

Astrofiles

Auburn Astronomical Society E-Newsletter August, 2013

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Events Calendar

We'll hold our **monthly meeting** on **Friday, August 2**, at 7:45pm, in room 215 of Davis Hall, the Aerospace Engineering Building. Our new moon **star party** this month was rained out this past weekend.

Aug 02, Monthly meeting at 7:45pm in room [215 of Davis Hall](#)

Aug 10, Perseid/Stargaze with the Lee Co. Historical Society in Loachapoka

Aug 12-13, Perseid meteor shower – best midnight-dawn

Sep 06*, Monthly meeting at 7:45pm in room [215 of Davis Hall](#)

Oct 05, Frank Ward's son's Scout Troup wants a stargaze in Lowndes County

Oct 12, Tuskegee Airmen stargaze

Nov 23, Forest Preserve fall stargaze

* We'll be competing for parking space with AU football tailgaters on the first two Fridays in September. The 20th is the first "away" game weekend. Let's talk about this at the meeting.

Public Stargazes

Lee County Historical Society, August 10

Allen Screws will address the Lee County Historical Society Saturday morning speaking on amateur astronomy with emphasis on the Perseid meteor shower. Then, in the evening, the rest of our volunteers should arrive around sunset (7:30pm), with telescopic observing starting around 8:30 in the field behind the museum in Loachapoka. Thanks to our host, LCHS board member **Teresa Paglione**, for this [\[MAP\]](#). [Please let Allen know](#) if you can help with your telescope. Allen will have all the details at our meeting.

Frank Ward's son's Scout Troop stargaze in Lowndes County on **October 5**

Tuskegee Airmen Stargaze scheduled for **October 12**

Forest Preserve fall stargaze is set for **November 23**.

Web Links

This video update gives you a report on **Curiosity's** discovery of a habitable environment near the landing site in Gale Crater on Mars.

http://www.youtube.com/watch?feature=player_embedded&v=GH56wMh3FZq

If just the number of moons can justify planetary status, **Pluto** is now four ahead of us, and five ahead of Mercury and Venus. Check out the latest on its moons.

<http://www.skyandtelescope.com/news/Introducing-Kerberos-and-Styx-214018041.html>

Skycube is a cubesat to be launched in September which will inflate a 21 meter (70 ft) wide titanium dioxide coated balloon to drag de-orbit itself at end of mission, resulting in a three week duration 0 magnitude object:

<http://www.southernstars.com/skycube/> , <https://www.youtube.com/watch?v=WbNPLtLK1wk> , &
<<http://www.nbcnews.com/technology/space-all-small-cheap-satellites-may-one-day-do-your-6C10488674>>

Here's a local online observatory in Freeport FL that has 20" & 14" Meade telescopes as well as 60 mm & 90 mm Coronado Solar telescope. Go on line to register and view any of the telescope images at [nwfobservatory.com](http://www.nwfobservatory.com).

At mag. 12.4, this supernova is within reach of most of our telescopes!

<http://www.skyandtelescope.com/news/Supernova-Erupts-in-Messier-74-217327171.html>

Google "finder Chart for M-74" for good finder charts.

ISS Passes next Week

Monday evening, Aug 5 rising in the SW at 8:48PMCDT, overhead at 8:51, and disappearing over the NE horizon at 8:53.

<http://www.heavens-above.com/gtrack.aspx?satid=25544&Session=kebgfbegjbefpidolkflbnd&mjd=56510.0768487616>

Tuesday evening, Aug 6 rising in the SW at 8:00PMCDT, overhead at 8:02, and disappearing over the NE horizon at 8:04.

<http://www.heavens-above.com/gtrack.aspx?satid=25544&Session=kebgfbegjbefpidolkflbnd&mjd=56511.0431169676>

Member News

You may remember that when **Maggie Murphy** joined AAS, she told us that she was building her own telescope including the mirror. I wrote Maggie and asked:

I was wondering if you could give us a demonstration for a meeting. Do folks still use the Foucault tester for the mirror? If so do you have this set up somewhere or could you bring it and any other tools you've used, to a meeting?

Maggie replied:

I really appreciate the Society being interested in my telescope endeavor. I would love to share this adventure with you all, and could use any advice / insight you're willing to give! I am going back home to New Hampshire this Wednesday until the 21st of August. If there is still a meeting on the first

Friday of September, I'd be more than happy to show the progress I've made so far. I believe rough grinding was completed using silica carbide grit #80 and thereafter I moved on to sizes #120, #180 & #220. The last couple of weeks my mirror has been placed under school in the list of priorities, (sad but necessary) and I have yet to finish the fine grinding with Aluminum oxide.

Furthermore, I've grown fearful that I've made some mistakes. The Pyrex mirror blank has an uneven backside, and while I thought a "perfect" spherical surface could still be produced on the face as long as the tool and mirror fit well — this may have been a foolish assumption. I used a dial indicator to check the sagitta/depth of curvature, and found thousandths more depth on the side of the mirror where thickness is least. I read in Jean Texereau's "How To Build A Telescope" that in order to avoid "astigmatism" one should grind down the backside of the mirror as well. Do you know if I could go back a few grit sizes (I do not mind the extra time this will take) and grind down the back without harming/stressing the mirror too much? The

Foucault test is certainly still very popular, and I intend to use that approach when it comes time to testing the sphere and re-figuring the parabola! I have only began to brainstorm this process, and may borrow a friend's mini-lathe for accurate movement of the knife edge along the mirror's axis, reading the different regions' centers of curvature. I still do not know nearly enough of the details. It would be my pleasure to share the process with the Society in any way that I can. Thanks again for the e-mail, hope to see you all soon!

Genuinely,

Maggie Murphy

Hello Maggie,

Thanks for offering to do this for us. I'm not sure about a date right now, but we definitely want to do this. Our Friday night meetings and tailgaters have to compete for parking spaces on football weekends in the fall. We'll talk about this at the meeting and I'll let you know if you have to put studies ahead of the meeting this Friday evening.

As to your "mistakes", I'm afraid none of us will be much help. In our 33 years as a group, I think you're the first to tackle this. I sat in on a mirror grinding seminar once. When the guy said "You have to be careful to keep the blank from sticking to the tool", he scared me away. I also lack the patience to attempt this. You have our highest respect and admiration for keeping this dying art alive.

You've probably already tried this, but there may be a virtual glass-pushers group online who could help you over this hump.

Keep us posted on your progress.

Hope to see everyone at the meeting,

Russell