



A.S.E.M. Newsletter

December 2012



NGC 1788

Photo By Dan Crowson
November 12 & 16, 2012

DECEMBER CALENDARS

Social

Dec. 6- 7pm Beginner Meeting Weldon Spring

December 8 – 5pm General Meeting Weldon Spring

Come join us one hour early for the December ASEM monthly meeting. We are gathering early to visit and relive a memorable year for the ASEM community. Appetizers will be provided.

5-6 PM Socializing

6-7 PM Dinner

7 PM Meeting

December 18 – 7pm DigitalSIG. Astrophoto group meeting Weldon Spring

DIY-ATMSIG No meeting this month

December 7, 14, 21, 28 – 7pm Brommelsiek Park Public Viewing, weather permitting.

Astronomical

Morning commuters: Jupiter in the low western sky, Mercury and Venus sharing the view low in the eastern sky up to the 12th, Saturn a little higher.

Dec 2 – Jupiter at opposition, rising at sunset, setting at sunrise. Closest and brightest for 2012.

Dec 5 - Ganymede, the largest satellite of Jupiter, crosses Jupiter's face tonight from 8:25 to 10:17 p.m. Its shadow closely follows from 8:37 to 10:44 p.m. Ganymede's shadow will be much more obvious against Jupiter's bright surface than Ganymede itself is. Steady seeing and 100x + magnification will reveal the low contrast moon against the face of the King of the Planets.

Dec 13 – Geminid meteor shower peaks tonight. Best from 10-dawn.

Dec 18 – The December S&T has an article with charts on page 50 for viewing Ceres and Vesta this month. Both will be easy binocular finds at roughly 6.6 magnitudes each.

VISUAL OBSERVERS PLANNING NOTES

This entire month Jupiter will put on a good show all night crossing the meridian at or before midnight. Moments of steady seeing should reveal a plethora of details if you can get magnification up to 200x or more. Last January I tracked double transit shadows and the associated moons with a 60mm refractor. This is doable from any urban/suburban area. Dark sky adaptation is not required for lunar or planetary viewing, in fact, some of my best observations were made while seated near streetlights.

Galilean Moon transit and shadow times can be found here:

<http://media.skyandtelescope.com/documents/JphenTab2012-2013.pdf>

These times are listed as Universal Time, remember to subtract 6 hours for STL time.

Occultation Alert: Pluto occults an 11.9 magnitude star on June 29. Don't worry, we have time to plan; this occurs in 2015.

VIEWING HIGHLIGHTS THIS MONTH—DECEMBER 2012

BY STEVE BOENER



Last month I mentioned that some objects are just better in binoculars and for the most part, M45 or the Pleiades, falls in that group. This open cluster is so large at almost 2° that the field of view of many telescopes fails to capture the entire grouping. It really does a long focal length eyepiece or binoculars to fit it all in. I was out at Danville last month during the new moon and looked at M45 with my new 12" dob. It was a glorious night. Seeing and transparency were both 8+ on a scale of 10. Looking at M45 revealed some of the nebulosity that you can see in the picture above. I'd imaged the cluster before and gotten quite a bit of it tweaking with DeepSkyStacker, but had never seen it visually. Don't expect those kinds of results out at Broemmelsiek. Speaking of that nebulosity, I read an article that said that it was caused by a cloud of gas M45 was passing through, not gas that was part of and moving with the cluster.

The objects this month tend to fall into two groups, the easy and the hard. Looking over my log for the Astronomical League's Messier Program I saw that I observed that M74 "was the hardest yet attempted." I remember M76 wasn't too far behind. On the opposite end of the scale M42, M45, M34, and M38 will leap into view. M79 is a good object for the Friday Night Open House regulars. After so many visible in the summer and fall, M79 is one of the few globular clusters that can be seen all winter.

| Messier # | Constellation | Type | Common Name | Bino Difficulty |
|-----------|---------------|---------|-----------------------|-----------------|
| 74 | Pices | GAL | | Challenge |
| 76 | Perseus | PN | Little Dumbell Nebula | Challenge |
| 34 | Perseus | OPEN | | Easy |
| 77 | Cetus | GAL | | Tougher |
| 45 | Tarus | OPEN | Pleiades | Easy |
| 79 | Lepus | GLOB | | Easy |
| 38 | Auriga | OPEN | | Easy |
| 1 | Tarus | SN REM | Crab Nebula | Tougher |
| 42 | Orion | DIF NEB | Orion Nebula | Easy |
| 43 | Orion | DIF NEB | de Mairan's Nebula | Tougher |

Observing this month is good news, bad news kind of proposition. The good news is that it gets dark early and nights can be crystal clear. The bad news is that those crystal clear nights are often cold and few and far between. Make sure you dress warmly with wind protection and know your limits. For those of you that frequent Broemmelsiek consider bringing a heating pad or electric blanket to take the edge off.

The Astronomical League has announced a new Asterisms Observing Program. Rumor has it that some ASEM members have already started working on it. Head over to: <http://astroleague.org/content/asterisms-observing-program> for more information.

Clear skies and keep warm out there!

ASEM'S WEBPAGE NEEDS YOUR HELP

BY STEVE BOERNER

There are two slide shows on ASME's main web page that have been playing the same pictures for years. One show displays pictures from our meetings and the other from our outreach activities. If you take a look at the pictures you'll see that they go way back to the early days. You'll see pictures of Broemmelsiek before Elliott's \$465,000 and people at meetings who have changed a bit or are long gone. In an effort to update things, I'm planning to pull the old pictures after the start of the New Year and replace them with ones that are more current. To that end I'm asking for help from any photographers with the time and energy to help.



If you have a few pictures you'd like to add please email them to me at admin@asemonline.org as attachments and I'll take care of the addition. If you'd like to add a bucket full of pictures or if you'd like to become an "official" ASEM photographer, a position that seemingly runs for life, I'll add you the users of the Picasa Web Album that holds the pictures. It only takes me a minute for the addition and at that point all you need to do to upload pictures is to go to a web page, log on with your ASEM email address, and drag the images from your computer to a window like the one shown below. At that point the transfer is automatic. It is a very simple process. Apparently each album can hold up to one thousand pictures. We have a long way to go!

In addition, there is a third slide show on the main page that displays astrophotography images from our members. If you have any that you'd like displayed on our page send them along too.

In order to get the correct picture into the correct slide show, I've created a web page called "Links to post pictures to ASEM" as a subpage under our "Links to Member Pages."

ASEM DigitalSIG Members Images :

[View Album](#)
[Play slideshow](#)
[Contribute photos to this album](#)

ASEM General Meeting Pictures

[View Album](#)
[Play slideshow](#)
[Contribute photos to this album](#)

ASEM Public Outreach Pictures

[View Album](#)
[Play slideshow](#)
[Contribute photos to this album](#)

I plan to archive the contents of the old slide shows at the start of the New Year. If you've been an ASEM member for a long time, you might want to click on the current slide shows to look through the pictures before then so you can download any pictures that interest you before they go away. Everybody can view an album or play a slideshow, but you do need to be added to a list to be able to contribute.

ASEM BEGINNERS MEETING

BY AMY WHITE

The December ASEM Beginners Meeting will be held on Thursday, December 6, at the Weldon Spring Interpretive Site Classroom building. That's the same building where regular ASEM meetings occur. The Beginners Meeting starts at 7:00pm. The Beginners Meeting has two major functions. The first is to help people observe the night sky. Naked eye, binocular, and small telescope objects, Moon phases, and celestial motion are discussed. There is usually a featured constellation of the month. At the December meeting, we will talk about Taurus, the Bull, and many of its great features. The second is to help people who are interested in learning how to use their telescopes. Having an experienced telescope user assist with the set up and operation of your telescope in a lit room makes all the difference. Since the season of gifts is coming, you might have questions about what to buy. We are glad to offer helpful and practical advice. All are welcome at Beginner Meetings. You don't need to be a member to participate.

NOVEMBER DIGITAL SIG MEETING NOTES

BY DAN CROWSON

The theme of November's Digital SIG was "Imaging with a DSLR." Dan Crowson gave a presentation on how to acquire, stack and process data using a digital camera. See the notes from the presentation on the following pages. Thanks to all of the people that attended.

The next Digital SIG meeting will be Tuesday, December 18th at 7 PM at the Weldon Spring Interpretive Center. The topic will be "Choosing Targets". Attendees will learn about determining field of view using CCDCalc and various planetarium software. We'll then discuss how to pull images from online sky surveys and Aladin. These tools can also be used to identify objects in your images. We also plan on discussing an all-day imaging workshop coming up. Now is the time to put in your requests. There is always time available for other questions so please join us.

Several members went to the Danville Department of Conservation site on Friday, November 16th. We had an extra mount and auto-guiding setup to use for DSLRs. Using stock Canon's with a 200mm lens, we could pull out the blue reflection nebulosity in the Pleiades (M45) with exposures as short as 30 seconds. The horsehead was clearly visible at 60 seconds. While a modified camera can pull out more detail, you can definitely use the camera you use for normal, daytime pictures and end up with something worthwhile.

Building on what we've learned over the last few months, December will give us another opportunity to put things into practice. An imaging party will take place at the Danville Department of Conservation site on Friday, December 14th or Saturday, December 15th. It should be dark by 6 and the moon sets by 6:33 or 7:44 PM. This is a good time to see some dark skies, get help and spend time with others doing the same. 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 ASEMDigitalSIG Yahoo! Group – <http://tech.groups.yahoo.com/group/ASEMDigitalSIG/>

ASEM Digital SIG – "Imaging with a DSLR"

November 20th, 2012

Dan Crowson – dcrowson at crowson dot com

Acquisition Software: BackyardEOS - <http://www.backyardeos.com/> \$30 Canon Only

Nebulosity - <http://www.stark-labs.com/nebulosity.html> \$80 Works with *most* cameras

Phd – Guiding - <http://www.stark-labs.com/phdguiding.html> Free

Stacking: DeepSkyStacker - <http://tech.groups.yahoo.com/group/DeepSkyStacker/>

Download the latest BETA version, not the CURRENT VERSION Free

Maxim, CCDStack, Nebulosity

Processing: Adobe PhotoShop - <http://www.adobe.com/products/photoshop.html>

Gimp – has drawbacks, Nebulosity, Maxim, Others

Noel Carboni's Astronomy Tools - http://www.prodigitalsoftware.com/Astronomy_Tools.html

PictureCode Photo Ninja - <http://picturecode.com/>

Used to be Noise Ninja

Russell Croman's GradientXTerminator –

<http://www.rc-astro.com/resources/GradientXTerminator/>

My workflow:

1. Levels and Curves
2. GradientXTerminator if needed
3. Level and Curves if needed
4. High Pass Filter, Unsharp Mask or Astronomy Tools Local Contrast Enhancement
5. Saturate
6. Fix artifacts
7. Astronomy Tools Increase Star Color
8. Astronomy Tools – Space or Deep Space Noise Reduction or Noise Ninja

Notes:

GradientXTerminator

1. Select Brighter Stars and use Wand on DSO - invert
2. Run Medium / Low
3. Increase the size of the selections (lasso brightest stars and DSO)
4. Run Fine / High

High Pass Filter

1. Create 2 new layers
2. Uncheck the original layer
3. Select to top layer
4. Filter – Other – High Pass
5. Move slider until it pulls out details in the object
6. Right-click the layer – Merge Visible
7. Check the Original Layer
8. Change the blending mode of the top layer to Overlay
9. Layer – Layer Mask – Hide All
10. Paint over the object with White to bring out the details
11. Flatten

Saturate

1. Duplicate Layer and name it “Saturate”

2. Duplicate this new layer and set blending mode to “Soft Light”
3. Duplicate this new layer and set blending mode to “Luminosity”
4. Select all three layers and Merge Layers
5. Repeat to taste

Yahoo Groups for DSLR Users

dslr_astro_image_processing –http://tech.groups.yahoo.com/group/dslr_astro_image_processing/

ASEM Digital SIG - <http://tech.groups.yahoo.com/group/ASEMDigitalSIG/>

Before and After Processed DSLR Image



NGC 1499 – The California Nebula – by Dan Crowson - Stock Canon T2i – Canon 75-200mm EFL @ 200mm f/5 – 10x300s

DIY-ATMIG

DO IT YOURSELF-AMATEUR TELESCOPE MAKERS INTEREST GROUP MEETING ON NOVEMBER 28

A more thorough report will be forthcoming by Tom Richards, these are some quick notes to tempt the uninitiated to our next meeting and share in the dark arts of telescope and equipment making.



Carl Turek demonstrating his new heavy duty binocular mount made from scrap wood and a few fittings. Suitable for stand up viewing as well as in a recliner. Probably will work well for outdoor hot tub use, too.

Carl's LED backlight picture frame chart holder. No visual observer should be without one. I'll get Carl to put together a Bill of Materials for our January newsletter. Maybe we can sweet talk Carl into holding an assembly workshop for an interested group.





Club raconteur Steve Boerner demonstrating his tracking mount fashioned from an old, cheap, plastic SCT. With one piece of scrap wood and a camera tripod head he's converted this to a perfectly suitable mount for widefield astrophoto work.

John Beury showing us his 4.5" reflector kit. This could be model for our public scope building project.



As you can see from these notes, there's something for the visual folks as well as the photo crowd. You won't learn nuttin if you don't come out! Toms's notes are posted on our website. There won't be a December meeting, there will be monthly meetings through the winter months. I hope to have a screw-

together refractor that I'll put together at the January meeting. I am sure others in the club will have unique projects to present as well. Don't be afraid, it's not all grinding glass and machining steel...

OBSERVERS REPORTS

There are many members who observe from their backyard or at Danville, our dark sky site. A paragraph or two of your observations sent in for the monthly newsletter will get you out there as a published author.

From Jim Oates November 18:

I have to confess that I had no intention of going to Danville but I had already driven 50 miles to get to BP and according to Jim Curry the weather was supposed to clear around 9ish, so I took my chances and kept driving. Thankfully he was right and it did. This has to be one of the best nights I have had in a long time. I met Marc and Kathy and Jim Curry there – after which a trailer with hunters showed up with lights/lamps blazing but they had as much right to be there as I did – just wish they'd turned their lights down a bit. Lol

Anyhoo I ran through 27 Messier objects with no problem and also managed to get my scope lined up. I also think this is a first. I bought a Telrad and it was the best thing I ever bought in a while to be honest. After a rough polar alignment and a 3 star alignment I was able to find everything. I think before I had the telrad I never actually had the scope lined up on the correct stars. We live and learn.

M42 was glowing from edge to edge of my eyepiece with Nebulosity. I could see the Milky Way east to west easily with just the horizon area blocked with light pollution.

A very cool night indeed and hope we get some more clear skies over Thanksgiving weekend.

I just went outside to compare the sky and this has proved to me that the drive was worth it. To say my enthusiasm has now gone through the roof – everything tonight just clicked. No photography just several hours of solid viewing pleasure under a crystal clear star-lit night.

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:

programs@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@aseonline.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@aseonline.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@aseonline.org

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

Outreach@aseonline.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@aseonline.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

Don't be afraid to print this. Thousands of high paying American jobs depend upon the paper industry.

An industrial forest is a healthy forest.