

THE MERIDIAN

Newsletter of the
Quad Cities Astronomical
Society
www.qcas.org



JUNE 2017

QCAS Mission Statement:
To stimulate an interest in the science of astronomy in the Quad Cities Area, to nurture an ongoing desire by Quad Cities Astronomical Society members to study the cosmos and to provide members of our community opportunities to experience the beauty and joy of Astronomy.

Presidents Greeting

Hi all!

Another great meeting in May... no small thanks to our guest speaker, Allen Wang... and thanx to Alan for setting up that presentation and loaning me \$5.00 for the use of the library projector!

We continue to remain quite busy... having 4 events per year is still quite a bit, especially considering the quality of the events we are trying to make available to the public and amateur astronomers.

Helping PAC at the Putnam Museum on 4/21 and a bit of after Black Hawk College concert band performance viewing was quite enjoyable as we could participate in a leisure manner... our Astronomy Day at Bettendorf High School on 4/29, although rained out, still went off pretty well. We had a dozen or so guests, one brought in a 10" reflector on a Vixen EQ mount for us to show him how to properly use... thanx to Craig for taking the lead on that. We were invited back to Bettendorf High School to put on another similar event as time permits. The public night at Menke on 5/13 was a lot of fun... and special thanx to PAC members Rusty and Terry for setting up their video astronomy gear for the event!

With the conclusion of our April 29th Astronomy Day, we are now half way done with our annual outings... if you recall, we narrowed down 'our' events to 2 main public events (Astronomy Day in April and the Meteor Shower Party in August) and 2 amateur astronomer events (The Messier Marathon in March and EISP in September)... so, please do the best you can to help out with these remaining 2 events...

Lastly... if you wish to take advantage of Bettendorf High Schools offer to add your astro-pics to their planetarium's standard introduction... bring them to me on a flash drive, and I can submit them!

See you back at the Bettendorf Library for our May meeting and maybe another pre-meeting cartoon!

Clear Skies!
Jeff

Last Society Meeting Minutes

Date/Time Location

6:30 PM on Monday, May 15th
Bettendorf Public Library

Attendance (25 in attendance)

Jeff Struve, George Bailey, Robert Mitchell, Jim Rutenbeck, Craig Cox, Alan and Sara Sheidler, Wayland Bauer, Mengyen and Luke Wang, Lucy and John Wang, Shao and Mike Zhang, Patrick Lewis, Karl Adlon, Amy S, Dave Ruddy, Ian Spangenberg, Greg Weinberg, Matt Neilssen, and a few other unsigned...

Presentations

Outings

- 4/21 – Putnam with PAC - Alan: Excellent event, around 500 visitors, went from 1:00 PM to 8:30 PM; 4 scopes were set up outside for solar viewing, two with H-alpha; clouds slowly moved in during day. There were displays in the grand lobby; Dr. Shapiro gave talk in theater.
- 4/21-4/23 – North Central Regional Astronomical League (NCRAL) symposium, Eagle Bluff Environmental Learning Center, Lanesboro, MN... Jeff and Craig attended. Presentations included "The Iowa Robotic Telescope", an "Astronomical Bucket List", "The Most Productive Scientific Instrument Ever Built – The Mt. Wilson Telescope", "Architecture of Planetary Systems Through Host Star Variability", "A Decade of Research with Backyard Telescopes", "Measuring the Cosmic Microwave Background with Balloon-borne Telescopes", "500 Years of Astronomy – How the Giants of Astronomy Changed Our View of the Universe", and "Experimental Impact Cratering".
- 4/29 – Astronomy Day at BHS - Rained out; we set up a dozen or so scopes inside; the event was supposed to run until 6:30 and then do open house at Sherman Park; A number of people came in 4:30 saying they were having Special Needs Prom at 5:30, so we packed up an hour early; Two planetarium shows on telescopes and Walt Whitman were held... all in all, the event went off well with about a dozen guests. One guest brought in their EQ mounted 10" reflector for us to help him with... Craig took the lead and did a great job helping him with set up and use.
- 5/9 – BHC Concert – Craig and Alan brought scopes and had about 25 guests viewing various objects after the concert which consisted of astronomy-related music.

- 5/12 – PAC held an outing at Paul Castle Memorial Observatory... about 7 scopes were set up and they were able to photograph the Comet Johnson
- 5/13 – Menke Public Night – We had about 8 member participants and about as many guests show up for the event. Rusty and Terry, PAC members, along with dual member Ken set up scopes utilizing video astronomy. They were able to show a number of objects including M51 and the comet... Craig set up his 16" Dob... no need to say, but the views through this beastie were incredible... Jeff assisted Robert in the dome with the 14" SCT... guest Don Robinson brought a 6" Dob which was a nice addition... Special Thanx to Alan as we would not have had any pics of the event if it wasn't for him!

Main Presentation

- Allen Wang gave a presentation on "Gravitational Waves and LISA". Allen is an Iowa State senior from Bettendorf, a 2017 Goldstar Scholar, and worked at NASA on the LISA Pathfinder.

Treasurers Report

- Matt provided a brief Treasurer's Report... The bank balance as of date was \$4,438.93. The report was voted on and passed.
- Please check with your places of employee to see if they have grant programs that we can take advantage of... We have utilized collecting funds from MidAmerican Energy, 3M, and potentially Verizon... funds are needed to advance the direction of the club!

Review of Minutes

The April Minutes as per the May Meridian were approved.

Old Business

8/12 – Meteor Shower Party

- Soccer field replied 3 weeks ago: they like idea but have to get permission from others; hoping for PA background music, barbecue wagon, expecting anywhere from 20 to 2000 people; slide presentation in background (covered area near restrooms); QCAS last 2017 public event

9/22-9/24 – Eastern Iowa Star Party

- Need to start preparing now; trying to get guest speaker to talk about meteor/asteroid impacts; not doing bunks this time; how to do donations for raffle?; Explore Scientific promotion? Grand prize?

Bylaws

- Matt and Jeff almost done reviewing them, will send general email about revisions; currently have newly elected president and board take over immediately, should be transition period to January

Website

- Matt still working on it

New Business

11/20 – Annual dinner meeting.

- We are considering the Chinese Palace on Elmore or the Pizza Ranch in Bettendorf; both have a variety of food items to choose from. In either case, everyone goes Dutch.
- This is Thanksgiving week: change to better time for people? We could cancel, since bylaws say we only need 9 meetings per year.

5/10 – meeting with Paula McNutt and Paul Koch, St. Ambrose

- Discussed moving the QCAS observatory to Wapsi River and merge with Menke; Wapsi ranger also enthusiastic about idea; Jeff will write up business case; need to bring in architect to examine Wapsi ground and identify best locations for new buildings. Jeff has 2 potential individuals interested in funding the project.

Next Society Meeting

Date/Time Location

6:30 PM on Monday, June 19th
The Bettendorf Public Library

June Presentation

At our June 19th meeting, Dana Taylor will be speaking on his January Star Trek Cruise!

Presentations for future meetings include Christian Allen on weather forecasting the QCA, Jim Rutenbeck on various star parties, and Carl Wenning on the Astronomical League. Contact Jim Rutenbeck or Jeff Struve if you'd like to make a presentation.

New Business

- 8/12 Meteor Shower Party
- 8/21 Solar Eclipse
- 9/22 EISP Prep
- November Banquet Meeting

Last Board Meeting Minutes

Date/Time Location

6:30 PM on Thursday, May 1st
The Village Inn on Elmore and 53rd in Davenport, IA

Attendance

Jeff Struve - Present
Craig Cox - Present
Robert Mitchell - Present
Matt Neilssen – Present

Agenda

Primary Topics

- Make Paul Levesque Publicist?
 - Yep!
- Facilities
 - 5/10 Meeting with SAU about moving Jens-Wendt to Menke
 - Society meetings at SAU
 - No discussion yet
 - Re-roof Block House or wait for potential move to Menke
 - Matt & Craig will go out to see if the building leaked
 - Will make recommendation for a temp and also for a permanent fix
- Inventory
 - Buy a generic laser collimator
- Interview Wayne Jens
- Open Houses
 - Send out email reminder and blind copy everyone
 - 5/13 Menke Observatory
 - 5/27 Jens-Wendt Observatory
 - 6/03 Menke Observatory
 - 6/24 Jens-Wendt Observatory
- 8/12 Meteor Shower Party
 - Still shooting for the soccer field
 - Food Truck
 - Kid friendly but not kid oriented
 - Handouts include astronomy etiquette

- Restrooms unlocked
- Sound System and Power Point (via Dr. Mitchell)
- Paul and SAU publicize
- 9/22 EISP
 - Same as last year
 - No lodge
 - Add swap meet
 - Go ahead and advertise
 - Figure out a fee
 - Explore Scientific Row
- Documentation re-write
 - Trifold
 - Astronomy Etiquette
 - Membership Application
 - Sherman Park/Menke Map
 - Large sign and yard signs
 - Bylaws
- Web Site Update
 - Preference Center
 - Need Content
 - May be ready for demo in July
- Eclipse
 - 5/10 trip to Aurora
 - Center on and track Sun
 - Safer tracking rate
 - Easier set up... might not see the moon
- 4/29 Astronomy Day Review
 - Interrupted by prom
 - Invited back by BHS
- Treasurers Report
 - \$250 from 3M via Jim R
 - Balance \$4438.93
- Dale will preside at the Putnam, SAU personnel will preside at SAU
- Reschedule 8/21 Society meeting
- 9/22 EISP
 - Same as 2016
 - Encourage a swap meet
 - No bunk house
 - Review surveys to further modify the event
- Dues/Membership
 - Jeff modified the application forms – Maybe instead, just use the modified trifold, info/calendar/courtesy/membership form.
 - Let's start using the membership cards as receipts
 - We will talk about fees when we review Bylaws
- Bylaws Rewrite
 - Discuss the standing committees
 - Review the Mission Statement
 - Jeff and Matt will review and edit the Bylaws. The rewrite will be reviewed and edited by the Board. The final draft will be sent to the membership for review. The Society will vote on acceptance at the Society Meeting that is at least 30 days post the sending to the Society
- Misc
 - Block House Inventory
 - We need to go through gear stored in the dome and in (and under) the roll off roof building.
 - We need to take an inventory of what we are keeping.
 - Other
 - Discuss moving our Society Meetings to SAU.
 - Discuss a High School Ambassador Program
 - Club Projects
 - Learn PixInsight
 - Build a Poncet Mount for the club dob
 - Convert the 20" scope into a truss system

Things to do – Open Items

2017 Event calendar

- Advertisement/Public Notification
 - QCAS Web Site, QCAS Facebook, Davenport Parks and Rec Web Site will be our primary means of advertisement.
 - Paul Levesque has volunteered to do press release for TV, Radio, publications
- Public Nights
 - Make signs reminding public to shut off lights and park in the side lot...
 - Build trifold with info, membership form, and astronomy courtesy.
- 8/12 Meteor Shower Party
 - Radio, TV, Newspaper advertising if possible.
 - Food wagon ok.
 - Slide show for back up if cloudy... music ok... advertise for public to check the web for cancellation notice
- 8/21 Solar Eclipse
 - Dr. Mitchell is lead
 - Robert sent out an application form for a Solar Eclipse Expo meeting in June to be held in St. Louis
 - Robert will ck with SAU for trip funding
 - How much memory is needed to store the whole event as video?

Next Board Meeting

Date/Time Location

Unless otherwise noted, Board Meetings will be held on the 1st Monday of the month at 6:30 PM at the Village Inn Restaurant on Elmore and 53rd in Davenport, IA. Please notify Jeff Struve if you plan on attending so seating arrangements can be made. Ordering from the menu is Dutch treat.

Agenda

- Discuss the new web site
- Discuss the 8/12 Meteor Shower Party
- Discuss the 8/21 Solar Eclipse
- Discuss the bylaws
- Discuss re-roofing the Block House

New Business

- 2017 Biennial Report
- We need to talk to the caretaker at Menke Observatory about the club's access to the facility.
- Discuss selling our heavy fiberglass step ladder and replacing it with an aluminum ladder for use in the roll off roof building.

Secondary Topics

- Society meeting relocation
- PixInsight meetings

Member Spotlight

My Solar Observatory – Alan Sheidler

When Jeff invited me to write a piece about how I got interested in astronomy, my interests, goals, etc., I must confess I had concerns you would find my story to be somewhat boring. Especially where my current interests and goals are concerned. So rather than focusing on what I am doing now, I thought I would relate a story about one of my early astronomy related experiences growing up on a small Ohio farm in the 1960s.

Back in those days, most farms had large hip-roof barns. Our barn had a particularly large haymow equipped with a pulley system, which was used long ago to hoist and transport loose hay. Though the pulley system was no longer being used to handle hay, to our good fortune, the ropes used to hoist the hay had not been cut down and were left hanging down from the peak of the barn to the floor of the haymow twenty feet or more below. It is natural for curious, young boys to explore the potential uses of such enticing artifacts of long ago. My brother and I, being somewhat creative, determined these ropes could be used for swinging (Tarzan style) from the beams and hay bale platforms which we built to facilitate our gymnastic play activities. The laws of physics governing the dynamics of a pendulum certainly were at work during these aerial maneuvers. But to kids playing in the haymow, the governing equation was also interlaced with variables for thrills, fun and laughter of which there was plenty in the Sheidler's barn back then.

Moreover, my brother and I and our friends spent many hours playing in the haymow. One day as we were engaging in haymow play activities, we noticed something rather interesting about how the sun, which was rather low in the western sky, had serendipitously aligned itself perfectly with one of the knot holes in the barn siding casting a dazzling, laser-like beam of light the full length of the barn. Because our play activities had stirred up significant amounts of airborne dust, the sun beam danced with a myriad of particles which glistened like diamonds illuminated. Where this sunbeam terminated on the eastern wall of the barn, there was a large, well illuminated circle of light. I remember looking at this circle of light and noticing something rather odd. First, it appeared to shimmer and vibrate slightly. The motion seemed to be related somehow to the wind outside or to mimic the shimmering of heat waves viewed at a distance. Superimposed on this was a gradual and inevitable upward movement of the spot. We correctly surmised this gradual upward motion of the circle of light was due to the rotation of the earth. But after staring at the circle of light for some minutes we realized that what we were actually seeing was an image of the sun itself projected through the knot hole as would be done by a telescope objective lens. Indeed, we could actually discern sunspots on the surface of the sun! We had seen pictures of the sun in astronomy books showing these sunspots, but we were seeing the exact same sorts of images, albeit slightly out of focus, in our very own solar observatory. This really made an impression on me.

For the next several days (as weather permitted), we went up to the haymow at around that same time of day (that had resulted in the fortuitous solar alignment with the knot hole) to observe the sun. Interestingly, we noticed the sunspots moved the same small amount every day indicating that the sun was rotating! Indeed, we could see the sunspots appear on one side of the image and over approximately two weeks gradually work their way all the way across to the other edge of the image where they would disappear. We even took to sketching the sunspot images with paper and pencil which was easy to do simply by placing the paper on the wall and then tracing the positions of the sunspots. We had our very own solar observatory!

This solar observing was highly interesting, but over several weeks, we eventually learned that the position of the sun in the sky had shifted due to seasonal movement of the sun's path to a location in the sky which was misaligned with the knot hole so that an image of the sun could no longer be generated. At first we were stunned and disappointed, but not for long. Then we realized all we had to do was find other knot holes with the proper solar alignment. However, while there were indeed many knot holes, none of them were suitable. Either they were too big, too small or poorly shaped. However, this did not stymie our creative young minds for long. The solution was to drill holes in the barn siding! Immediately we ran down to the workshop and procured dad's brace and bit and bored a hole in exactly the correct alignment to put our barn solar observatory back in business. Over the course of time, we drilled many holes in the barn siding to enable observing year-round regardless of the seasonal shift in the position of the sun in the sky. This was indeed the solution, but we didn't tell dad about all the added "knot holes" we drilled into the siding until many years later. At the time of these drilling escapades, we were sure dad would have been displeased had he known about it. But, in retrospect, perhaps he wouldn't have minded. When we did finally come clean about what we had done (years later after we were grown up and had moved away) all he did was smile, in only the way a loving father can do.



Figure 1: This picture shows the haymow and the knot holes (both naturally occurring in the siding and the artificial ones my brother and I drilled). As I recall, the three equally spaced holes in linear alignment near the center of the picture are ones we drilled in the siding to get better images of the sun. This is the "solar observatory" my brother and I used as kids to make numerous observations of sunspots and noticed their movement as the sun rotates. Note also the rope hanging down which we used to swing like Tarzan.



Submitted Articles

SAU/QCAS/Putnam Museum Logistics for the Solar Eclipse

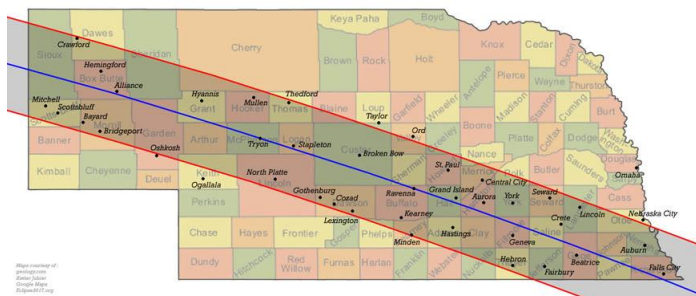
By Jeff Struve

On Saturday, May 20th, Robert and I drove to Aurora, Nebraska to attend a Sunday, May 21st, meeting with Dan Glomski of the Aurora Leadership Center and Mark Sellers of Hamilton Communications to discuss Solar Eclipse logistics.

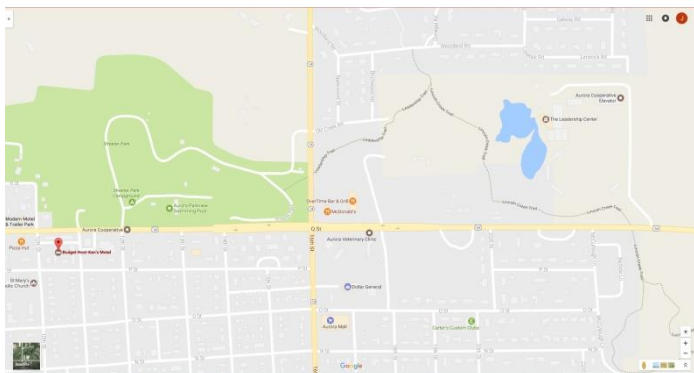
The meeting proved to be quite informative and helpful in that we were able to secure onsite parking, as well as electricity to run the gear and a private network line to facilitate the live broadcast... prior to this meeting, these 3 items were of considerable concern.

They aren't sure about the number of guests attending but are guessing between 1,500 and 3,000 from out of town. They are planning on having food available for those working the event and camping on site. Dan will let us know on the afternoon the day before the eclipse if the event is cancelled due to weather, at which time he invited us to caravan with his group North West to clear skies... in this case, there will be no guarantee that we will have internet access for broadcasting, so we will be identifying other amateur astronomers who are broadcasting the event, and make those links available for use at the Putnam, Saint Ambrose, Augustana, and other areas that expressed the desire to show our feed.

Aurora, very near the center line for the eclipse, is a boring, yet simple 6.5 hour drive off I80 from the Quad Cities... it is a small rural town with few amenities. This being said, the Leadership Center is a perfect location for the event. At the time of this writing, there were a few rooms yet available at the motel, Ken's Motel, that Robert, Craig, Mike, and I will be staying at... there are also a number of bunks available onsite at the Center.



The motel is about ¾ mile from the Center and since we are key personnel in this event will be able to park on site during the event...



The Leadership Center is in close proximity to the Aurora Co-Op and share the same entry road and parking lot. The parking, as pictured below, is reserved for folks working the event.



The below picture was taken from our set up area and is of the observation field...at the back, we will be driving between the trees to drop off and pick up our gear.



We will be setting up between and just in front of the center and right side Evergreen Trees in the below picture... the public address system will be set up between the center and left side Evergreen Tree... Power will be run from building behind the PA set up while internet will be run from the building behind our set up.



At this time, our set up will be a MallinCam Extreme with a 70mm -300mm DSLR lens set at about 85mm along with a magnetic clipped Baader Glass Solar Filter on a Dual saddle with a DSLR with a similar solar filter both mounted on a Celestron AVX mount. This set up is to broadcast (MallinCam) and take stills of the eclipse. A Revolution 2 camera will be on a separate tripod aimed at Dr. Mitchell for his narrations. The link to view the broadcast:

<https://www.youtube.com/channel/UCntLNG Of ESAwH-GW2Busq>

Gallery

4/21/17 NCRAL Pics – Jeff Struve

Friday, April 21		
1:00 PM	3:00 PM	NCRAL staff setup
3:00 PM	4:30 PM	Open registration
4:00 PM	4:30 PM	Portable out-reach planetarium demonstration #1
4:30 PM	4:45 PM	Break
4:45 PM	5:15 PM	Portable out-reach planetarium demonstration #2
5:15 PM	5:30 PM	Break
5:30 PM	6:30 PM	Dinner
6:30 PM	7:00 PM	Welcome
7:00 PM	7:45 PM	Robert Mutel - The Iowa Robotic Telescope
8:00 PM	Sun rise	Dark Sky Observing

Saturday, April 22		
8:00 AM	9:00 AM	Breakfast
9:00 AM	9:45 AM	Carl Wenning - Astronomical Bucket List
9:45 AM	10:30 AM	Armando Manduca - The Most Productive Scientific Instrument Ever Built - The History and Discoveries of the Mt. Wilson Telescope
10:30 AM	10:45 AM	Break
10:45 AM	11:00 AM	Group photo
11:00 AM	11:45 AM	Steve Kawaler - Architecture of Planetary Systems Through Host Star Variability
11:45 AM	12:45 PM	Lunch
12:45 PM	1:00 PM	Break
1:00 PM	1:45 PM	Russ Durkee - A Decade of Research with Backyard Telescopes
1:45 PM	2:30 PM	Karl Young - Measuring the Cosmic Microwave Background with Balloon-borne Telescopes
2:30 AM	2:45 PM	Break
2:45 PM	3:00 PM	Astro-Bingo
3:00 PM	3:45 PM	Dave Falkner - 500 Years of Astronomy - How the Giants of Astronomy Changed Our View of the Universe
3:45 PM	4:45 PM	Business Meeting
4:45 PM	5:30 PM	Break
5:30 PM	6:30 PM	Banquet and Awards
6:30 PM	7:30 PM	Jennifer Anderson - Experimental Impact Cratering
7:30 PM	7:45 PM	Wrap-up
7:45 PM	Sun rise	Dark Sky Observing

Sunday, April 23		
8:00 AM	9:00 AM	Breakfast
9:00 AM	11:00 AM	Check out

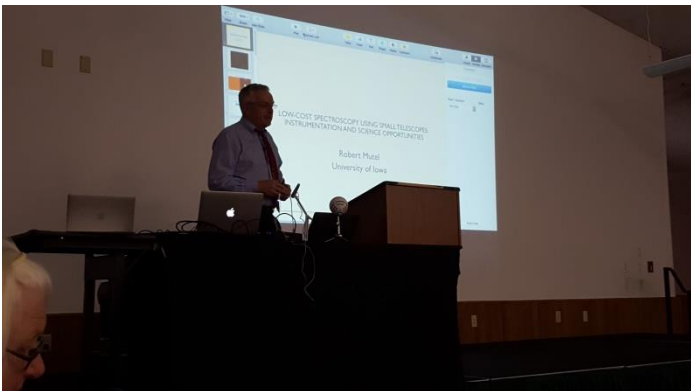
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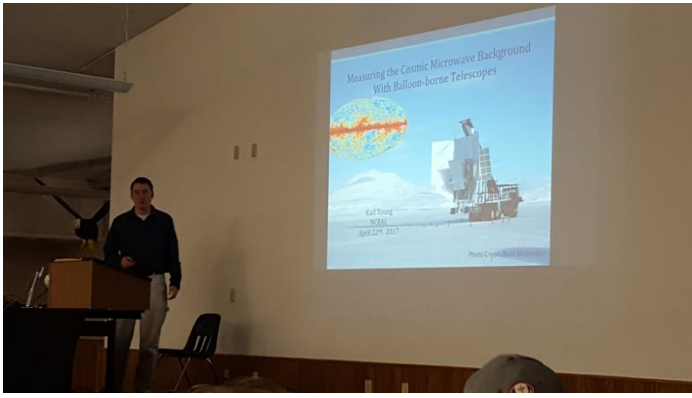
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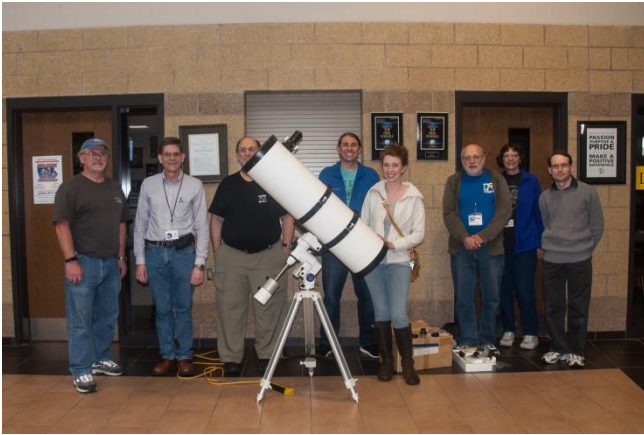
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Paul Levesque



5/13/17 Menke Public Night – Alan Sheidler



John Baker submitted the below picture that he took several years ago. NCG2903

Camera: Canon EOS 5D Mark II
Exposures: 6
Exposure time: 17-25 second manual exposures
ISO:- 25600
Processed with Photoshop



George Bailey submitted the below picture that he took on May 23rd

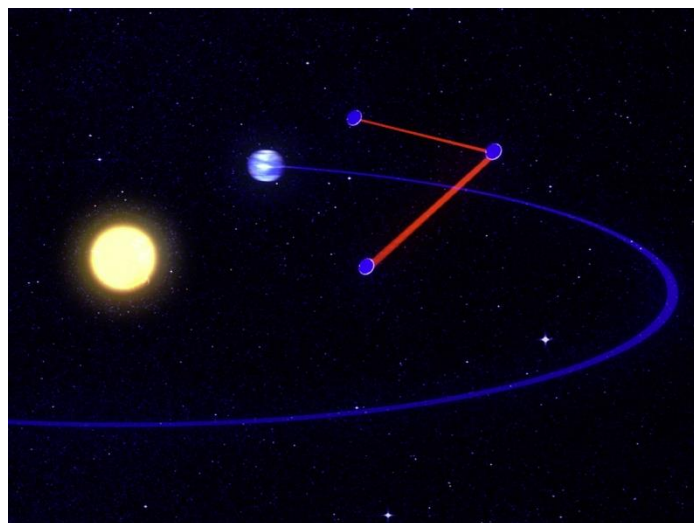
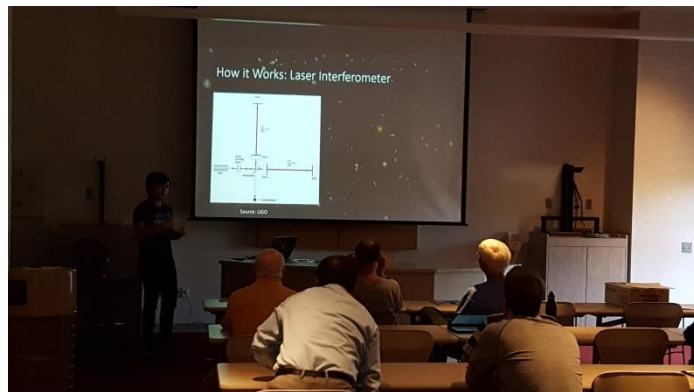
Camera: ZWO ASI2234MC
Exposures: 1800 of 12000 frames



Guest Speaker – Allen Wang

Mr. Allen Wang, a student at Iowa State from Bettendorf, gave a presentation on the LISA project at the May QCAS meeting at the Bettendorf Library at [6:30PM](#). Mr. Wang was named a Goldwater Scholar for 2017 and worked at NASA on LISA Pathfinder, which is the precursor mission to building a gravitational wave detector in space which will be called LISA. See the link below for more information about Mr. Wang.

<https://math.iastate.edu/2017/04/06/wang-named-goldwater-scholar/>

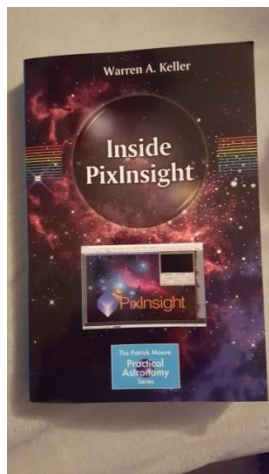


For Sale – Wanted

For Sale



– Baader Planetarium Hyperion 8-24mm Mark III Zoom Eyepiece with original box, great shape, needs cleaning (I'm afraid to clean my eyepieces as I don't want to risk damaging the glass). Great for quality outreach as you don't have to change eyepieces and it is easy to view through. Price \$175.00 Contact Jeff Struve at PwrHsePro@aol.com



– New 2nd Addn “Inside PixInsight” by Warren Keller. \$30.00 – 1 left!
Contact Jeff Struve at PwrHsePro@aol.com

I have the following from previous telescopes or for telescopes I decided not to build:

1.25" OD

Five, 72" long, 0.035" wall thickness, never used, (current new price: \$18.49), \$8 each

One, 50" long, 0.035" wall thickness, painted blue, \$6

1.25" OD - from a mid-80s Sky Designs scope

Eight, approx 1/16" wall, painted black, ends flattened, bolt at one end and hole at other, approx 44.75" center-to-center, \$7 each

1" OD

Eight, approx 1/16" wall, painted black, one end flattened, bolt at flattened end and hole at other, approx 53" center-to-center, \$6 each

Five, approx 38" long, unpainted, \$5 each

One, approx 34.75" long, \$4

One, approx 32.75 long, \$4

Various shorter lengths in 1.25" OD and 1" OD at reasonable prices.

If you've checked prices, you'll see that these are unreasonably low. I need them gone and I prefer not to scrap them.

Contact Karl Adlon at KMJA79@yahoo.com

Calendar of Events

2017

01/16/17 – Society Meeting

01/28/17 – Open House at the Jens-Wendt Observatory

02/18/17 – Menke Observatory Scouts Tour

02/20/17 – Society Meeting

02/25/17 – Open House at the Jens-Wendt Observatory

03/18/17 – Open House at the Jens-Wendt Observatory

03/20/17 – Society Meeting

03/24-25/17 – Messier Marathon at Menke Observatory

04/01/17 – Hawkeyes in Space Field Trip

04/17/17 – Society Meeting

04/21/17 – Assist PAC at the Putnam Museum

04/29/17 – Astronomy Day

04/29/17 – Open House at the Jens-Wendt Observatory

05/13/17 – Menke Observatory Public Open House

05/15/17 – Society Meeting

05/27/17 – Open House at the Jens-Wendt Observatory

06/03/17 – Menke Observatory Public Open House

06/19/17 – Society Meeting

06/24/17 – Open House at the Jens-Wendt Observatory

07/15/17 – Menke Observatory Public Open House

07/17/17 – Society Meeting

07/29/17 – Open House at the Jens-Wendt Observatory

08/12/17 – SAU/QCAS Perseid Meteor Shower Party

08/21/17 – Solar Eclipse

08/21/17 – Society Meeting

08/26/17 – Open House at the Jens-Wendt Observatory

09/18/17 – Society Meeting

09/22-24/17 – Eastern Iowa Star Party

09/23/17 – Menke Observatory Public Open House

09/30/17 – Open House at the Jens-Wendt Observatory

10/16/17 – Society Meeting

10/28/17 – Open House at the Jens-Wendt Observatory

11/18/17 – Open House at the Jens-Wendt Observatory?

11/20/17 – Society Meeting – Annual Dinner

12/16/17 – Open House at the Jens-Wendt Observatory?

12/18/17 – Society Meeting

Editor's Note:

Please help improve the substance of our newsletter by submitting articles and pictures for publication. Variety is the spice of life... be spicy!

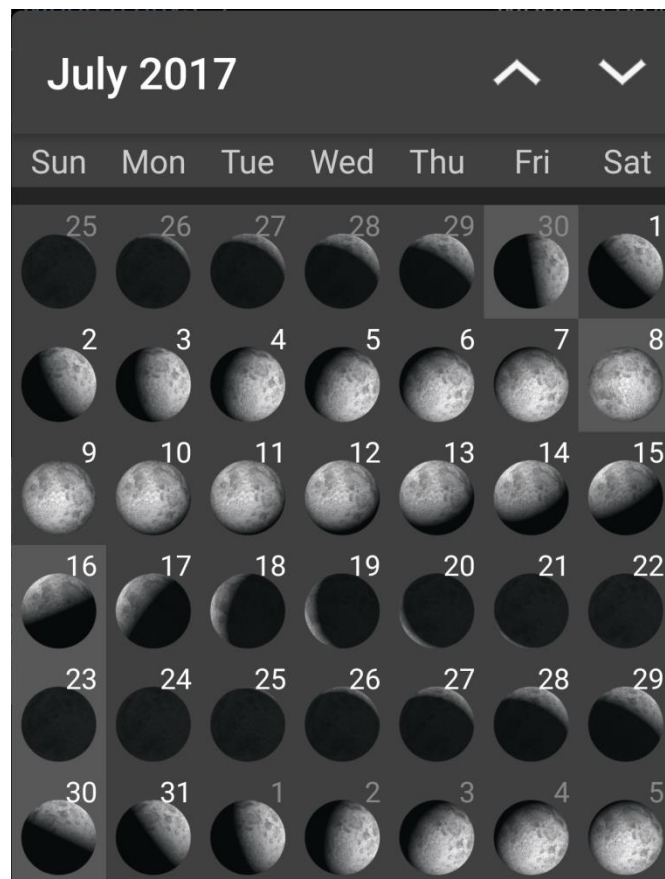
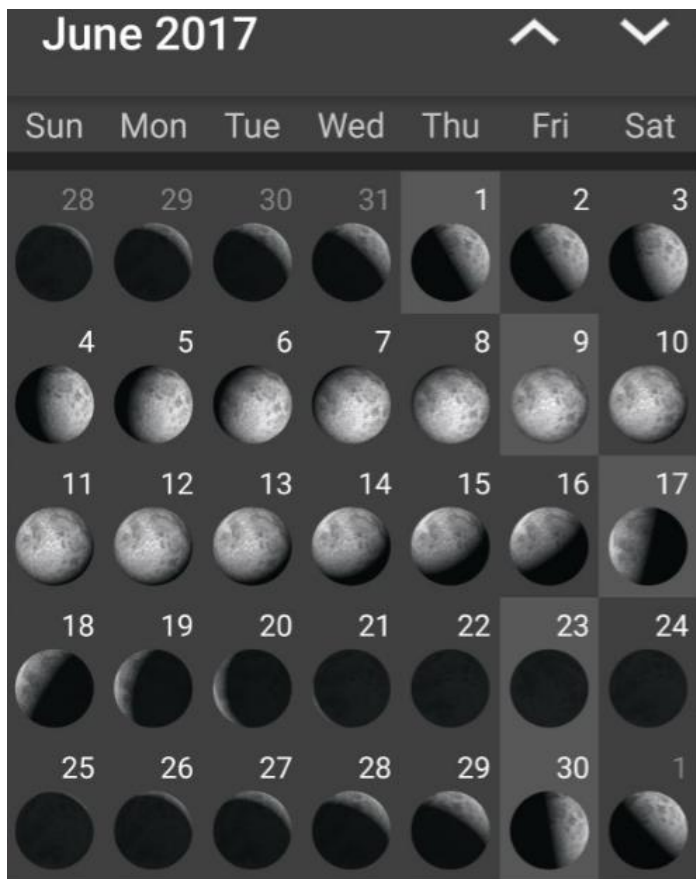
Types of articles that would really be interesting could include What's In the Sky This Month, equipment reviews, experiences you've had in astronomy, sketches you've drawn, trips you've taken to observatories or star parties, a high level overview of your favorite astronomer, movie, book or article reviews, list astronomy gear that you want to buy or sell, and of course pictures you've taken and how they were done...

If each member submitted 1 article per year we could have an incredibly varied and interesting newsletter... that is my challenge to you!

Also... Drop an email, text, or make a phone call or two... members want to get together outside of normal club events to discuss and work on our hobby!

Jeff

PS... A special thank you to Alan for being in the Spotlight, George, John, Paul and for their pics!



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Members are welcome and encouraged to submit articles for The Meridian. Submit any and all interesting items (via e-mail) to: PwrHsePro@aol.com and/or MitchellRobertC@sau.edu

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