



Astrofiles

Volume 21, Issue 1

May 2015

Upcoming Events

Monthly Meeting,

June 5th, 7:45pm in Room 215 of Davis Hall on the Auburn campus.

New Moon Stargaze,

May 21st, at Kiesel Park

- Upcoming Moon Phases
- Full - May 3rd
- New - May 17th

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Astronomy Day

Well it sounds like astronomy day was a fantastic event for those who were able to make it. Despite the bad weather predictions, there was a pretty decent turnout. Below is a description of the event from the AAS website.

"The W. A. Gayle Planetarium, in partnership with the Auburn Astronomical Society celebrated National Astronomy Day at the Planetarium in Oak Park in Montgomery, on Saturday, April 25th from 5:00 – 10:00PM CDST. Again this year, we were stymied by the clouds. When we arrived at 3:00PM, we could not even rule out the possibility of rain. Just to be on the safe side, we displayed our telescopes in the planetarium lobby for the visitors to see. Given the high humidity associated with the temperature, the air conditioning was a factor in this decision as

well. Rick treated those of us who are usually manning the telescopes to a private screening of the planetarium programs we usually have to miss. We enjoyed "Two Pieces of Glass" and "Losing the Dark". Following these programs, we were treated to Subway sandwiches and sides by Rick and his staff.

By 7:00PM radar showed that the rain had bypassed us just to the south. Unfortunately, the clouds would linger until 10:00PM, frustrating us and the guests with highly filtered views of the Moon and only the briefest of glimpses of Venus and Jupiter. " - <http://www.auburnastro.org/>



Photos by: John Wingard/Russel Whigham, see more on AAS page

Galaxy Season Is Here!

If you have noticed, over the past few months Orion, The Pleiades, and Cassiopeia have set onto the horizon earlier and earlier each night. The Milkyway now surrounds the earth below the visible horizon in a manner similar to the way Saturn's rings encompass the planet. We are in Galaxy season. With the big

dipper approaching Zenith by midnight, the sky is now a vast expansion of Messier objects including Globular Clusters, Open Clusters, and Galaxies of many magnitudes.

Some galaxies to look out for are M81 and M82, which can easily be viewed through a telescope, M51, the Whirlpool Galaxy in Ursa Major is a bit more dim than the others, but is quite the impressive sight under dark skies. Others

include the Markarians chain and the Virgo Cluster in the constellation Virgo. It would be very easy to fill several hours of time doing a Messier Marathon.

So break out your star maps and star finding apps, and we hope to see you all at the next star party for Galaxy season! Remember to dress warm and try to bring a telescope. If not, there will be others that would be more than happy to share a view!

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ATM “Amateur Telescope Making”

Maggie Murphy’s Newtonian Build

While I don’t think we could exactly call it amateur when a senior mechanical engineering student develops a carbon fiber Newtonian telescope as a senior thesis, it is none the less fascinating and inspiring to watch as a project like this successfully concludes. In a facebook post from our president, Dr. Morrison, he says “*Just a quick note to say that the Engineering Team (Maggie Murphy, Dylan Gouletas, Zachary Paramallakis, Mike Ciuzio, Michael Keyser, and Chris Hewitt), did an outstanding job at their Senior Project presentation on the Auburn University campus this past Friday, 1 May 2015. They were able to get a very nice lunar photo the night before, which they included in their presentation. I had the pleasure of being in attendance and it was AWESOME to hear the audience gasp when they saw the quality of the lunar photo. That was definitely cool.*” Excellent job indeed students, the AAS applauds your achievements. More on this project next time when we can get more images.



In this image from the beginning of the Newtonian project, Maggie Murphy explains the steps involved with pitch lapping a BAK7 Pyrex 6” mirror.

Meanwhile on the other side of the pond..

I have been helping 3 astronomy friends, Stan White, Dennis Sutherland, and Greg Shaffer work on an 8” F16 refractor, owned by Gregg. Greg bought the objective cell made by Muffalatto optics quite a while back and this has been a huge undertaking. The cell was made in Dennis’s machine shop along with the focuser back, and dew shield. The tube was purchased through hasting irrigation, and well the scope still needs baffles and a powder coat, but it will be finished in a few months. This picture was taken in Tallulah Falls Georgia with the 11 foot long 75lb 8” F16 refractor sitting on a Losmandy Titan.

If you would like to read more about this build you can follow it on cloudy nights <http://www.cloudynights.com/topic/485252-8-f16-refractor-project/>
-Wes Schwarz AAS Editor



Astronomical Photography

As you may have realized by looking at the AAS facebook page, we have many talented astrophotographers in our club. It is a challenging and rewarding aspect of the hobby and provides a very dynamic foundation for ones knowledge and understanding of astronomy.

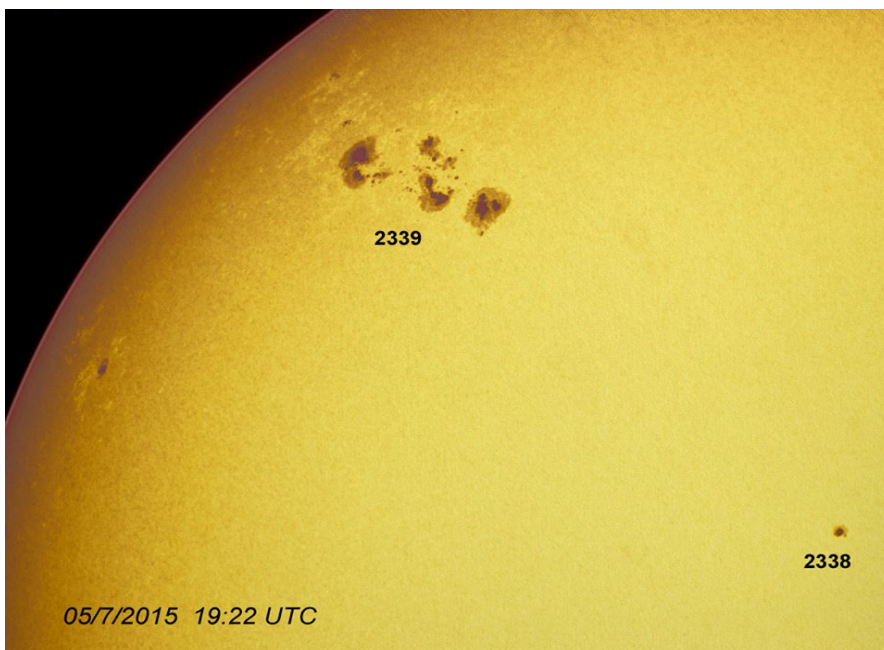
Here we have several images taken by various members of the club which range from solar, planetary, nebula, and galaxies. The cameras used to acquire images can vary from specialized high speed video cameras, consumer DSLR's, and even deep cooled monochrome ccd cameras.

Great job on the images everyone. If anyone has images that they wish to submit to the next newsletter feel free to message us on the facebook page.

Jupiter Session By: John Wingard



Here's an initial shot from last night's Jupiter session. I had some problems with exposure in trying to keep some of the cloud band detail versus capturing clear images of the moons. With the scale that my camera gave me, I was unable to capture all four moons in the image. The ones visible are (L-R): Io, Europa and Ganymede. Callisto was too far out to capture in the same frame. As with the solar photo earlier, I used my Questar 3.5" and an Imaging source DMK 41AU02.AS color camera. Processing was in AutoStakkert 2.1 and Photoshop.



Sunspots by: John Wingard

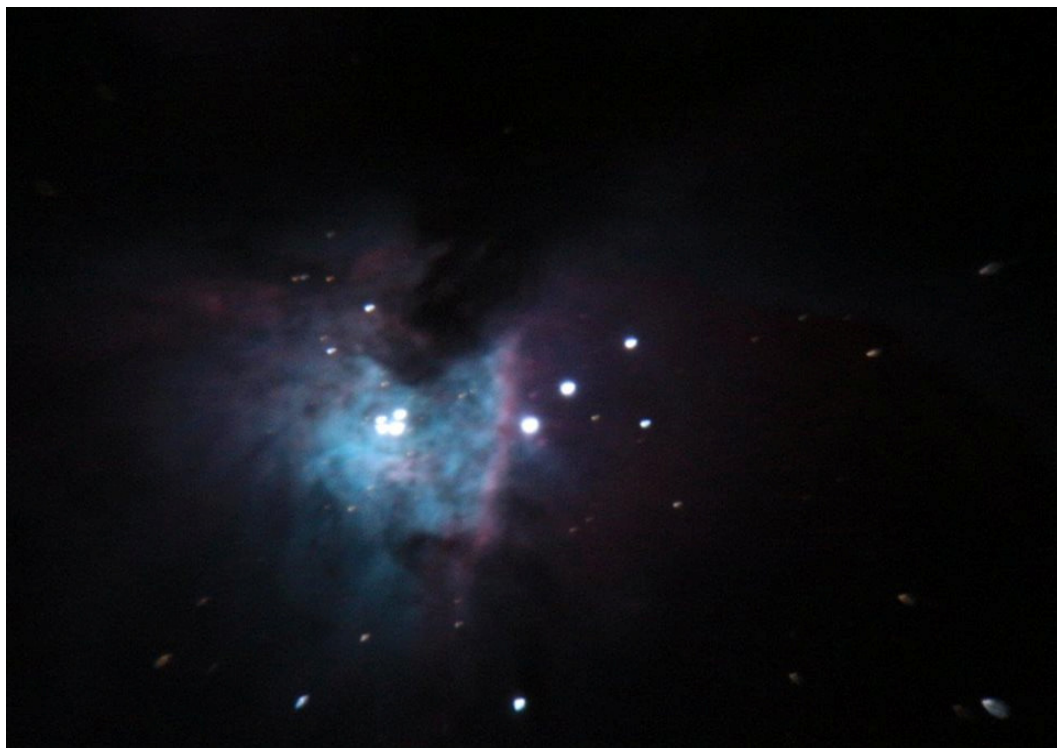
Finally had a chance to drag the scope out today and shoot the sun on a beautiful but rather windy day. Here's a composite image from a 20-second video, stacked and processed in AutoStakkert 2.1 and then sharpened in Photoshop. Shot with Questar 3.5" with full-aperture Questar solar filter and Imaging Source DFK 41AU02.AS color camera through Questar axial port. The major sunspot group #2339 was responsible for a major X-2 class flare yesterday, with more predicted.

Astronomical Photography..continued!

Trapezium by: Keith Coleman

“Orion nebula through the LX-90 single exposure of 20 seconds at ISO 3200, Canon T4i. In still learning! “

Great job Keith and welcome to the club! It is exciting to see our members take on the challenge of deep sky imaging! Keep at it and if you need any tips, there are a lot of members who also image that would be happy to help. We hope to see you at the next star party.



M81 by: Phil Hosey

Imaging telescopes or lenses:
[TMB 130SS](#) **Im-**
aging cameras: [Starlight Xpress](#)
[Trius SX-694 mono](#)

Mounts: [Orion Atlas EQ-G](#)

Guiding cameras: [Starlight Xpress Lodestar Autoguider](#)

Filters:[Astrodon Blue G2E](#):
 4x300" -20C bin 2x2
[Astrodon Green G2E](#): 4x300" -
 20C bin 1x1
[Astrodon Lum G2E](#): 10x300" -20C
 bin 1x1
[Astrodon Red G2E](#): 4x300" -20C
 bin 2x2

Fantastic job Phil! The Ha came out wonderfully in this image. Your work is always an inspiration!



Copyright: Phil Hosey

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Observing Reports

For those fortunate enough to have clear skies and a free night to do some observing, we really appreciate any feedback on your Messier Marathons, and unique astronomical observation sessions.

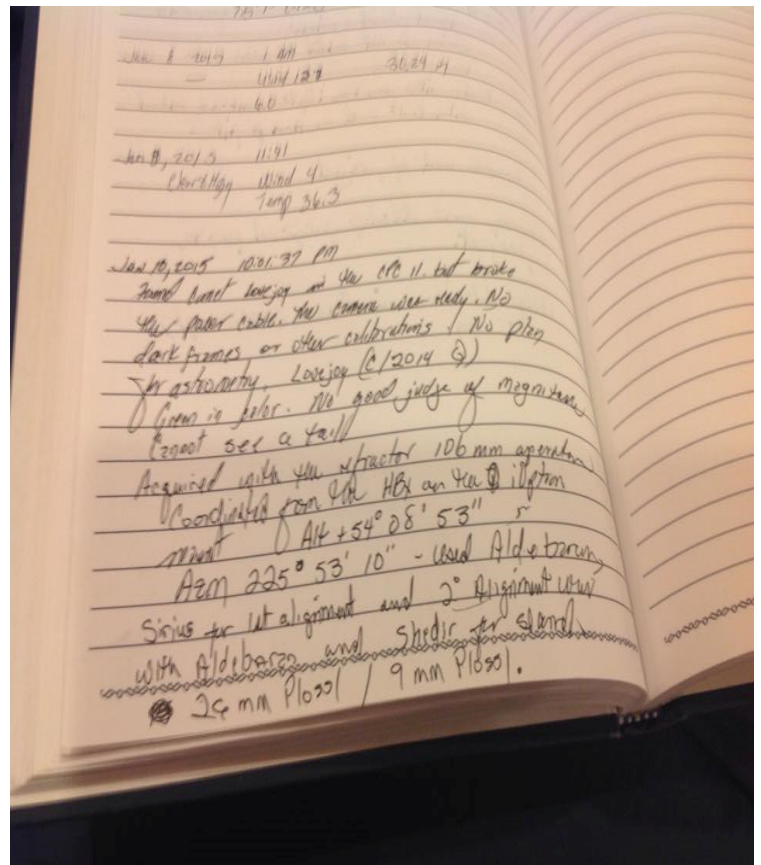
These observations are from January but remember, the newsletter is quarterly so a lot can happen between letters.

January 11th 2015,
Joseph W Jackson

Short observing session. Ended because I didn't see the power supply cord getting mangled by the CPC base and wedge. Switched to the iOptron refractor had a great view of a tiny greenish dot in Taurus. My 9mm Plossl gave a better view. The original plan was to image it with the CPC II. The best laid plans of mice and men oft go astray (I know it ain't the original Gaelic). My notes are in no particular format. Forgot the sky was reasonably clear, temp was about 35F, no wind.

January 10th 2015, John Wingard

Just came back in from a short observing session from the patio with my 10-inch dob and 40-mm EP at about 30X. I finally got a fairly decent view of Comet Lovejoy, but absolutely no chance to see any tail since I'm located in a borderline orange/red zone. I don't think the air transparency was very good either. There was a definite greenish tint to the comet, and at times I thought that I could make out the central nucleus. I also got a fairly good view of M42 as it was coming up over the rooftop. The best view was of the Pleiades...very nice in the low-power field. Also, the relatively mild 39 degree temp. was a lot more bearable than the past few nights.



Astronomical History

Charles Messier

No, its not George Washington, or a famous musical composer as the picture might suggest, though he is buried next to Chopin. This man is in fact the one responsible for those "M" objects in you hand controllers and star catalogs, aka Messier objects. Charles Messier is responsible for discovering and cataloguing 110 deep sky objects and 13 comets through a 100mm refractor during his time spent at the Hôtel de Cluny in Paris France. According to Wikipedia "Charles' interest in astronomy was stimulated by the appearance of the spectacular, [great six-tailed comet](#) in 1744 and by an annular [solar eclipse](#) visible from his hometown on 25 July 1748. "http://en.wikipedia.org/wiki/Charles_Messier Now is the time to get out and put those messier objects into focus, we hope to see everyone at the next star party!



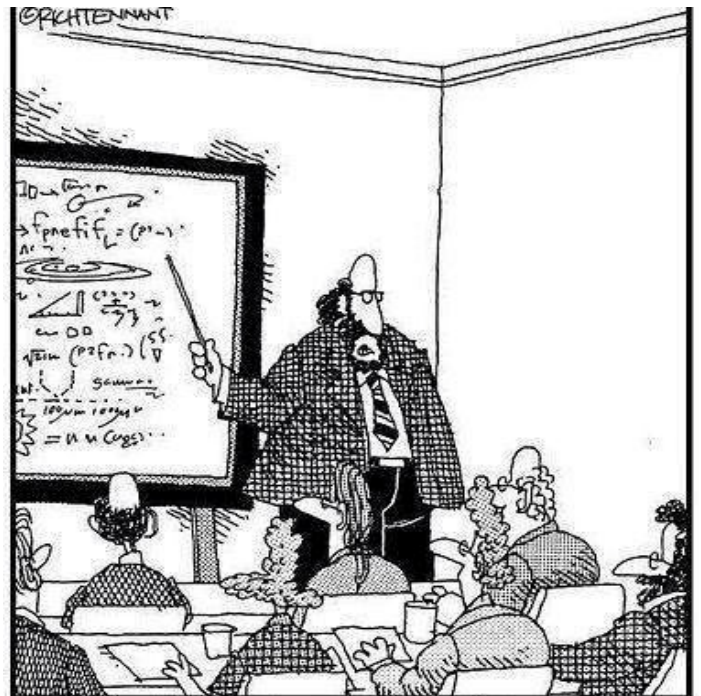
Science Humor

**IF YOU GET YOUR KIDS INTERESTED
IN ASTROPHOTOGRAPHY**



ASTRONOMONO

**THEY'LL NEVER HAVE MONEY FOR
ALCOHOL OR DRUGS**



"Along with 'Antimatter,' and 'Dark Matter,' we've recently discovered the existence of 'Doesn't Matter,' which appears to have no effect on the universe whatsoever."

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**GENERAL INFORMATION ABOUT
THE AUBURN ASTRONOMICAL SOCIETY**

Established in September 1980, the Auburn Astronomical Society welcomes anyone with an interest in astronomy, including beginners, amateurs, educators, or professionals.

The monthly club meetings of the AAS are held at 7:45pm on Friday evenings near each Full Moon in room 215 of Davis Hall, the Aerospace Engineering Building on the main campus of Auburn University (see club website for specific [dates](#) and [directions](#)), The AAS is not directly affiliated with Auburn University. Regular club meetings are informal and typically include discussing club issues and recent club member activities, hearing reports from recent star parties, sharing [astrophotos](#), new objects observed, new telescope or accessory reviews, book reviews, and/or news of recent astronomical discoveries. The program feature can range from astronomy-related videos, astronomy software demonstrations, and how-to programs presented by our members, to programs given by invited professional astronomers. Again, visitors are welcome.

Monthly stargazes are held each month, on a Saturday evening near the New Moon, at the AAS dark sky viewing site near the intersection of Macon County Roads 22 and 24 (see club website for specific [dates](#) and [directions](#)). Other stargazes are held periodically, upon request by schools or other local organizations. At these stargazes, all AAS members are especially encouraged to attend, as they are typically one of our best outlets for sharing our hobby with the general public.

Club dues are \$20 per year (\$10 for students), payable in January. Club members enjoy a number of benefits, which include access to the club's library of videos and other material, borrowing permission for club equipment (some restrictions apply), membership in the [Astronomical League](#), permission to access the AAS dark sky viewing location, discounts on purchases from select suppliers, discounts on subscriptions for [Astronomy](#) and [Sky&Telescope](#) magazines, and much more. Spouses and family are encouraged to attend club events, as well as visitors who are interested in astronomy.

As part of our mandate to promote amateur astronomy, and as a service to the community, the Auburn Astronomical Society makes itself available to school and scout groups, to supplement their classroom studies with some real hands-on observing. For more information, please contact the AAS President, Rodger Morrison, by sending an email to ceo@trustc3.com.