ASTROFILES

Auburn Astronomical Society Newsletter

February 2019 *Newsletter Editor — John Wingard — jwin1048@gmail.com*

Moon Phases

February 4 — New Moon

February 12 — 1st Quarter

February 19 — Full Moon

February 26 — Last Quarter

March 6 — New Moon

March 14 — 1st Quarter

March 21 — Full Moon

March 28 — Last Quarter

Stay in touch with us

http://www.auburnastro.org

https://www.facebook.com/groups/79864233515/

Next AAS Meeting

In keeping with the meeting schedule that we implemented last year, the next scheduled AAS meeting will be Friday, April 5, 2019 in Auburn at our usual meeting location, Room 2015 of Davis Hall (Aerospace Engineering) on the AU Campus. 7:45 PM CT. Meeting reminders will be sent to all members in advance of the meeting date.

If you missed our meeting on Friday, February 1st in Auburn, we had a presentation by Chris Ward on his proposed updating of the club web page. It is somewhat dated and needs a fresher, more up-to-date look designed to appeal to the younger generation of astronomy enthusiasts. His ideas look very promising and hopefully we can begin to implement some of the changes in the coming months.

It's Time for 2019 AAS Dues!

If you have not already done so it's not too late to renew your 2019 dues to the AAS, or better yet, join us and become a member. Dues are only $20.00 for the year. Please refer to the application at the end of this newsletter for details and the address for mailing your dues or you can renew at the next meeting,.

National Astronomy Day—Saturday, May 11,

The AAS is planning to support the annual Astronomy Day activities at the W. A. Gayle Planetarium in Montgomery, AL on Saturday, May 11th. More details will be forthcoming in a newsletter closer to the date of the event.

Area Amateurs Caught the January 21st Lunar Eclipse

Several hardy amateur astronomers braved the cold and late hour to view and photograph the lunar eclipse on January 21/22. For the most part, skies in this area were clear but very cold. This eclipse was ideally positioned for viewing in the entire country. Below are a few shots of the eclipse.

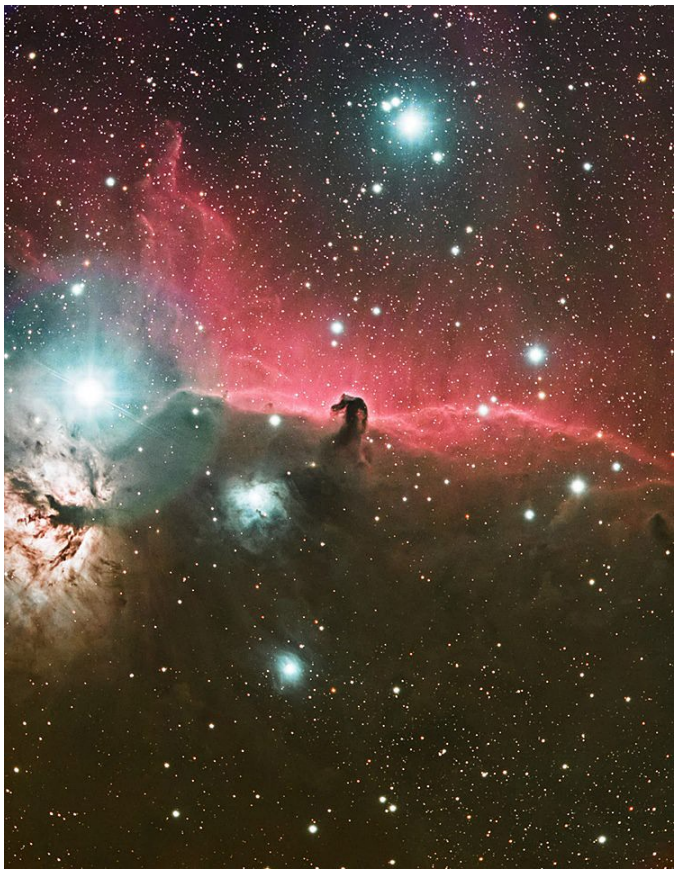
Photo by Mike Lewis

Photo by Melly Howard

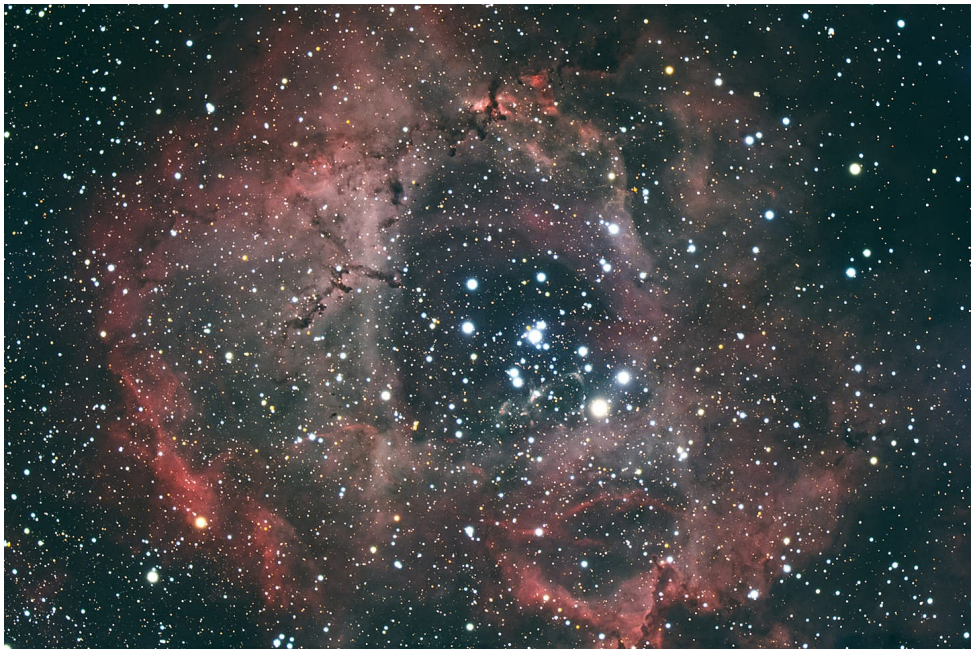
Photo by Melanie Folds

Photo by Robert Rock

It's exciting to see that several of our members are getting into astrophotography. The shots of the lunar eclipse on the preceding page are good examples. With the equipment and technology that is available to us today, amateur astronomers are capturing images that equal or even rival the quality of those taken by professionals at major observatories not too many years ago. One of our newer AAS members, Jay Hall, has shared a few of his amazing images on our Facebook page. Here are two good examples of his work.



Horsehead Nebula (Banard 33) - Constellation: Orion - Photo by Jay Hall

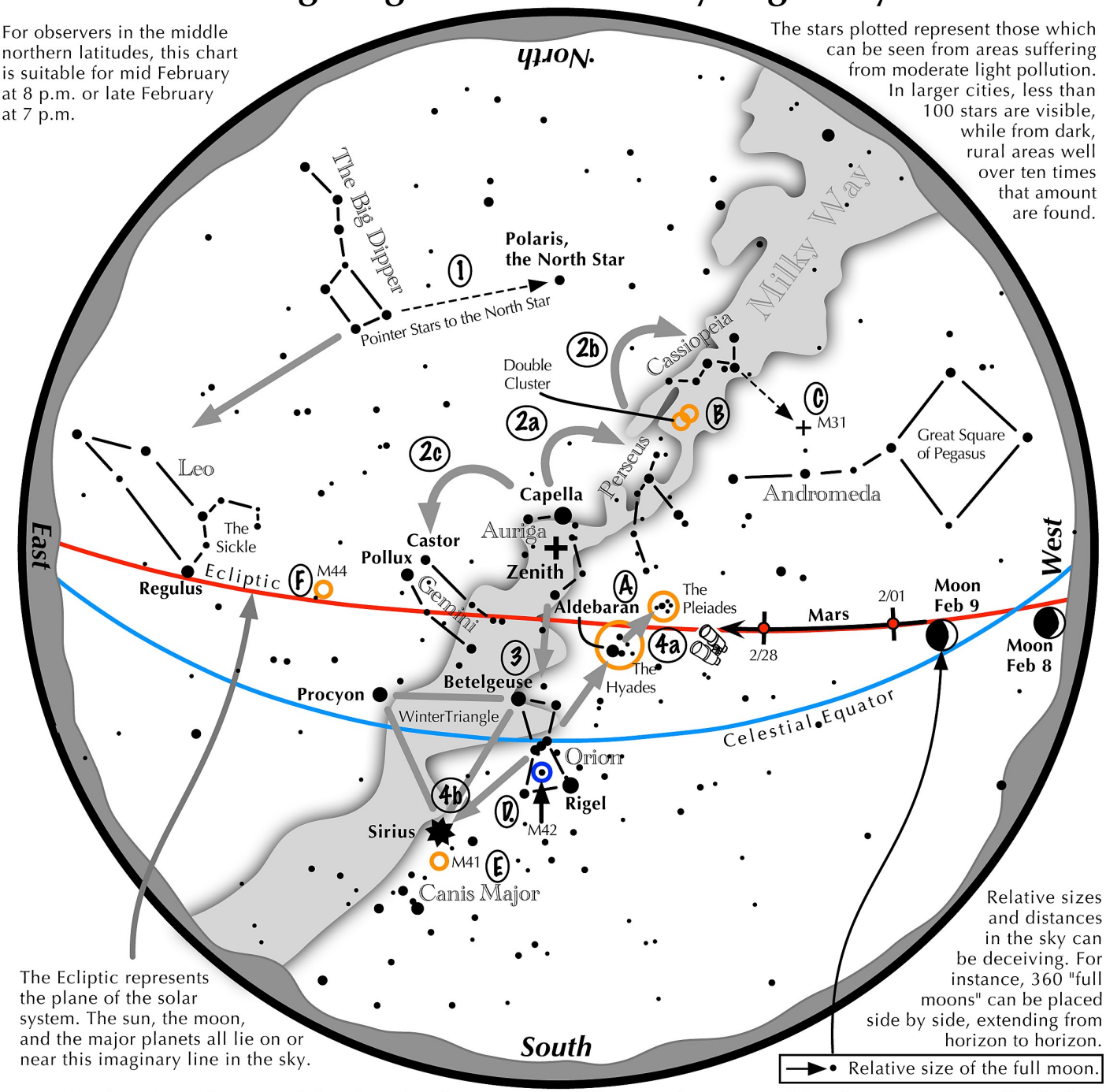


Rosette Nebula—NGC 2244—Constellation: Monoceros—Photo by Jay Hall

Navigating the mid February Night Sky

For observers in the middle northern latitudes, this chart is suitable for mid February at 8 p.m. or late February at 7 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→• Relative size of the full moon.

Navigating the February night sky: Simply start with what you know or with what you can easily find.

1. Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star.
2. Face south. Overhead twinkles the bright star Capella in Auriga. Jump northwestward along the Milky Way first to Perseus, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars of Castor and Pollux in Gemini.
3. Directly south of Capella stands the constellation of Orion with its three Belt stars, its bright red star Betelgeuse, and its bright blue-white star Rigel.
4. Use Orion's three Belt stars to point northwest to the red star Aldebaran and the Hyades star cluster, then to the Pleiades star cluster. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius, a member of the Winter Triangle.

Binocular Highlights

A: Examine the stars of two naked eye star clusters, the Pleiades and the Hyades.
B: Between the "W" of Cassiopeia and Perseus lies the Double Cluster.
C: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.
D: M42 in Orion is a star forming nebula. **E:** Look south of Sirius for the star cluster M41. **F:** M44, a star cluster barely visible to the naked eye, lies southeast of Pollux.

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!

Hexagon at Night, Quartet in the Morning

David Prosper

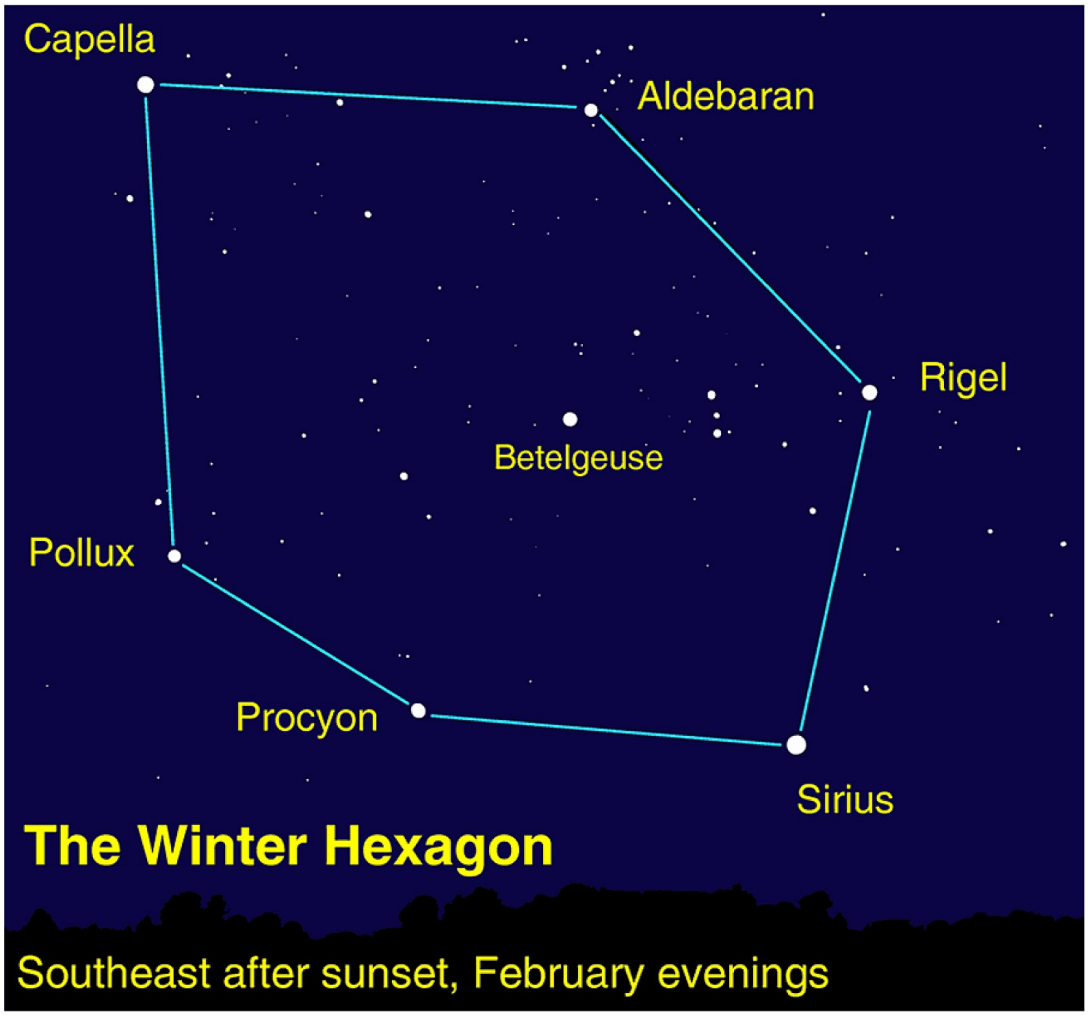
The stars that make up the **Winter Hexagon** asterism are some of the brightest in the night sky and February evenings are a great time to enjoy their sparkly splendor. The Winter Hexagon is so large in size that the six stars that make up its points are also the brightest members of six different constellations, making the Hexagon a great starting point for learning the winter sky. Find the Hexagon by looking southeast after sunset and finding the bright red star that forms the "left shoulder" of the constellation Orion: **Betelgeuse**. You can think of Betelgeuse as the center of a large irregular clock, with the Winter Hexagon stars as the clock's hour numbers. Move diagonally across Orion to spot its "right foot," the bright star **Rigel.** Now move clockwise from Rigel to the brightest star in the night sky: **Sirius** in Canis Major. Continue ticking along clockwise to **Procyon** in Canis Minor and then towards **Pollux,** the brighter of the Gemini twins. Keep moving around the circuit to find **Capella** in Auriga, and finish at orange **Aldebaran**, the "eye" of the V-shaped face of Taurus the Bull.

Two naked-eye planets are visible in the evening sky this month. As red **Mars** moves across Pisces, NASA's InSight Mission is readying its suite of geological instruments designed to study the Martian interior. InSight and the rest of humanity's robotic Martian emissaries will soon be joined by the Mars 2020 rover. The SUV-sized robot is slated to launch next year on a mission to study the possibility of past life on the red planet. A conjunction between Mars and **Uranus** on February 13 will be a treat for telescopic observers. Mars will pass a little over a degree away from Uranus and larger magnifications will allow comparisons between the small red disc of dusty Mars with the smaller and much more distant blue-green disc of ice giant Uranus.

Speedy **Mercury** has a good showing this month and makes its highest appearance in the evening on February 27; spot it above the western horizon at sunset. An unobstructed western view and binoculars will greatly help in catching Mercury against the glow of evening twilight.

The morning planets put on quite a show in February. Look for the bright planets **Venus**, **Jupiter**, and **Saturn** above the eastern horizon all month, at times forming a neat lineup. A crescent **Moon** makes a stunning addition on the mornings of February 1-2, and again on the 28th. Watch over the course of the month as Venus travels from its position above Jupiter to below dimmer Saturn. Venus and Saturn will be in close conjunction on the 18th; see if you can fit both planets into the same telescopic field of view. A telescope reveals the brilliant thin crescent phase of Venus waxing into a wide gibbous phase as the planet passes around the other side of our Sun. The Night Sky Network has a simple activity that helps explain the nature of both Venus and Mercury's phases at bit.ly/venusphases

You can catch up on all of NASA's current and future missions at nasa.gov



Caption: The stars of the Winter Hexagon
Image created with help from Stellarium

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!