



The W.A.S.P. Newsletter

June 2012

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The Warren Astronomical Society Paper
P.O. BOX 1505
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The President's Field of View

Our WAS group has some special events that are the highlights of each year. Be sure to mark these in your calendar so you don't miss them.

Our annual club picnic will be on Saturday, July 21, starting at 4 PM, at Stargate (at Wolcott Mill Metropark). We supply the hot dogs, buns, and soft drinks. You can bring and share salads, chips, desserts, or anything else you like (no alcohol permitted by the park). Many members also bring their spouse or children, so it gives us all a chance to get to know each other better. If the skies are clear, some of us stick around for observing after dark.

Astronomy At The Beach (AATB) is the biggest public astronomy event in Michigan every year. It's held at Kensington Metropark in Brighton. This year's dates are Friday and Saturday, September 21 and 22, starting at 6 PM. Several other astronomy clubs join WAS in setting up telescopes, distributing information about astronomy and about our clubs at display tables, giving or listening to presentations, and chatting with the public to convey our enthusiasm for our hobby. Attendance is in the thousands, including many families with kids. <http://www.glaac.org/kensington-astronomy-at-the-beach>

The Great Lakes Star Gaze is an annual event just for us amateur astronomers (not for the public). Members of astronomy clubs from all over Michigan, and some from nearby states, gather at River Valley RV Park in Gladwin, from Thursday to Sunday, to observe with our telescopes under dark skies that are impossible to find close to Detroit. This year's dates are September 13-16.

<http://www.greatlakesstargaze.com>

Our annual WAS banquet this year will be on December 8. Unlike in past years, we are having it on a Saturday evening, to make it easier for members and their spouses to attend. Save the date on your calendar now, and watch the WASP and announcements at our meetings for details.



- Jon

New Larry Kalinowski Telescope for WAS Observatory

Our domed observatory building, Stargate, is currently without a working telescope. The board and concerned WAS members have been researching possible telescopes to buy for use in our observatory. We have received much appreciated donations from the family of deceased WAS member Larry Kalinowski. These donations can help pay a large part of the cost of a new telescope and mount.

After considerable research and discussions by email and at board meetings, on May 7, 2012, the board approved ordering an 8-inch refractor telescope for Stargate. It will take about 8 months to get this telescope after we order it. The cost is about \$3800, which does not include a mount and necessary accessories.

We decided to purchase a large refractor telescope for several reasons. First, the club already has a number of large reflector type telescopes, which includes Blaine's 13", and the 22" Big Dob. Riyad did the research and recommended the D&G Optical 8" f/12 refractor. It's a great telescope for the money. The telescope is 8 feet long and will include an Astro Physics focuser. Also, since the scope is so long, it will be more user friendly. The observer will not have to climb as high to look through the eyepiece.

Secondly, by having a large telescope that actually looks like a telescope, mounted in a real observatory, we thought it would generate much more public and club attention, along with enthusiasm. The possibilities for future outreach events at Stargate are endless. Which means more attention for our club and increased membership.

In regards to the mount, there are several choices, ranging from adapting our old mount and settling for its limited functionality for about \$600, to purchasing a new and better mount for up to \$9000. Thus far, the board has only approved the \$600 adaptation of the old existing mount. If more money can be obtained from donations, then we will consider the other better mount choices. Expect to hear more about this in the near future.

We can't wait for the "first light" grand opening of the new Kalinowski Telescope at Stargate in 2013!

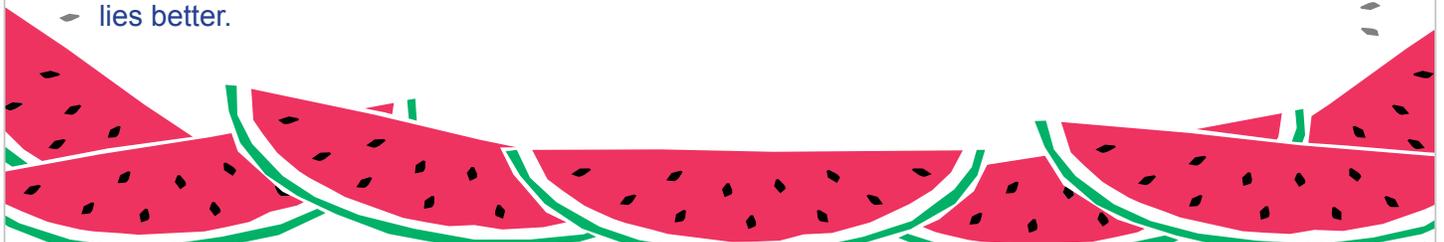
- Jon Blum, Bill Beers & the WAS Board

WAS Annual Picnic July 21

Our annual picnic will be on Saturday, July 21, beginning at 4 PM, at our Stargate observatory. Members & families of all Michigan astronomy clubs are invited.

The picnic is a bring-your-own-basket affair, though we will provide drinks, hot dogs, and buns. PLEASE BRING YOUR OWN CHAIRS, TABLES, AND BLANKETS, and feel free to bring food to share, such as dessert or chips or salads. Wolcott Mill rules allow no alcohol on the premises.

Bring your whole family. This is a great event for all of us to get to know each other and our families better.





The SWAP SHOP

This column is for those interested in buying, trading or selling. Ads run for six months. The month and year the ad will be removed is shown. Submit ads to publications@warrenastro.org.

NOW \$5,995 or Best Offer! Scope Located in Plymouth, Michigan 48170... Pick up only. w8tu@comcast.net Jim Frisbie [5-2012]



For Sale: 4.5 inch Celestron Reflector Telescope with Tripod, four lenses, and an Amateur Astronomers Handbook. [9-2012]
Call Regina at 810-434-3381.

WANTED: Coarse mirror-lens grinding powder (60 to 80 grit), carborundum (silicon carbide) preferred. For a coarse, glass grinding, crafting application/experimentation. It doesn't have to be optical grade--I won't be mirror-grinding. I just need to take a rough glass surface down. If you have any such abrasive that's taking up space and you want to unload it, please let me know. Contact Brian Klaus [8-5012]

alecbmdb1836ce@gmail.com (586) 731-0011

FOR SALE: 75 mm Unitron achromatic refractor. Doublet primary. 1200 mm focal length (f16). Alt Az tripod. Excellent visual scope. Collectable, due to high quality everything. New & unused condition & in original box. Chuck Peters at 586-445-8596.



WAS Discussion Group

The WAS Discussion Group meetings take place at the home of Gary and Patty Gathen from 8 to 11 PM on the fourth Thursday of the month from January through October. Different dates are scheduled for November and December due to Thanksgiving and the holidays. The Gathens live at 21 Elm Park Blvd in Pleasant Ridge, which is three blocks south of I-696 and about a half block west of Woodward Ave. A map can be found at http://maps.yahoo.com/maps_result.php?q1=21+Elm+Park+Blvd.%2C+Pleasant+Ridge%2C+MI.

The agenda is centered around discussing one science topic at a time by all. A science video is shown from 9 to 10 PM, usually about astronomy, and selected by a vote. Soft drinks are furnished while snacks are contributed by attendees. We usually have from 4 to 16 members and guests, so come on over (and bring some snacks for the group). Gary can be reached at 248.543.5400 and at gary@gathen.net.

Stargazers watching skies in Wexford Co.

BY MARDI SUHS
CADILLAC NEWS

CADILLAC — Friday afternoon, I looked through a very large telescope and saw sun spots. And then at the edge of the sun, I saw a dangling, eerie red mist. I was told it was “prominence,” something like a solar flare but trapped there. I was told that 50 earths could fit inside that mist.

I wasn't in an observatory or a science museum.

I was in an open field just north of Caberfae Peaks near a cluster of vacation homes. The field was littered with tents and canopies and about 30 telescopes. They were large and expensive looking. And one was especially huge,



MARDI SUHS | CADILLAC NEWS

Bill Beers joined the Warren Astronomical Society in the 1990s after he found the rings of Saturn through a small telescope. Now he enjoys looking at galaxies millions of light years away through a scope with a solar filter to view sunspots.

with a 22-inch reflective mirror.

Bill Beers is a retired GM executive who bought a second home near Caberfae in

1993. One weekend, he brought a small telescope with him, just for fun. When he discovered the rings of Saturn, he became hooked on as-

tronomy and joined the Warren Astronomical Society.

This weekend Beers is hosting his 11th annual Spring Star Party. About 30 members from four downstate clubs will be up all night gazing at the dark skies of northern Michigan.

“We are 13 miles west of Cadillac and it's a fairly dark spot, so we are able to see a lot more objects in the sky,” he explained. “City skies are light polluted. It's a real treat. Many people in our astronomy club have never been in dark skies.”

The amateur astronomers start when the skies are dark and “take in the skies until the sun comes up.”

news@cadillacnews.com | 775-NEWS (2397)



A little less than a year ago, Diane and I spent about an hour with the SpaceX Dragon test capsule that had gone into and come back from orbit. It was on display for the final shuttle launch. I did not expect to be filled with feelings of awe and excitement, but I was.

Today, the Dragon capsule is docked to the ISS, after a nearly flawless flight in every respect. And unlike the ESA and ROSCOSMOS and JAXA supply ships, it is not destined for a fiery plunge into oblivion loaded with trash. It will be filled with science experiments and equipment and will return to Earth by parachute, filling one of the significant voids left by the shuttle program's end. This objectively sounds pretty boring, but just typing it gives me another unexpected thrill.

There's still time for something to go wrong. This won't be a success until the capsule is safely bobbing in the ocean and the ISS is resupplied and still safe. But I can't help thinking of the first time humans climb out of Dragon into the ISS. And I can't help wondering if in twenty or thirty years, Andy Pettit's “Looks like we caught a Dragon by the tail” will be as quotable as Neil's first words on the moon - or at least Gene Cernan's last words from the moon.

I can't help feeling that something really important for humanity's relationship to space happened today.

If you get a chance, check out footage from the mission on NASA TV.

-- Jonathan Kade

Editor's Note: The opinions expressed in this article are those of the author, and completely reflect in many ways those of the scientific collaborations of which he is a member. The editor was duly moved.

WAS Club logo wear



(Photos and modeling by Jon Blum)



Diane Worth,
dianewsky-night@yahoo.com
or 248-980-7832 sells club logo
clothing (hats, shirts, sweatshirts, jackets).
Stephen Uitti brings the catalog to meetings.

Astronomical Phenomena June 2012

d	h	
1	2	Spica 1.3N of Moon
1	20	Mercury 0.2N of Venus
3	12	Moon at perigee
4	4	Antares 5.0S of Moon
4	11	FULL MOON Eclipse
4	17	Moon furthest South (-21.7)
5	4	Neptune stationary
6	1	Venus inferior conjunction
6	2	Pluto 1.0N of Moon Occn
10	1	Neptune 5.9S of Moon
11	10	LAST QUARTER
12	20	Uranus 5.1S of Moon
16	2	Moon at apogee
16	10	Venus 3.3N of Aldebaran
17	7	Jupiter 1.1S of Moon Occn
18	0	Venus 2.0S of Moon
18	1	Aldebaran 5.0S of Moon
18	18	Moon furthest North (21.7)
19	15	NEW MOON
20	23	Solstice
21	2	Mercury 5.1S of Pollux
21	16	Mercury 5.5N of Moon
24	11	Regulus 5.6N of Moon
26	9	Saturn stationary
26	10	Mars 5.3N of Moon
27	3	FIRST QUARTER
27	4	Venus stationary
28	8	Saturn 6.0N of Moon
28	10	Spica 1.3N of Moon
29	15	Pluto at opposition

All times are in UTC

2012 Stargate Observatory Open House

June 16, July 21 (WAS Picnic), July 28,
August 12 (Perseids), August 18

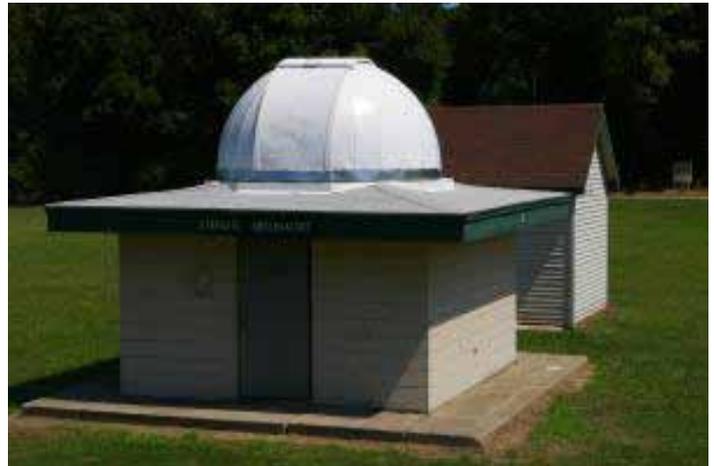
2012 WAS Meetings

Cranbrook Meetings: 1st Mondays

June 4, July 2, August 6

Macomb Meetings: 3rd Thursdays

June 21, July 19, August 16



Observatory Rules

1. Closing time depends on weather, etc.
2. May be closed one hour after opening time if no members arrive within the first hour.
3. Contact the 2nd VP for other arrangements, such as late arrival time. Call 586-992-0498.
4. An alternate person may be appointed to open.
5. Members may arrive before or stay after the scheduled open house time.
6. Dates are subject to change or cancellation depending on weather or staff availability.
7. Postings to the Yahoo Group and/or email no later than 2 hours before starting time in case of date change or cancellation.
8. It is best to call or email the 2nd VP at least 2 hours before the posted opening with any questions. Later emails may not be receivable.
9. Generally, only strong rain or snow will prevent the open house... the plan is to be there even if it is clouded over. Often, the weather is cloudy, but it clears up as the evening progresses.

- Riyad Matti, 2nd VP



We know that not everyone likes to talk in public, but we also know that our members have a lot of things they want to say. Please consider writing an article to share with your fellow astronomers!

Need a topic? Here are some suggestion:

Jun, Jul 1971

This remarkable cover design by Frank McCullough is one of Jonathan Kade's favorite (possibly the oddity factor?). Elsewhere in the issue, AQUILA AND SCUTUM are discussed by Tim Skonieczny and Frank McCullough explores M-11 in OBSERVATIONAL ASTRONOMY.

Jun 1975

With all the eclipsing going these days, I figured I'd include this issue: Frank McCullough covers the (at the time, upcoming) May 24th-25th lunar eclipse in his Observational Astronomy column. Carl L. Noble encourages would be Messier hunters in CELESTIAL SHOWPIECES - Something to work for! And Ken Wilson celebrates A SANILAC SUNRISE.

Jun 1976

Pete Kwentus had a nice report on the Easter weekend campout at Stargate, while Donald A. Rosenfield reflected on his "Thoughts on the Big Bang". A germinating seed shows up in the A.T.M. column by G. Boyd: "About a Radio Telescope built by Amateurs."

Jun 1986

Group hug! A group photo of the WAS members graces this month's cover. We see our association with Metro Beach (now Lake St. Clair Metropark) goes way back, complete with weather issues in METROBEACH HALLEY WATCH REPORT by Alice Strom. To assist in watching the comet, Ken Kelly produced POSITIONS FOR COMET HALLEY (1982i)

Breaking Historical News

Over on Facebook, Doug Bock is busy posting pictures to the Boonhill.net page. I encourage anyone who can to head on over there to peruse the collection (growing by leaps and bounds). Longtime members may want to I.D. some of those smiling faces for posterity (please?).

- Dale Thieme

Topics:

July: **Home Built**

August: **Daytime Viewing**

September: **Most Memorable**

Due Date:

June 25

July 25

August 25

If you have an idea for an article that isn't one I have listed, please submit that at any time and we'll make room for it.

- Debra Chaffins

Seven Ponds Open Invitation

WAS members are invited to The Seven Ponds Astronomy Club monthly meetings. More information about upcoming meetings, maps to Seven Ponds Nature Center, etc. is available at <http://bhmich.com/sevenpondsac/>. Please let me know if you might attend so that appropriate plans can be made. Any questions, please contact me.

- John Lines

Upcoming Talks

July 2 C	Larry Phipps	Astronomical Space Observatories
July 19 M	Minitalks!	Speakers TBD: Includes "Sky Safari Pro" by Ken Bertin
August 6 C	Chuck Dezelah (long) Jon Blum (short)	Urban Observing: Targets, Tips, and Tactics Why You Should Go To AATB and GLSG next month
August 16 M	Still available!	Contact the First VP if interested.

Object of the Month: NGC 4111

NGC 4111 is a magnitude 10.8 lens-shaped galaxy located in the constellation of Canes Venatici represented by a pair of hunting dogs. Its compact size, distinctive shape, bright core, and high northerly latitude make it an interesting target for mid-sized telescopes under moderate light pollution. It is typically categorized as an S0 lenticular galaxy, a classification with qualities intermediate to those of spiral and elliptical galaxies and which may correspond to an as-of-yet poorly understood transition state between these more familiar galaxy types.

NGC 4111 can be found high in the western evening sky throughout the month of June. It is located about 1.5° below (i.e. southwest) of the midpoint of a line between β CVn and χ UMa. The galaxy lies nearly 1° due east of the 5th magnitude star 67 UMa. At the eyepiece, it should appear as a flying saucer shaped spindle of light with a dominant central bulge, or perhaps it is even better described as looking like a back-lit lens viewed from the edge. Despite its low magnitude, it exhibits fairly high surface brightness as a result of being only $4.8' \times 1.1'$ in size. Unlike some edge-on galaxies which require averted vision to reveal additional subtle detail, NGC 4111 seems to proudly display its characteristically eye-grabbing silhouette. The object lies in a region rich in galaxies, but fortunately only NGC 4143 and NGC 4051 are bright enough to be possibly confused for our object of the month. Neither of these, however, have the distinctive shape of NGC 4111.

This column is a recently added feature written with the intention of introducing a new object each month that is visible from Stargate Observatory using a modest sized telescope typical of beginner and intermediate level amateur astronomers. In particular, special focus will be given to objects that are not among the common showpiece objects with which most observers are already familiar, but instead articles will mainly give attention to "hidden gems" or underappreciated features of the night sky.

-Chuck Dezelah



Members are encouraged to join the [Warren Astronomy Society Yahoo Group](#) for messages, photo posting and more.

Save the Date

Annual WAS Banquet December 8, 2012

Our annual banquet at the end of this year will be on Saturday evening, December 8. This is different than in past years when we had the banquet on the Thursday of the December Macomb meeting.

There will still be no Macomb meeting in December.

Changes!

Change in Meeting Room at Macomb

From May through August, we will meet in a different room than usual at the Macomb Community College library on the third Thursday of the month. We will meet in room J151. This is on the lower level.

Enter through the back door on the ground, the door facing 12 Mile Road. This is the same room we met in last summer.

Annular Eclipse

Kanarraville, UT
May 20, 2012

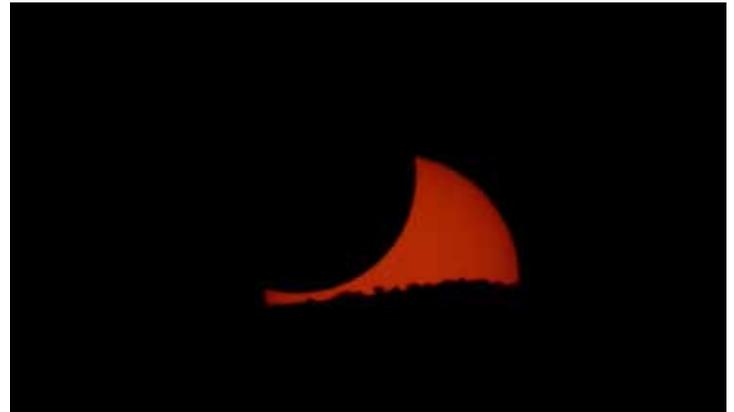


Above: This is the moment of Annularity.



**Left: Jonathan Kade, Diane Hall,
Ken Bertin and Alan Rothenberg**

**Below: Double eclipse.
Sun eclipsed by the moon and the earth.**



**Photos by
Ken Bertin**

We Fell Into A Burning Ring of Fire

“To Frank McCullough,” said Alan, as the darkened moon reduced the sun to a ring of light.

“And Blaine McCullough,” added Jonathan.

Alan Rothenberg, Ken Bertin, Jonathan Kade and I were standing in a field in Kanarraville, Utah on May 20th, 2012. It almost didn't happen that way, because we almost didn't go to Kanarraville. Alan and I both worried about what kind of crazy we might find in this corner of rural Utah, a place that didn't even warrant a dot on our navigation map. Would we find 10,000 eclipse freaks, news helicopters zooming around, \$20.00 parking spaces, and no bathroom? We already knew

Kanarraville didn't even have a filling station; could the roads handle the swarm of eclipse chasers due to descend upon the town? Then Ken's iPad claimed that, far from being the “sweet spot” viewing location it was promoted to be, Kanarraville would show us a decidedly lopsided eclipse, hardly even worthy of being termed “annular.”

Jonathan and I were thrilled about finally being on an eclipse chase, and a semi-official “W.A.S.” eclipse chase at that. We'd each seen partial eclipses but hadn't managed an annular or total eclipse of the sun in our lives, and being in the company of eclipse veterans like Ken and Alan made this doubly exciting. (Nota bene-- Ken is hereby disqualified from the Armchair Astronomer award this year.) As you might expect, we had our club gear on to “represent,” though we didn't bring the club flag down to Utah. A minor oversight.

We pulled off the highway and headed for Kanarraville anyway; if the place looked rotten, we could always aim for Cedar City or someplace else in the band of annularity. Almost immediately we noticed vehicles to the side of the road-- fellow astronomers who'd already staked out their spots. We were prepared to do likewise in the event the town itself proved to be a fiasco. We never got around to seeing the town, or what there was in the way of a town. Alan turned into what seemed to be the "official" viewing site, a field of wild barley spotted with sagebrush and juniper nestled at the base of some stark, impressive hills. At first it looked like trouble; as many vehicles were going out as were coming in, and as we edged past the tents selling T-shirts and trinkets, most of us were thinking that all the parking was likely taken and we'd have to somehow turn around, trailer and all.

Surprise! There was plenty of room for us, our trailer, and our tent there in the field. We staked out our location there in the barley patch among the locusts. Alan and Jonathan assembled the tent with assistance from one of our new "neighbors," a local who'd brought some of his children out for the spectacle. The tent proved not to have any stakes to secure it, so Alan weighed it down by tucking water bottles at the corners of the canopy. This worked, and we had a stable source of shade for the afternoon.

While it was a ninety-nine degree day down in Vegas, where we'd come from, the temperature in Kanarraville was supposed to be a pleasant seventy-two, with a light mountain breeze... and a clear blue sky. Our tent became a hub of activity as our telescopes lured over many, many curious people, some locals and some who'd traveled greater distances than we had. The gear consisted of two pairs of eclipse glasses, Ken's Leica binoculars fitted with solar filters, Alan's 3" refractor with a white-light filter, my PST with a hydrogen alpha filter, and Ken's telescope with a camera. That gave us what was possibly the best arsenal of gear on the field, at least as far as we could see.

We were well-equipped in another sense, as Alan and I had decided to uphold a W.A.S. eclipse tradition of drinking Amarula after totality (or annularity, in this case). We weren't sharing any of that, though-- during our spontaneous outreach event we let people look through a solar telescope for the first time in their lives, but the liquor stayed hidden. Despite that, or because of it, the atmosphere of the crowd was amazing-- convivial might be the word for it, with none of the shoving or hysteria we'd seen in Florida at the launch of Atlantis last year. The big moment sneaked up on us; Jonathan and I were about to go hunt down some dinner when we realized that first contact was minutes away.

Ken pointed out that the hydrogen-alpha filter on my PST would give us the earliest glimpse of first contact, and so I stood vigil at my scope. Fooled once by what seemed to be a nibble at the edge of the sun, I was conservative about making the call of first contact. I think I started shouting "We've got it!" right at the same time as Alan did, as a slight flattening at the edge of the solar disk became a genuine dip.

Of course that was just the beginning. Already it seemed cooler and dimmer, a premature sunset, and the crickets were sending up quite a chorus around us. One by one, the sunspots we'd observed earlier were swallowed up by the moon's black shadow. The four of us swapped views through our gear when we weren't letting all our newly-met friends have looks through our eyepieces.

The several hours that an eclipse lasts sounds like a long time... until you're experiencing it! When the sun became a narrowing crescent, more like a horseshoe or an oxbow lake than a true crescent moon, I realized that this was my best chance to try for shadow projections. I left the telescope and ran to the rear of the field, where I hoped the waist-high sagebrush would do a better job than the juniper trees I'd experimented with earlier. I held out my hand to catch the dimming sunlight as it filtered through the sagebrush leaves. Success! My hand filled with tiny crescents.

I spent the next few minutes scurrying about showing anyone interested how to cast the shadows, but by then it was almost time for second contact. The PST provided a phenomenal display of Baily's Beads-- not bright "diamonds," of course, but impressive all the same. We tried to wring every second out of annularity, with Jonathan and I taking turns at the eyepiece, but other spectators wanted to have a look too and we weren't about to deny them. I stepped back and put on a pair of eclipse glasses, which actually provided the most dramatic view on the event. Through the glasses the much-hyped "Ring of Fire" was exactly that, a luminous circle of glowing orange suspended in a blank void. The view through the PST, with its deep red image, was a little more subdued and intimate, and of course the telescopes didn't provide the same sense of scale that just looking at the sky through glasses.

I still wanted time with my telescope, though; I watched another display of scarlet Beads and then turned the PST over to Jonathan just in time for third contact to seal off the rim of the sun. And then... it was over? People actually began pulling out of the lot within minutes of third contact. Alan broke out the celebratory bottle of Amarula and we drank toasts to another happy W.A.S. eclipse chase.

As the sun became a crescent again, Jonathan and I went back to the sagebrush to get some more shadow-projection images. Then I ran back to the food tents to get discounted fry bread and a Pronto Pup to share with Jonathan as our dinner. Things were getting a little wild down there; a man from Australia or New Zealand tried to cut in front of me at the Pronto Pup line even though I'd already paid for my dinner and he hadn't, but he was fortunately distracted by the appearance of a newly-fried "cheese dog" and I made off with my prize. Camp was looking a little lonely by the time I got back with the food; Alan wanted to get packed up while we still had some daylight, and many of our new friends were leaving and bidding us goodbye.

Gove, the man who'd helped our gang to set up the tent, had some watermelon to share with us, and he was cutting up what his youngest daughter termed "W.A.S. Steaks" while we chatted about how nice the whole experience had been. Then people began to cheer and shout again, and in that moment I couldn't fathom why. Jonathan shouted for me to come over quick, and I dashed back to our campsite while trying not to spill the plate Gove had loaded with thick melon wedges. (Phil, we promise "steaks" at this year's picnic.)

We'd all known that the sun was going down with the moon still on its face, but none of us had visualized what that meant other than that we'd be cheated out of fourth contact. One glance through the PST and I

understood what the cheering was about; the shark-fin sun was descending through the mountains, being "eclipsed" by the earth and the moon at once. Jonathan saw second and third contact through the PST, while I'd gotten first contact and now watched this unexpected grande finale as the sun and moon sank together in the west. The PST proved its worth again; even as viewers using eclipse glasses cheered the end of the event, I witnessed a final display akin to Baily's Beads through the trees that lined that distant mountain ridge. Then, the last little flicker of scarlet was gone. Ken could still show us eclipse images on his iPad, but that wasn't quite the same.

We felt no compulsion to clear out, and neither did our nearest neighbors, a couple from the RASC chapter in Edmonton. Alan broke out the Astroscan and we had twilight views of a slim crescent Venus and Saturn accompanied by four of its moons. I think it was painful for all of us to turn away from this true dark-sky site in the mountains, especially with the air being so pleasant, but Ken, Jonathan and I all had planes to catch in the morning, and so we loaded up the rest of our gear and said goodbye to Kanarraville. Venus by this time shone brilliantly in the west, playing hide-and-seek with us among the mountain peaks. It was a fitting way to close out the day-- Jonathan and I would be off on our next great chase in just sixteen days as Venus made its own rendezvous with the face of the sun.

-Diane Hall

Transit of Venus Viewing Locations

**Rooftop Observatory at
Wayne State University Physics Building**
666 W. Hancock, Detroit, MI 48201

Stony Creek Metropolitan Park
4300 Main Park Dr., Shelby Township, MI 48094

Tuesday, June 5, 2012 - 6:00 PM

**Stargate Observatory at
Camp Rotary in Wolcott Mill Metropark**
20505 29 Mile Rd., Ray, MI 48096

Kensington Metropark
2240 W Buno Rd., Milford, MI 48380

Reminder to all members:

We need your help to continue having snacks at the meetings. For full details on how to volunteer, what we need, or compensation, please email Sheila at scrapsalotsmb@yahoo.com or use the [signup form on our website](#). *Napkins and cups are now provided by the club.*

Suggested snacks:

Two to three packs of cookies or similar sweet snacks

One to two packs of salty snacks (pretzels or chips)

Optionally, one pack of small candies

Two to three 2-liter bottles of pop, juice, etc.

One bottle of water

Treasurer's Report

April 30, 2012

MEMBERSHIP

We currently have 86 members (17 of which are family memberships).

INCOME AND EXPENDITURES (SUMMARY)

We took in \$387.99 and spent \$374.71. We have \$10176.87 in the bank account and \$212.74 in cash, totaling of \$10389.61.

COSTS AND REIMBURSEMENTS

\$41.97 snack reimbursements (includes \$10.00 reimbursement for March)

\$34.90 purchase planispheres

\$250.00 deposit for annual banquet

\$14.89 part for big Dob (Bill Beers)

\$32.95 magazine subscriptions

INCOME

\$232.00 new memberships and renewals

\$7.50 Astronomical League memberships

\$45.54 miscellaneous donations

\$32.95 magazine subscriptions

\$70.00 planisphere sales

For the record: Summary of recent WAS by-laws change and its implementation.

The WAS board met on February 6, 2012 and approved an amendment to the WAS by-laws. The new wording of the by-laws, section 5.07, subsection I, second sentence, is as follows. "The Treasurer shall carry a maximum amount of petty cash to be determined by the board of directors." This was announced at the regular WAS meetings at Cranbrook on February 6th and at Macomb on February 16th. This amendment was voted on by the membership of WAS at our regular Cranbrook meeting on March 5, 2012, and was approved.

The WAS board approved the following on April 2nd. "We recommend that the treasurer make a reasonable effort to maintain a maximum cash box balance of \$500."

- Dale Partin

2nd Vice President's Report

The open house at Stargate on May 19th was very successful with clear sky and a few members attending. A large number of scouts and the general public attended as well and observed many deep sky objects, double stars, as well as Venus, Saturn, and Mars. The event lasted until almost 3 am.

Next open house will be on June 16th and I hope to have an even better attendance.

The hands-on subgroup will meet at each open house and there is a list of summer double stars for observing.

Work on the observatory continues and the next step is to paint the interior before we start rebuilding the floor.

-- Riyadh I. Matti

GLAAC SIG Report

GLAAC is pleased to announce that this year's keynote speaker for Astronomy at the Beach will be Astronaut Andrew "Drew" Feustel, a two-time Space Shuttle veteran. Feustel, who grew up in Lake Orion, flew the final Hubble Space Telescope servicing mission (STS-125) and the final flight of Shuttle Endeavour (STS-134). Kudos to Dave D'Onofrio for his efforts alongside Bob MacFarland to secure Drew as our speaker. This should be a year to remember!



WAS Cranbrook Board Meeting May 5, 2012

Board members: Jon Blum, Diane Hall, Dale Partin, Dale Thieme, Debra Chaffins, Bob Berta.

Visitors: Brian Klaus, Marty Kunz, Ken Bertin, Dave Bailey, Bill Beers, John Schroer, Jason Daniels.

Jon Blum called the meeting to order at 7:32 p.m.

Reports:

1VP: Need to fill in some gaps in the talk schedule, mostly at Macomb.

2VP: Open house May 19, at the April Open house, 35 attended. Worked on observatory and gave an impromptu presentation to scouts.

Treasurer: Trying to finish reconstructing the ledger. We need someone for the legal forms. Dale Partin reported that a neighbor of Marty Kunz is a lawyer who is willing to lend expertise to the 501c3 project.

Secretary: No Report.

Outreach: Cranbrook astronomy day: success in spite of clouds, about 15 W.A.S. members were onsite. Stargate good turnout of scouts, projector worked great on Observatory wall. 7 Ponds star party at D-Bar-A coming up May 12, with use of a free cabin.

Publications: WASP is up. The May 12th D-Bar-A Star Party gets its own page.

Old Business:

9mm eyepiece repair - not going well, recommend buying an 8.8mm, 2" barrel eyepiece Bill Beers located. Riyad Matti moved \$140 be spent for the eyepiece. Bob Berta seconded, passed.

New Business:

Door mechanism on the observatory in poor condition and needs replacing (deadbolt issues), recommend button combo deadbolts. Riyad Matti made the motion that we purchase two button-code deadbolts, replace keys- at a cost of \$350. Bob Berta seconded, motion passed.

Picnic- W.A.S. will supply dogs, buns, condiments, pop. Bob Berta will purchase. Barbecue discussion, table top unit suggested. \$150 for grill in mind, Bob Berta motioned, Diane Hall seconded, motion passed.

Astronomy at the Beach. Jon Blum moved that the W.A.S. donate \$300, Diane Hall seconded, passed.

New Observatory scope discussion. Dale Partin moved that we buy the scope for \$3800, with \$600 to refurbish mount. Diane Hall seconded. Passed. Bob Berta nominated to start collecting pledges towards the project.

Jon dismissed the meeting at 7:29



Speaker's Corner - June 21, Macomb

Our featured presenter on June 21 will be **Gary Ross**, who brings us the evocatively titled "**In Search of... Capella.**" We look forward to finding it.

Second Vice President Riyad Matti will also have a short talk for us that evening; Riyad will talk about the "**Larry F. Kalinowski Telescope**" which we hope to have installed at Stargate in early 2013. Riyad, the chairperson of our Double Star subgroup, has been a key proponent of adding a large refractor to the W.A.S. arsenal of telescopes.

We will also have a section of the meeting set aside for members to discuss their Venus Transit 2012 experiences. Please bring in your pictures and videos!

WAS Cranbrook General Meeting May 5, 2012

The meeting began at 7:32 with 53 present

Officer Reports:

President:

- Macomb meeting will be in different room- 151.
- We have a great opportunity on Saturday May 12 to see and use the new telescope and facility at D-Bar-A scout camp. Bob Berta will tell us more about it.
- This month, May 17, and all summer through August, Macomb meetings will be downstairs in room 151. Enter lower level back door like last summer.
- Mark your calendar for our annual club picnic at Stargate Saturday, July 21, starting at 4 PM. Club supplies hot dogs & pop.
- Our club newsletter, the WASP, is sent by email shortly before the first meeting each month. It's full of useful information, including dates of future meetings and observing nights. If you don't get email announcements about our meetings and our newsletter, sign up for our Yahoo Group, AND give your name & email address to any board member to give to Dick Gala for our mailing list
- Banquet will be December 8. Mark your calendar. No Macomb meeting in December

1st VP: looking for volunteers for talks

2nd VP: Open House on May 19th, April's Open House was well attended.

Treasurer: 10,389 balance. Full report in WASP.

Outreach: Astronomy Day was a big success in spite of the Michigan Nebula. Saw some planets through the clouds at stargate, viewed programs on a projection. 7 Ponds Astro club Star Party at the D-Bar-A is coming up on May 12.

Publications: WASP is out, writers needed, we do have articles coming in.

SIG Reports

Discussion Group: 4th Thursday video and discussion. Bring your own snacks.

Solar Group: Sun has a big spot coming around. May need new location to meet while scope is out. Hands On: next meeting at Stargate open house

History: Still scanning in old WASP newsletters

Observations: Gary Ross is the second greatest observer in Mi. Mike Simonsen has made his 70,000th variable observation. Riyad, while observing Saturn from 9:30-10:00, saw a motion in the eyepiece, followed for some time with the 10" dob, heading south. Jonathan, tracked the ISS in the 22" dob using a 16mm lens at last month's open house.

In The News 5/7/2012

- Much ado about nothing: "Super moon".
- Swarm of pebbles could safely deflect asteroids.
- California meteorite is rare rock laden with organics
- Neutrino no-show deepens cosmic ray mystery
- Mysteriously dark Mars regions are made of glass
- Crucial environmental satellite falls silent
- Nearby dark-matter-free zone poses cosmic conundrum
- How Saturn's moon Titan could spark chemistry of life

Short Talk:

Video: "Planetary Resources- mining asteroids"

Presentation:

Last Chance Transit of Venus- Jonathan Kade Ken Bertin showed a video he took of the 2004 transit.

End time 9:54

-Dale Thieme, WAS Secretary

Oakland Astronomy Club Newsletter

<http://oaklandastronomy.ulmb.com/oacnews.html>

Clear skies, - Bill MacIntosh

WAS Macomb Meeting May 17, 2012

The meeting began at 7:30 with 38 present

Officer Reports:

President's Report: Jon Blum

- Today and all summer thru August, Macomb meetings will be downstairs here in room 151. Enter lower level back door like last summer. Mark your calendar for our annual club picnic at Stargate Saturday, July 21, starting at 4 PM. Club supplies hot dogs, burgers, pop.
- The board has approved the purchase of a new telescope for Stargate observatory, an 8" refractor. It will take 8 months to get it, and we have not yet decided on a mount. It is partially paid for by donations from Kalinowski family and will be named after Larry Kalinowski
- I'd like to see everyone wear their nametags at meetings. If you are a member and never got one, give me your name in writing the way you want it to appear.
- Our Banquet will be December 8. Mark your calendar. No Macomb meeting in December.
- Our club newsletter, the WASP, is sent by email shortly before the first meeting each month. It's full of useful information, including dates of future meetings and observing nights. If you don't get email announcements about our meetings and our newsletter, sign up for our Yahoo Group, AND give your name & email address to any board member to give to Dick Gala for our mailing list.

1st VP: Diane Hall

- (speakers schedule) Tonight's presentation is Bob Berta's "Astrophotography 99," an introduction to imaging.
- At June's Cranbrook meeting, we have another astro-imaging talk, Dr. Phil Martin's "A Brief History of Astrophotography," the story of Phil's own journey into the field.
- The short talk that night will be "Beijing Ancient Observatory" by Jon Blum.
- The Macomb meeting for June will feature two short talks, "In Search of... Capella" by Gary Ross and "Larry F. Kalinowski Telescope" presented by Riyadh Matti.
- We will also have time set aside for members to discuss their Transit of Venus 2012 experiences.

2nd VP: Riyadh Matti

- (Observatory schedule) The open house for May will be Saturday May 19th. Riyadh will be there (tho away today). The open house in April was very successful with nearly 35 members attending in addition to scouts and their leaders. The night was clear and many members enjoyed observing with many available telescopes including the 22 inch WAS Big-Dob.
- Work on the observatory continues and we are making good progress. Now we need to paint the completed ceiling and walls then start working on the floor.

Treasurer: Dale Partin

As of the end of April we have 86 members. We have \$10,389 of which \$4000 is from Mark Kalinowski for the new telescope. Details can be read in the WASP

Special interest groups reports

GLAAC report from Diane Hall: GLAAC is happy to announce that the speaker for Astronomy at the Beach 2012 will be Astronaut Andrew Feustel, veteran of the final Hubble servicing mission and the final flight of Endeavour. This is deeply exciting and we encourage all of you to attend.

Discussion Group: Gary Gathen. Meet at Gary's home in Pleasant Ridge at 8PM on the 4th Thursday of each month. See the WASP and emails for details.

Hands On: Riyadh Matti - Meet at Stargate open house May 19

Observing: Jonathan Kade sighted the ISS at Stargate with the 22" dob, saw incredible detail. Bob Trembley showed the sun to a group of schoolkids with his solar gear.

In The News May 17, 2012

- Dust rings not 'smoking gun' for planets after all
- Pulsar heavyweight champ challenges Einstein
- Two craters that launched a thousand meteorites
- Sun too sluggish to act as a cosmic Concorde
- Hot Jupiters oust their siblings

Presentation: Astrophotography 99 (easier than 101) by Bob Berta

Speaker's Corner - June 7, Cranbrook

Dr. Phil Martin will be our featured speaker for the Cranbrook meeting in June, bringing us the presentation "**A Brief History of Astrophotography.**" He has the following to say about it:

In his previous talks Phil has talked on many different subjects (if he's nothing, he's persistent in pursuing a subject he's interested in – one might say even fanatical – astrophotography, special relativity, general relativity, quantum mechanics – pu-lease!! Uebergeek!). He's delivered seminar-style presentations on some aspect of each of the aforementioned subjects.

Now he will talk about his travel through time and space, learning by reading (since there were basically no astrophotographers in the group at the time he joined), about astrophotography and his personal failures and triumphs in the hobby – no, its more akin to a field.

The talk is a backwards in time to now show of the astrophotos he's accumulated – yes – including the disasters (which he, at the time, thought were fantastic). The talk was initiated by an invitation to speak in the regularly scheduled seminar series every Tuesday at Wayne State's Biochemistry Department (where he spent 30 years performing experiments to elucidate the atomic and molecular structure of enzymes by X-ray diffraction, molecular dynamics, and quantum mechanics.

It came as a bit of a surprise when the department chairman, Bahrati Mitra, asked if he would show astrophotos, and not talk about QM/MM and protein structure and function!

What you are about to see and hear is basically that seminar – but with Bugs, Daffy, Porky, and Elmer added appropriately. If you don't like "Dr. Phil's" slides, at least you'll get a laugh from his cartoons. So, sit back and relax. There's no new math, no tensors, no new or old theories – just a bunch of astrophotos and star party pictures taken over the last 8 or so years."

Our short talk that night will be incumbent president **Jon Blum's "Beijing Ancient Observatory."** Jon is a member of seven amateur astronomy clubs, three of them on the isle of Maui. His "Jon's Maui Info" website is arguably THE essential online resource for one planning a trip to the island.

Outreach Report

Bob Berta and Lee Hartwell have done astronomy presentations at several elementary and middle schools. In addition Bob just finished his astrophotography "classes" with Gross Point North High Schools astronomy club. He was impressed with the results they were able to achieve with just a few sessions. Perhaps next year they can show some of their images at a club meeting. Local Gross Point Newspapers are doing articles about the school club and WAS participation.

WAS donated a "Night Under the Stars" for a silent auction at a church in Shelby Township. The family that won the auction and about 30 of their friends and their families met with Bob and fellow club member Angelo DiDonato on Sunday, May 26th under some of the best viewing skies at Stargate in a long time. They enjoyed

dew and bug free viewing and were enjoying it so much they stayed until 12:45am.

A pastor of a Lutheran church in Warren is an avid astronomy aficionado and contacted Bob to help put on a star party for his entire parish in September...maybe a new club member ;-). Bob was very impressed with the pastor's knowledge of astronomy.

"The most exciting phrase to hear in Science, the one that heralds new discoveries, is not 'Eureka!' but 'That's funny...'"

~ Isaac Asimov

20th OF MAY Borr Telescope, 240X, seeing good.

NU-1 LYR -- Wide, faint, P.A. 350 deg. Hirshfeld and Sinnott enumerate 6/ 11.4, 36 arc-sec., P.A. 73 deg. (1924). Nothing matches! ATLAS OF THE HEAVENS, SKY ATLAS 2000, and A. BOREALIS depict Nu-1 as double, but in fact there is additionally a 10.4 mag. @ 59" (1923) and 11.6 mag. @ 18" (1905), easy companions in a 16-inch telescope. Nothing matches.

SULAPHAT -- Not shown as multiple in FIELD BOOK OF THE SKIES, but properly is on above atlases. My obs'n = very faint, P.A. 290 deg. H&S = 3.2/ 12.0, 13 arc-sec., P.A. 304 deg. (1958), a good fit, but also a 10.5 mag @ 177 arc-sec. away from the principal component (1979; no data, 1904). Olcott and the Mayalls should have caught that star unless they were using out-dated information in 1954, ante.

BETA 648 LYR -- (Immed. N.W. of Sulaphat.) Did not split. However, this star -- double on BOREALIS and A. of HEAVENS -- is most complex! H & S = 5.4/ 7.5 but no data. A 12.1 mag., 55" (1921), which should be easy in the 16-inch telescope, 12.2 mag, 91" (same yr.). The latter is not easy because one would be fooled by the distance from the A star. But -- TWO more companions @ 100 arc-seconds with much different Position Angles. No data on magnitudes for these in Hirshfeld and Sinnott. Becvar's ATLAS CAT. gives AB separation 1.3" (1959), and now presumably less.

OMICRON SIGMA 525 LYR -- Very wide, double, Al-bireo class. H & S list the 6.0 mag. A star as a "G". 6.0/ 10.2 @ 2" (1849, no data [1958]). There is a 7.7 @ 45" (1846, no data [1935]), the pair I saw, and a 10.4 @ 193" (1880, no data [1934]). ATLAS OF H. (Atlas Becvar) depicts 525 as triple. Becvar's numbers for AB are less than 2" (1924) and AC as 45" (same). Why H & S in their modern, well researched tome did not pick up these more recent numbers -- even from the old Becvar -- is not easy to understand.

17 LYR -- Very faint, close, P.A. 280 deg. This highly deceptive star is double on ATLAS OF THE HEAVENS and BOREALIS. In fact, H & S make up for their lacunae above, listing TWELVE for the system! 5.2 mag./ 9.3 mag., 3.4" and P.A. 300 (1958), a Position Angle which matches, but "very" faint? There is a 9.4 at P.A. 293, but 132" away (1956), hardly "close." Additionally: a 10.8, 9.5, 9.1, 11.6, 10.8, 11.6, 12.5, and two stars w/o data. 17 Lyrae is a research project in itself given the information gaps in Hirshfeld and Sinnott, the most complex multiple I have ever attempted to observe, the most amazing in the book, which even Lyra's situation in the Galaxy

cannot really explain. One has the feeling a really large instrument is needed under excellent seeing conditions.

23RD OF MAY

50 mm. refractor, 45X

Theta Virginis -- Failed. The sky in Royal Oak was turbid and although just past upper culmination, this part of Virgo is nonetheless low. The OBS. HANDBOOK of the R.A.S.C. cites 4.4/ 9.4 mag, 7 arc-sec. Rhea is 9.7 mag. and under very clear sky at the same location I have seen him, but these conditions rendered a ninth magnitude star impossible. FIELD BOOK by Olcott and the Mayalls incredibly lists Theta as 6.7/ 9.0 -- whilst the star map on following page says "4" and @ 31 arc-sec. compounding the error by calling the pair "Yellow-Red," a FAR later spectral class than the A star is, all amazing error. A careful reading of their next line down, allegedly for Sigma 1682 Vir, contains the correct data for Theta. Burnham's CELESTIAL HANDBOOK lists a third star of 10th mag. @ 71 arc-sec. (1934) and the same AB separation as above (1958). Both ATLAS ECLIPTICALIS and SKY ATLAS 2000 depict it as double, so perhaps the third component was taken away by subsequent reckoning. In accord with Burnham, O & M comment, "A triple star."

Porrima -- Failed. Per the R.A.S.C. HANDBOOK: 3.5/ 3.5 mag @ 1.8" (2012) and opening up. Burnham: "[O]ne of the finest of the visual binaries." Watson's SELECT DOUBLE STARS says, "This grand double star has long been the target of amateur and professional telescopes. The separation is rapidly closing to a minimum of 0.3 seconds of arc in 2007." A cautionary tale concerning age of source material is from O & M (1954): 6 arc-sec, "[a] beautiful object." After briefly reviewing observational history and how in 1836 the pair was at periastron and impossible to split, "[n]ow the stars are again about 6" apart and the difference . . . is widening." Period of 171 years (later refined to 169). Doing the arithmetic from their text, 6 arc-sec. in 1756 + 171 yrs. = 1927. The Mayalls took Olcott's seminal commentary without modification for their final edition of FIELD BOOK OF THE SKIES. Burnham: 4.7" (1966) with max. separation in 1920. Watson: 1.6" (~ 2002). Burnham has a long article on Porrima, one interesting feature being John Herschel's computation of orbit, only the second for a multiple star, and Sir John's prediction of the 1836 very close approach of AB. Burnham cites additional companions in the ADS Catalogue, a 15th mag, @ 53 arc-sec. and a 12th @ 124" arc-sec., but "no real connection with the orbiting pair," so distances are increasing from the principal pair. The number two "companion" seems a bit of a stretch for any catalogue, so perhaps compilers are trying too hard. ECLIPTICALIS depicts Porrima as double. For all the various commentary on colour for the closely matched pair, the transparency made comparison impossible.

-- G.M. Ross