



Newsletter of the Quad Cities Astronomical Society

www.qcas.org

SEPTEMBER 2016



Presidential Ramblings

Now that we are more than halfway through the current year and Mars is fading into the background of "heavenly" news, we look to the activities that face us as an astronomy group. QCAS' next event is the Open House at the end of the month. And on the 13th St. Ambrose is hosting a Star Party at the Menke Observatory.

After this month we will be hosting an EISP the first weekend in September and our last Open House. This will then put us up against elections for officers and a "feast" in December. By then we should be once again attending our regular meetings at the Bettendorf Library, hopefully starting in November.

At our meeting on Monday the 15th we will be discussing some opportunities to be involved and invested in astronomy outreach. Pleasant Valley High School, through its science department, is interested in forming an astronomy club this fall. The faculty member who sent the request to us wants to explore how this student astronomy club can "participate" with the QCAS. This could include as many as 40 students who have signed up and showing interest. He wants the students to "run" their club but they need some basic instruction in using telescopes. This is something we have discussed several times and will discuss again – is doing something like this part of our "charter"?

We have also been contacted by the Putnam Family Museum to determine if we want to participate in two Family Fun Nights – one in November and then in April of next year. These types of activities would not necessarily involve the entire membership but I know that the first one of these in which we participated had several of our members actively participating. There will be hundreds of students and family members invited to attend and participate. So once again we are faced with "opportunities" for involvement and need to have discussions associated with these activities to determine if or when we want to participate.

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.

Presidential Ramblings (cont'd)

Why was the QCAS formed? What was the shared interest/motivation? Does our tax exempt status somewhat "mandate" that we participate in "outreach" events? To this point we have not reached any consensus about how to respond to requests that are "outreach". I think we need to devote some time over the next couple of months to conversations about this issue and reach some resolution on it.

-Dale Hendricks, QCAS President

SPACE

That's what we're about.

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Calendar of Opportunities

++++ August +++++

Saturday, August 13
SAU Star Party @
Menke Observatory

Monday, August 15

QCAS Monthly Meeting
at the Credit Island
Lodge, 6:30 PM

Saturday, August 27

QCAS Observatory
Open House

+++ September +++

Friday-Sunday,
September 2 – 4,
Eastern Iowa Star Party
@ Menke Observatory

Monday, September 19
QCAS Monthly Meeting
at the Credit Island
Lodge, 6:30 PM –
Nominations Due

Saturday, Sept. 24

QCAS Observatory
Open House

+++ October +++

Monday, October 17
QCAS Monthly Meeting
at the Credit Island
Lodge, 6:30 PM –
Elections

+++ November +++

Monday, November 21
QCAS Monthly Meeting
at the Credit Island
Lodge, 6:30 PM

Lazy Astronomy

by Karl Adlon



Too lazy to get my equatorial mount out, I just lay the camera on its back on the patio table and my excuse is: "What do you want for 4 AM?"

This first image details are: Canon T3i; 50mm f1.8 lens; stack of 13 frames using Deep Sky Stacker; 6 sec each; ISO 6400; camera was on a table pointing up; Port Byron, IL; no tracking; no mount.



This second image is the same except Deep Sky Stacker's 2X drizzle was used.

QCAS Correspondence:

Please contact the society at: P.O. Box 3706, Davenport, IA, 52808.

Members are welcome and encouraged to submit articles for The Meridian. Submit any and all interesting items (via e-mail) to: Karl Adlon, Secretary.

QCAS Officers and Contacts:

Officers

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Secretary: Karl Adlon
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Stolen from Spacebook

Are you knowledgeable about baseball? I only ask because this is a double steal. These articles are taken from the QC Astronomy Facebook page. And "Spacebook" is from "Sevенеves" and is the social media used by characters in the book.

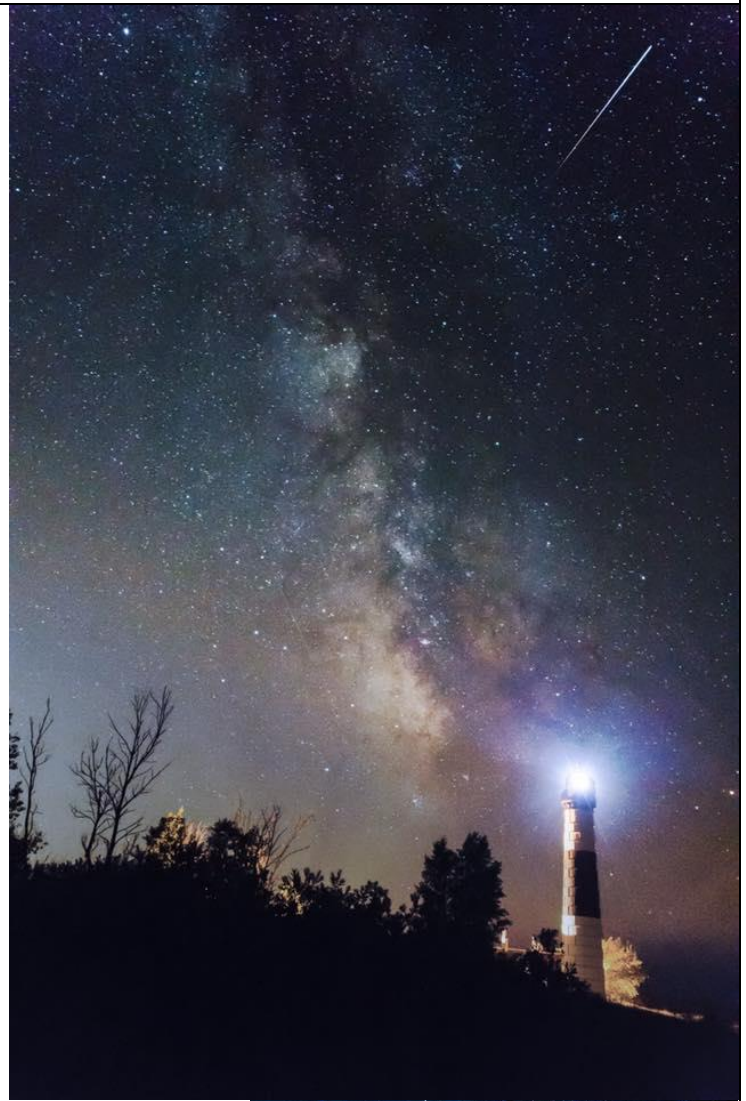
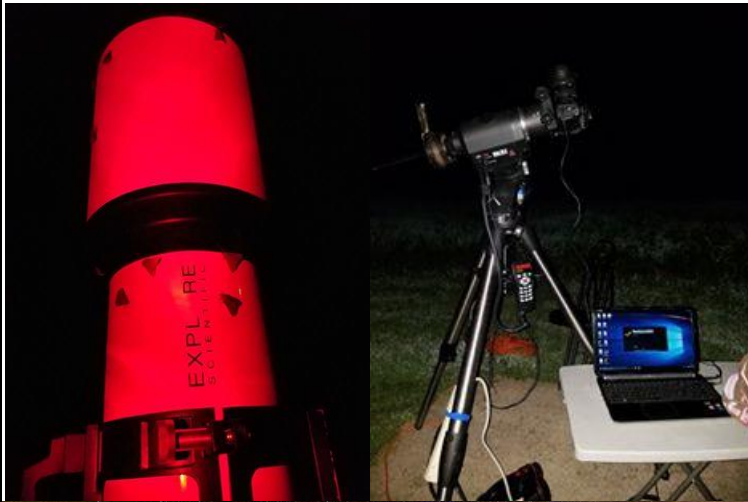
by Matt Neilssen

Spent last night out at Menke with Craig Cox. Amateur astro is a constant learning process and last night was no exception. First, I learned that sometimes 40% DEET just isn't enough. Second, that moths love telescopes and their eyes are super reflective. Third, that it is basically impossible to focus an 11mm lens with a light pollution filter on it. Lastly, that I'm really gonna have to figure out how to use the aforementioned combination if I wanna get nice wide angles from anywhere near the Quad Cities.

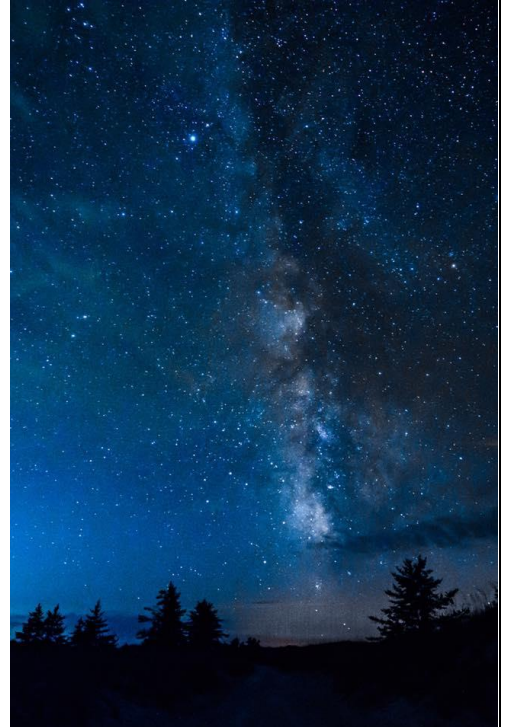
Have any of you gotten any astronomy done lately? How did it go?

Replies back to Matt:

- ★ Jeff: A Thermacell should keep the mosquitoes away. Walmart had them. (I saw them in Lowes Moline –Karl
- ★ Jeff also commented that he purchased a Polemaster and installed it but hasn't been able to find time and skies to try it out.



Here are a couple pictures I took of the Milky Way in the state park in Ludington, Michigan. The lighthouse is the Big Sable Lighthouse.
-Mike Umbrello



2016 Eastern Iowa Star Party

As you probably know, the 2016 Eastern Iowa Star Party will be held at the St. Ambrose University's Menke Observatory facility, just outside of Dixon, Iowa from September 2nd through September 4th. A number of amateur astronomers will also be staying on a third night.

Along with the observing/imaging activities at night, other activities include guest speakers from the Popular Astronomy Club, Cedar Amateur Astronomers, and the Quad Cities Astronomical Society as well as tours of the Menke facility and the PACMo, and solar viewing during the day. There will be an outside area set up for gathering to socialize and swap stories and items. A number of QCAS members have graciously donated items and money to support this free event so we will be also be giving away a number of door prizes which includes a new Televue eyepiece.

Beverages and munchies will be available (donations welcome) throughout the event, and we will serve chili at midnight on Friday. Meals throughout the event can be purchased in Dixon via your visit to the Dixon American Legion. We will have a charcoal grill set up at the east parking area on Saturday night for you to share for a midnight grilling session. This is a "bring your own dog" event.

We have secured access to the camp grounds bunk house and shower facility called the "Owls' Nest"... we have 14 bunks available on a first come first serve basis. This co-ed facility also houses a restroom and individual showers, again, donations are welcome.

If you wish to leave the site for an extended period of time... for meals, going home to sleep, or have other things to attend to... you can leave your gear set up (but covered) and we will have folks on site monitoring the observation/imaging area.

For those club members that have strayed from the club, this event is the perfect opportunity to practice your hobby and become more active in the social aspects of the hobby. It is also an opportunity for all those not overly familiar with a formal star party to get a taste of what larger star parties are like... who knows, maybe you'll start doing a bit of traveling to attend some of the more well-known and large events such as the Nebraska Star Party, the Oakie Tex Star Party, and the Florida Winter Star Party...

Attendance is by registration and there are limited spots available. Registration dead line is August 15th. If you do not have a registration form, send an email to Jeff Struve at PwrHsePro@aol.com advising of your wish to participate, and the form and other information will be sent to you.

Registration forms will also be available at our August 15th Meeting.

Astronotes

- ★ Quote of the Month:
"If you thought that science was certain - well, that is just an error on your part" -Richard Feynman
- ★ I had to give prominence to Mike's very, very nice image with the lighthouse and meteor.
- ★ 2028 or later – that's the current estimate for how long the Hubble Space Telescope will remain in orbit unless it is de-orbited or boosted to a higher orbit.

Classifieds

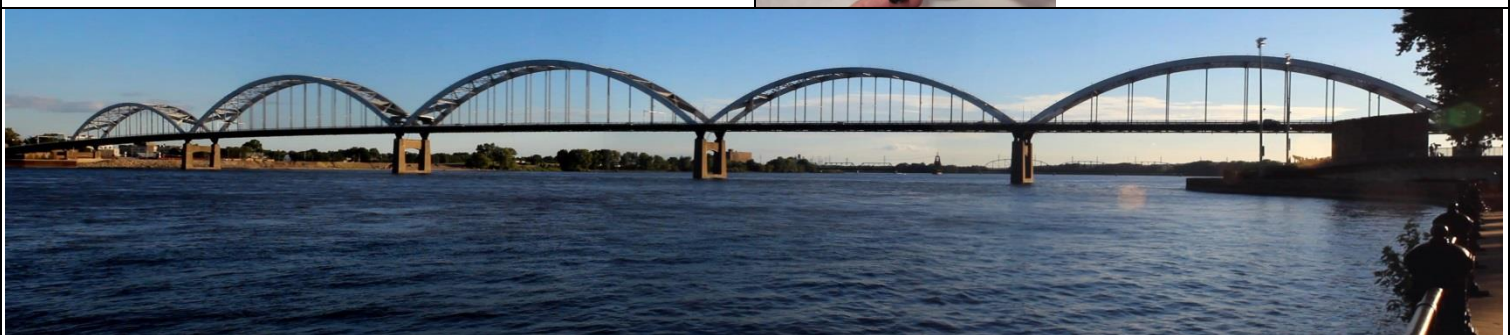
R&P Focuser

Manufacturer unknown. I only have the 1-1/4" collar as shown. I'm not the original owner. \$15. -Karl Adlon



10" Mirror Cell

Manufacturer unknown. I'm not the original owner. \$35. -Karl Adlon



Created from a video pan using Image Composition Editor –a free Microsoft program. It can also stitch adjacent images (like astrophotos) into a merged image. Give it a try!

Achieving Good Polar Alignment

By Mike Ombrello

I am a photographer and have a desire to take Milky Way and deep sky images. I can address the Milky Way images, with my existing equipment - using a wide angle lens for 20-30 second exposures without star trailing. However, deep sky images are a different matter - they require the ability to track with the earth's rotation. This is what got me interested in astronomy - and more specifically in astrophotography. I am new to astronomy and astrophotography, purchasing my telescope (an Explore Scientific ED127 Triplet APO Refractor) and mount (Losmandy G11 with Gemini 2 Goto) within the past 120 days. One of the observations I quickly made about this hobby is that it will consume all the money you can throw at it and ask for more. So I decided that I needed to get my arms around the capabilities and limitations of what I already had - without throwing more money at it.

The biggest challenge I was facing was taking exposures of 3-5 minutes, without trailing stars. I would diligently do my polar alignment (with three stars), using the Losmandy polar scope, but found that I was getting trails on stars after about 2-3 minutes of exposure. Researching the different techniques, I discovered that Drift Alignment was the preferred method of polar aligning, with accuracy up to 2 arc minutes (I would guess that I was probably in the neighborhood of 10 arc minutes using the Losmandy polar scope). I tried Drift Alignment on a number of occasions, but found that it was extremely time consuming - eating up a significant amount of the time I had available to be under the stars for the evening.

A fellow astronomer (and member of the QCAS and PAC - Jeff Struve) told me about a device that he had heard of that was easy to use and provides accuracy up to 30 arc seconds. I did some reading on the product (PoleMaster) and found nothing but favorable reviews and comments. I took the plunge and purchased the PoleMaster camera and attaching hardware for the Losmandy mount, as well as downloading the software and device driver for my Surface Pro tablet.

Well the publicized 5 minutes to install and get it up and running was a little understated - it actually took me about 25 minutes - though most of this was due to the learning curve - understanding what was being asked. I actually started the alignment routine over because of a mistake I had made. The software used the PoleMaster camera to find the stars needed to do the alignment. The actual instructions for using the PoleMaster system are found on the internet, in video form - basically it goes through the process of finding the celestial pole and then finds the axis for

the mount. Following the instructions in the software, you use your hardware adjusting bolts (altitude and azimuth), to place the mount axis on the celestial pole. You are done.

After completing the installation and alignment, I was surprised that I was now able to take the 3 minute exposures that I desired without star trailing. I had not pushed the exposure time to see where the threshold actually is for star trailing. But this has provided me what I needed to take 3-5 minute exposures without having to purchase auto guiding gear.

The next logical step for me was to determine if I could improve on the 3-5 minute exposure times, without star trailing. On the next night out, which was very humid and windy, I set up the PoleMaster system (in less than 5 minutes). I took my time in following the software and doing the alignments, using the arrow keys (instead of the touch pad) on my Surface Pro to fine tune the placement of the template on the sky. I mounted my DSLR. I was able to take 8 minute exposures without any star trails and just the faintest star trails were evident on a 10 minute exposure - all without auto guiding.

The PoleMaster system is definitely worth every penny I spent on it - providing what I have not been able to achieve previously (Good Polar Alignment) - without spending a significant amount of time setting up.



Above is the PoleMaster camera and at right it is shown attached to Jeff's EQ-G mount. The red collar is specific to the mount design, making the camera transferrable from one mount to another.

