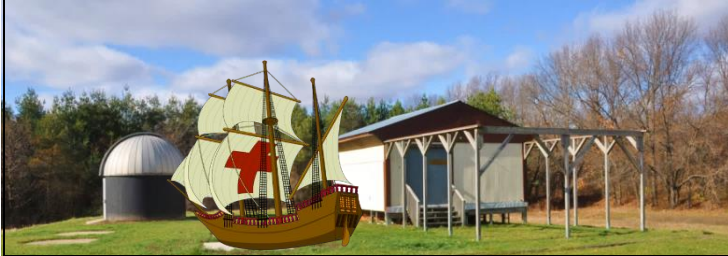


# THE MERIDIAN

Newsletter of the  
Quad Cities Astronomical  
Society  
[www.qcas.org](http://www.qcas.org)



**APRIL 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!

We had 15 in attendance at our March meeting which was held at the Bettendorf High School... Peter Bruecken and Chris Like attended as well... this was a meeting for the books!

The meeting started promptly at 6:30 and then at 7:00, Peter and Chris led us to the planetarium where they ran the new system through its paces... very, very impressive! I've included a few pictures taken with my cell phone, but they obviously don't do justice!

Although the meeting was kept short, we had great discussion... remember, we need volunteers to help PAC at the Putnam museum on 4/21... that would be Solar in the afternoon and evening time viewing help are both being sought! Please email me if you can attend so I can notify Alan... I believe free pizza may be involved!

As of this writing, it looks like the Messier Marathon will be cancelled, or postponed at best, due to weather... RATS!

We still can take participants for the 4/01 field trip to Hawkeyes in Space and to the CAA Eastern Iowa Observatory... let me know ASAP! I have an article in this edition of the Meridian about this...

We are working with Bettendorf High School on holding our 4/29 Astronomy Day solar activities at their location and inviting folks out to Sherman Park for that evening's public open... I'm hoping all of you can participate in this event... it should be a lot of fun!

We had 6 members meet after the meeting at the Village Inn on Elmore and 53<sup>rd</sup> in Davenport... Karl Adlon, George Bailey, Craig Cox, Mike Dannenfeldt, Mike Ombrello, Jeff Struve... great camaraderie!

See you back at the Bettendorf Library for our April meeting!

Clear Skies!  
Jeff

## Last Society Meeting Minutes

### **Date/Time Location**

6:30 PM on Monday, March 20<sup>th</sup>  
Bettendorf High School Commons

### **Attendance**

Peter Bruecken (BHS), Chris Like (BHS), Jeff Struve, George Bailey, Craig Cox, Paul Levesque, Mike Ombrello, Matt Neilssen, Steve VanHyfte, Ken Boquist, Alan Sheidler, Sara Sheidler, Karl Adlon, Dave Ruddy, Mike Dannenfeldt

### **Presentations**

- Karl Adlon talked about the DSLR Lens adapter he bought for his ZWO camera.
- Craig Cox talked about his new ES 16" dob.
- Peter Bruecken and Chris Like gave an incredible demonstration of the new digitally enhanced planetarium... We watched a program on dark matter, which was followed by Chris demonstrating the abilities of the facility... very nice!

### **Treasurers Report**

- Matt provided a brief Treasurer's Report... The bank balance as of 3/20/17 was \$4,322.93 The report was voted on and passed.
- Matt advised that the utility bill base fee at the observatory has doubled and that our membership fees barely cover the cost.
- Please check with your places of employment 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 February Minutes as per the March Meridian passed.

## Old Business

- Mike Ombrello, Craig Cox and Jeff Struve worked on the broadcasting process.
- Jeff Struve, Craig Cox, and Mike Ombrello went to Jens-Wendt for the March 18<sup>th</sup> public open house. Craig set up his new 16" Dob, Mike his 127mm Triplet, and Jeff did a little all sky videoing with his ZWO color camera.
- Jeff advised that the 3/24-25 Messier Marathon had 10 people registered, but the event would more than likely be cancelled due to weather.
- 4/1 Hawkeyes in Space and CAA – 7 are registered... Ian Spangenberg is going to try to set up a tour guide for the museum... if you wish to attend, please contact Jeff ASAP!

## New Business

- 4/21 Putnam Museum – PAC will be participating in a family night event at the Putnam on 4/21 and has requested our help in setting up scopes for public viewing. This can be either solar viewing that afternoon, night viewing that evening, or both. Jeff and Craig will be at NCRAL, George Bailey, Karl Adlon, and Matt Neilssen will be checking their calendars to see if they can help out. PAC said they would have QCAS Trifolds available if made available. Please let Jeff know if you can help out.
- 4/29 Astronomy Day – Jeff is still waiting for the City of Davenport to comitt to our use of the levy for this ctivity, however, we are also working with Bettendorf High School to hold the event there. We are hoping that all members can attend this event.
- PAC is preparing a field trip to Yerkes Observatory and has invited us to attend... more later!

## Next Society Meeting

### Date/Time Location

6:30 PM on Monday, April 17<sup>h</sup>  
The Bettendorf Public Library –

### April Presentation

George Bailey will talk about his new ZWO camera

Jeff Struve will pass around his Paracorr 2 and ZWO ADC

For our April 17<sup>th</sup> meeting, Christian Allen will be giving us a talk on weather forecasting, and how we can be a little more attuned to understanding forecasts for our use in astronomy... Don't miss it!

At our May 15<sup>th</sup> meeting, Jim Rutenbeck will be giving a talk on the 2017 Winter Star Party and other recent star parties... we can at least live vicariously!

## New Business

- We need to further discuss logistics of attending the Solar Exposition in St. Louis

## Last Board Meeting Minutes

### Date/Time Location

6:30 PM on Thursday, March 6<sup>th</sup>  
The Village Inn on Elmore and 53<sup>rd</sup> in Davenport, IA

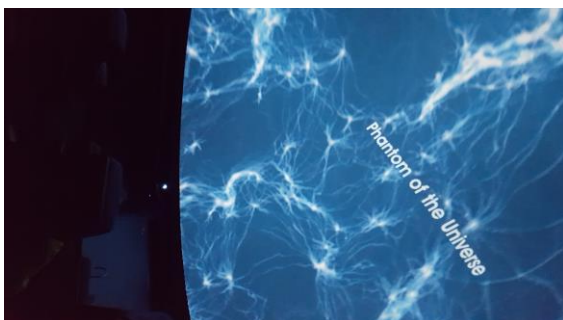
### Attendance

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

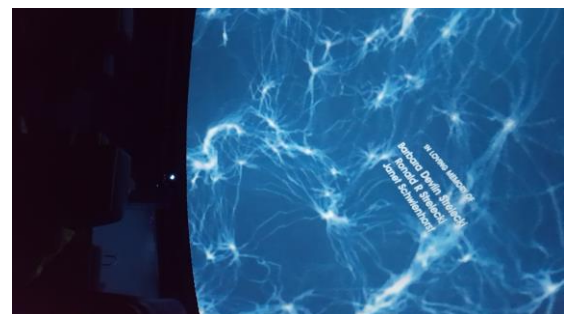
### Agenda

#### Primary Topics

- 2/25 Public Open House
  - Craig and Jeff were there... 0 guests
- 3/24-26 Messier Marathon
  - Jeff sent reminders out and has 11 replies to date.
  - Dave sent Jeff links to a list of rules and a list of objects in the order that they should be observed.
- 4/01 Hawkeyes in Space Fieldtrip
  - PAC and QCAS will meet at noon for lunch, visit museum from 2:00 – 3:30, visit CAA from 4:00... Pizza/Observing/Imaging?
  - So far 7 people for 4/01, 3 for 4/08, and 4 for 5/06
- 4/21 Putnam Museum
  - Offer to the Society to see if anyone can attend and bring a telescope for solar viewing.
- 4/29 Astronomy Day
  - We need to check with the City of Davenport to use the Davenport Levy and electricity for the day time event.
  - Put together flyers inviting folks out to Sherman Park for that night's Public Open.
  - We need to invite PAC... maybe Alan can do this
- 8/12 Meteor Shower Party
  - Matt will make initial contact with Davenport about using the soccer field.
- Web Site
  - Mike O and Matt are still working on the proper tools to build the new site. Mike has a good start on how it will look and what features it will have.
  - We need access to the web and Facebook to post our calendar and cancellations.
  - Matt has secured hosting for the new site... Private hosting via QC Total Tech at no charge... use Matts domain for testing
- Jeff and Matt are nearly finished with the first pass of the Bylaws.



BHS Planetarium



BHS Planetarium

## 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.
  - Public Nights
    - Make signs reminding public to shut off lights and park in the side lot...
    - Build trifold with info, membership form, and astronomy courtesies.
  - 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
  - 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?
    - Dale will preside at the Putnam, SAU personnel will preside at SAU
    - Reschedule 8/21 Society meeting
  - 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
    - Jeff asked Dale to send the membership card template to Matt and the business card template to Robert
    - 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

## Next Board Meeting

### **Date/Time Location**

Unless otherwise noted, Board Meetings will be held on the 1<sup>st</sup> Monday of the month at 6:30 PM at the Village Inn Restaurant on Elmore and 53<sup>rd</sup> 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 4/29 Astronomy Day
- Discuss the new web site
- Discuss the 8/12 Meteor Shower Party
- Discuss the 8
- Discuss the bylaws

### **New Business**

- 2017 Biennial Report
- We need to talk to the caretaker at Menke Observatory about the club's access to the facility.
- We need to further discuss logistics of attending the Solar Exposition in St. Louis
- 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



Easter Bunny

## Member Spotlight

By Paul Levesque

As an addendum to the following eclipse scouting item, here's a little bit more about me, one of your newest members.

About my last name: It's of French origin, and the "S" is silent, just as it is in "Illinois" and "Des Moines." Levesque is actually a fairly common name back in New England, my home territory.

I first came to the Midwest in the late 1970s, when I attended the Writers Workshop at the University of Iowa and earned a Masters in English. I returned to New England but eventually made my way back to the Midwest via employment at Rock Island Arsenal.

For many years, I edited the Arsenal's installation newspaper, "The Target." I may use my writing and editing skills to submit occasional items to your society's publication, and I'm willing to assist in your publicity efforts, if you wish that is.

I'm an English major, not a scientist, so the mathematical and technical aspects of astronomy are way over my head. Still, it's a subject I took interest in back in high school and college. There was a time when I worked late at night and would sometimes walk around in the dark, looking up at the stars. I became pretty good at identifying the constellations. I've read a number of books written for a popular audience on astronomy and still have some of these volumes in my personal library.

Like others with a full head of gray hair, I remember the manned space missions of the 1960s, and how our Catholic school teachers would roll a black-and-white TV into the classroom so we could watch the astronauts blast off from Cape Canaveral, with play-by-play provided by Walter Cronkite.

I'm fascinated by the stories and folklore behind the objects in the night sky, and I'm also taken by the sheer beauty found in the photos taken of distant galaxies and nebulae. The incredibly vast size and scope of the known universe boggles my small, simple mind.

Finally, I find it interesting that amateur astronomers, such as yourselves, can make real contributions to astronomical research through your observations and collection of data. I won't contribute much in this area, but I hope I can bring something to the table and help you tell your story to the broader public in the Quad Cities. Keep looking up!

## Submitted Articles

### My eclipse scouting mission

#### (and how I ended up on a rooftop in Mexico, Missouri)

By Paul Levesque

Please allow me to introduce myself: I just joined your organization, and I primarily did so because of my interest in – or, more accurately, obsession with – the All-American Total Solar Eclipse that will occur on Monday, August 21, 2017.

I am a native of New England (Go Patriots!), born in the mill city of Fall River, Massachusetts, and raised in the suburban town of Tiverton, Rhode Island. I found my way to the Quad Cities as a civilian employee of the U.S. Army who's worked at Rock Island Arsenal since November 1986. I've always found astronomy to be a fascinating subject and have been to a few of the society's star parties in the past.

In March 1970, while I was a freshman in high school, the path of a total solar eclipse skirted the coast of southern New England before making landfall in easternmost Canada. This event is famously mentioned in Carly Simon's hit single, "You're So Vain." Since I had no Learjet nor any other means of making it to Nova Scotia, I just missed seeing totality.

I also remember the annular eclipse that passed over the Quad Cities in May 1994, on a crystal-clear day. The effect it created was both eerie and beautiful, and made me want to see what would happen when the sun was completely obscured by the moon's shadow.

"Seeing a Total Solar Eclipse" had made it onto my bucket list, and was still there a few years ago when I celebrated my 60<sup>th</sup> birthday. Checking items off my bucket list had taken on some urgency, and it wasn't long after that milestone birthday when I realized that a total solar eclipse would soon be occurring in a location well with driving distance of my home in Moline.

Experiencing the eclipse then became not just something that I wanted to do, but something that I *had* to do, and would go to all reasonable lengths to accomplish.

My beautiful wife Dawn, who I married after I moved here, works for John Deere, and her job sometimes calls on her to travel. Dutiful spouse that I am, I usually take her to and from the airport for these trips.

One of her recent trips was scheduled to begin on November 11, 2016, leaving on the 6 a.m. flight. This day happened to be a federal holiday (Veterans Day) and thus a day off for me.

I decided that, weather permitting, this would be a good day for an eclipse scouting mission. The plan was to drop Dawn at the airport sometime before 5 a.m. and then keep driving down to Missouri, to a place that would be within the path of totality. There really is no fast or direct way to get there from here, but a little map research showed that one of the nearest spots as the car drove would be the town of Moberly, Missouri – per MapQuest, a little over four hours and 230 miles of driving time and distance away.

November 11 was forecast to be a sunny, pleasant late autumn day throughout the Midwest. All the stars were aligned favorably, and the solo eclipse scouting mission was on.

I drove away from the airport in pitch dark, slowly seeing the sky brighten as I headed south through Macomb and Quincy, over the river and into Missouri. By mid-morning, I had made it to Moberly. This was encouraging, as I knew that totality would occur here sometime around 1:15 p.m., meaning that I could make it to the path from home on Eclipse Day provided I left early enough.

After wandering around a well-kept city park on the edge of town, I headed into the downtown area. After wandering around there for a bit, I stopped into a local restaurant for a bite to eat.

When the young lady serving as my waitress was done taking my order, I said, "Excuse me, but are you aware that this town is in the path of a total eclipse of the sun that will happen next August?"

She looked at me with a puzzled look on her face and said, "Uh, are you joking?"

"No, I'm not," I said, and when she came back with my food I showed her a map of the eclipse I had pulled up on my smartphone, showing the path of the totality through Moberly.

"Uh, okay," she said, and I asked a fellow diner at a nearby table if he was aware of the upcoming eclipse.

"Yeah, I think I heard something about that," he said. He seemed sincere but could have just been humoring me.

I was sure to leave a generous tip. As I left, I said to the waitress, who was now behind the counter, "The eclipse is going to bring a lot of people to this town, so you'd better be ready." She replied, "Thanks," still not sounding completely convinced.

As I walked back to my vehicle along the streets of Moberly, I spotted the public library, and wanted to go in to see if eclipse awareness was any higher there. Unfortunately, the library was closed for the holiday, so I moved on.

It wasn't even noon yet when I hit the road again, leaving me with plenty of daylight to play with. I didn't want to head straight home, so I drove south, then east, until I found myself in the town of Mexico, Missouri.

I drove past what appeared to be a Victorian-era mansion, with a sign in front that said, "Audrain County Historical Museum." After walking about the grounds (which included other buildings such as a one-room schoolhouse), I entered the museum, paid my fee to the nice lady in front, and went to see the displays, which centered around Mexico's past as a center for the breeding of saddle horses and production of bricks, and also featured some letters hand-written by Harry Truman.

I must have been their first customer of the day, because the lady who took my fee came in behind me to turn on the lights. As she did, I asked her, "Are you aware that this town is in the path of a total eclipse of the sun that will happen next August?"

"Well, no," she said, "but that's interesting." She came back a few minutes later and said, "These ladies in the back would like to talk to you about the eclipse."

Soon after, I went to the back room, introduced myself, and spoke about how I had come over 200 miles to their museum, all because of the upcoming eclipse and my search for a place to observe it. The lady who was the director of the museum then said, "We can go up on the roof if you'd like."

Yes, I would like, so we went up two flights of stairs, then up a narrow stairway into the attic, and then up a ladder to a hatch that opened onto a small, flat portion of metal-sheathed roof. This is what is commonly referred to as a "widow's watch" in New England, and perhaps in the Midwest as well.

I asked my new friend to point in the direction of Columbia, roughly the heading of the eclipse path. The direction offered a clear view. I had – maybe, hopefully – found a near-exclusive eclipse viewing spot.

I hung around for a while longer, thanked the nice ladies for their hospitality, and headed out of Mexico, past large, now-vacant brick kilns. I was amazed at what had just happened to me.

I drove back via the Iowa side, through Keokuk, Burlington and Buffalo, which seemed to take about the same amount of time as the drive down. After stopping for some take-out, I arrived home a little after 7 p.m., a bit road-weary but totally pleased with the success of my eclipse scouting mission – and more eclipse-obsessed than ever.

The approaching eclipse did solve my annual Christmas gift dilemma, since I already have about everything I need and so never know what to ask for. But my 2016 letter to Santa Claus requested that he bring anything and everything eclipse-related. Sure enough, I received eclipse books, eclipse glasses, an eclipse poster, and an eclipse t-shirt, which I wore to my first QC Astronomical Society meeting.

Reading the books made me aware that eclipse obsession can get a grip on you; there are people who've experienced more than 20 solar eclipses and have traveled to very remote places just to see the sun blotted out of sky for a few minutes. Apparently, it's totally worth it, because there's nothing else like it.

I've become an eclipse evangelist, spreading the word of this awesome event happening close by and soon, perhaps somewhat annoying my family members and friends but also persuading many of them that they, too, need to see the eclipse for themselves.

Since then, we've succeeded in obtaining lodging near Linn, Missouri, in a rental house that I've actually stayed in before. Linn is in the path of totality, and also happens to be in the area where my mother-in-law was born and raised. Believe it or not, she'll turn 90 years old in August 2017.

If I'm reading the map correctly, Linn will enjoy nearly two and one-half minutes of totality. That's about as good as anywhere and more than a minute longer than Mexico, which is on the northern edge of the total eclipse path.

So, I probably won't be on the rooftop in Mexico for the eclipse, but I know that I need to be flexible and plan for uncertain weather and viewing conditions. More importantly, I know for sure that, barring the unforeseeable, I will be in the shadow of the moon on August 21.

I may make another eclipse scouting mission in April – a good time to do it because, as readers of this publication should know, the sun will be in about the same position then as it will be in August. I guess I don't really need to do this but – well, why not? Maybe I'll find out if that waitress in Moberly now believes what I told her.

If I go, I can report back if you'd wish. I hope that you share my enthusiasm about the eclipse, and I hope the eclipse raises public awareness of the wonders found in the sky above us. All we need to do is look up.



A mural in downtown Moberly, Missouri, where awareness that a total solar eclipse is coming soon to this town appeared low, at least as of last November.



Here I am atop the widow's walk at the Audrain County Historical Museum in Mexico, Missouri. If my calculations are correct, the moon's shadow will come roughly from the direction behind me.



BHS Planetarium

## Articles regarding the 4/21 Field Trip:



It turns out there is something Herky the Hawk can smile proudly about: the University of Iowa's longstanding ties to the U.S. space program.

A new "Hawkeyes in Space" exhibit is opening Thursday at the Old Capitol Museum, and the logo features a gleeful historic image of the UI mascot sitting astride Explorer I, the first satellite the U.S. successfully launched into orbit.

Much of the craft and the instruments were designed and constructed by the late James Van Allen and other researchers at UI, and the 1958 mission eventually led to the discovery of the radiation belts that later were named in Van Allen's honor.

The exhibit's logo is a slightly updated version of UI's official homecoming pin from 1958, which celebrated the successful launch nine months earlier. That year's Homecoming corn sculpture also depicted Herky astride a rocket ready to explore the solar system.

"The whole campus must have been abuzz with the success of their physics department and the role that the campus played in getting the first U.S. satellite into space," said Trina Roberts, director of the Pentacrest Museums at UI.

The new exhibit — which coincidentally kicks off on the 50th anniversary of the first "Star Trek" episode — tries to recapture the earlier era's thrill of discovery while condensing 60-plus years' worth of UI-inspired space physics and astronomy research into a few panels and captions.

"Until 1975, the majority of the instruments — and even some of the spacecraft — were built right here," said Cornelia Lang, an associate professor in the UI Department of Physics and Astronomy. "... We really want to show that these contributions were not just from one person working alone in a white lab coat. They were made by whole teams of people working together."



This image shows the University of Iowa's official pin for Homecoming in 1958.

(Photo: University of Iowa Special Collections)

UI faculty members, graduate students and alumni have played a role in more than 100 spacecraft over the past six decades — the first predating the creation of the National Aeronautics and Space Administration in 1958. Van Allen died in 2006, but UI-created instruments and equipment continue to provide NASA scientists with data from Voyager, the Mars Atmosphere and Volatile Evolution spacecraft (MAVEN), Juno and the Van Allen Probes.



(Photo: Special to the Press-Citizen)

The exhibit is designed to showcase the important role UI researchers, including undergraduate students, continue to play in helping humanity go where no one has gone before.

"This research didn't stop with Van Allen," said Lang. "This remains an active, vibrant field. There is a whole new generation of people carrying on this legacy."

"Hawkeyes in Space" kicks off at 5 p.m. Thursday with an opening reception. It will run in the museum's Hanson Humanities Galley until May 2017.



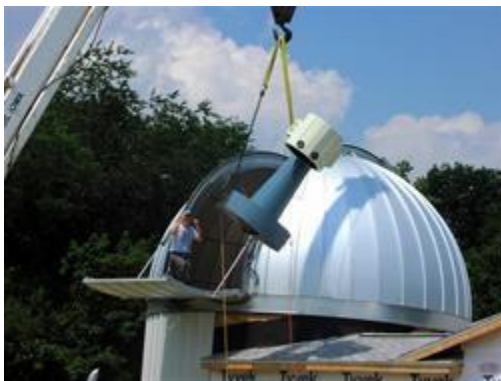
Reach Jeff Charis-Carlson at [jcharisc@press-citizen.com](mailto:jcharisc@press-citizen.com) at 319-887-5435. Follow him at [@JeffCharis](https://twitter.com/JeffCharis).

## Eastern Iowa Observatory & Learning Center



A relationship established in the early 1980s celebrated its special partnership in 2008 with the grand opening of the Eastern Iowa Observatory and Learning Center in Linn County. The Cedar Amateur Astronomers and the Linn County Conservation Board began working in tandem in 1983 out of a common interest to raise public awareness about astronomy through local educational programs. For nearly a quarter of a century, this partnership has flourished and blossomed – sustained by visionary leadership with support & participation from the Greater Cedar Rapids and Linn County communities.

By making available land and support facilities at their Palisades-Dows Preserve, the Conservation Board provided the opportunity for the Astronomers to install their first permanent domed structure and telescope in 1987. This was followed in the mid-1990s with a second facility containing a larger telescope. Over the past two and a half decades, the Cedar Amateur Astronomers have provided hundreds of free public programs and education sessions at the Pal-Dows Preserve and other Linn County Conservation venues.



In 2003, the Cedar Amateur Astronomers were the recipient of a gracious donation from the University of Iowa of a rare and valuable cassegrain telescope made by the Boller & Chivens division of Perkin-Elmer Corp. The research-quality telescope has a 24-inch mirror, and upon installation in a new location will have an estimated value over \$250,000.

The “new location” would be the premier public astronomy site in Iowa....the Eastern Iowa Observatory & Learning Center. As a 501(c)(3) organization, the C.A.A. launched a capital campaign in 2004 to raise the \$700,000+ to construct the necessary support facility for the telescope(s), education programs and administration.

In partnership with the Linn County Conservation Board, the project was identified early in 2006 as a priority for the “15 in 5 – Community Planning Process” in the Greater Linn County area. In June of 2006, the effort received statewide support with a \$250,000 Community Attraction and Tourism (CAT) Grant through the VISION IOWA program which “.....provides financial incentives to communities for the construction of recreational, cultural, educational or entertainment facilities that enhance the quality of life in Iowa”. Coupled with a \$25,000 infusion from the Linn County Board of Supervisors, the Astronomers successfully raised the remaining \$500,000 in private donations to fund the project to completion. The facility was gifted to Linn County in late 2007 for management by the Conservation Board.

The Eastern Iowa Observatory & Learning Center (EIOLC) is located in southern Linn County in Palisades-Dows Preserve located along Ivanhoe Road, [click here for a map](#).

The EIOLC is open for the public programs, as well as by scheduling an event with the members of the Cedar Amateur Astronomers via the link: [CONTACT THE CEDAR AMATEUR ASTRONMERS](#)



Open Every Saturday - The observatory will be open every Saturday starting about at sunset and running for about 2 hours. Individuals and families, just drop in. No cost, but we appreciate donations. If you have a group, please set up a group visit.

- See more at:

<http://www.mycountyparks.com/county/linn/park/eastern-iowa-observatory-learning-center.aspx#sthash.Bm2kEO1S.dpuf>

## Coma and Coma Correctors

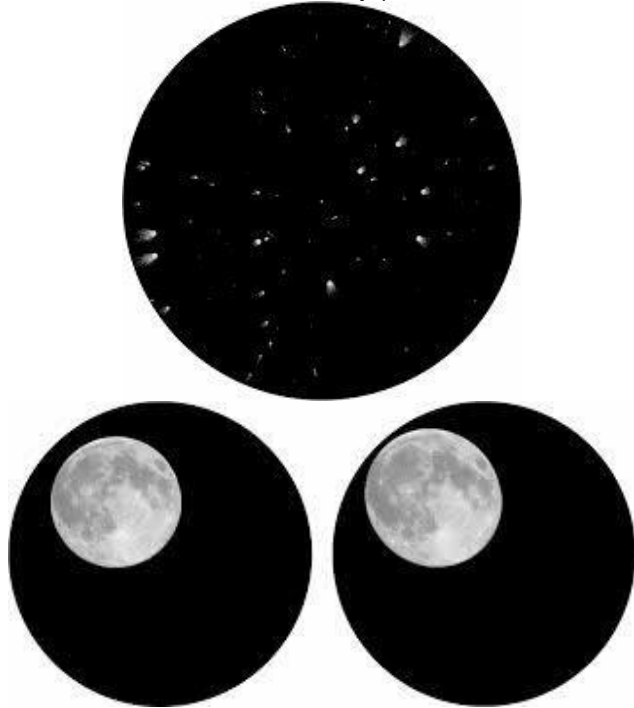
By Jeff Struve

Nothing depresses and disappoints folks in their eyepieces than coma. Coma is the aberration that makes stars at the field of view edge look like seagulls or comets... that's why it's called "coma,!" The thing is, eyepieces don't generally introduce coma... it's generally caused by fast telescope optical systems, mainly in Newtonians (Dobsonians). Coma is, for the most part, unnoticeable at f/8, visible at f/6, prominent at f/5, and tends to be pretty bad below that.

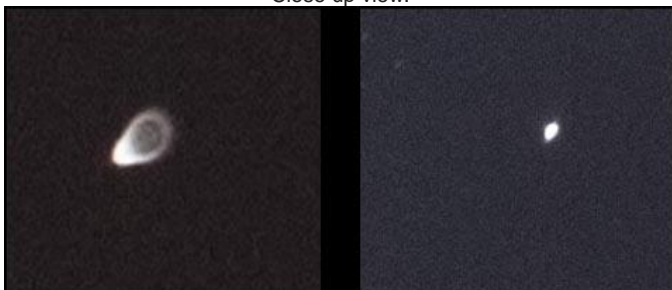
Common aberrations:



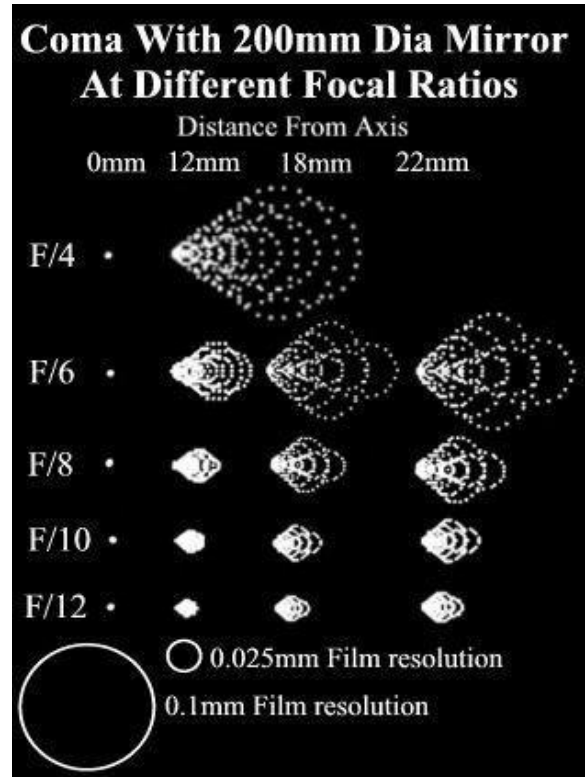
Coma thru the eyepiece:



Close up view:



Impacts to different focal ratio scopes:



So what can be done about coma? No matter its cost or style, with the exception of one obsolete eyepiece called the Pretoria, there are no coma correcting eyepieces. The Pretoria did a bit of correcting, but was a very poor eyepiece design and therefore has been made obsolete by coma correctors like the TeleVue Paracorr.



There are a few things you can do about coma... Concentrate on the view in the center and ignore the "seagulls" toward the edge... Use higher power and narrower field eyepieces that won't show the edge of the light cone where coma is worst, or purchase a coma corrector which is kinda like a variable Barlow.



Gallery

A few pics from the March Public Night



Mike Ombrello's Aurora pics from Iceland!

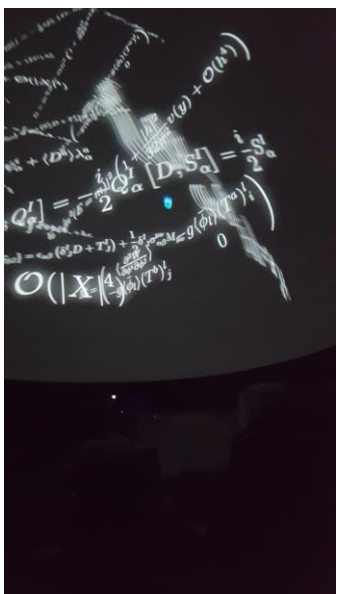


Craig and his new 16" Explore Scientific Dob



Mike and his 127mm Explore Scientific Triplet

A few cell phone pics at the Bettendorf High School Planetarium:



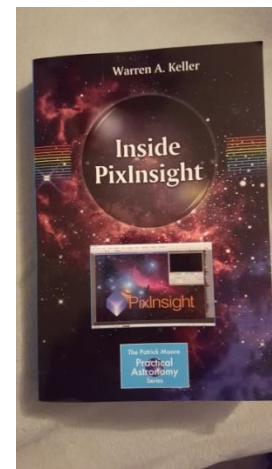
## For Sale – Wanted

For Sale

– Orion 90mm short tube refractor. 500 mm focal length. Equipped with 1.25 inch focuser, 45 degree diagonal, 26mm Sirius Plossl ep, 6x30mm finder and tube rings that are larger than the tube. There is a plate on the bottom of the tube assembly with 1/4 inch x 20 threaded hole for mounting to a camera tripod. Excellent condition. Price \$100.00 Contact Jim Rutenbeck at [JRutenbeck@frontier.com](mailto:JRutenbeck@frontier.com)



– 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](mailto:PwrHsePro@aol.com)



– New 2<sup>nd</sup> Addn “Inside PixInsight” by Warren Keller. \$30.00 Contact Jeff Struve at [PwrHsePro@aol.com](mailto:PwrHsePro@aol.com)



– Vixen NLV 20mm eyepiece. Price \$65.00 Contact Jeff Struve at [PwrHsePro@aol.com](mailto:PwrHsePro@aol.com)

Ever go out to the Observatory and then try to think of things to look at; especially after you have seen the usual suspects?

These are suggestions of objects to try.  
Sky conditions will dictate what you can see.  
Generally, double stars are not included.  
Nor are bright satellites / Iridium flares.

## 2017 March 29 – Open Cluster Season – Let’s Go Hunting!

Sunset 6:26 PM  
Civil Twilight Ends: 6:54 PM  
Astronomical Twilight ends 8:01 PM  
Moon New (4%) – about 25 degrees from Sun – so maybe you can see it

### Twilight

- (Maybe) The Moon is low in the west – but could be in trees – Mercury is north, a little lower, so more difficult
- Jupiter

### Early Evening (8 PM or later)

- Orion Nebula – may be last chance this Spring; [*dist = 1344 light-years*]
- Pleiades – low power (Open Cluster) ; [*dist = 444 light-years*]
- Hyades – binoculars or very low power (Open Cluster) ; [*dist = 150 light-years*]
- Double Cluster (Open Clusters) ; [*dist = 7500 light-years*]
- Betelgeuse and Rigel – compare colors; [*dist = 500 + 863 light-years, respectively*]
- M41 (Open Cluster) ; [*dist = 2316 light-years*]

### When Dark

- M44 – Praesepe – best a low power (Open Cluster) ; [*dist = 577 light-years*]
- M37 (Open Cluster) ; [*dist = 4511 light-years*]
- M38 (Open Cluster) ; [*dist = 5241 light-years*]
- M36 (Open Cluster) ; [*dist = 4241 light-years*]
- M35 (Open Cluster) ; [*dist = 2773 light-years*]
- M82/81 (Galaxies) ; [*dist = 11.42 + 11.74 million light-years, respectively*]
- M51 – Whirlpool Galaxy ; [*dist = 23.16 million light-years*]
- NGC 3115 - Spindle Galaxy – C53 ; [*dist = 31.6 million light-years*]

### If it’s a Great Night

- Leo Triplet (M65, M66 + NCG 3628) (Galaxies) ; [*dist = 35 million light-years*]
- Virgo Galaxies (M84, M86 and others) ; [*dist = 60 + 52 million light-years*]



## 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  
04/29/17 – 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 Public viewing of the Perseid Meteor Shower  
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!

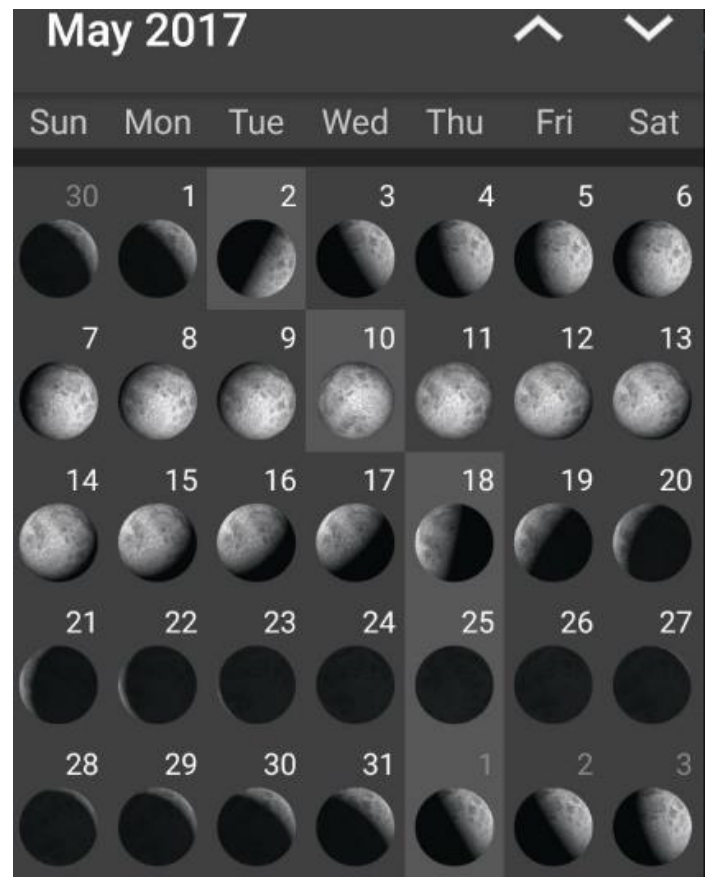
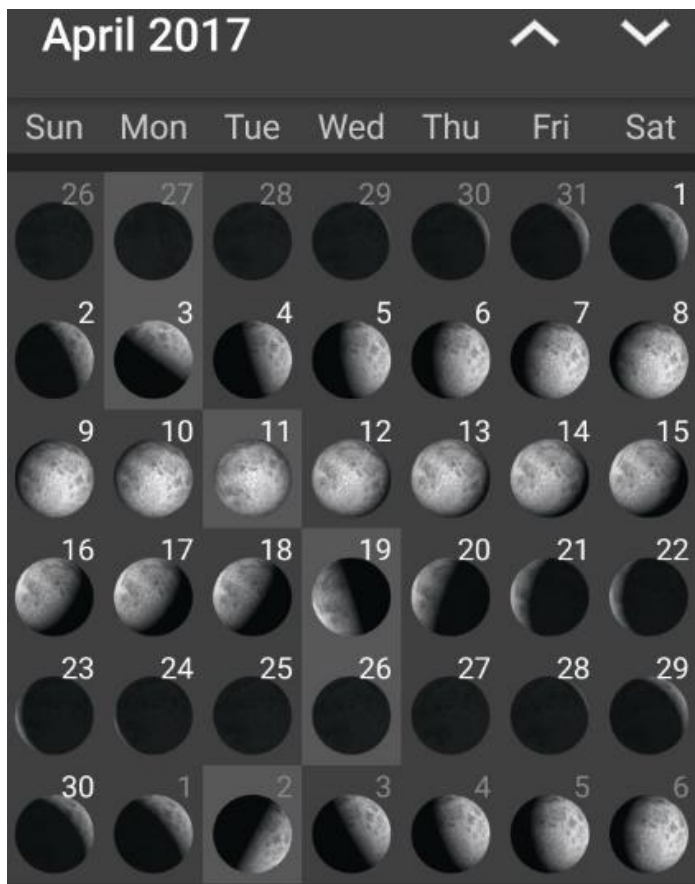
Types of articles that would really be interesting could include What’s In the Sky This Month, equipment reviews, experiences you’ve had in astronomy, sketches you’ve drawn, trips you’ve taken to observatories or star parties, a high level overview of your favorite astronomer, movie, book or article 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 Peter Bruecken for his hosting our clubs March meeting and providing the evenings presentation of the BHS Planetarium, Paul Levesque for being in the Spotlight as well as his great solar article, Mike Ombrello for his Aurora pics, and Karl Adlon for his Notes and What’s In the Sky!



### 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: [PwrHsePro@aol.com](mailto:PwrHsePro@aol.com) and/or [MitchellRobertC@sau.edu](mailto:MitchellRobertC@sau.edu)

### QCAS Officers and Contacts:

#### Officers

President:	Jeff Struve	<a href="mailto:PwrHsePro@aol.com">PwrHsePro@aol.com</a>
Vice-Pres:	Craig Cox	<a href="mailto:AdmiralCox2000@yahoo.com">AdmiralCox2000@yahoo.com</a>
Secretary:	Dr. Robert Mitchell	<a href="mailto:MitchellRobertC@sau.edu">MitchellRobertC@sau.edu</a>
Treasurer:	Matt Neilssen	<a href="mailto:Matt.Neilssen@gmail.com">Matt.Neilssen@gmail.com</a>
Director:	Dana Taylor	<a href="mailto:Dana@NelsonTaylor.com">Dana@NelsonTaylor.com</a>

#### Chairpersons

Facilities:	Dana Taylor	<a href="mailto:Dana@NelsonTaylor.com">Dana@NelsonTaylor.com</a>
Meridian Editor:	Jeff Struve	<a href="mailto:PwrHsePro@aol.com">PwrHsePro@aol.com</a>
Outreach:	Matt Neilssen	<a href="mailto:Matt.Neilssen@gmail.com">Matt.Neilssen@gmail.com</a>
Programming:	Jim Rutenbeck	<a href="mailto:JRutenbeck@frontier.com">JRutenbeck@frontier.com</a>
Web Master:	Dana Taylor	<a href="mailto:Dana@NelsonTaylor.com">Dana@NelsonTaylor.com</a>