



A.S.E.M. Newsletter

May 2013



MARKARIAN'S CHAIN

PHOTO BY DAN CROWSON

MAIA

MONTH OF THE GODDESS MAIA



Maia, mother of Hermes, oldest of seven Pleiades

MAY NOTES

BY STACEY THATER, EXECUTIVE DIRECTOR

Good Spring and good weather (at least better weather) to all ASEM members! Things are cranking up for us and there are several events scheduled for the upcoming month. I would like to take a moment to thank Grant Martin and David Lloyd for helping with the cleanup and repairs at the Park in April. We managed to clean the optics on the Jones-Bird, and are working on getting the collimation squared away to make this scope the amazing instrument it was designed to be. In addition we cleaned out the observatory and put up new cork and white boards for messages and educational purposes. In addition a smaller table is in the southeast corner making the 14" telescope more accessible to large groups. The doghouse has new wheels and a ground trim board that makes it less likely that the leaf blowers will blow debris into the telescope. Be sure to stop by and see the changes.

In other news, Jim Twellman was informed by the family of Nolan Hupp that the disposition of his telescope equipment needed to be resolved. To that end Jim went and purchased several telescopes and eyepieces as well as filters on behalf of the club. Nolan's widow said that the money was sorely needed and was greatly appreciated. In addition, Jim and I have decided that Nolan's 12.5" scope is of sufficient quality, (Jim says very nearly excellent quality), to be of use to the club as a loaner scope. We believe that it will fill a need for people a little squeamish about taking responsibility for the Starmaster. We plan to create a plaque to fix to the scope detailing Nolan's contribution, his widow was particularly pleased to hear this news. Jim will fill you in on further details, but I have one exciting piece of news to share.

I have decided that some of the equipment won't be needed for club usage and as a result we plan to auction some of the eyepieces, filters, and other items. Jim will bring pictures and some of the actual items to the May meeting for your perusal. At that time we will decide on the best format for the auction. Possibilities include a silent auction, online auction, or a fixed price sale. This may be held as soon as the June meeting, or possibly at the September picnic. So be sure to make it to the May meeting to see and discuss these items. Thanks for doing all that you do!

Stacey Thater
AfA Executive Director

MAY CALENDARS

Social

May 2 - 7pm Beginner Meeting Weldon Springs

May 11 - 6pm Pot luck dinner.

7pm General Meeting. Weldon Spring, 7295 Highway 94 South, St. Charles, MO 63304

May 21 - 7pm DigitalSIG. Astrophoto group meeting Weldon Spring, 7295 Highway 94 South, St. Charles, MO 63304

May 22 - 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

May 3, 10, 17, 24, 31 - 8:30 - 9:00 pm start times Broemmelsiek Park Public Viewing, weather permitting.

Astronomical

Comet PanStarrs circumpolar all month but getting fainter.

May 24/25 - Very slight penumbral eclipse of moon, moon passes very close to Beta Scorpio.

VIEWING HIGHLIGHTS THIS MONTH-

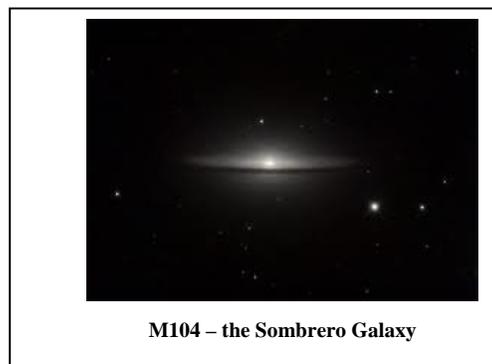
MAY 2013

BY STEVE BOERNER

We are getting near the end of the Messier list. After this month's entries there will only be ten left. If you've been following along viewing you should be pretty close to completion. Hopefully the weather will start cooperating after poor run we've been having since December and you'll be able to get some quality observing time in at the eyepiece. Jim

Twellman mentioned that he'd seen an article somewhere that our poor sky run was a national occurrence and that skies here were rated as the third best for viewing since the beginning of the year. Wow! That's got to make you feel really sorry for some people somewhere. There was even a thread on Cloudy Nights called "Will I ever get to use my new scope?"

Nothing is ever easy... well at least nothing in this month's list is easy for binoculars. It's not that they are hard to find, it's just that they are dim and small. You can do them all from Broemmelsiek but it will take one of those special nights when the colors at the [Clear Sky Chart](#) are as dark as they can get. Even then many of the



M104 - the Sombrero Galaxy

galaxies will show as only an elongated fuzzy patch that is difficult to pick up from the background gray sky. If you are lucky enough to be further away from the St. Louis light dome the object below should be a bit easier.

Messier Number	Constellation	object type	Common Name	RA h	RA min	DEC deg	DEC min	Mag	Obj size(min)
49*	Virgo	GAL		12	29.8	8	0	10	9 x 7.5
87*	Virgo	GAL		12	30.8	12	24	11	7
88**	Coma Berenices	GAL		12	32	14	25	11	7 x 4
91**	Coma Berenices	GAL		12	35.4	14	30	11.5	5.4 x 4.4
89**	Virgo	GAL		12	35.7	12	33	11.5	4
90**	Virgo	GAL		12	36.8	13	10	11	9.5 x 4.5
58**	Virgo	GAL		12	37.7	11	49	11	5.5 x 4.5
68*	Hydra	GLOB		12	39.5	-26	45	9	12
104*	Virgo	GAL	Sombrero Galaxy	12	40	-11	37	9.5	9 x 4

*Tougher with binoculars

** Challenge with binoculars

The Sombrero Galaxy is the best in the list. I remember finding it out at Whetstone Creek CA about fifteen miles west of Danville. It is half way between Porrima in Virgo and Beta Corvus, the bottom left star in the cup. M104 was a gem that night with my 90mm refractor and well worth the time it took to find it. Give it a try your next time out if there is no moon in the sky.

MAY DIGITAL SIG MEETING NOTES BY DAN CROWSON

The theme of April's Digital SIG meeting was "Planetary Imaging" presented by Jim Melka. Ten people attended Jim's presentation on how to image the planets from his Chesterfield backyard. Jim gave us tips on how to reduce heat current issues and how he takes projection images. Planetary imaging can be done any clear night from even the most light-polluted location. Also of note is that the setup used by the best imagers is a C-14 – the same telescope that ASEM has out at Broemmelsiek Park. Other topics included a presentation on some new or recently updated software.

The next Digital SIG meeting will be Tuesday, May 21st, 2013 at 7 PM at the Weldon Spring Interpretive Center. The main topic of the night will be plate-solving. As of right now, this will include using Maxim DL and Astrotortilla (<http://sourceforge.net/p/astrotortilla/home/Home/>). We're also looking for more topics. If you have ideas, please email them to me at dcrowson@crowson.com.

Building on what we've learned over the last few months, May 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, May 10th or Saturday, May 11th. 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 ASEMDigitalSIG Yahoo! Group – <http://tech.groups.yahoo.com/group/ASEMDigitalSIG/>

ASEM Digital SIG – Software Update
April 16th, 2012

Dan Crowson – dcrowson at crowson dot com

Google Earth with Light Pollution Overlay

- Google Earth - <http://www.google.com/earth/index.html>
- Light Pollution Overlay - <http://astronomy.santa-cruz.ca.us/files/Light%20Pollution%202001.kmz>
- More information here - <http://astronomy.santa-cruz.ca.us/node/9167>

eXcalibrator 4.01

Used to determine the correct color ratios when imaging through red, green and blue filters. The program handles atmospheric extinction because the results are based on your data.

- <http://bf-astro.com/excalibrator/excalibrator.htm>

BackyardEOS 2.1 (Beta)

The best (?) program for imaging with a Canon camera. Nikon (and CCD) version by the end of the year.

- <http://www.binaryrivers.com/download/setup-BackyardEOS-v210-BETA03.exe>
- See the following pages for more information

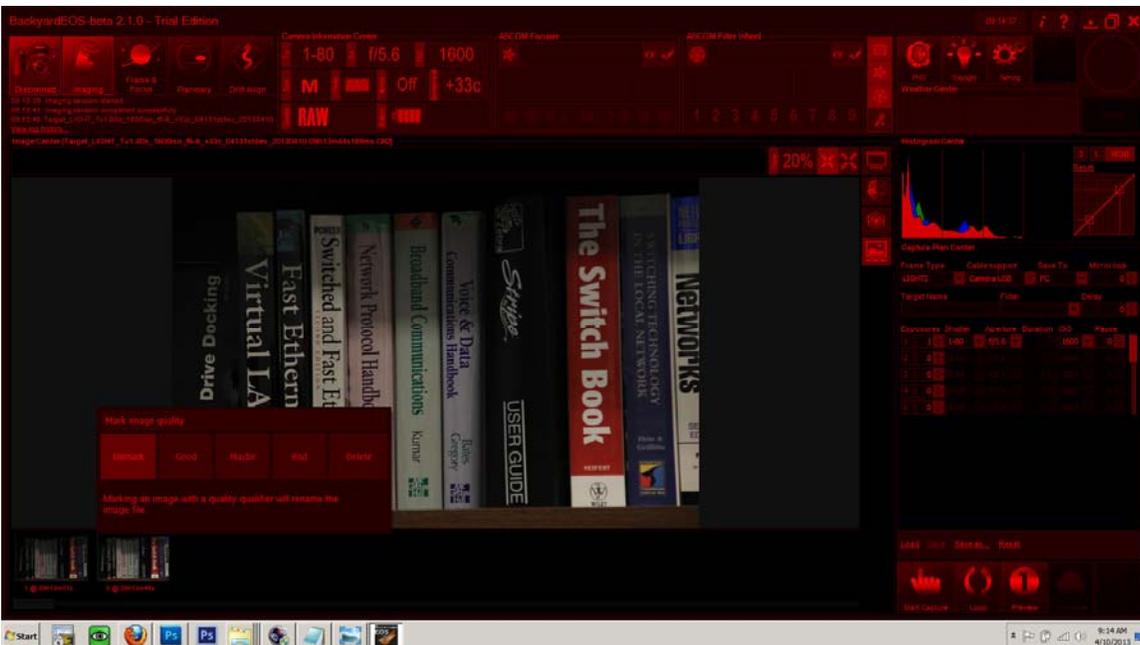
Weather Ninja 2.0

Integrates the Clear Sky Clock along with several other forecasts and maps.

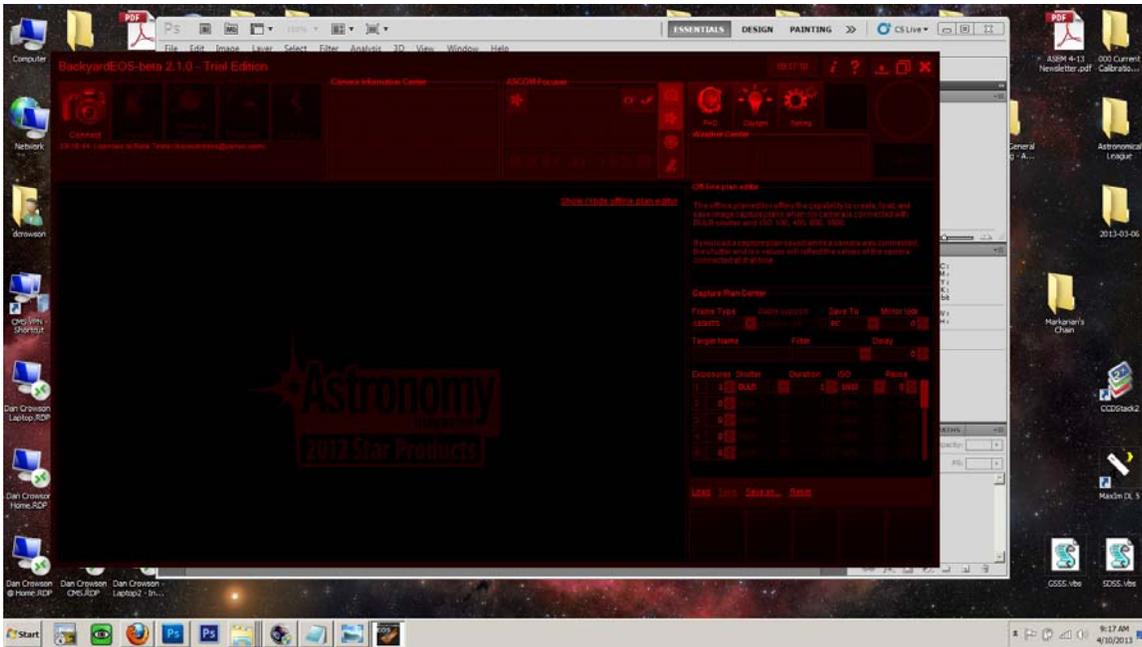
- <http://www.ccdware.com/Files/WxNinja.zip>

Imaging

- New cursor
- Right-Click for histogram and statistics
- Wheel mouse (or + / -) for zoom
- Right-Click thumbnails for marking
- Presentation mode can be dragged (to a second monitor)



- Image plans can be made and saved without the camera



- Ability to create RAW TIFF files added
- Ability to drag and drop images added for eclipse framing
- Non-destructive screen stretch added

ASCOM

- Controls for focuser, filter wheel and telescope



Frame and Focus

- Multiple focus modes (FWHM, HFD, StdDev and Bahtinov)
- Ability to move focus center zoom box

Performance

- Image and video processing is now done in the background
- Text and menu transitions removed (increased speed with RDP)

General

- Download folder dating changed to allow for the same day up to 6 AM
- Ability to operate two or more cameras
- AstroTortilla support by 2.1 release date
- Auto-Focus possible by 2.1 release date but not 100% certain

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

DIY-ATM GROUP

2013 JANUARY 23RD MEETING

SUBMITTED BY TOM RICHARDS, SIG COORDINATOR

submitted by Tom Richards, SIG Coordinator (my apologies for not posting reports of the previous 2 meetings, for September and November of 2013 - will try to catch up on that)

Besides the great ideas, creative construction, learning of sources for cool stuff that can be had at great price, saving your wallet, we had a lot of electronic gizmo's this time around for scopes, focusers and batteries, with a touch of astronomy nostalgia thrown in (read on):

Carl Tureck first showed off:

His "souping up" of a \$200 department store Celestron Nexstar 102GT Alt/Az scope. Modifications included:

- Replacement of the tripod, with a beefy "retired" surveyor's tripod, that he picked up for free.
- Upgrading the focuser with a ScopeStuff 2 inch dual speed.
- Adding a home-built electric focuser drive from a low-cost servo kit.
- Use a "sorabafan", that is available in small sheets, as vibration pads. The sheet size is enough for two tripods.
- Home-built tripod bracket for Nexstar Handset.

Now this scope and mount has become his favorite grab'n'go scope that includes a GoTo drive ! Nice work again Carl!

In addition, he figured out how to use those free narrow beam LEDs, that were available in the November's meeting, and wired them to a waist clipped battery pack to create a comfortable hands-free "red-light". Carl what will you think up next? Just too cool!

Ed White brought in his (and, oh yeah, Amy's) 10 inch dob that has been modified with a low-cost, home-built version of a wireless "sky commander" control, that is a lot cooler. This included a low cost 12V/5V battery power supply for encoders and interface, RC hobby connector adapters, [Dave Eks Digital Encoders](#) and bluetooth kit that interfaced to SkySafari running on a (low cost) Nook Color tablet. The Nook was "Androidized" by "rooting" it (you can do this with the older

versions) and now its an Android tablet running SkySafari. In addition, Ed found another [low-cost bluetooth adapter](#) for the Nook off Amazon.

And way to make/package a low-cost battery charger, with a very low-cost DC power board off Ebay (check with Ed on this, if interested).

Ed and Amy really like the end result of this work by Ed. For dob owners interested in making something like a Sky Commander, this is really worth checking out. Well done Ed!

Grant also showed off his knack for making very interesting technical tools, that all could benefit from. This time he cooked up a way to test batteries under load for current and voltage characterization, at the same time, with the use of two low-cost Harbor Freight multimeters (just in case there is a problem). Thats the engineer there. He even showed a time-lapse video of a real test of data collection and plotting. Really interesting. Watch [Grant's personal page](#) for more (upcoming) details.

And now that Steve has himself a big (Skywatcher) dob that is a GoTo scope, he has been working on a low cost adaptation for video astrophotography in both piggyback and thru focuser adaptations. Steve is an avid fan of video imaging, and for personal study and public star party support, working this interface out was just simply the right thing to do. So for piggyback wide-field imaging, Steve has prototyped up an interface to a Canon lens and a bracket to carry and attach both to his collapsible dob. In addition, he has also adapted the camera to a flip-mirror/diagonal for high magnification use, and with his type of dob he was able to easily over-come the common camera focus depth issue by simply adjusting the position of his scopes diagonal/focuser ring. Steve you did it again. Way to go! See [Steve's personal page](#) on video imaging and for more (upcoming) information and photos.

Finally, and while not really related to DIY projects, Jim Curry gave us something to think about with showing off his recent (great find/buy) of a 2009 Great Sky Atlas chart book by Piotr Bych, which just went out of print. For most of us, this was a nostalgic trip, since the age attending this meeting all started the study of heavens with charts (not with computers). So, we were blown away with the number of 17x24 maps (296 of them), their detail and the fine print showing stars up to mag 12 and more galaxies and DSO's than one would want to count, all on the shiny black-on-white double side pages. Of course, most immediately were scratching our heads how to red-light adapt such a collection of charts, but with being on fine glossy paper that is double-sided, we all had to sigh, and accept reality, this this chart is definitely not for night vision, but as a great desk reference for daytime study, that is for sure. See this link (<http://www.greatskyatlas.com/>) for more information. Congrats Jim on finding one of these gems!

Finally, just a footnote here: we are meeting every 4th Wednesday of the Month now. So, for those creative home builders, keep those ideas and projects coming! Thanks to all that participate.

OBSERVERS REPORTS

Jeff Heckencamp reports a late April visit to Danville: “Danville had fairly good transparency but below average seeing. The galaxy views were good but nothing was "popping". Saturn was mush at the end of the night and globs M5, M3, M13 and M53 were not as bright as on a good night. We all need a clear moonless weekend night, soon I hope.”

CLUB CONTACTS

Membership

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

Email: stthater@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 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