park on the 6th, and two events at public libraries. On the 12 July there's a moon event at the Kinston branch of Duplin Public Library from 7-9pm. I know it's a bit far for some folks, and I've only promised one person and two scopes, but additional CFAS people will be very welcome if you can make it. On 31 July Pender County Public Library will be having a Solar System event at the Hampstead branch. We'll set up the model solar system.

Looking ahead, we've been invited to participate in International Observe the Moon Night on 05 October at the Cape Fear Museum. This event will be rain or (moon) shine. There will be stations in the building and around the grounds. We can provide 'scopes to look at the moon, and moon-based activities if we desire. In the event of rain, we'll set up scopes indoors looking at pictures of the moon hung at a distance, and possibly a telescope petting zoo. This will be a fun event. If enough of us participate, we may get to visit the other stations.

Possible future events:

- ★ I haven't yet heard back from the Town of Leland regarding their Fall Events.
- ★ The WHQR Pledge Drive is October 10-16, and we could get some exposure by volunteering to take pledges.
- ★ The Cape Fear Fair runs 01 - 10 November at ILM airport, and we could put together a booth, or just set up solar and lunar observing.
- ★ There is a transit of Mercury on 11 November, which is a Monday and Veterans Day.

-Jon Stewart-Taylor

Next CFAS Monthly Meeting

Sun, July 14, **7:00pm** – 9:30pm
212 DeLoach Hall, UNCW Campus

Program: Hidden Figures

GAStronomy Meeting

Sun, July 14, **5:00pm** – 6:45pm
(Dinner, prior to the Monthly Meeting)

Cracker Barrel, 21 Van Campen Blvd.,

Next Event - July Public Star Party

July 6, **8:00pm** – 9:45pm
Carolina Beach State Park

July Calendar

- 02 New Moon
- 04 Moon < 1/4 deg from Mars, ~ 3 deg from Mercury, evening
- 06 Public Observing at CBSP**
- 09 First Quarter Moon
- 09 Saturn at opposition
- 12 Moon event at Duplin County Public Library, Kinston branch**
- 14 Pluto at opposition
- 14 Cape Fear Astro monthly meeting**
- 16 Full Moon.
- 25 Last Quarter Moon
- 30 Southern Delta Aquarid meteor shower, ZHR 25
- 31 Solar System at Pender County Public Library, Hampstead branch**

DSLR Astrophotography: Flats

Article and Photos by Karl Adlon

Many new moons ago I took this photo using a Celestron Comet Catcher 5.5" F3.62 Schmidt Newtonian and a Canon 450D modified camera.



No matter what I did, the corners are dark; the center is bright and the dark nebula isn't.

Flats! I thought. I didn't take any. I hadn't changed the set-up at all. So I took flats. I set the camera to "auto" and covered the aperture with a white cloth. Here is one:



And when I re-ran Deep Sky Stacker with the flats, **MAGIC!**



Apollo 11 and Earlier

Article and Photos by Karl Adlon

As long as I can remember, I've been interested in space travel and astronomy, and, concentrating on the first of these two, here are some of my memories:

(Prologue: Yes, I'm that old.)

Sputnik: On a chilly, late autumn night in 1957, Mom and Dad woke up me (9) and my brother (7). We put on our coats and went outside. After a short while we saw Sputnik pass over head. Then the tumbling last stage passed over – now you see it; now you don't; repeat.

Echo: The paper would publish visible passes and the large inflated aluminized sphere used to bounce radio signals was very bright – a nice warmer time of year, too.

Apollo 8: Christmas Eve, 1968 and the family (now 8 of us) were gathered in the living room. Coming from the Moon ¼ million miles away was the live transmission from Apollo 8. With lunar craters and mountains passing by on the screen, the astronauts read Genesis. It was amazing!

Apollo 10: Drafted a couple months earlier, I was at Fort Campbell, KY. It was a Sunday. On the TV, the 5 engines lit and 8 seconds later Apollo 10 lifted off, headed for the Moon. When the successful mission was over, the path to land on the Moon was clear.

Apollo 11: Launched on the 16th, it was late afternoon when I heard they were on their way. I almost missed the first step! It was originally supposed to be later but was moved up when Neil and Buzz couldn't sleep. I happened to be passing the "Day Room" and wondered why all the people!

I remember afterwards walking back to the barracks and looking up at the Moon. Did it look the same or somehow different? My recollection now is that it was different but looked the same.

At right is a photo I took of the mock-up of the Saturn 5 in Huntsville, AL. It was drizzling in February 2004.

Below shows the business end of the rocket with gaps between stages so each set of engines can be seen as you walk.



IT IS REALLY BIG!



CLUBS & EVENTS NIGHT SKY PLANNER OUTREACH RESOURCES ABOUT THE NETWORK SITE SEARCH

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.org to find local clubs, events, and more!



Observe the Moon and Beyond: Apollo 11 at 50

By David Prosper

Saturn is at opposition this month, beckoning to future explorers with its beautiful rings and varied, mysterious moons. The **Moon** prominently passes Saturn mid-month, just in time for the 50th anniversary of **Apollo 11**!

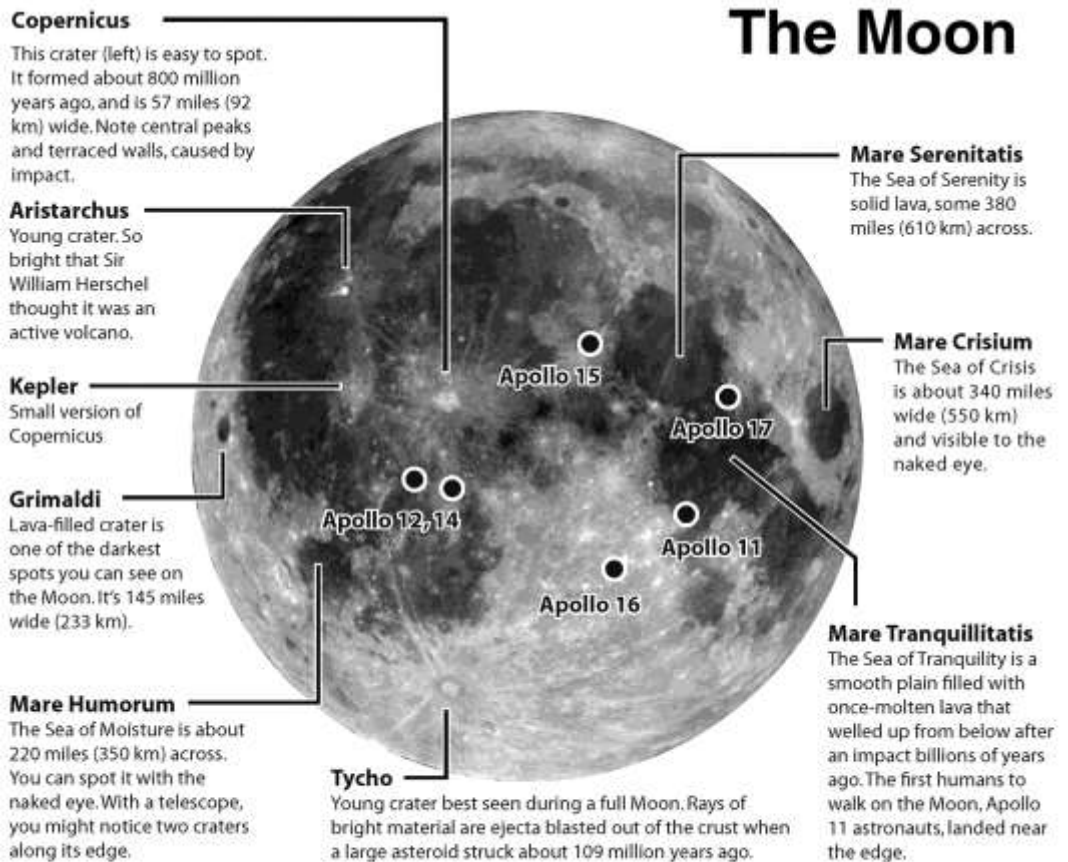
Saturn is in opposition on July 9, rising in the east as the Sun sets in the west. It is visible all night, hovering right above the teapot of Sagittarius. Saturn is not nearly as bright as Jupiter, nearby and close to Scorpius, but both giant planets are easily the brightest objects in their constellations, making them easy to identify. A full **Moon** scrapes by the ringed planet late in the evening of the 15th through the early morning of the 16th. Some observers in South America will even see the Moon occult, or pass in front of, Saturn. Observe how fast the Moon moves in relation to Saturn throughout the night by recording their positions every half hour or so via sketches or photos.

While observing the Saturn-Moon celestial dance the early morning of the 16th, you can also contemplate the 50th anniversary of the launch of the **Apollo 11** mission! On June 16, 1969, Apollo 11 blasted off from Cape Canaveral in Florida on a journey of almost a quarter million miles to our nearest celestial neighbor, a mission made possible by the tremendous power of the Saturn V rocket – still the most powerful rocket ever launched. Just a few days later, on July 20, 1969 at 10:56 pm EDT, Neil Armstrong and Buzz Aldrin set foot on the lunar surface and became the first people in history to walk on another world. The astronauts set up equipment including a solar wind sampler, laser ranging retroreflector, and seismometer, and gathered up almost 22 kilograms (48 pounds)

of precious lunar rocks and soil samples. After spending less than a day on the Moon’s surface, the duo blasted off and returned to the orbiting Columbia Command Module, piloted by Michael Collins. Just a few days later, on July 24, all three astronauts splashed down safely in the Pacific Ocean. You can follow the timeline of the Apollo 11 mission in greater detail at bit.ly/TimelineApollo11 and dig deep into mission history and science on NASA’s **Apollo History Site**: bit.ly/ApolloNASA.

Caption: Observe the larger details on the Moon with help from this map, which also pinpoints the Apollo landing site. Full handout available at bit.ly/MoonHandout

Credit Jon for suggesting this article.



SOURCES: NASA; ADVANCED SKYWATCHING; CAMBRIDGE ATLAS OF ASTRONOMY; DK VISUAL ENCYCLOPEDIA

Photos: James Scala. Layout and text for Moon map used with permission: Robert Roy Britt/SPACE.com.

FOR SALE

Orion Padded Telescope Case for 10" Dobsonian
Soft padded case protects your telescope and makes transport and storage easy.

Fits reflector optical tube of the Orion Atlas 10 EQ, SkyQuest XT10 Classic Dobsonian, XT10i IntelliScope, and XT10g GoTo Dobsonian telescopes.

Made of heavy, water-resistant polyester/nylon material with padding sewn into the inner case lining.

Full-length zipper allows easy access for quick deployment and repacking of equipment in the field. Handle straps can easily be slung over your shoulder for convenient transport



Internal case dimensions: 47" L x 17" W x 18" H

New: \$120

My price: only \$45

Contact Kat Davis – 317-440-8321

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Some Interesting Links:

Collimating a Newtonian:

<https://starizona.com/tutorial/collimating-a-newtonian/>

Very explanatory! –Karl Adlon

The SAO/NASA Astrophysics Data System (ADS) is a digital library portal for researchers in astronomy and physics, operated by the Smithsonian Astrophysical Observatory (SAO) under a NASA grant.

<https://ui.adsabs.harvard.edu/about/>

For an example, try searching "atlas of peculiar galaxies". – Karl Adlon

These two links are locations that provide images of astronomical objects; Professional images in all wave lengths. - Tom Jacobs

https://archive.stsci.edu/cgi-bin/dss_form

<https://skyview.gsfc.nasa.gov/current/cgi/titlepage.pl>

This last link is to a very comprehensive catalog of deep sky objects.

This catalog defines "deep sky" as objects beyond the solar system.

<http://simbad.u-strasbg.fr/simbad/>

I invite you to visit and play around with the data you can fetch. It is a resource that comes in handy every now and again. -Tom Jacobs

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Saturn the Planet, Not the Rocket

5 years ago I took a video of Saturn and used Autostakkert! 2 and Registax 6 to process it. It wasn't very good.

See was *terrible* that night, but I recorded anyway since everything was already set up.

Today I saw Autostakkert! has a beta version 3, so I downloaded it and gave it another go.

Not bad! I've seen much worse. I've seen much better. But I'm happy with the results from this poor video.

-Karl

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Members are welcome and encouraged to submit articles or other input for "CAPE FEAR SKIES". Submit any and all interesting items for publication to Karl Adlon, Editor (email kmja79@yahoo.com).

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