



ASEM NEWSLETTER MAY 2012



Venus Image courtesy ASEM member
Dan Crowson¹

FROM THE EXECUTIVE DIRECTOR



I may not have danced around many Maypoles lately, but May does bring some wonderful observing opportunities for those interested in celestial poles. Ursa Major is wonderfully positioned during the early evening hours for those willing to challenge the bear.

In other things ASEM, the 14" telescope (right with Tom Richards) is back in residence at the roll off roof observatory, and training sessions on the SkyCommander system will be held starting the second week of the month. Is there a preference for a particular day? The system is working well and we intend to use it as the default system for both the 14 inch and the Jones Bird. This will encourage more use of the Jones Bird and keep training to one platform. Members will still be allowed to hook up the computer/server interface, but we ask that everyone who finishes for the night restore the scope to its SkyCommander settings.



Make sure you get out to the park to see the excellent work our volunteers have done with the Celestron. A word of caution, the balance is critical, so unless you are extremely comfortable in adjusting the balance, please leave it as it is set up for traditional diagonal and eyepiece viewing. The damage to the scope resulted from improper balancing and several of the pieces needed to be hand machined by Bob Kirschenman (thanks so much Bob!).

Hope to see you all at the Park, or the next meeting!

Stacey Thater
sthater@stchas.edu

¹ We'd like to showcase your best work, submit your astrophoto to NEWSLETTER@ASEMONLINE.ORG

DIGITAL imaging SIG by Dan Crowson

The theme of April's Digital SIG was the Sun and how to view and image it.

Will Day started the meeting with a presentation on imaging the Sun using video cameras connected to a Lunt solar telescope. The Astronomical Society of Eastern Missouri owns one of these telescopes with a mount. Will explained how he captured the data, why monochrome can be better than color and how to stack and process into a final picture. Some of Will's solar work can be found here –

[HTTP://ASTROPHOTOS.WSDAY.COM/HOME/SOLAR-IMAGES](http://ASTROPHOTOS.WSDAY.COM/HOME/SOLAR-IMAGES)

Steve Sands gave an informative presentation on different ways to view the Sun. He demonstrated different projection devices and filters. The most interesting device was a Herschel Wedge, first used by John Herschel in the 1830s. This diagonal-looking device uses a prism to reflect 4.6% of the light to your eyepiece. The remaining 95.4% of the light and heat exits out the opposite side of the wedge (or is absorbed by some models made of ceramic). Steve pointed out that these can**NOT** be used with reflecting telescopes.

Picture of the month – NGC 4725 spiral galaxy in Coma Berenices by Gregg Ruppel –

[HTTP://WWW.RUPPEL.DARKHORIZONS.ORG/NGC4725.HTM](http://WWW.RUPPEL.DARKHORIZONS.ORG/NGC4725.HTM)



The latest news can always be found in the ASEMDigitalSIG Yahoo! Group –

[HTTP://TECH.GROUPS.YAHOO.COM/GROUP/ASEMDIGITALSIG/](http://TECH.GROUPS.YAHOO.COM/GROUP/ASEMDIGITALSIG/)

DIY SIG by Tom Richards

We skipped the month of April, which goes hand-in-hand for the increase in available observing time in the spring. Chat on building astro gear projects has quieted down on our DIY forum too.

So, at this point in time the focus is the agenda for the May meeting, and that is open for more project and tool discussions. Presently, we plan to discuss:

The enhancements to the scopes and sheds at Broemmelsiek Park, with some work in process by Gary Liming and Carl Turek.

A show'n'tell by Grant Martin on the use of an Arduino mega controller board from Radio Shack (as a light controller, battery charger/maintainer/load-controller and data acquisition system) and the quality of work he just experienced in optical coating services from Nova Optical Systems (yes, he is very happy with their services).

If you have an idea you wish get some input on or wish to share a completed project (new or old), this is the group to join, which is open to both members and visitors who are interested in Astronomy and related gear.

There will be more to report next month for sure.

Got questions on the meeting? then please feel free to contact Tom Richards, SIG Coordinator, at:

[**TRICHARDS@ASEMONLINE.ORG**](mailto:TRICHARDS@ASEMONLINE.ORG)

or join our DIY-ATM forum at:

[**HTTP://TECH.GROUPS.YAHOO.COM/GROUP/ASEM_DIY-ATM_SIG/**](http://TECH.GROUPS.YAHOO.COM/GROUP/ASEM_DIY-ATM_SIG/)

REGULAR CONTRIBUTORS (OR USUAL SUSPECTS – YOU DECIDE)

MARV STEWART (GENERAL ASTRONOMICAL RACONTEUR)

Barb and I will be in Albuquerque, New Mexico, on May 20 for the annular eclipse. In researching for this article, I was astonished to find that I have a life long connection to this series of solar eclipses, Saros 128. And it wasn't easy to understand how a Saros series works until I could make this personal connection.

My first connection was the year I was born. On April 7, 1940, Saros 128 moved on a similar track just south of the track it will take May 20, 2012. The next eclipse it produced was April 19, 1958. This one started over the Indian Ocean and ended in the western Pacific. About a month later I graduated from high school.

In 1976 our nation celebrated the Bicentennial, Gerald Ford was president and Saros 128 was observed across north Africa, the Middle East and Turkey on the twenty ninth of April. On schedule on May 10, 1994, Saros 128 gave the Midwestern states an annular eclipse. I referred to an old diary of mine to get a description of my thoughts on that day.

I made a pin hole projector from cardboard and watched it during lunch hour. I have drawings showing what it looked like at 10:30 a.m., and at 11:53 a.m. I drew an annular ring. There are two more drawings after that but no times recorded. So now I am looking forward to seeing an old friend I haven't seen in over 18 years, with my wife beside me in Albuquerque.

Saros 128 began on August 29, 984, with a partial eclipse near the South Pole. Every 18 years 11 days and 8 hours after that the Earth, Sun and Moon would arrive at the same configuration and produce another eclipse, but because of the 8 hours it would occur one third of the world away and a little further north.

The eclipses in my life time have all been annular eclipses, Saros 128 has produced only four total eclipses. The one on May 20 will be number 58 of the "family" of 73 that will end on November 1, 2282, with a partial eclipse near the North Pole. Oh, the next one after May 20 will be June 1, 2030, I haven't made any plans for it, yet.

Marv

AMY WHITE

Beginners of the World, Unite! Meetings are open to all ASEM members, and our non-member friends in the community. We will meet Thursday, May 3rd at 7:00pm at the Weldon Spring Site, our usual place.

The annular eclipse is coming up, May 20th. Find out how you can SAFELY participate in this exciting event. The next total solar eclipse we will experience here in our zip codes will be August 21, 2017. That's a ways off. So let's have fun with the upcoming annular eclipse.

Also, the transit of Venus across the Sun is not to be missed. It will occur before the June Beginners Meeting, so let's talk about it at the May meeting.

We can also talk about "Gearing up for Summer Observing." Bug spray and dew shields for sure. What constellations and bright stars will be up for us to enjoy? The binocular deep sky of Summer is exciting. We will talk about those fun, big, and bright objects that are easy to catch.

The Beginners Meeting format is really flexible. If there is something you want to learn about, bring it up and we will cover it. If you have your Universe Sampler book from the Astronomical League, we can go through some of the "badge requirements" if you wish. Anybody wanting help with any of the other Astronomical League Observing Clubs should visit for information and moral support.

Need help getting your telescope up and running? You are very welcome to attend Beginners Meetings. Bring your scope or binocs so you can get advice from experienced observers on how to use your stuff. It does not matter if your equipment is computer-controlled like the HST or low-tech like Sir Isaac Newton used. We will do our best to help you enjoy your observing experience.

Now that weather is getting warmer, here is a question. Do we want to start Beginners Meetings at the Weldon Spring Site, then roll out to Broemmelsiek around 8:00pm? For me, the best way of learning is by doing. Broemmelsiek has a much better view of the sky than the Weldon Spring Site does. At Weldon Spring, there is not much to see naked eye. Scopes can be set up if folks want to try an observing run. For those of you with an early Friday morning commitment, you might not want to stay too late on Thursday evenings. The weekend might be better for you. Steve's "Social Observers" sessions might be just the thing for fun, relaxed viewing. We can talk about this at the May 3rd meeting as well.

Email me at awhite@stchas.edu if you have any questions or want to suggest something. Hope to see you soon! And now I must mow the lawn which is growing too fast.

JIM TWELLMANS' COMET WATCH

On Comets, we still have Garradd as a late-evening object in May, but during that month, it fades from mag 8 to mag 10. [HTTP://COMETCHASING.SKYHOUND.COM/COMETS/2009_P1.PDF](http://COMETCHASING.SKYHOUND.COM/COMETS/2009_P1.PDF)

Nothing expected sub-mag-10 in June, but in July we have 96P/Macholz1 in the evening, low in Leo in mid-July. It is expected to peak at mag 7 and then fade very fast.

ASTRONOMICAL LEAGUE

A special observing club award has been specially designed and developed for the upcoming Venus transit in June. Two levels of awards will be offered. The extract below is directly from the AL website

[HTTP://WWW.ASTROLEAGUE.ORG/PLANETARYTRANSIT_VENUS2012](http://www.astroleague.org/planetarytransit_venus2012)

Start getting ready NOW! Success can be achieved through dry-runs and practice so you have less than 5 weeks to get your setup and system working. Many members of ASEM are experienced solar observers & astrophotographers. They can help you safely enjoy the experience. Your questions can be rapidly answered on the YAHOO group '[STL ASTRONOMY](#)'. Watch ASEM ONLINE.ORG, the Astronomical League and STL Astronomy for more details as they are published. The program committee will have more information on this club and event at the May General meeting on the 12th



Rules and Regulations

There will be a general certificate available for download by anyone hosting a transit viewing. The host can then provide these certificates to those who participate as a memento of their experience and to commemorate this very rare experience.

There will also be a special award for those who undertake the process to calculate the value of an Astronomical Unit. The special award will include a certificate and a pin.

To receive this special award from the Astronomical League, you must meet these requirements:

- Be a member of the Astronomical League.
- Observe as much of the transit as is visible from your location.
- Sketch the event as you see it, noting the timings for the contact points.
- Include your Latitude and Longitude of observation.
- Calculate the value of the Astronomical Unit. Instructions on how to do this will be available from the NASA website.

Submit your work per instructions that will appear here by the deadline indicated

To do the calculations requires two distant observations. If you are able, you can use your observations as one of them. The other may be done using data from another observer. This information will be available on the NASA Website.

To receive your special award, follow the instructions that will be provided here in the future.

Editors Note: Jim Twellman is the AL club coordinator for ASEM. More information on the submittal process will be addressed by Jim later so be sure to save your work ;)

BREAKING NEWS THIS just in from Jim:

On the specifics currently given for timings, it isn't too scary, and I seriously doubt that teamwork is against the rules. Now is the time for individuals to commit to an observing program, or to commit to an Outreach or an astrophotography event. I think, to a degree, that Outreach and this program could be done simultaneously. Also, there appears to be a "lesser" certificate simply for observing or for Outreach on the Transit.

CALENDARS

CLUB

Date	Event
3	Beginners meeting
12	Potluck social and general meeting
15	Digital SIG
30	DIY-ATM SIG

All meetings take place at the Weldon Springs Nuclear containment site at the specified times (Don't worry, you won't be irradiated any more than usual ;)

OUTREACH (VIA JIM TWELLMAN)

Date	Event	Notes
4	Cub Scouts - Indian Camp Creek Park (at campground, at sundown)	expect 50, need 2 scopes
20	Klondike Park (hill behind conference center)	Expect 50. Show up before 5pm for first contact at 5:25pm

ASTRONOMICAL EVENTS FOR APRIL (VIA MARV STEWART)

Date	Event
3/4	Look for a grouping of Saturn above the bright star Spica with the nearly full Moon to the west. On the fourth the Moon will be to the east.
 6	Full Moon. This is the largest full moon this year, the Moon is at perigee on the sixth.
7	Antares rising at dawn is to the lower left of the crescent Moon.
 12	Last Quarter
 20	<ul style="list-style-type: none"> • New Moon • Annular solar eclipse visible from southern China to the Texas panhandle. Check for times in your area
21	The crescent Moon low on the horizon, bright Venus far above.
 28	<ul style="list-style-type: none"> • First Quarter • Mars above and to the left of the Moon
31	The now waxing gibbous Moon is near the same position it was on the 3rd.

"Every second, the sun converts 657 million tons of hydrogen into 653 million tons of helium by a process known as nuclear fusion. The missing 4 million tons of mass are converted into energy and hurled into space as heat and light. The earth intercepts only about one two-billionth of this energy, or about 4 pounds (per second) worth of the vanished matter."

Chet Raymo, 365 Starry Nightsp. 57, April 1 (For May's ASEM meeting)

CLUB NOTES

May General meeting

The program is still under development but one thing's for sure, they plan to continue to make it entertaining, educational and inclusive. We did get a note indicating the following can be counted upon:

- Marv will continue his trivia entries and Astro 101.
- More information regarding the upcoming eclipse and transit.
- A possible guest speaker or speakers to discuss getting ready for these events and photographing them.



"Stellar Surprise"

As of this printing, no one has volunteered to bring the main dish so it looks like on the MENU!!!! (Don't ask – just be adventurous and come & enjoy).

is

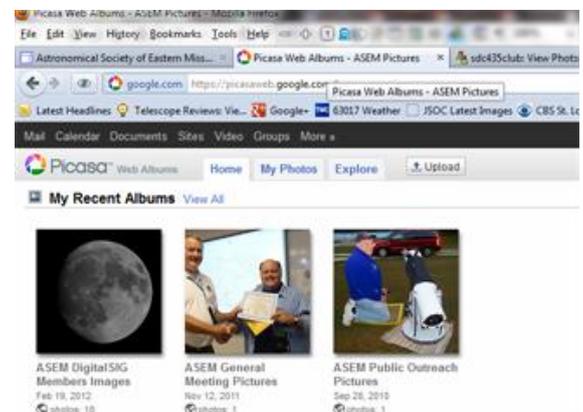
ASEM Pictures

By Steve Boerner

Yvonne Roe always had a camera with her and now with her farther away, we need some people to "pick up the slack." There are currently three slide shows on ASEM's main page, but many of the pictures in the shows are outdated. I've even noticed a picture of Jim Roe with his hair all one color and Jim Twellman with a beard. A number of people bring cameras to our meetings and events. I'd like to encourage them to take even more pictures and post their efforts so we can include the images on ASEM's web page.

One of the many Google Apps that is available to ASEM members is Picasa Web Album. Picasa is a combination of a desktop client to manage picture organization and a web page for sharing that provides 1 GB of online storage. You can access both parts at <http://picasaweb.google.com>. If asked to log in, use your ASEM email address and password (contact me if you are unsure about these). The slide shows on our pages come from pictures stored at Picasa. I'll point out that you can also use the Picasa storage for personal pictures that can be shared with family and friends.

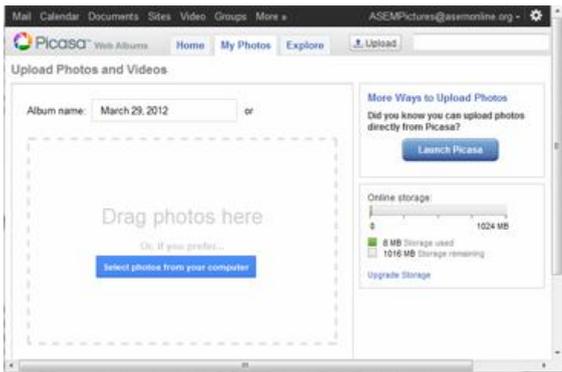
To make the process easier for volunteers, I've created a new member with an email address ASEMPictures@asemonline.org. I've created three albums for the account:



- ASEM DigitalSIG Members Images
- ASEM General Meeting Pictures
- ASEM Public Outreach Pictures

Pictures added to these folders will be automatically included in the correct slide show on ASEM's main page.

There are two ways to get any pictures you take into the correct album. If you only take a few pictures you can email them to me at sboerner@charter.net and I'll take care of the rest. If you plan on taking frequent or many pictures let me know and I'll share the needed albums with you. The sharing is a one time thing that takes about five minutes. Once completed, Google will send email telling you that a album has been shared and a link to open. Open the link and log in with your ASEM email address and password. At that point all you'll need to do is drag and drop the pictures from your computer to the browser window (see left) and the rest is automatic. It is really easy! Let me know you are interested in contributing and I'll get you added.



Two other things of interest:

Many ASEM members have knowledge that could and should be shared with the world. ASEM membership includes having the ability to create web pages on the ASEM site. Our site host, Google, offers many tools that make web page creation a relative simple task. If you are interested in creating your own web page based on ASEM's goals let me know and I'll create the space. If there is enough interest we can easily schedule a "how to do it" session at a location with good Internet access.

Lastly there is a web page buried on ASEM's website with out any real links to the world. The page is called "ASEM Member's Pictures" and the address is: <http://www.asemonline.org/members-pages/asem-member-pictures>. So far there are only five pictures on the page (Grant Martin, John Duchek, Jim Twellman, Don Ficken, and mine). If you'd like your picture posted to the page, send me an email (sboerner@charter.net) with your picture attached and I'll add it to the page. Additionally if there is a web page you'd like linked to your picture send it to me and I'll include the link.



Beginning at the May meeting, solar observing viewers will be available for \$2.00 each. These viewers are quality products from Thousand Oaks and can be used for the upcoming Solar Eclipse in May and the Venus transit in June (and any solar event from here on out). Quantities are limited so come to the meeting and get them while they're hot (and available)

MEMBER NOTES



Steve Boerner is currently traveling “across the pond” as it were. He recently sent in this photo (left) of a particularly famous object.

So, what is it? Anyone hazard a guess?

Answers to this and other curious questions at the May general meeting only.

We also received this note from John Duchek:

I finally got around to calibrating one of the images from the 6 inch F/8 tubeless dynascope. In this image on the right, I have labeled how the image was made, and put an approximate 1 arc-second circle to give myself an idea of the resolution I am achieving (the white “dot” is in the middle on the left hand side). It is clear I am well below 1 arc-second in resolution as there are many craters visible smaller than the 10 pixel diameter. I thought this photo might be worth including in the newsletter as an resolution example. The FOV was estimated from S&T's Field map of the moon.

John



Catharina2Theophilus. 03/28/2012. 6 inch F/8 tubeless Newtonian and 2.5x Televue Barlow. Canon T1i(500D) and EOS_Movie Record software. 600/2400 frames used. Image is 3.0 x2.2 arc-minutes, 980x681 pixels, 1 arc sec = 5.4 pixels (see 6 pixel circle)

[The editor asked for additional information so John responded with the following note. A future article will address the telescope itself. Perhaps it might show up at a future DIY meeting [hint hint]]

You asked me for pics of the telescope camera setup that took the pic of the moon I sent earlier in the week. Here is "Son of Holey Scope" and a close up of the camera set up as it was for the picture, with a 2.5x Televue Barlow (not PowerMate) in line with the 1.25" R&P focuser equipped with electric focuser.

John



OUT AND ABOUT

Several ASEM members are also members of the Saint Louis Astronomical Society (SLAS). Their general meeting is on the third Friday of the month. All SLAS general meetings are open to the public. This month it is on the 18th. While our meetings are more social, interactive and less technical, theirs is oriented around a more formalized lecture format. Even though these presentations are given by experts in the field and technical in nature, they can be very informative and easy to grasp by the public – you don't have to have a college degree to understand the topic – just a desire to learn something new.

This month's topic is "Stellar evolution". It will be presented by Kristen Erickson. Kristen is a graduate student at the University of Missouri St. Louis, in the Astronomy and Physics Department. She grew up on Ramstein Air force Base in Germany. She received her undergraduate degree in Physics and Astronomy from the University of Arizona, Tucson. She is currently working on research in star formation. Her dissertation will focus on two star forming regions, Serpens and Rho Ophiuchus molecular clouds. For more information about SLAS and the general meeting time and location, got to www.slasonline.org

CLUB CONTACTS

MEMBERSHIP

Membership issues can be addressed through our executive director Stacy 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@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 STL Astronomy in yahoo groups. If you aren’t a member, you should join. Go to

[HTTP://TECH.GROUPS.YAHOO.COM/GROUP/STL.ASTRONOMY/](http://TECH.GROUPS.YAHOO.COM/GROUP/STL.ASTRONOMY/)

and click “Join”

Think Clear, dark skies