



ASTROFILES

Auburn Astronomical Society Newsletter

September 2018

Newsletter Editor — John Wingard — jwin1048@gmail.com

Moon Phases for Sep-Oct

September 2 — 3rd Quarter
September 9 — New Moon
September 16 — 1st Quarter
September 24 — Full Moon
October 2 — 3rd Quarter
October 8 — New Moon
October 16 — 1st Quarter
October 24 — Full Moon
October 31 — 3rd Quarter

Important Meeting Announcement

We will have a regular club meeting on Friday, October 5, 2018 in Auburn at our usual meeting place, Room 215 of Davis Hall (Aerospace Engineering) on the AU campus. Meeting time is 7:45 PM CT. The Auburn football game will be out of town that weekend. We are working on a possible program by Dr. Rhon Jenkins on recent developments and future of the commercial space program. Please make plans to attend and we hope to see you there!

Make-up Star Gaze A Success!

The star gaze that we had scheduled for Saturday, August 18, 2018 at Wind Creek State Park was cancelled due to the weather, but AAS members Mike Lewis and his son David graciously volunteered to put

on a make-up event the following weekend at the park. The weather was much better this time and as it happened, there were quite a few park visitors that took advantage of the opportunity to view a number of planets and other objects. Mike provided a great report on the night's activities so here are his comments:

David and I brought our two refractors to Wind Creek State Park on August 25 to present a make-up stargazing program due to the cancelled session the week before. Given the unique planetary line up in the evening sky I felt it worthwhile to offer the public another opportunity to view our solar system neighbors before they move



out of sight. This time we were successful.

Skies were completely clear as predicted by the Clear Sky Chart website for Alexander City. We set up at the Snake Island observing location by 7PM awaiting nightfall. Locally, conditions on the ground were great. A constant light breeze over the water from the east kept temperatures fall-like and the mosquitoes at bay. The Park had also scheduled a moonlit hike for visitors beginning at 7:30PM, and I asked the ranger to mention our astronomy program to the hikers so they could drop by after the conclusion of their hike around 8:15PM. As it turned out, many did just that.

By 8:15PM, campers began walking up for nighttime viewing. David took his position on the far tip of Snake Island point facing the rising full Moon and Mars in the east and southeast. Meanwhile, I was set up on the southwest and westward facing side of the point to observe Venus, Jupiter and Saturn. Venus, although rather low, was sporting a fairly sharp small crescent shape. Not much false color from the atmosphere like I usually notice with Venus. Jupiter was much higher perhaps at the 45 degree level that often separates fair from good seeing. However, it was not as crisp at medium to high power as I expected. That part of the sky was right above the main body of the campground and it had me wondering if rising heat from camp fires and all the many camping vehicles might have been the reason for Jove's somewhat intermittent fuzzy appearance at above 100X. The southern and northern equatorial belts were easily visible with some more color in the clouds but that's about all. The four Galilean moons were nicely lined up and most observers still found the sight more than pleasing. The star of the night (from my scope anyway) was Saturn. It was much higher in the southwest than Jupiter and even though significantly dimmer, the disc and rings were nicely resolved using an old style 7mm (162x) Televue Nagler in my 127mm f/9 ED refractor. My personal favorite planetary eyepieces are Televue Radians. I know conditions are good when images hold up in my 4mm Radian (285x). Saturn was sharp and displaying color on the disc and Cassini's division was pronounced to even the first time observer.

Lots of "wow's" and even an shout uttered so loudly

that I thought the utterer had been injured. I warned her I had no insurance if she should suffer a stroke or some other physical breakdown from the shock of seeing Saturn for the first time.

Turnout was quite good for the stargazing program this time. One of the first stargazers to arrive was a 4-year-old boy from Tallassee (see photo of him looking through a scope) who exclaimed that the biggest thrills of his visit to Wind Creek that weekend were (in order) catching his first ever fish (a catfish) and seeing the Moon and the planets. He had his priorities in order! An unofficial count of guests passing by our two scopes was over 40. This included a half dozen or so cub scouts from Pack 66 in Rockford. Other visitors said they were from Eclectic and Birmingham as well as Coosa County.

-We closed by down 9:30PM.

September 15th Star Gaze at WCSP

On Saturday, September 15, 2018 the AAS wrapped up the final event for this year at Wind Creek State Park near Alexander City, AL. Initially we were somewhat concerned with possible side effects from Hurricane Florence that had already moved into the Carolinas, but other than a brief period of some rather stiff winds, the skies remained clear for most of the evening. The breeze also provided some relief from the heat and helped to keep the mosquitos away.

There was an elevated level of excitement due to the ideal placement of four major planets that could be viewed during the evening. We also had an almost first quarter moon to view.

The turnout from AAS members was outstanding! We also had a good group of visitors including several from Maxwell AFB in Montgomery. AAS President Allen Screws had set up a table and was preparing hot dogs for members and guests. We also had at least nine telescopes set up for viewing-a good mix of refractors, Schmidt-Cassegrains, Maksutov-Cassegrains, and Dobsonian reflectors.

Since we had a fairly good view to the west, our first planet to be viewed was Venus before it went below the horizon. Then as the sky gradually darkened, the giant planet Jupiter popped into view. All four of the

Galilean moons were visible as were the cloud bands across the planet's disc. Then, as the sky gradually got darker, the ringed-planet Saturn came into view along with its largest moon Titan. Of all the planets, the telescopic views of Saturn tend to draw the most comments due to the beautiful rings. And finally, the red planet Mars shown brightly towards the south. Although it is slowly receding from the Earth, it is still quite large. The planet-wide dust storm that has been going on for the past month or two is finally subsiding and larger scopes can once again make out some surface details including the polar ice caps. All in all, this final event of the season was a big success and thanks to all the AAS members that came out, brought their scopes, and answered questions from our visitors. This was the third season of our star gazes at the park and we look forward to another series next year. We also would like to thank AAS member Mike Lewis for his efforts in coordinating these events with the staff at Wind Creek State Park.





All photos taken at this event were taken by AAS members Mike Lewis and John Wingard

You can learn more about the AAS by visiting our web page at: www.auburnastro.org

You can also follow us on our Facebook page at: <https://www.facebook.com/groups/79864233515/>

Longtime AAS member Passed

Jim Chesnutt, a very early member of the Auburn Astronomical Society, passed away on August 29, 2018 at the age of 83. Jim graduated from API/ Auburn University in 1957 with a degree in Electrical Engineering. He was an active member and valuable contributor to the AAS in the past.



What are the differences between civil, nautical and astronomical twilight?

As we all waited for the sky to darken at the star gaze last Saturday evening, we went through three degrees of illumination although most of us never really thought about it. We just usually refer to this time of the evening (or morning) as either dusk or dawn. But there are three more specific terms that are determined by how far the sun is below the horizon.

1. *Civil Twilight* :

Civil twilight is defined when the sun is 6 degrees below the horizon. In the morning this is known as dawn, in the evening it is called dusk. This is the

Item for Sale

Robert Rock has a Meade ETX-125 that he would like to sell. It includes a tripod, hand controller, 26mm Plossl eyepiece and carrying case for the OTA. \$375.00 to \$400.00. If interested, Robert can be contacted via e-mail at: robertgloriousrock@gmail.com



limit at which twilight illumination is sufficient, under good weather conditions, for terrestrial objects to be clearly distinguished; at the beginning of morning civil twilight, or end of evening civil twilight, the horizon is clearly defined and the brightest stars are visible under good atmospheric conditions in the absence of moonlight or other illumination. In the morning before the beginning of civil twilight and in the evening after the end of civil twilight, artificial illumination is normally required to carry on ordinary outdoor activities.

2. *Nautical Twilight* :

Nautical twilight is defined when the sun is 12 degrees below the horizon. At the beginning or end of nautical twilight, under good atmospheric conditions and in the absence of other illumination, general outlines of ground objects may be distinguishable, but detailed outdoor operations are not possible, and the horizon is indistinct.

3. *Astronomical Twilight* :

Astronomical twilight is defined when the sun is 18 degrees below the horizon. Before the beginning of astronomical twilight in the morning and after the end of astronomical twilight in the evening the sun does not contribute to sky illumination; for a considerable interval after the beginning of morning twilight and before the end of evening twilight, sky illumination is so faint that it is practically imperceptible.



Auburn Astronomical Society Membership Application Form

Name:

Address:

City: _____ State: _____ Zip: _____

Phone: _____ Date of Application* ____/____/____

E-mail:

Telescope(s):

Area(s) of special interest:

Enclose: \$20.00 for regular membership, payable in January. *Full-Time* student membership is half the Regular rate.

If you are a NEW member joining after the first of the year, refer to the prorated table below

Jan \$20.00	Feb \$18.33	Mar \$16.66	Apr \$14.99	May \$13.33	Jun \$11.66
Jul \$10.00	Aug \$8.33	Sep \$6.66	Oct \$4.99	Nov \$2.33	Dec \$1.66

Make checks payable to: Auburn Astronomical Society and return this application to:

Auburn Astronomical Society
c/o John Wingard, Secretary/Treasurer
#5 Wexton Court
Columbus, GA 31907

For questions about your dues or membership status, contact: jwin1048@gmail.com

Thank you for supporting the Auburn Astronomical Society!