Four Open Clusters in Cassiopeia
IC 166, NGC 654, NGC 663, Berkeley 6 –
clockwise top left to bottom left
Dan Crowson
October 18th, 2015 – Dardenne Prairie MO
November Calendar

Social
November 5 – 7-9pm Beginner Meeting @ Weldon Springs Interpretive Center, 7295 HWY 94 South, St. Charles, MO 63304

November 14 – Monthly Meeting. 6pm Social hour then dinner followed by monthly meeting. Turkey dinner for the entrée. Complimentary dishes and desserts are welcome.

November 17- 7pm DigitalSIG Astrophoto group meeting Weldon Spring, 7295 Highway 94 South, St. Charles, MO 63304.

November 25- 7PM DIY-ATMSIG Weldon Spring, 7295 Highway 94 South, St. Charles, MO 63304

November 6, 13, 20, 27- 7 pm start times Broemmelsiek Park Public viewing, weather permitting.

I’m reading a book about anti-gravity.. it’s impossible to put down!
A newsletter is only as interesting as the material sent in by contributors.

Would you like earn the eternal gratitude of your fellow club members and intergalactic recognition in our newsletter? Send a note to your friendly editor on any astronomy related subject at newsletter@asemonline.org I’ll get it posted in the monthly newsletter.

Your editor at large (not large editor),

Jim Curry
FROM OUR EXECUTIVE DIRECTOR
JIM TWELLMAN

Notes from the E.D.

The first 2017 Eclipse Workshop was held at the Planetarium on October 9 and attended by Amy White and myself. Nancy Gomer of St Chas County Parks also attended.

The workshop was sold out. Many city and recreational administrators from StL and South along the eclipse path were there. Presentations were excellent. I think we really got their attention! Mizzou and Carbondale both plan to use University football stadiums for the Public (not students!).

At this time it is likely that we'll host at Klondike and Broemmelsiek parks. Capacity issues are being addressed.

We had some great weather in October, and good attendance at FNOH's. I hope this good weather continues for us.

--
Jim Twellman
Executive Director
Alliance for Astronomy (dba Astronomical Society of Eastern MO)
ASEM Upcoming Star Parties
By Chuck Simms

Here is a list of upcoming Library Star Parties. Are you getting an update on the Star Parties from Don Ficken? If not then I can give you a brief update. (Editor: And don’t forget to check the Yahoo postings for frequent updates/additions.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, November 19, 2015</td>
<td>Kisker Road</td>
</tr>
<tr>
<td>Monday, November 23, 2015</td>
<td>Corporate Parkway</td>
</tr>
</tbody>
</table>

Thanks, Chuck
**Hospitality Members Needed**

Like the Marines, ASEM is looking for a few good members to go above and beyond in the support of YOUR club. As noted in the past several meetings, the current hospitality crew of Barb Stewart, Carla Kamp, and Marlene Bopp have been doing yeoman service for the last ten years. They need a break. We need to step up and relieve them.

If you’re a regular at the potluck and general meeting, we can “Divide and conquer” these tasks so efficiently carried out by the current hospitality committee. If you don’t come to the meetings regularly you can still help out. Below is a list of the items needed for each meeting and tasks that are performed. Please review this list and see if there is something you can do to help the club.

Since this is going to be a “Change of guard” perhaps you might decide to take the helm as committee chairperson. You can also help by just being a committee member and assisting in the activities. You might even decide to help organize these tasks so that smaller tasks can be carried out by more members reducing the individual loads. Who knows, the committee and the tasks are up for grabs. We'll talk at the next meeting. But in the meantime, here are the tasks and processes (as currently implemented):

**Inventory for meeting and potluck.**
The bulk is usually stored at a hospitality members house. A portion of this stock is brought to each meeting. The member storing the stock generally keeps it replenished. ASEM will reimburse for purchase of supplies needed as needed:

- Plastic utensils: forks, knives, and spoons
- Paper plates: dinner and dessert
- Paper bowls
- Cups for coffee, tea, lemonade, and softdrinks.
- Napkins
- Coffee, coffee filters, tea, sugar, sweetener, and creamer
- Thermos for the ice tea
- Thermos for the lemonade
- 2 tablecloths
- Ice chest
- Storage container with name tags, clip board, sign-in sheets, which is membership.
- Video library.

**Process each month:**
Bring (most of this can be kept in two large plastic storage containers in a “Grab ‘n go” condition – a member can take responsibility for bringing these tubs to each meeting or arranging for their delivery, an relatively effortless monthly contribution):

- Two bags of ice in the ice chest.
- Several bottles of various softdrinks. A stock can be purchased ahead of time, in bulk to reduce costs and then meeting needs can be withdrawn accordingly
- The thermos of lemonade
- The thermos of tea.
A storage container filled with the utensils and paper products counted out to 50-60 of each item for the dinners.
A bag with coffee supplies.
A bag with the two tablecloths that have been washed and dried after each meeting.
The storage container with name tags, clip board, sign-in sheets, which is membership.
The video library (this is an easy job for a regular member – this could even be broken out as “Club Librarian” and handled by an irregular member ;).

Before dinner tasks (approximately 15 minutes of support effort):
- Tables are arranged for serving, table cloths are laid down.
- Napkins and other plastic paraphernalia are laid out
- Coffee is made in the back.
- Cups are filled with ice and an initial pour of softdrinks are made.
- Once members arrive, a hospitality member may assist with setup.
- Nametags are laid out while the above is accomplished
If you ever look at a dark site map, you will see some small pockets of “Black” on the map in Missouri. Those black pockets reside in the Mark Twain National Forest region. Council Bluff Lake is a campground operated by the Feds, and is located close to one of those pockets of black sky.

On Friday, October 16th, the deep blue skies of the day foretold of a clear night that was to follow. From Council Bluff, the humidity level was in the 40% range, and the wind and turbulence was at a minimum. When darkness fell, both the seeing and the transparency were close to a ten, a very rare occurrence in Missouri.

The most obvious thing about such conditions was the way the Milky way POPPED into view, as extremely luminous, much like a bright, glow in the dark shirt. Stars were visible down to the horizon. While visiting some old friends from the Messier list, this special night belongs to the road less traveled. So here is a summary of some of the “other lists”. I observed these with the 18 inch Night sky scope. I did experience a few equipment problems, so I converted over to “manual power” for part of the night.

**NGC 7000: North American Nebula** – Faintly visible without a filter, once I put the O3 in, I was able to trace the entire nebula, and even in a high power eyepiece, there is a lot to see.

**IC 5070: Pelican Nebula** – this nebula off the “coast” of the USA really pops out with an O3, and I was able to trace out the outlines clearly. Spending more time revealed filaments and knots, this was really exciting

**Stephans Quintet:** The “finder” galaxy, NCG 7331, really stood out, and pointed the way to the Quintet. However, I was not able to clearly identify all 5 members, but that’s ok, it was simply due to my tired eyes. I did try Steven O’Meara’s suggesting about “deep Breathing” to get more oxygen in, and it worked, as I saw 4 members clearly, but not
the 5th. (Editors note: I’ve seen this in my 140 refractor, you saw all 5 but 18a & 18b were merged)

**NCG 253: Sculptor Galaxy** 253 lies low in the autumn, skies, and while perhaps the best edge on in the sky, it was also subject to atmospheric extinction. This was NOT to be the case for the sky tonight. This galaxy was huge, and the dust lane is very prominent. This is a Star Burst galaxy, so lots of new activity going on.

**NCG 7789: Cluster in Cassiopeia** It’s a mystery how this was overlooked by Messier, and many others as well. If you have never seen this open cluster, go look! The night was so clear, that stars were visible as round, perfect pinpoints all the way to the edge of the field. The entire field of view in my 30mm, 82 degree eyepiece from Explore Scientific was filled to the brim with stars. It looked like a time photograph taken from the milky way!

I did pack up and leave around 1:30 or so due to Personal commitments, and Bill Nuepert was the only other visitor for observing, and Bill stayed in the campground for the night. My 18 inch night sky below
**November Meeting Preparations**  
**By Grant Martin**

Hey hey, ho ho, this little note's got to go...Wait what?

Yeah, get those cards and letters in for the things you may want to cover at the November ASEM meeting. Since it's Thanksgiving month, we could do something special. Ed White has volunteered to do a presentation (approximately 30 minutes). We have the usual 30 minutes of overhead (will probably be closer to 40 minutes this month). So that gives us an additional 15 minutes for something "completely unexpected".

Have any ideas?  
Want to try something new?  
let us know (reply to all to suggest, coordinate or collaborate).  
How about a nice little "Tongue in cheek" presentation for the "Fair weather astronomers" regarding how to put their equipment into storage for the winter. We all know we need to drain the fluids in vehicles and we need to cover all those holes so wildlife doesn't get in. So what DO we recommend that someone should do to their observing equipment before they go into hibernation for the winter?

Thanks much & Best regards - GM
Broemmelsiek Report
By Amy White

Clouds parted and gave us a clear sky at Broemmelsiek Park after 8pm for the Friday Night Open House. It turned out to be a very good evening. We had 34 participants.

An unexpected Girl Scout group of around 20 visited. They did not know about contacting our Outreach Coordinator to ensure scope coverage for their group, but the leader knows that now. Many of the girls were not dressed for chilly weather, with tank tops and flip flops. Hopefully, when they visit again, they will be better prepared.

Car Turek ran his 10” Dob, giving great views of deep sky objects. Epsilon Lyrae was split nicely, even with a 25mm eyepiece. Saturn looked great, even down to the horizon. Next time you see Carl, congratulate him for winning a big contract with the Science Center.

Rodney Roederer provided welcome support for visitors. We had some folks visit who were curious about the facility. They found out about FNOH and ASEM through various media sources. I am sure we will see them again at future events.

Ed White and I ran the C-14. Without the annoying light of the Moon, we were about to show deep sky objects nicely at high magnification. It is always a blast to run the huge beast with Sky Safari on a cell phone.

Jim Stenzel and Dennis arrived later with their scopes, so we had tag team astronomers. As Carl and Ed and I were packing up, Jim hung around to entertain the stragglers.
The image attached is not astronomical, but lots of guys who like astro also like airplanes. When I was walking the dog today, a formation of 4 biplanes passed overhead. I could hear their engines a few minutes before seeing them, they were flying so low.

Amy W
October Digital SIG Meeting Notes
By Dan Crowson

October’s meeting consisted of working with data collected at Broemmelsiek Park the month before. Steve Boerner gave a presentation on AutoStakkert! 2 (AS!2), probably the most popular program for stacking lunar and planetary images. Thanks to the eight people that came out.

The next Digital SIG meeting is Tuesday, November 17th, 2015. Bill Neubert will discuss the Baader 2 filter adapter system for digital camera (DSLR) lenses. This system allows the use of 2” astronomy filters on common DSLR lenses. These can be very useful for modified cameras. He’ll discuss mechanical and optical considerations. More information on this system can be found here - http://www.baader-planetarium.de/sekction/s44a/s44a.htm#en.

Bill’s doing double duty by also discussing his first impressions of imaging with a small APO refractor when compared to a SCT or reflector. It seems like every goes out and buys a big SCT (12” Meade LX 200-ACF for me) and then reality (and frustration) sets in when they decide they want to take pictures. Bill will talk about features and accessories along with some of his recent images.

Show up. Bring your images and questions. We can help.

The latest Digital SIG news can always be found in the ASEM Digital SIG Yahoo Group
## ASEM Loaner Equipment
### By Chuck Simms

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Binoculars</td>
<td></td>
<td>Chuck Simms (7/11/2015)</td>
</tr>
<tr>
<td>Canon T1i camera</td>
<td>Canon T1i camera</td>
<td>Dan Crowson (6/30/2015)</td>
</tr>
<tr>
<td>SBIG STL-1001 camera</td>
<td>SBIG STL-1001 camera</td>
<td>Jim Roe (12/8/2012)</td>
</tr>
<tr>
<td>Eye-piece/Filter kit</td>
<td>various 1.25 inch eyepieces &amp; filters (O III; H Beta; UHC)</td>
<td>Bill Sheehy (5/9/2015)</td>
</tr>
<tr>
<td>11.5 inch scope</td>
<td>Nolan's 12</td>
<td>Chuck Simms (5/4/2015)</td>
</tr>
<tr>
<td>Coronado PST</td>
<td>Personal Solar Telescope</td>
<td>Chuck Simms (7/3/2015)</td>
</tr>
<tr>
<td>Meade ETX125 Telescope</td>
<td>125 mm (5 inch) Meade ETX telescope W/tripod</td>
<td>Richard Kamp (6/12/2015)</td>
</tr>
<tr>
<td>Starmaster 14.5” telescope</td>
<td>Starmaster 14.4 inch telescope</td>
<td>Stacey Thater (1/12/2013)</td>
</tr>
<tr>
<td>Celestron CG5 mount</td>
<td>mount currently being used for Lunt</td>
<td>Kirk Steinbruegge (6/13/2015)</td>
</tr>
<tr>
<td>Lunt - Stack Filter</td>
<td>Stack filter used on Lunt Solar telescope</td>
<td>Kirk Steinbruegge (6/13/2015)</td>
</tr>
<tr>
<td>Lunt Solar Telescope</td>
<td>LS50FHa filter - 60mm</td>
<td>Kirk Steinbruegge (6/13/2015)</td>
</tr>
<tr>
<td>Denkmeier Bino-Viewer</td>
<td>Denkmeier Bino-Viewer</td>
<td>Stacey Thater (6/20/2015)</td>
</tr>
<tr>
<td>Equatorial Platform</td>
<td></td>
<td>Grant Martin (9/14/2013)</td>
</tr>
<tr>
<td>Star Atlas</td>
<td>Herald-Bobroff Astro atlas</td>
<td>Bill Biermann (4/10/2015)</td>
</tr>
</tbody>
</table>

“A photon walks into a bar and orders a drink. The bartender says, ‘Do you want a double?’ And the photon says, ‘No I’m traveling light.’”
ASEM’s Tinkerer’s aka The DIY Crowd (Do-It-Yourself)
These guys will find solutions to problems you didn’t know you had

NOTES PREPARED BY CARL TUREK, PHOTOS BY GRANT MARTIN
October 28, 2015 Meeting

Six ASEM members attended the October ASEM ATM-DIY meeting. This month, discussion revolved around several topics:

First, Bill Jones brought his 50 mm finder from his 13 inch Coulter. The problem: clearance issues when he loads the unwieldy Coulter OTA into the back of his Suburban. The existing finder ring casting had a 4 inch standoff height. Bill solved the problem by changing to a finder bracket with a Vixen style shoe and base. The finder is now removable giving the clearance needed for loading/unloading the large OTA.

Next, Tom Richards brought his Pelican EP case and several Baader Hyperion eyepieces. Tom demonstrated the versatility of the Hyperion line of eyepieces. Hyperion features include:

• The eyepiece fits both 1.25 and 2 inch focusers
• Large eye lens with a generous 20mm of eye relief
• 68 degree apparent field of view
• Variable EP focal length. Each EP can be set up for three different focal lengths. The eyepiece can be used stock or, the front negative lens group can be unscrewed from the body and the EP can be used as a much longer focal length for wide field views. In addition, screwing in extension tubes, available in multiple lengths, in between the main body and the removable barlow group, converts the EP to a shorter focal length for higher magnification views.
• Threads under the fold up rubber eye shield. Removing the eyeshield reveals standard M43 x .75 threads to attach camera adapters for afocal astrophotography.
• Eight lens elements in five groups gives well corrected views.
• Low cost. These eyepieces have a price point under 150.00!

Grant Martin brought a Powerpoint presentation dealing with cooling a green laser when used as a finder. Grant is a fan of using a green laser pointer (GLP) as a finder. An issue with GLP’s however, is they do not like to operate in cold weather. Grant has devised and constructed a solution to this by building an insulated heater for the GLP.
Grant constructed a mat of resistors that, with a battery power source, dissipate heat keeping the GLP warm. The GLP is covered, appropriately, with green insulating material. The resistor mat is folded around the laser and then covered with insulation which retains and directs the heat to the GLP.

This assembly is then wrapped with Reflectix insulation increasing the R value.
The heater is powered by a group of lightweight 18650 lithium ion rechargeable batteries. The heat level is variable as Grant utilizes a simple PWM LED controller from Super Bright LEDs.com Grant can adjust the heat output based on the ambient temperature.

That’s all for this month.
WANTED:
Wanted: 2.5x and 5x Televue Powermate 1.25”

-Mike Pusatera

For Sale:
1070 Cave Astrola 12.5” f/6.7. Contact Tom Kelemen, St. Louis.
Kelemen56@gmail.com

For Sale:
Fiberglass tube for 10” reflector – x Cave f/5 $40, contact Jim Curry
jjc@structureguard.com

For Sale:
2” Orion Skyglow imaging filter (never used), asking $100, Mark Shea
1.25” Orion Skyglow observing filter (never used), asking $40 (never used), Mark Shea
Tube rings for 10” reflector (12” ID rings) (never used), free, Mark Shea
Orion ST80 refractor plus rings, asking $100, Mark Shea
markanddenise3@charter.net
ASEM Members Photography

A section for ASEM members to distribute their photographs within the Society. Whether you’re shooting digital, film or working in charcoal (hand sketching), this page(s) is for members to show us what you’ve seen and how you recorded it. Sunsets, supernovas, sundials, Stonehenge. Crepuscular rays, planetary alignments, or Markarian’s Chain. If it’s something we have to look up to see it will probably interest this crowd of inquisitive folks.

First Five Rocks from the Sun - Mike Pusatera
The Deer Lick Group & Stephan’s Quintet
Rick Steiling
Abell 262 Galaxy Cluster in Andromeda
Gregg Ruppel
Barnard 173 and 174 Dark Nebulae in Cepheus
Gregg Ruppel
Barnard 29 and 222 – Auriga

IC 5076 + Barnard 351 + 356 – Cygnus

Dan Crowson – Dardenne Prairie MO
Sharpless 171 – LRGB – AT90EDT (603mm)
Dan Crowson
Sharpless 171 – ASEM Club Camera – 200mm
Dan Crowson
vdB 7 + 9 (and other LDN nebulae)
Dan Crowson
Club Contacts

Membership

Membership issues can be addressed through our executive director Jim Twellman at these addresses:

Email:  jtwellman@asemonline.org.
Snail mail:
   Alliance for Astronomy (ASEM)
   Rudder Court
   Lake St. Louis, MO 63367

Committees

Comments, questions, suggestions and money (just kidding) may be sent to the following addresses:

program@asemonline.org
   Use this address to communicate with the program committee. If you have something to present at a meeting or wish to contribute and let someone else perform, send it here. Questions and/or suggestions about programming etc. Remember, they are here to help you. This is a user friendly society and we like to see members get up and share.

equipment@asemonline.org
   This address is used to find out about ASEM loaner equipment. If you find something amiss at BPark by all means report it here. If you are curious about borrowing an item, put in a request via this address.

hospitality@asemonline.org
   Got a main dish you’d like to bring to the potluck? We sure could use it AND you will be reimbursed for your expenses.

newsletter@asemonline.org
   Primary contact for the newsletter. Got an article or notice you’d like to see published? Send it here and be famous!

Outreach@asemonline.org
   Special requests for groups at Broemmelsiek Park including:
   • Notice of large party (more than groups of twenty)
   • Request for specific requirements needed (school assignment, merit badge requirements, etc.)
   • Requests for Star Party / Telescope event at another location

webmaster@asemonline.org
   Kirk Steinhuegge is now our webmaster. Shoot him anything you want posted on our Web page

Entertainment

Late breaking news and member adventures (or shenanigans as the case may be) can usually be found at STL Astronomy in yahoo groups. If you aren’t a member, you should join. Go to http://tech.groups.yahoo.com/group/STLAstronomy/ and click “Join”

Think Clear, dark skies