WESTMINSTER ASTRONOMICAL SOCIETY, INC. (WASI)

Membership News

Volume 40 – Number 4 Fall 2024

Message from our Society's President, Wayne (Skip) Bird

Howdy People and Welcome to Wayne's World,

As I right (write is right) this, we just had lots of Perseid's and some Auroras. Which if you were outside last night then you got to see both, a very rare combination. If you didn't then you forgot the most important rule of astronomy and our club motto (did you know we had a club motto?), Astronomy is Looking Up!

My wife once asked me to call her when something exciting was happening. Exciting! Exciting? We have a recurrent nova that might go off any day. Meteors that give their life and their molecules for our entertainment. Aurora's that graced our light polluted skies (and not covered in clouds) just so we could say, WOW!!!!!!! Black holes crashing into each other (thanks LIGO) and planets continually being found around other stars (Thanks TESS). How much excitement do you want???

If all this isn't exciting enough I have 100 cases of Lithographs in my garage looking for some families to adopt them. OK maybe that's not exciting unless you are my wife who would tried to park her car in the garage. Any school teachers, scout leaders, librarians or origami artists (needing colorful stock for their artwork), or anyone else, please let me know and we can fill you car up to where the axle scrapes the ground. The reason I'm going on about this is our club has a loaner scope program (several really nice scopes from last count, contact Curt), a lending library which you can check out (yes real books made out of paper, again contact Curt), AND people who are just waiting for someone to ask them " Hey, could you show.....", which almost all other clubs do not have! You belong to one of the most active clubs in the USA, presently # 2 (if the 4 people who have unreported events would be so kind as to report their events we might be #1 again), Make WASI Great Again. This is an exciting time in our lives DON'T LET IT SLIP BY!!!!!

OK,enough about excitement. We just finished our busiest month (24 events) for outreach. I want to THANK all those who helped out, We could not have done it with out you. Those of you who have helped close your eyes for the next little bit. This is addressed to all those people (you know who you are) that didn't help. It's OK that you didn't share your love of astronomy with others, however it's not OK when you complain about how light polluted our skies are, It's not OK to complain about how the gray the club is, It's not OK to complain about taxes going up (where did that come from), It's not OK to complain there are not enough dark sky sites close by, IT"S NOT OK unless you ARE WILLING TO DO SOMETHING ABOUT IT.

Continued on the next page...

President's Message—Continued

Something as simple as showing someone a star in the daytime, something as simple as explaining why you can see the Moon in the day, something as simple as how a telescope works, just something simple could change someone's ideals about astronomy so when they grow up they might be on a senate committee that might vote for less light pollution, less taxes (there it is again), more Dark Sky parks, or even put up just one less light at night. You never know how your one little act affects the world. Please help out at the next outreach event (see our calendar for your next OPPORTUNITY), reach out and share your love of astronomy with others.

Again thanks to all those who helped.

I warned you "I'm a Rambling Man".

Until next time..... Astronomy is Looking Up!

Skip

WASI News

The WASI 130 is a set of 130 nice objects that are viewable from our latitude. Some are pretty easy objects; others a bit more challenging. There's more information here: https://westminsterastro.groups.io/g/main/files/Observing%20&%20Challenges. Laurie Ansorge is close to snagging the entire set of objects!

Want to know more about our outreach events? Here's the calendar: https://nightsky.jpl.nasa.gov/club-view.cfm?Club_ID=152

This news letter goes out quarterly. Please send your astrophotos and astronomy news to jack@ganssle.com.

Observing Notes

International Observe the Moon Night—September 14

International Observe the Moon Night occurs annually in September or October, when the Moon is around first quarter — a great phase for evening observing. Join WASI September 14 at Bear Branch from 6:30 to 10PM, rain or shine, for this event. There's more info here: https://moon.nasa.gov/observe-the-moon-night/

C/2023 A3 (Tsuchinshan-ATLAS)

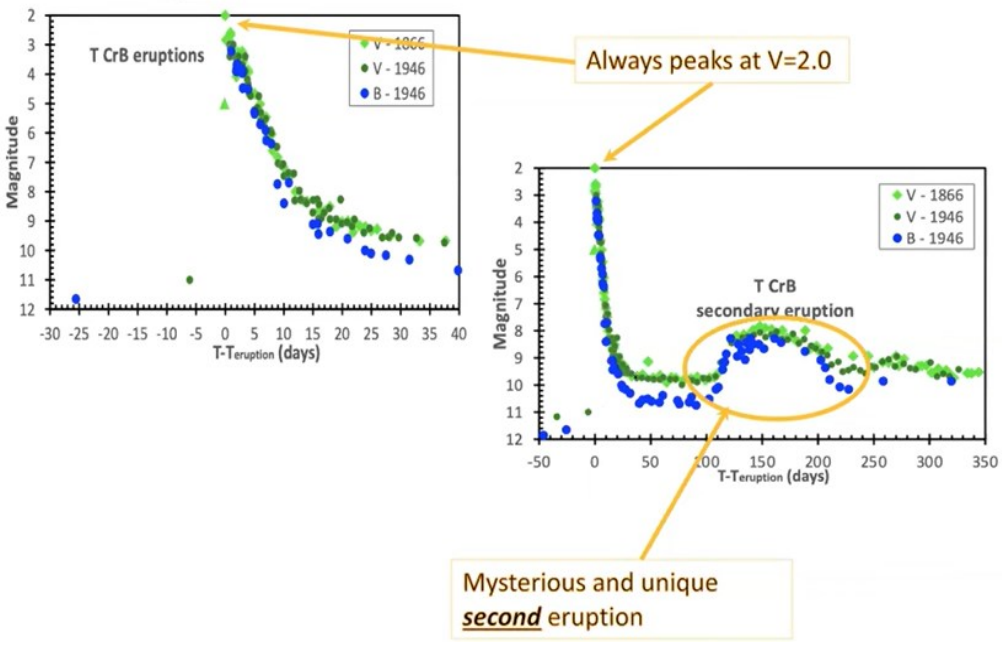
Comet C/2023 A3 will approach the Sun, coming within 0.4 AU, in late September, and it is expected to brighten up to 2 mag. The brightness evolution slowed down since May. It will brighten rapidly after this. In the Northern Hemisphere, it is not observable now, but it will appear in October.

T Coronae Borealis—Anticipated Nova

We're all breathlessly waiting for T CrB, AKA the Blaze Star, to go nova, an event that happens only once every 80 years or so. It will increase from its current magnitude of about 10, to perhaps 2 (same as Polaris). (Each magnitude is 2.512 brighter than the previous, so this 8 magnitude change represents 2.512^8; that is, it will be about 1500 times as bright as it usually is.)

Alas, it will fade again within days, so be prepared! This could happen as soon as this month.

To keep an eye on its state: https://apps.aavso.org/webobs/results/?star=000-BBW-825&num_results=200. And there's more info here: https://www.nasa.gov/centers-and-facilities/marshall/nasa-global-astronomers-await-rare-nova-explosion/. For a deep dive this 2 hour video is great: https://www.youtube.com/watch?v=1Zfg67Q-szU . That video also includes ideas about how amateurs can contribute data to the real science of this event.



Back To Basics - The Parsec

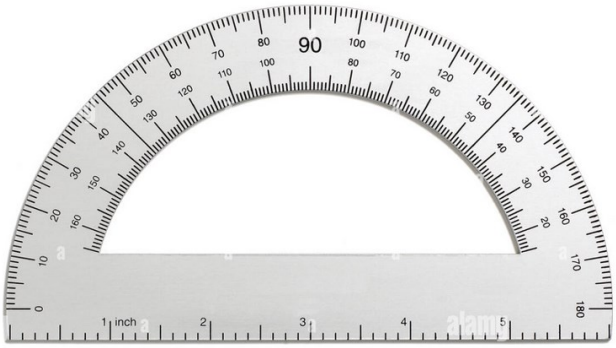
We casually toss about measurements in light years (LY). For instance, M31, the closest grand-design spiral galaxy to the Milky Way, is a neighbor at only 2.2 million LY away. But a light year is, to us mere mortals, a staggering distance. Given that light zooms by at 300,000,000 meters/second (186,000 miles/second), one LY works out to about 6 trillion miles (that's 6 million million miles). That puts M31 at about 12 million million million miles away. Though much closer than, say, a quasar, it's a galaxy far, far away.

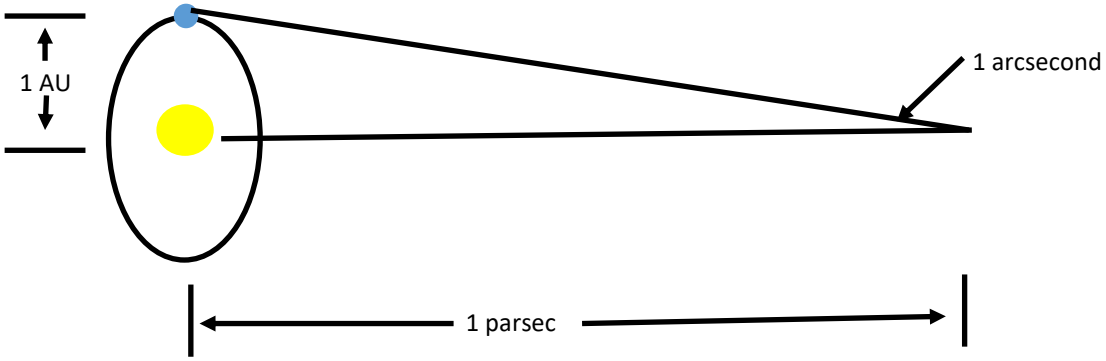
But most astronomers prefer parsecs over light years. One parsec is about 3.26 light years. Where does this odd metric come from?

There are two terms we must first define: astronomical unit (AU) and arcsecond.

An *astronomical unit* is the average distance from the Earth to the sun, about 150,000,000 km or 93 million miles. It's a convenient metric for solar system measurements, Jupiter being about 5 AU from the sun, Saturn almost 10 AU, Uranus 19 AU and Neptune 30 AU.

An *arcsecond* is 1/60th of an arcminute, which is 1/60 of a degree. So an arcsecond is 1/3600th of a degree. Remember those plastic protractors we had in school? You can fit 3600 arcseconds between each of those closely-spaced gradations on the protractor.





A parsec is the distance at which an angle of one arcsecond subtends one AU. The drawing above shows the angle, and the Earth-sun distance (one AU). (That drawing is greatly exaggerated as an arc-second is a tiny thing. One arc-second would give a one-foot width at a distance of 39 miles.)

A parsec is 206,265 AU. The nearest star, Proxima Centauri, is a bit over one parsec away from us.

The word parsec comes from "parallax of one second". The distance to a star, if one can measure the angular shift as the Earth goes around the sun, is 1/angle-in-arcseconds. Thus a star which seems to shift 0.1 arcseconds is 10 parsecs away.

ALCON 2024 in Kansas City, Kansas (& Missouri) July 17-20

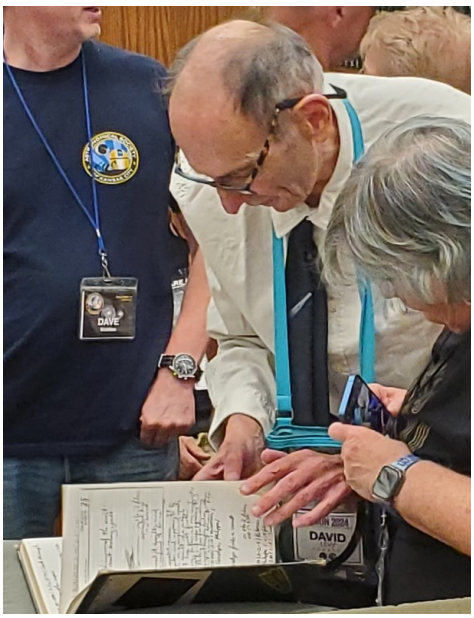
Text & photos by Laurie V. Ansorge

As WASI members you are each also members of the Astronomical League (A.L.). The AL holds an annual convention called ALCON, hosted by different clubs in different cities. For 2024 the host was the Astronomical Society of Kansas City (ASKC) which has something between 500-700 members, a partnership/relationship with a 133+ seat planetarium in downtown, and the Powell Observatory with a 30" homemade reflector telescope under a custom grain silo for a dome. As with other ALCONs, the 4-day event held committee meetings, side trips to local astronomical venues of interest, speakers from a wide range of expertise, freebies & vendors, and a President's panel for feedback (I served on this one). Explore Scientific, a long-time supporter of the League, provided live interviews of guests that are posted on the internet. (https://www.youtube.com/@ExploreScientificOfficial)

The event was offered in a hybrid format: in-person as well as virtual for a fee (partially covering the cost of the AV contractor to professionally record and broadcast).

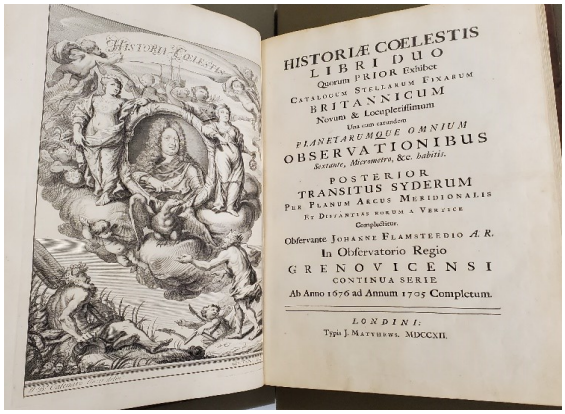
The Gottlieb Planetarium in Union Station was the first field trip where we enjoyed seeing the results of volunteer members' having rebuilt the entirety following disrepair and a fire of the original planetarium device. The presenter walked us through how the programming is presented to the public in frequent shows. (https://planetarium.unionstation.org/)

The next visit was to the **Linda Hall Library** which is almost entirely devoted to scientific texts and objects including the logs and original telescope belonging to David Levy of Shoemaker-Levy 9 fame (the one that collided with Jupiter). There are a number of resources the public can access online. July 2024 marks the 30th anniversary of the comet strike on Jupiter, raising awareness that an Earth impact is a real possibility. The library is set to receive an original Galileo text in July 2024. They had previously acquired a "pirated" early copy of such a text. We heard presentations from the librarians and David Levy. (https://www.lindahall.org/)



David Levy flips through one of his donated comet observation logs.

ALCON 2024, Continued



One of many important astronomy historical artifacts in the Linda Hall Library.

Friday night at ALCON includes the traditional **"Star-B-Que"** with great food and friends. This year's was held at the Overland Park Arboretum and Botanical Gardens which provided an outstanding venue inside and out. One highlight for us was the expansive outdoors train gardens. We were joined by David Levy for a 30th anniversary of Shoemaker-Levy 9's plunge into Jupiter cake, and Tim Russ of Star Trek Voyager, a speaker on amateur observations using his images from his Unistellar eVscope2.

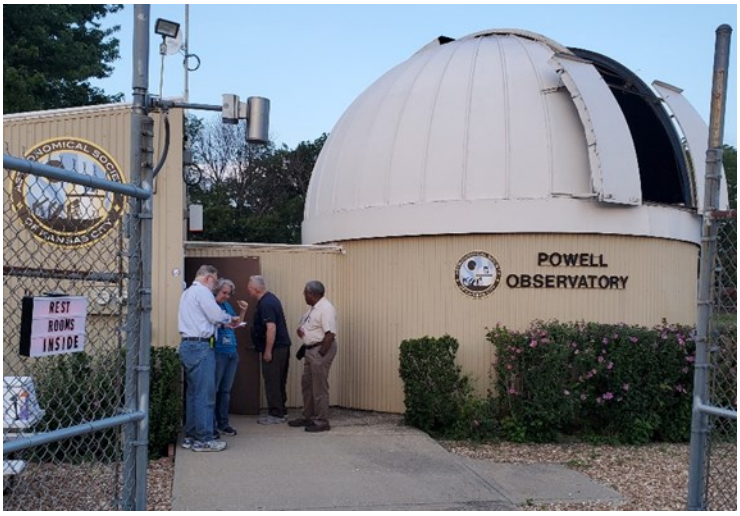
https://www.opkansas.org/recreation-fun/arboretum-botanical-gardens/

Tim Russ of Star Trek Voyager fame, discussing his experience in amateur astronomy.

Center: David Levy, Right: Carroll Iorg, President of A.L.

Next stop was at Astronomical Society of Kansas City's **Powell Observatory**. The main scope, a 30" reflector, was literally paid for 'by the pound' of metal scrap in that they started with a mirror and spent hours building it from metal scrap, buying and selling back the pieces needed to build it. "Steam punk" design anyone? The dome is a grain silo roof customized for the observatory.

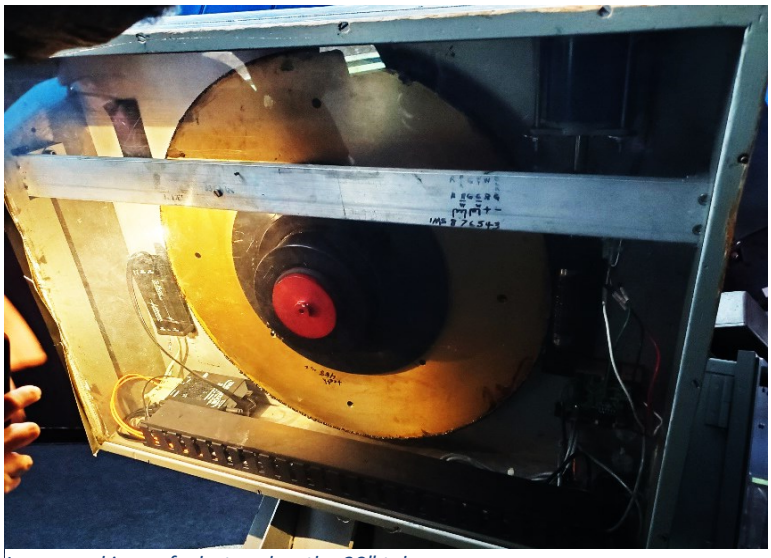
https://.askc.org



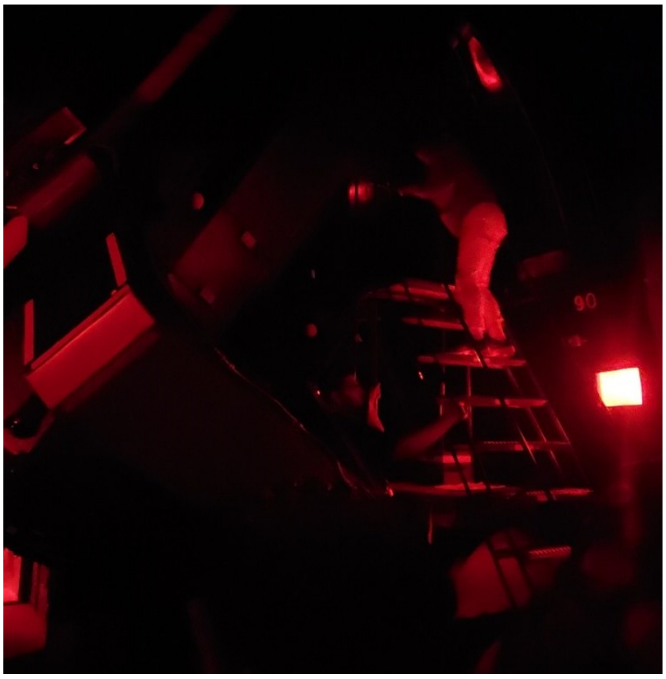
30" 'home made' telescope at Powell Observatory.

ALCON 2024, Continued

Indoors, connected to the Powell observatory.

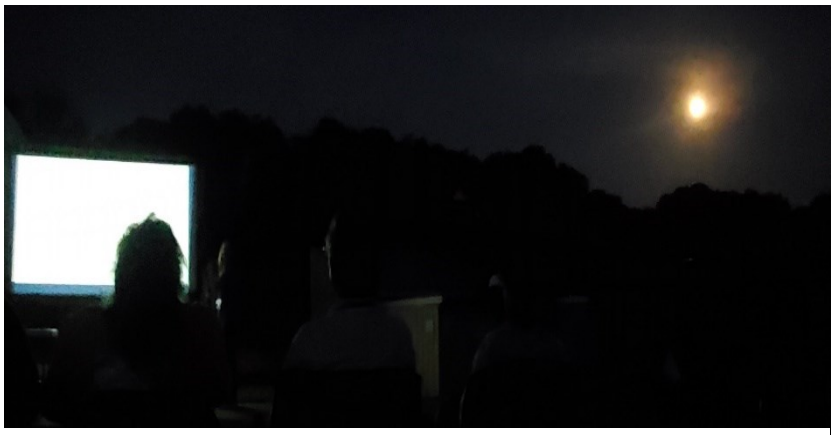


Inner workings of what makes the 30" telescope move.



Under-lighting on the tall ladder steps enables viewing through the 30" telescope.

Telescope housed under a slide off roof.



Programming outside the Powell Observatory

ALCON 2024, Continued

Some of the **speakers at ALCON 2024** include:

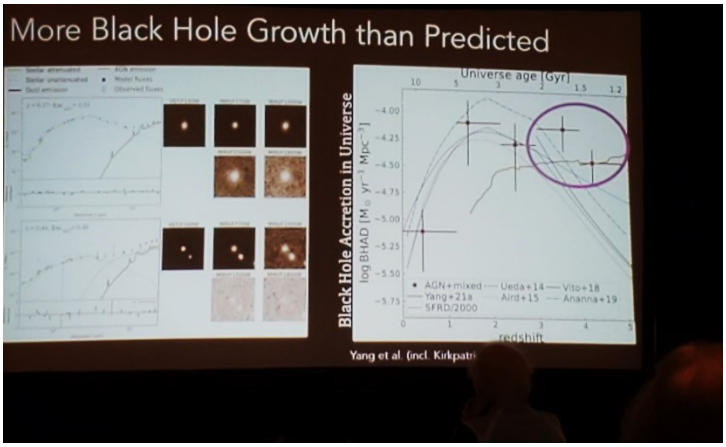
BILL WREN – *A History of McDonald Observatory*
RYAN GOODSON – *Ideal Materials Used to Build Large Portable Telescopes*
SCOTT HARRINGTON – *Observing With Binoculars*
Powell Observatory: RACHEL CIONITTI – *Dark Matter and Dark Energy,* Stargazing and Imaging with the 30" Ruisinger Telescope
GARRETT PARKINS – *Artemis Mission*
DAVID MCCALLLIE – *Live-Stacking at Powell Observatory*
TIM RUSS – Beginning Visual Astronomy
MITCH CLOUD and JENA DUNHAM – *Exploring Space with Ham Radio*
LOU MAYO – *The Legacy of Voyager: From Planetary Probe to Interstellar Explorer*
Keynote Speaker: STEPHON ALEXANDER –The Jazz of Physics

The **Saturday night banquet** featured a local jazz band, and Brown University professor of physics and astronomy, and jazz musician, Stephon Alexander discussing his latest book, *The Jazz of Physics*. This was followed by an **awards program**. WASI's webmaster Tom Milley received a large plaque for 2nd place of A.L. websites. WASI won the annual Astronomy Day competition with a certificate and $150 check for the club. Each ALCON usually has some sort of observing type challenge competition and this year it was an in-person image competition with five categories, 1st, 2nd & 3rd place voting by participants, and medals awarded at the banquet. Laurie Ansorge took home 1st place in 'wide-field' for M27 and 3rd place for 'solar system' for annual eclipse image with sunspots.

McDonald Observatory's mirror with bullet holes & hammer damage

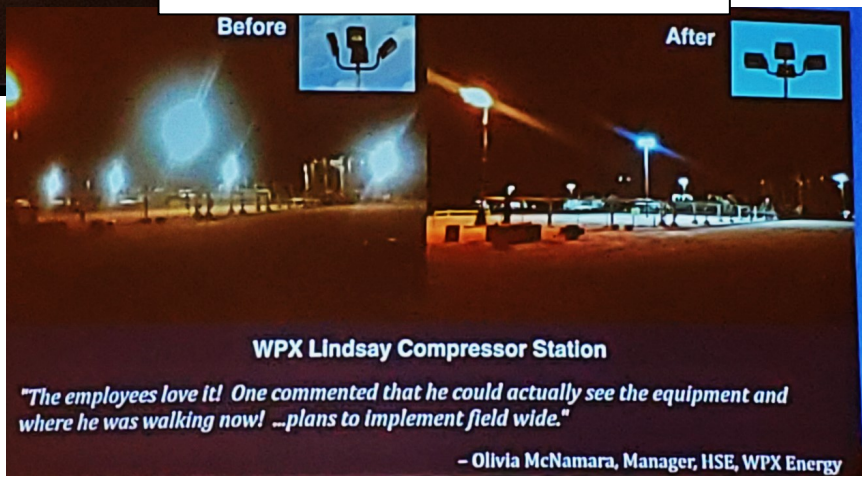
ALCON 2024, Continued

League President-Elect, Chuck Allen (WASI July 2024 speaker) and AOS President Jason Cousins pose with WASI donated Hubble lithographs at ALCON. Nine cases (~12,000 lithographs) were shared with clubs and planetariums. (Gas mileage on the home trip was much better!)



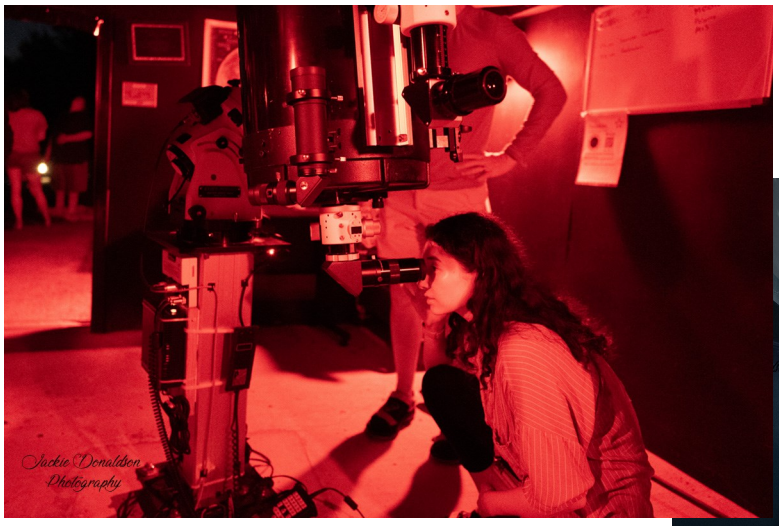
A wide range of material was offered by expert speakers.

Success stories in improved outdoor lighting for better dark skies.



WASI Star Party, August 12

Jackie Donaldson captured some pictures from our recent star party. We had a good turnout from the public after the planetarium show, and a half dozen of us brought telescopes. The sky was clear… till 11 PM when the clouds rolled in. But a good time was had by all.



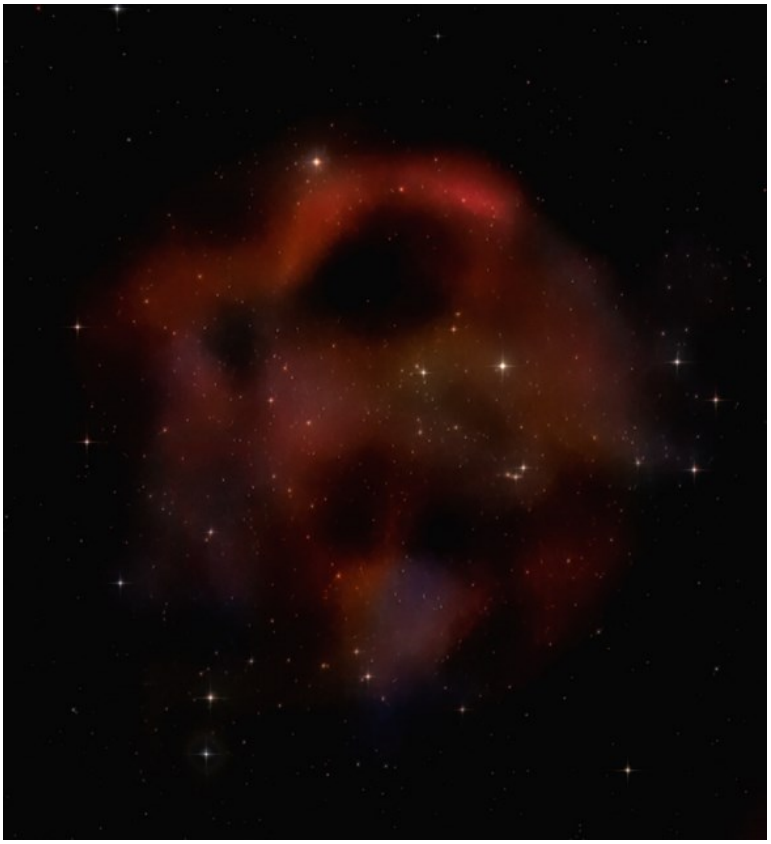
Astrophotos From Our Members

Ian Slepian continues to get great results from his Seestar S50:

Astrophotos From Our Members

Who would have thought we could see an aurora from Maryland? Dan Packy took this on a Pixel 5 phone while watching for the Perseid meteors—there's no post processing.

Matt Orsie took this 2.25hour capture of SH2-173 with his Seestar S50. It's unsurprisingly called the "Phantom of the Opera" nebula, and is in Cassiopeia.



Astrophotos From Our Members

Michael “Mikey” Mangieri sent this, which he calls the Horse in Stormy Waters. It’s an amazingly-artistic take on the Horsehead Nebula, taken with a William Optics ZS61 2.4”, f/4.7 scope and a ZWO ASI1600MM Pro camera. There’s 5h 05m of integration time using just an Ha filter.

He also sent this image of the California Nebula, taken with the same William Optics ZS61 scope and a ZWO ASI1600MM Pro camera. There’s 9 hours of integration time using Ha, Sii and RGB filters.

Astrophotos From Our Members

Martin Remmers used his Seestar S50 to get this cool shot of a jet passing the moon.

Jackie Donaldson got this nice image of the Cygnus Wall with the Pelican Nebula at BBNC August 12.

Astrophotos From Our Members

How's this for a nice Crescent Nebula? Dave Weisman took this.

Dave also got this amazing solar flare with his Lunt 40 mm solar scope with a 3x Barlow lens. Solar max is next year so get your solar scopes ready!

WASI FAQs

Library - Did you know we have over 700 books about astronomy in our WASI library? There are available to WASI members. Here's the complete card catalog: https://westminsterastro.groups.io/g/main/files.

Loaner telescopes - We also have a telescope lending library. If you'd like to borrow a scope, talk to Curt Roelle.

Astronomical League - All WASI members are also members of the Astronomical League. Check out their 80+ observing programs, many of which come with awards: https://www.astroleague.org/

Newsletter - Please send pictures, articles, and ideas for the newsleter to jack@ganssle.com.

Facebook - We're active and sharing images on our Facebook page, found here:

Join/Renew membership link: https://www.westminsterastro.org/join-wasi/

If you've already entered your contact information (renewing), skip the "database" link: https://paypal.me/WAstroSInc

Dues are payable via PayPal on the link above, by check or cash (and through your bank's on-line bill payment). Membership Dues are $25/year for individuals or family, and youth under 18 is $5/year.

- On time payment means eligibility for the annual incentive .
- Keep access to the members-only groups.io pages/information
- Receive members-only access/notifications on Night Sky Network
- Keep/get discount rates for popular astronomy magazines
- Borrow from the WASI scope/literature library

Files and club member correspondence & wiki links are found here: https://westminsterastro.groups.io/g/main. Remember to set your communication preferences.

Outreach/event calendar is found on: https://nightsky.jpl.nasa.gov/index.cfm. Set your communication preferences here as well.

Changed address, email or phone? Please update your information and send a message to the webmaster and/or treasurer@westminsterastro.org.

We meet monthly on the 2nd Wednesday of the month:
Back to Basics from 7:00 PM − 7:30PM; General Meeting 7:30PM − 9:30PM
Bear Branch Nature Center Carroll County; 300 John Owings Rd.; Westminster, MD 21158
Website: https://www.westminsterastro.org/ (Zoom info for hybrid meetings)