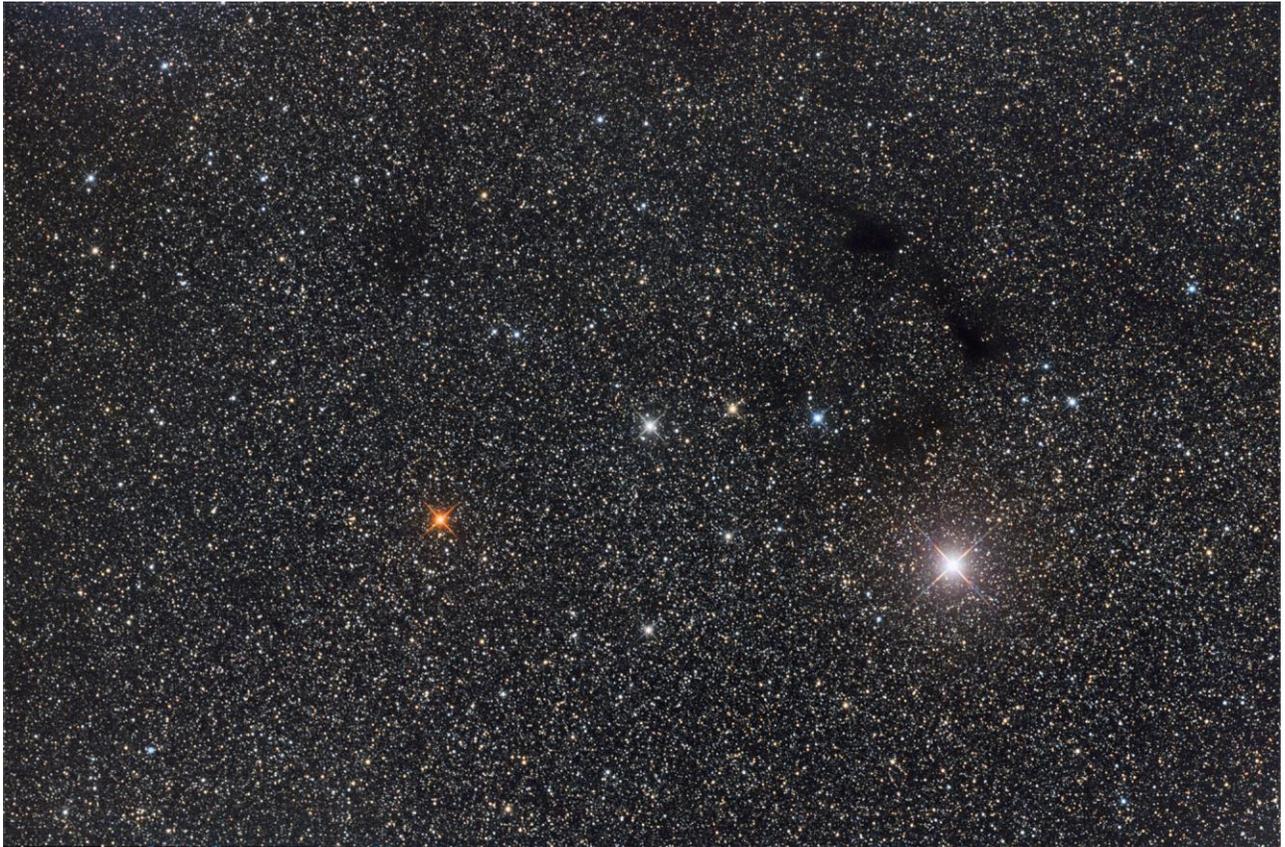




A.S.E.M. Newsletter

October 2013



**PHOTO BY GREGG RUPPEL
BARNARD 127, 129, 130
DARK NEBULAE**

OCTO

Roman: Octo, the eighth month (from and including March)

OCTOBER NOTICE

BY JIM CURRY, NEWSLETTER EDITOR

The government slowdown has resulted in a closure of the Weldon Springs Interpretive Center until further notice. The DOE sent a note to Tom Richards and I assume Tom will be kept abreast of developments and updates will be posted to the ASEM website. Check there for alternate meeting locations or postponements. There may also be notices posted to our Yahoo group chat. I will post the meeting dates in our calendar section (below) but confirm at our website or with your meeting coordinator before setting out. If the slowdown drags out this may also affect our monthly club meeting.

Also, I'm looking for some quick observing notes from Friday nights at BPark, Danville, the Southwest or wherever our members are observing from. This will help flesh out our newsletter content. Have fun.

OCTOBER CALENDARS

Social

October 3 - 7pm Beginner Meeting Check website for location

October 12 – 6pm Monthly Pot Luck & General Meeting, at Weldon Spring (confirm it's open). Carla Kamp says the main dish will probably be Mostacholi

October 15 – 7pm DigitalSIG. Astrophoto group meeting Weldon Spring, 7295 Highway 94 South, St. Charles, MO 63304 (confirm it's open).

October 23 - 7PM DIY-ATMSIG For the telescope maker to display his wares or those who wish to see what folks have been doing in their workshops. Weldon Spring, 7295 Highway 94 South, St. Charles, MO 63304 (confirm it's open).

October 4, 11, 18, 25 – 7:00 pm start times Broemmelsiek Park Public Viewing, weather permitting.

Astronomical

October 3 – Uranus at opposition. Crosses the meridian at midnight moving into evening skies as month progresses.

October 5 – New Moon on a Saturday.

October 9 – Mercury at greatest elongation east from sun, evening sky.

Jupiter – High and bright in morning sky before sunrise.

Comet ISON will rendezvous with Mars in the early days of the month and brightens. It should become a telescopic comet this month for medium size scopes. Monitor Sky and Telescope or other websites for the latest news.

Astronomical League Observing Program of the Month—October 2013

The Astronomical League's Observing Programs can be divided into three groups based on difficulty: beginner (20), intermediate (12), and advanced (8). Only one of the programs highlighted so far in this series is classified as beginner and that is The Lunar Program. This month's choice, the Northern Skies Constellation Hunter, is a second beginner program. Some might say that this program is too easy, or that they know it all the constellations already. I thought so too until I realized that while I knew some parts of the sky very well, I really didn't know other parts at all. The Constellation Hunter is giving me an opportunity to explore the unfamiliar areas.



There are actually two different Constellation Hunter Programs, [Northern, with the thirty-nine constellations](#) visible north of the ecliptic [and Southern, with the fifty-seven constellations](#) visible south of the ecliptic. Make sure you check the Northern list before you start drawing because if you read through the Southern list you'll recognize constellations that contain many of our favorite objects: Orion, Scorpius, Sagittarius, and Ophiuchus. All of the constellations in the Northern program can be seen from Broemmelsiek. The same can not be said for those in the Southern Program. You will need to head pretty far south to grab some of those. It might give you something to do on a Caribbean cruise.

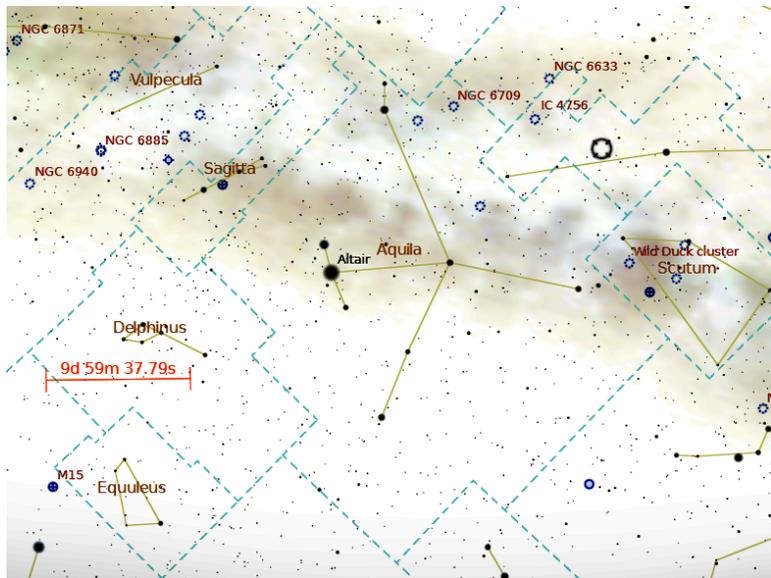
To qualify for the AL's Constellation Hunter Certificates and pins you need to observe and sketch all of the constellations on the checklist that you are pursuing. No equipment is required other than a planisphere or atlas for reference information of the names of major stars and constellation boundaries. Binoculars, while not required, will give you a deeper look into the star fields that you sketch. They'll let you know if there really is a star where you are looking. There is a rough form you can use on the AL's web page, but it is just as easy to make your own for this observing program. You should not include these additional stars and objects on your sketches, but the view will give you an appreciation for all of the things that await you in the other Astronomical League Certification Programs. You should proceed constellation by constellation. For each constellation, you need to provide this data:

- Local date and time.
- Latitude and Longitude of observation.
- Constellation name.
- Sky conditions: transparency, and seeing.
- A sketch of all the stars which are visible to the unaided eye, out *to the limits of the constellation's boundary*. Named stars should be identified on the sketch.
- The sketch should include other objects that are visible within the boundaries of the constellation, including but not limited to: galaxies, open clusters, globular clusters, and nebulas.

If you are truly a beginner, the last three requirements are going to be concerns. Transparency and seeing are beyond the scope of this article, but a quick Google should turn up descriptions and scales. Either would make a great Newsletter article for anyone who wants to join in the writing fun. There are many different scales for each and it is important to be consistent as you work through an AL program. Jim Curry would love another contributor. One easy **seeing** scale is the **Antoniadi scale**. You've probably noticed that some nights the stars seem to twinkle more than other nights. Twinkling stars means poorer seeing because the atmosphere is unstable. Seeing isn't going to affect what you see with the naked eye very much. Transparency deals with how much "junk" like water vapor, dust, pollen, or particulates are in the air. Poor transparency means you won't see as many stars and it will affect this activity. Trying to do the Constellation Hunter on a night with poor transparency AND a bright moon will be an exercise in futility. A good method to rate transparency is simply to list the limiting magnitude you can see as you make your observations.

The other objects to include in the drawings are going to be pretty short if you do your drawings from Broemmelsiek. The only galaxy you might see with your naked eyes is M31 and it will take a special night. The open clusters in the required constellations will be M44, M45, and the Hyades. The only nebula will be M42. If you do this program in a really dark sky location you will see more, but you might have a bit of trouble seeing the "forest for the trees." You might consider doing the observations from the same place and under the same moon conditions for consistency.

The killer for me is doing the sketch out to the boundaries of the constellation. That means you have to draw a whole lot more stars than just what makes up the stick figure asterism that people normally think is the constellation. I say “is” because of this writing, I’m



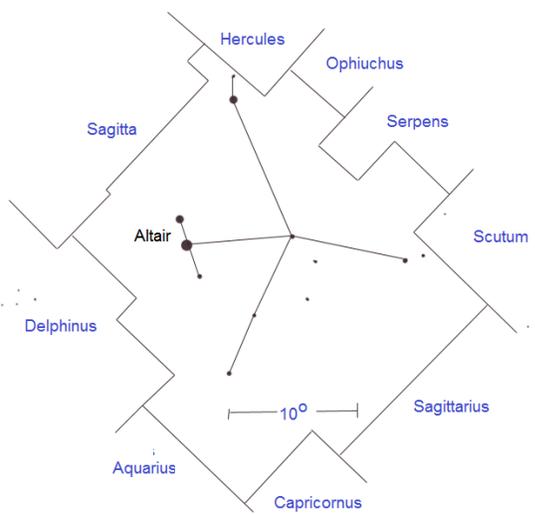
still working on the program. I spent quite a few nights in the dark out at the picnic table at Broemmelsiek putting dots on pieces a paper wondering if I’d gone far enough or still had more to do. I’d look at the dots when I got home and wad them up in disgust. I wasn’t getting the job done. I’d seemingly miss some of the brighter stars, have new stars that were nowhere on any star map I’d ever seen, and nothing was ever where it should have been. It wasn’t a seeing problem, but more of a drawing problem. Putting dots where you want them on a piece of paper in the dark is tough! I started and stopped on this program multiple times before I finally discovered my current, best solution. I shared it with some people at a Beginner Meeting a few months ago and they were pretty sold on it too. Now I’ll share it with you...Stellarium but not out in the field, rather at home. Use Stellarium, or another planetarium program, to print out a piece of paper with the constellation on it. Make sure the graphic contains the boundaries and stars down to a magnitude dimmer than you know you’ll see. If your planetarium or graphics program will let you do it, put

a scale on it, invert it black & white wise, and then boost the contrast. You should end of with something like the picture of Aquila above.

Take the picture on a clipboard with dew cover, head out to Broemmelsiek with a pencil or marker, and find the constellation in the sky. Look for every star on the picture and circle/check the ones you find. Shade in areas of the Milky Way that you see. Look for the ones that are listed, but you won’t see very many of them. Since the constellation boundaries you’ll know if you’ve gone far enough. You might want to add a few brighter stars around the outside of constellation to give the sketch some scale. You can label the constellations to understand how the whole sky comes together.

Sure, you could redraw it out at the park, but it is going to be damp, and possibly cold. Once you get home, redraw the in your log using your picture and notes. Your final drawing the stars you saw and they’ll be where they are supposed to be. to record the required information like date, time, location, transparency too.

Now if I could only learn how to pronounce Camelopardis and Maybe there should be a verbal part of this program too!



you find.
DSOs that picture has enough.
the neighboring
dark, maybe constellation will have all
Don’t forget seeing and
Monoceros.



ASEM is a totally volunteer organization

- ASEM has no elected officers
- All meetings, publications, activities, and programs are planned and executed by volunteers who've given up their time and stepped up to the plate.
- We need more bodies to help with the process.
- We need to know what you want to do.
- We need to know what direction to go to best meet your interests.
- We need more people to take a turn at bat.

What Help Is Needed?

- Adding your knowledge to ASEM's Webpage
- Bringing main courses at our General Meetings
- Creating articles for the Newsletter
- Making suggestions for topics, features, and presenters at meetings
- Planning and presenting content at meetings
- Staffing Broemmelsiek Park for Friday Night Open Houses
- Staffing Outreach events at other locations
- Taking pictures for ASEM Publications

ASEM Committees:

- Beginner: Amy White, Steve Boerner
- DigitalSIG: Dan Crowson
- DIY-ATM: Tom Richards, Carl Turek, Jim Curry
- Equipment: Chuck Simms
- Hospitality: Carla Kamp, Barb Stewart
- Newsletter: Jim Curry
- Outreach: Jim Twellman
- Program: Grant Martin
- Web & Pictures: Steve Boerner

Contact one of these people to get involved!

Get Started Viewing With the Club's C14--SB

Are you bored on a beautiful clear fall night with nothing to do? Nothing you want to watch on television? Looking for some peace and quiet? Why don't you head out to Broemmelsiek for a few hours of observing? It gets dark early enough this time of year so you can get a few hours in and still get home in time for a good night's sleep.

Don't want to go to the trouble to pack, lug, and set up your own equipment? The C14 in the observatory is working well and can be operational in less than five minutes. Yes, you will have to know a bit about the software, but the only things you need to bring are yourself and an idea of what you'd like to see. There are a wide range of 2" eyepieces in the safe that will let you see everything from large objects down to very tight doubles. Of course you can bring your laptop to look up and record data or your personal eyepieces if you prefer. Once you're done, a quick five minute procedure will get you back to your car and down the road headed home. Looking at the sky through the C14 really is easier than all the hassle involved with all the pack up and setup needed to get observing with your own equipment.



Don't know how to use the C14 or the observatory? It's all right. I'm out at the park two or three nights a week and I'll get you set up and running. I promise I really am willing to help you get started. If you want, I'll provide the training to get you to a point you'll be happy using the C14 on your own or I'll set up on the closest pad and give you all the support you need. Drop me an email and we'll get together.

The C14 isn't a stock model. In fact, it is probably the only one in the set up the way it is. The C14 is set up to run Sidereal Technology's SiTech controller software V0.90P on the observatory's server. One of the built-in features of the program is "SkyMap." It is a clickable, zoomable planetarium program that is very easy to learn and use. It isn't as pretty as Starry Nights or Stellarium, but it was designed to control the C14 and does a great job. Once the C14 knows where it is pointing in the sky with a simple one star alignment, the C14 can be controlled by a mouse click in the SkyMap window. There's even a button on the screen where you can enter the object's name if you don't know where it is in the sky. Lately I've been working on the Planetary Nebular Observing program and the C14 has been doing a very good job of locating my objects. The GoTos are pretty good if you take a little care and have a bit of patience. It is a good idea to search, center, and sync on a star close to your object first. Another option is to use SiTech's circular search function on the hand controller to look around the area.

The SiTech program has many built-in object lists: Messier, NGC, and IC. The RA and Dec of an object it can be entered directly if you are looking for a moving target like a comet. If you are working on an Astronomical League observing program where GoTos are allowed, you can make a "Scroll File" that contains the Names, RAs and DEC's that can be used to step through the list. The "Scroll File" is a text file that has one line for each object's coordinates and data. They are pretty easy to construct and there is a growing collection on the server. They do make the AL's observing clubs easier.

All it takes to get observing with the C14 are two combinations, two locks, two hasps that lock the roof, two plugs for electricity, one button press to open the roof, one scope cover to remove, a computer boot, one connection check, a one star alignment, and you. It may sound complicated, but it really isn't. Give it a shot, drop me a line, and we can meet out in the dark some night. You can start observing without the hassle of having to carry everything out to a pad.

New Monthly Entry on the ASEM Calendar

Many Astronomical Clubs have a scheduled monthly observing session at a dark site for personal viewing or imaging and not public outreach. The next time you check ASEM's calendar on the web page you'll find a new reoccurring event:

Dark of the Moon Night Out

When: Sat, October 5, 6:30pm – Sun, October 6, 6:30am

Where: Danville Conservation Area ([map](#))

Description:

Private viewing and/or imaging at the Danville dark sky location. Bring your rig for an evening under the stars. There is no official program and you need to make your own call on the weather.

Address questions or comments to: STLAstronomy@yahoogroups.com or admin@asemonline.org.

This is a reoccurring event will be scheduled for the Saturday night nearest the New Moon unless preempted by the monthly ASEM meeting.

ASEM Member Benefits

Being an ASEM member grants you more rights than a pot luck dinner one night a month. One of the web pages on ASEM's web site describes it all:

Becoming a Member not only supports our mission, but provides tangible benefits for you as well. Among these are:

- ✓ Associate with others interested in astronomy
- ✓ Regular scheduled meetings (see our main web page for times and locations)
 - Monthly General Meeting--second Saturday
 - Special Interest Group Meetings
 - DigitalSIG--devoted to imaging --third Tuesday
 - DIY-ATM--devoted to building & improving your equipment--last Wednesday
 - Beginner--devoted to increasing your comfort level--first Thursday
 - Informal sessions with others at dark sky locations
- ✓ Opportunities to learn and personal growth
- ✓ Opportunities to share your knowledge and help others
- ✓ Observing programs
- ✓ Classes in advanced subjects
- ✓ Advanced Internet Services (see Google Apps)
 - Free email account yourname@asemonline.org (almost 7,000 MB to store mail)
 - Free personal calendar synced with ASEM's official calendar
 - Free personal web site for Astronomical content (500 MB of storage)
 - Free use of on-line word processor, spread sheet, presentation program
 - Free access to Picasa Web Albums and Google+

- ✓ Membership in the Astronomical League
 - Quarterly Newsletter The Reflector
 - Discounts on Astronomy books from the Book Store
 - Participation in Regional and National Conventions
 - Observing programs/awards

- ✓ Use of Alliance facilities and equipment (*not* available for limited membership rate of \$10)
 - 25x100 giant binoculars and mount
 - 16-inch go-to telescope at Broemmelsiek Park
 - Celestron-14 telescope at Broemmelsiek Park
 - 2 Ha Solar Telescopes—Lunt and PST
 - 125 mm white light solar telescope
 - 14.5" StarMaster Dobsonian telescope
 - 12" Dobsonian telescope
 - Denkmeier Binoviewers
 - Astrophotography cameras

- ✓ Discounts on Sky & Telescope and Astronomy magazine subscriptions
- ✓ Discounts on bulk purchases of astronomical items.
- ✓ Email discussion lists by Yahoo
 - St. Louis Area Astronomy News
 - DigitalSIG
 - DIY-ATM
 - Broemmelsiek Users

If you are a member and would like to suggest a class, not getting the quarterly The Reflector, or don't have access to the various Google Apps contact admin@aseonline.org and we'll get you set up.

DIY-ATM GROUP

SUBMITTED BY JIM CURRY

Steve Boerner spoke of his putting together a sun shade for utilization with the club's solar telescope.

Also, Grant Martin brought a rather large DIY project to Weldon Spring for us to admire. Grant is outfitting his full size Chevy? van with solar panels on the roof, a bank of marine batteries, and a kaleidoscope of LED's to illuminate the interior of the van. The most important color was red of course. He's equipping his van with bunk and storage space for camping, either an overnight stay at our local observing haunts or travels in the west for clear, steady skies away from the mid-west lights and humidity.

Keep an eye on the DIY Yahoo list in October for discussions about an eyepiece shootout at one of our upcoming meetings.

SEPTEMBER DIGITAL SIG MEETING NOTES SUBMITTED BY DAN CROWSON

The theme of September's Digital SIG meeting was a continuation of our Sun program. Steve Boerner demonstrated his trials and tribulations with the club's PST solar telescope. He also demonstrated a way to get surface details and flares using the same image.

The next Digital SIG meeting will be Tuesday, October 15th, 2013 at 7 PM at the Weldon Spring Interpretive Center. The topic and direction of the SIG are currently open. Please check out the ASEM Digital SIG Yahoo Group (link below) for updates.

Building on what we've learned over the last few months, October will give us another opportunity to put things into practice. The nights are getting longer. An imaging party will take place at the Danville Department of Conservation site on Friday, October 4th or Saturday, October 5th. I'll probably head up other days around the new moon if the skies are clear. This is a good time to see some dark skies, get help and spend time with others doing the same. We'd really like to see some new people come out. Visit the Yahoo Group for more up to date information including weather backup plans (link below).

The latest news can always be found in the [ASEM Digital SIG Yahoo Group](#).

LATE BREAKING ASTRONOMICAL NEWS

Over the past few weeks there have been scattered reports around the country of bolides. Don't be afraid to look up from your scope once in a while. :->

CLUB CONTACTS

Membership

Membership issues can be addressed through our executive director Stacey Thater (pronounced "totter") at these addresses:

Email: sthater@stchas.edu

Snail mail:

Alliance for Astronomy (ASEM)

PO Box 141

New Melle MO 63365

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

steve.boerner@asemonline.org

Web page and all other communications not covered above

ENTERTAINMENT

Late breaking news and member adventures (or shenanigans as the case may be) can usually be found at STLAstronomy 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