



ASTROFILES

Auburn Astronomical Society Newsletter

November 2018

Newsletter Editor — John Wingard — jwin1048@gmail.com

Moon Phases

November 29 — 3rd Quarter
December 7 — New Moon
December 15 — 1st Quarter
December 22 — Full Moon
December 29 — 3rd Quarter
January 16 — New Moon
January 24 — 1st Quarter
January 31 — Full Moon

Next AAS Meeting

As was mentioned in last month's newsletter, we will have our next scheduled club meeting in February of 2019. Most likely it will be Friday, February 1st unless we decide otherwise. Meeting reminders will be sent to all members in advance of the meeting date.

AAS Members Check Out New Viewing Site

On the evening of November 10, 2018, AAS members Allen Screws and David Blake traveled to the new viewing site south of Auburn near the line between Lee and Russell counties. It was a cool evening and Allen reported that other than a few clouds to the SW, the sky was clear and the seeing was good. They stayed at the site for about 3 hours and viewed a variety of objects including the setting crescent moon, Saturn, several globular clusters and M8 in Sagittarius. Allen used a 10-inch DOB. He commented on what a difference having good viewing conditions can make in your observing experience. He also mentioned experiencing a rather unusual occurrence...two different satellites crossing in the same field of view of his scope! With so many satellites now in orbit around the earth, it is becoming more and more commonplace to catch them passing through your field of view, either visually or in photographs. I've caught quite a few myself during long exposures. Allen felt like they had a good observing session at the site and decided to pack up and leave when the wind picked up and his coffee ran out! We're looking forward to some additional visits to the site early in 2019. One of my favorite parts of the sky is the area around the constellation of Orion and it should be pretty impressive from a darker site.

Stay in touch with us



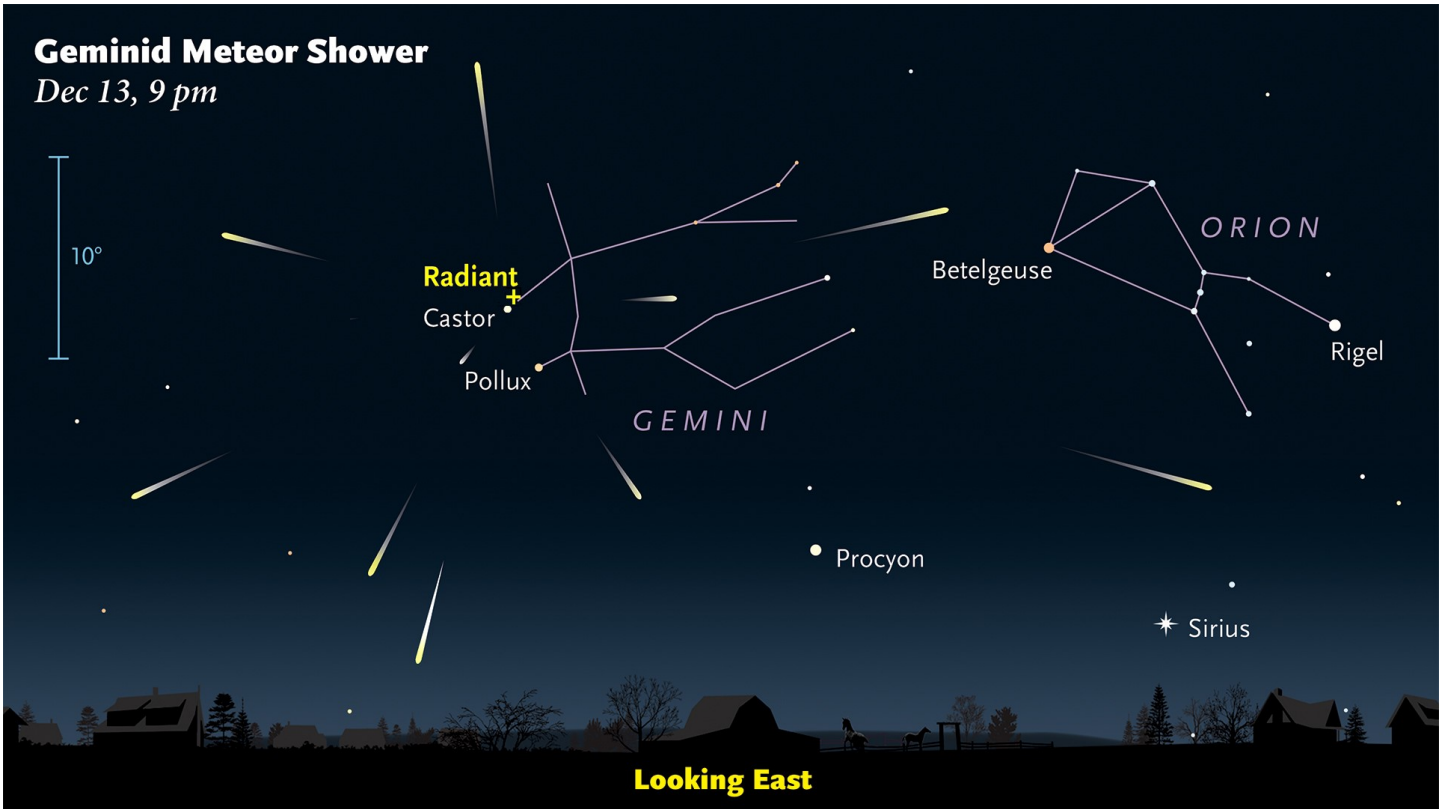
<http://www.auburnastro.org>



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

Gemini Meteor Shower Coming Up in December

Mark your calendar for the evenings of December 13-14 for the annual Geminid meteor shower. As the name implies, these objects appear to radiate from the constellation of Gemini. As is the case with most meteor showers, the best time to view them is between midnight and dawn, but there should still be a few meteors visible earlier. These particular meteors are the result of debris from comet 3200 Phaethon as it intersects the earth's orbit. Depending on your particular viewing time and conditions, you could potentially see anywhere from 50-100 meteors per hour. The chart below shows the radiant point very near the star of Castor in the constellation of Gemini.



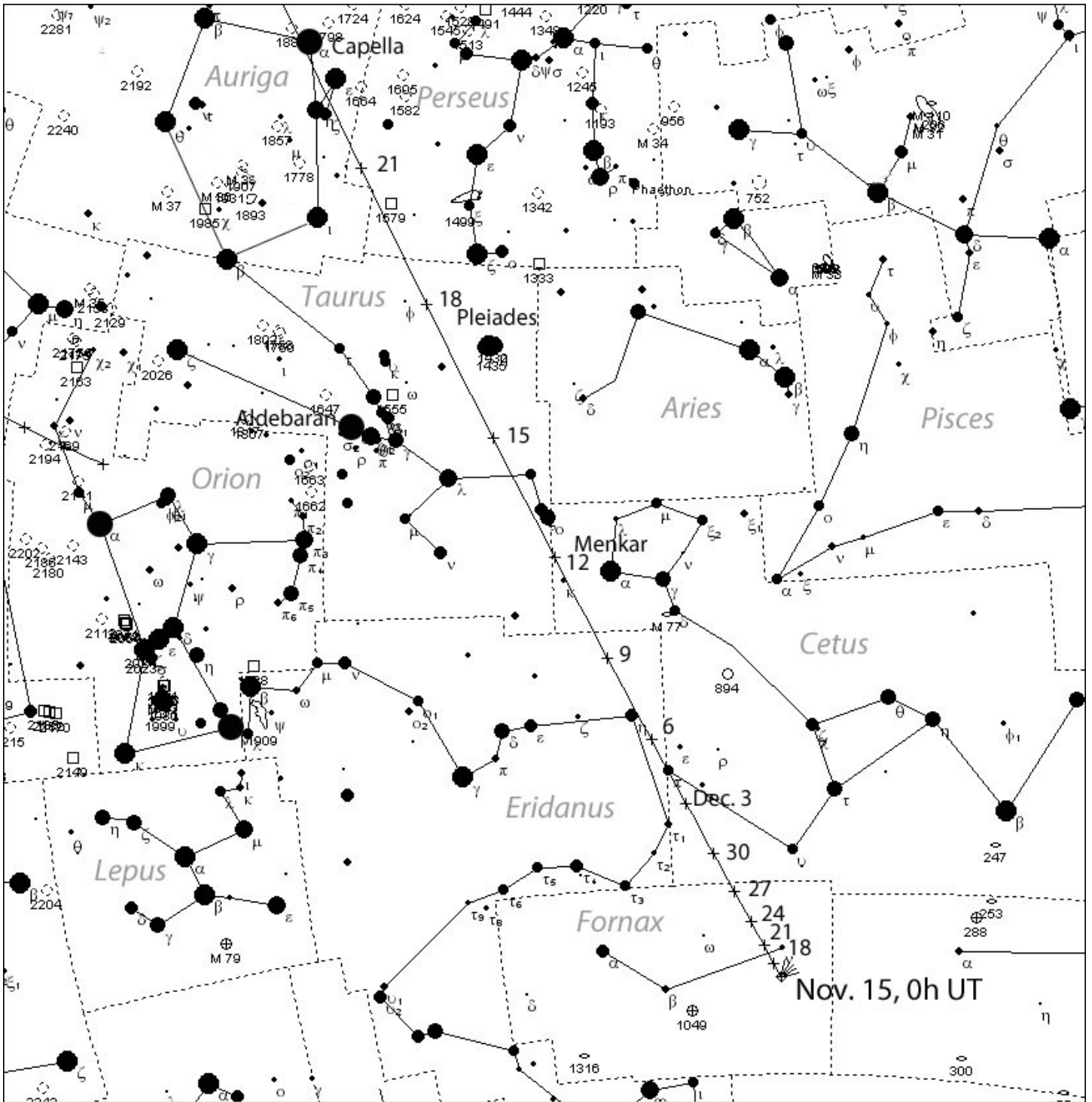
A “Christmas Comet” Is Coming!

Another potential treat for observing in December is the predicted appearance of comet 46P/Wirtanen as it moves through the skies in December. It circles the Sun every 5.4 years, but this time it will pass just 11.5 million kilometers from the Earth at its closest point on December 16th. It will make its closest approach to the Sun just four days earlier, so it could potentially be a good one. The radiation from the Sun typically causes the comet to increase in apparent size and brightness as material is released from its core. It is already visible in binoculars or small telescopes if you know where to look. (See the finder chart on the next page).



Photo taken on November 4, 2018—Courtesy of Martin Moberly

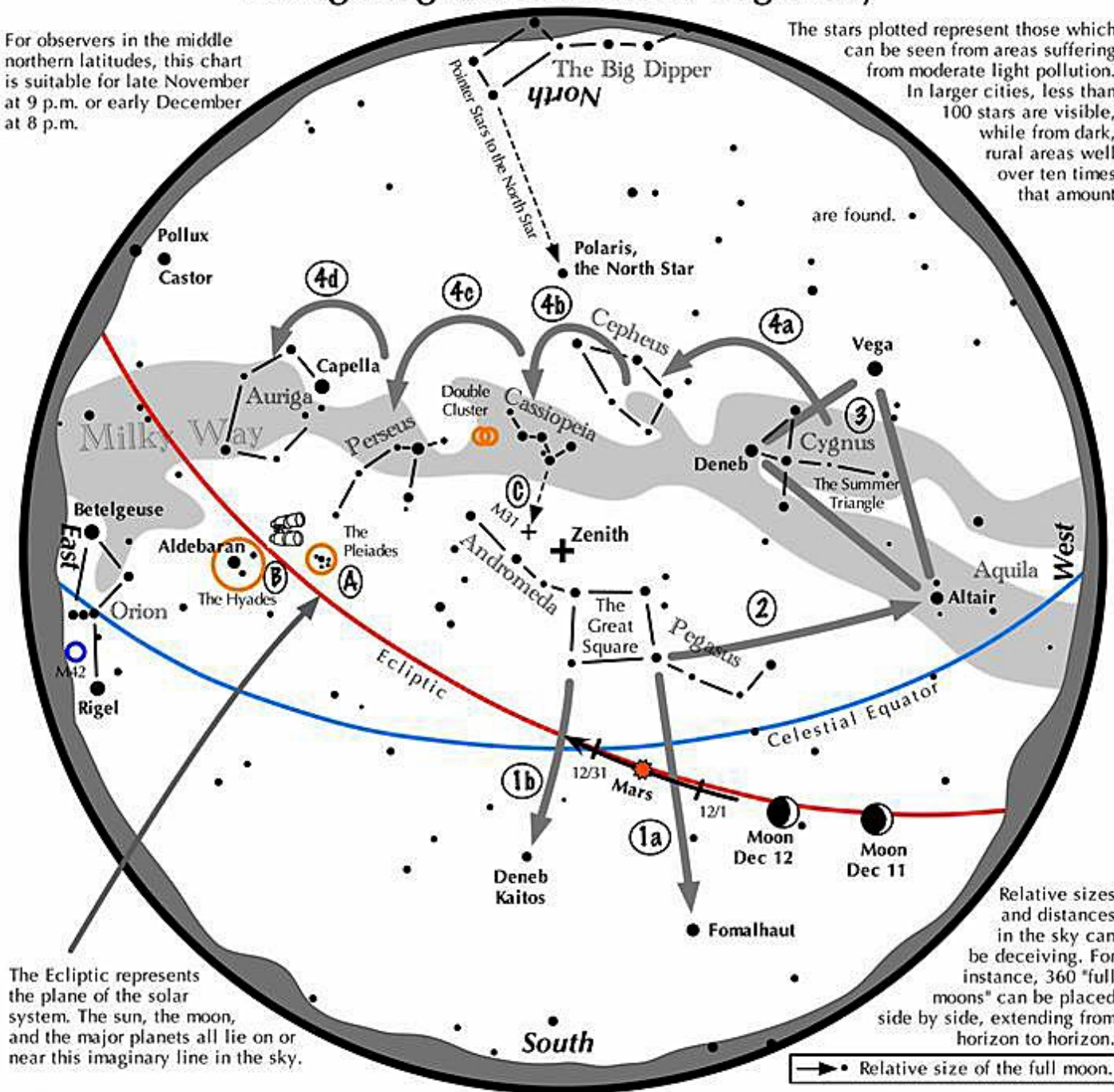
Below is a finder chart to aid in locating Comet 46P/Wirtanen during the month of December, 2018. Currently at approximately magnitude 7.5-8.0, it can be viewed with binoculars or telescopes. As it gets closer to the Sun it is predicted to brighten to the point that it should be visible with the naked eye under good viewing conditions. At its closest approach to Earth on December 16th, it will be well placed for viewing between the Pleiades and the constellation of Taurus the Bull. If you miss the opportunity to see it in December, it will still be visible into early 2019 although at a reduced brightness level as it recedes from our neighborhood.



Navigating the December Night Sky

For observers in the middle northern latitudes, this chart is suitable for late November at 9 p.m. or early December at 8 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 late fall night sky: Simply start with what you know or with what you can easily find.

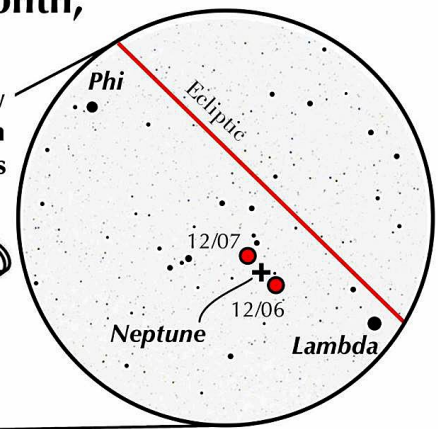
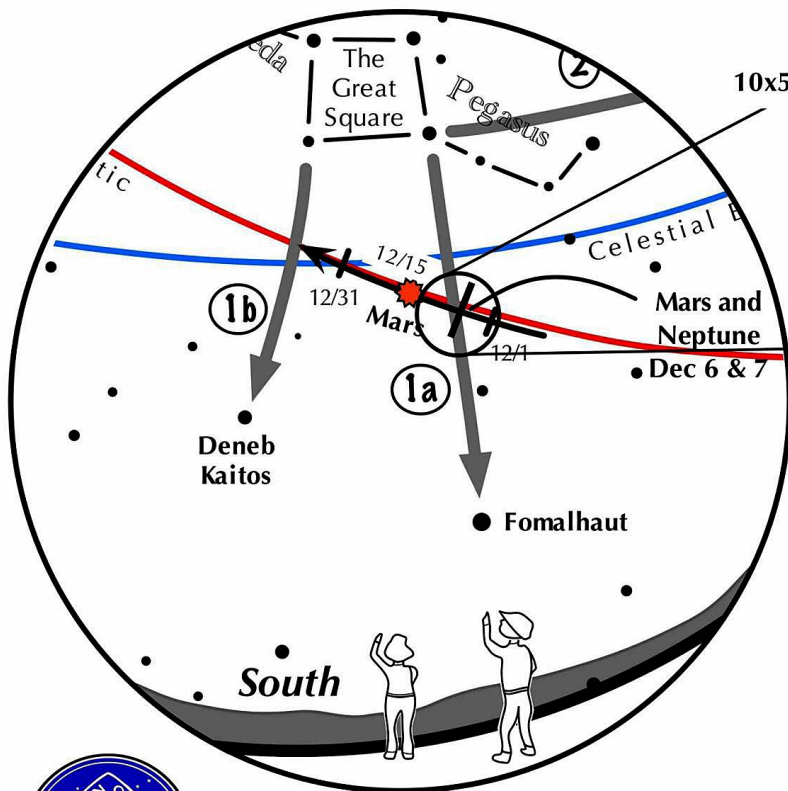
- 1 Face south. Almost overhead is the "Great Square" with four stars about the same brightness as those of the Big Dipper. Extend an imaginary line southward following the Square's two westernmost stars. The line strikes Fomalhaut, the brightest star in the southwest. A line extending southward from the two easternmost stars, passes Deneb Kaitos, the second bright star in the south.
- 2 Draw another line, this time westward following the southern edge of the Square. It strikes Altair, part of the "Summer Triangle."
- 3 Locate Vega and Deneb, the other two stars of the "Summer Triangle." Vega is its brightest member while Deneb sits in the middle of the Milky Way.
- 4 Jump along the Milky Way from Deneb to Cepheus, which resembles the outline of a house. Continue jumping to the "W" of Cassiopeia, to Perseus, and finally to Auriga with its bright star Capella.

Binocular Highlights

- A and B: Examine the stars of the Pleiades and Hyades, two naked eye star clusters.
- C: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.
- D: Sweep along the Milky Way from Altair, past Deneb, through Cepheus, Cassiopeia and Perseus, then to Auriga for many intriguing star clusters and nebulous areas.



If you can observe only one celestial event this month,
consider this one:



The Scene: Mars Passing Faint Neptune

On December 6 and 7, bright Mars passes faint Neptune, making the 8th planet relatively easy to find with steadily held binoculars – if the sky is clear and dark. Look for Mars at 7:30 p.m. just below the Great Square of Pegasus in the south-southwest.

- Neptune lies immediately to the upper left of Mars on Dec. 6. It will be very faint and to the left of a star of similar brightness. Mars, Neptune and the star will form a small, fat isosceles triangle.
- Neptune lies just to the lower right of Mars on Dec. 7. As the nights proceed, Mars moves proportionally farther away from Neptune.



South-Southwest 7:30 p.m.
on December 6 and 7



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!