



President's Message November 2009

Year end is rapidly approaching and we are getting busy. We had a great Renaissance ArtsFaire, the school Star Parties are coming fast and furious, our annual ASLC year end Party is just around the corner and the holidays are upon us. Not much time to stop and smell the roses.

November is election month and we will soon have some new officers to grab the reins and guide us through another year. Our monthly meeting will be on Nov 20th the third Thursday this month to avoid the Thanksgiving weekend. I hope you all attend and cast your vote. We actually have 2 people willing to be president this coming year so we will have a real election. Please come ready to pay your dues if you are past due. Only current members are allowed to vote and it appears we have a lot of past due members.

The DAAC Renaissance ArtsFaire was held Nov 7th and 8th and we participated, and as usual we had a full compliment of volunteers dressed in the usual variety of costumes. We had a Wizard with a very powerfull crystal ball. He was nearly struck down by his own devices. We got a lesson in the power of focused sunlight as it burned through his costume. Ron is a very powerful wizard. I being the Viking "Ragnar" would not attempt to slay the wizard because my Sword was no match for his crystal ball. We had a great turnout. There were no Planets to view and the Sun was quiet as usual but we still had many members of the community come by and look at all the images and ask lots of questions. We quietly got about 35 signatures on a petition to support a stronger light pollution ordinance here in Las Cruces. I will have the petition at our November meeting and our year end Party so you will all have a chance to show your support.

It looks like the Year end Party will be held at either NMSU or at the Airport and it will be a Pot luck again with the club providing the meat and beverages, and we will again enjoy a wide variety of club members' favorite dishes. We will have a gift exchange drawing. If you bring a gift you will win a gift. Who knows what wonderful gifts may appear for the exchange? Additional arrangements and such will be announced at the November meeting and through the email list and Yahoo groups. There will again be no fee to attend the Party but you need to bring some food to share. If your Last Name starts with an A-M we ask you bring a side dish (Potato, vegetable etc), if it starts with a N-Z we ask you bring a salad or desert. I believe the meat choices will be brisket or turkey.

I would like to thank the members of the Board as well as the other special committee members for their support over the past year. It has been a busy one for me, and many of the other board and committee members. We managed to pull together and get done what needed to be done. I would also like to thank the many members of this club that continuously stand up and give of themselves to serve this club and the community. I applaud each and every one of you. If you are new or are not participating, don't wait to be asked, this is a volunteer organization, step up and volunteer. We need your participation.

Your President and humble servant
Jerry Gaber, 575 382-9183

The Astronomical Society of Las Cruces (ASLC) is dedicated to expanding public awareness and understanding of the wonders of the universe. ASLC holds frequent observing sessions and star parties and provides opportunities to work on club and public educational projects. Members receive the High Desert Observer, our monthly newsletter, membership in the Astronomical League, including AL's quarterly A.L. Reflector. Club dues are \$35.00 per year. Those opting to receive the ASLC newsletter electronically receive a \$5.00 membership discount. Send dues payable to ASLC with an application form or note to: Treasurer ASLC, PO Box 921, Las Cruces, NM 88004

ASLC members are entitled to a \$10.00 discount to Sky and Telescope magazine.

ASLC OFFICERS, 2009

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Next Meeting

To be announced.

Events

The next monthly dark sky viewing event will be held on the night of November 14th at the Upham site. The next monthly Moon Gaze will be held at the International Delights Cafe on November 28st. Both events begin at dusk. For information on these and other events, please see the ASLC website.

[Http://www.aslc-nm.org](http://www.aslc-nm.org)

December Issue of the HDO

A note to all members, we need more contributors! Sharpen your writing skills, share your knowledge and help bolster our newsletter! Articles for future issues should be sent to Tony Gondola by the 10th of the month. Text should be submitted as email (acgna@comcast.net) or as an attached Microsoft Word format document. All Images should be in jpg format.

If you have any questions about submitting materials for publication in the HDO, please don't hesitate to contact Tony at 373-5104, acgna@comcast.net

Thanks in advance!

Minutes, October 2009 ASLC Meeting

Call to Order:

Jerry Gaber, President, Astronomical Society of Las Cruces (ASLC), called the meeting to order at 7:30 pm., 23 October 2009, Rm. 77, Dona Ana Community College.

President's Comments:

Jerry Gaber welcomed the group and recognized new members or visitors present.

Secretary's Report:

The minutes for the September meeting were submitted for publication in the current (October) issue of the Club newsletter, the *High Desert Observer (HDO)*. Publication of that issue is pending. Bert Stevens moved that the minutes from the last meeting be accepted pending publication in the *HDO*; Dave Dockery seconded. The motion was passed by the members present. There was not an additional Secretary's report.

Treasurer's Report:

The Treasurer gave an update on the status of Club accounts, including noting the Astronomical League (AL) dues had been paid. The Meade SolarMax telescope ordered approximately two (2) years ago and reportedly being built in March 2009 has disappeared. When the Treasurer spoke to a sales rep today, she was told the Club's order did not "exist". She is waiting on a call back from Meade's sales manager. There was no additional Treasurer's report.

Committee Reports:

Observatory Committee:

Rich Richins, Committee Chairman, was not present to give a status report. There have been reports in the local news recently that a new waste water treatment facility may be built in the same general area as the proposed Club observatory.

Nominating Committee:

Nils Allen, Committee Chairman and Club Past-President, reported that a limited slate of candidates is available. The committee is having problems getting commitments from members to stand for election and/or serve in the open officer positions. In particular, candidates are needed for the offices of Board Director-at-Large and President. Nils asked that anyone willing to serve the Club as an officer to please contact him as soon as possible. He will also post this call for candidates on the yahoo groups and the web site.

There were no additional committee reports.

Old Business:

1. Club-logo Apparel – Ron Kramer announced he has received the most recent order and has the items available for distribution/sale after the meeting. He has approximately \$400 invested in this order but that amount doesn't cover much. Is the Club willing to finance a larger inventory of apparel to have on hand? Ron Kramer presented a motion that \$750 be allocated to increase the Club logo apparel inventory to be sold to Club members at cost plus \$1 as a fund raiser for the general fund. Bert Stevens seconded the motion. Discussion followed regarding the variety of items available and different styles and colors. The question was called and the motion passed.
2. Meade Solarscope – See Treasurer's Report above. Steve Barkes will continue research into other vendors and brands.

3. QCSHOW – This is the software application used to record and play back the Club presentations on the InterNet. Jerry Gaber has purchased a single user license for \$65 and volunteers to act as recorder when he becomes Past-President. Jerry Gaber presented a motion to purchase another single user license for Dave Dockery to be his alternate. Nils Allen seconded the motion. There was no follow-on discussion. The question was called and passed by the members present.
4. *HDO* articles – Tony Gondola NEEDS ARTICLES for each issue. Brief articles are fine and will be appreciated. Please submit them to him by the 10th of each month.

There was no additional old business discussed.

New Business:

1. Star Parties – Bernie Joplin, Outreach Coordinator, has two (2) star parties scheduled for November. East Side Elementary is 09 November and there is an IYA 2009 party at Doña Ana Community College on 18 November. He will announce a call for volunteers via the yahoo.groups and web site.
2. Renaissance Arts Faire 2009 – This year's Faire is 07-08 November at Young Park. The Club's application and registration fee have been submitted and accepted by the Doña Ana Arts Council. The Club's booth/exhibit space will be the same location as last year in the Children's Realm. Volunteers are needed to man the booth for the two day event, also for set-up and tear-down. More information will go on the yahoo.group and web site.
3. December Meeting/Social Event – Jerry Gaber is open to suggestions for possible venues, event format, etc. Nils Allen will contact Mike and Carol Sherrick about using their home again this year.
4. Pre-meeting Presentations – Equipment issues prevented Ron Kramer presenting prior to tonight's meeting. He will make his presentation prior to the November meeting. Volunteers are needed for future monthly meetings.
5. TAAS/ALSC Joint Star Party/Magdalena Ridge tour – Jerry Gaber has not been in contact with the Albuquerque club and the current status of the star party is unknown but will probably not happen in 2009. The status of a tour of the new observatory at Magdalena Ridge in November is also unknown.
6. Presenters – Volunteers to do program presentations are always needed. Bill Stein and Mike Sherrick have volunteered to make presentations in 2010. Jerry Gaber will provide the presentation at the November meeting on adaptive optics. Kirby Benson will coordinate.
7. November meeting – The November meeting will be the 3rd Friday, 20 November, to avoid conflict with the Thanksgiving holiday.
8. Member Name Tags – Ron Kramer suggested obtaining name tags to allow new members to meet and become familiar with current Club members and vice versa. Ron Kramer presented a motion to allocate \$100 to obtain materials to produce nametags for the current membership and to have additional nametags for future members. He will coordinate the production of the name tags. Bernie Joplin seconded the motion. Discussion regarding coordination and upkeep of the name tags followed. The question was called and was passed by the members present.
9. Las Cruces lighting Ordinance – A rough draft is available for review and comment. There is no enforcement provision included and all currently legal lighting already in place will be "grandfathered" in under the proposed ordinance.

10. DSO Site – Directions to the Upham DSO site were requested. It was noted that maps are available through the web site and that caravanning arrangements are possible through the yahoo.group.

There was no additional new business for discussion.

Ron Kramer offered a motion to adjourn and Kirby Benson seconded. The motion passed and the business portion of the meeting was adjourned at 8:15 pm.

Announcements:

Items for Sale:

Nils Allen has two 8” LX200 Classics for sale. See him after the meeting.

Recognitions/Achievements:

None.

There were no additional announcements made.

Presentation:

The October program was “Asteroid CCD Photometry and Light Curve Analysis Performed by Amateurs to Professional Standards” by Club member Fred Pilcher. Many amateur astronomers can and will attest to the variety and uniqueness of galaxies, moon craters, and asteroids. Amateurs are the primary observers in asteroid discovery and astrometry because they don’t have to compete for the limited observing time on large professional telescopes. Fred displayed several light curves for known asteroids and discussed what the data may indicate about those objects. He has chosen to do CCD photometry and light curve analysis of asteroids that he selected years ago because he thinks he can considerably improve the knowledge about those objects and increase the known data, including the rotational parameters, of those asteroids. Fred went through his process of collecting light curve data over several nights of observing. His data will be published in the *Minor Planet Bulletin*.

This presentation was not recorded for rebroadcast on the Internet. Other meeting presentations can be accessed on the web at <http://www.aicsresearch.com/lectures/aslcnm/>.

The October 2009 monthly meeting concluded at 9:30 pm.

-Respectfully submitted by John McCullough, ASLC Secretary

NPS Volunteering Part 2 – Living the good life at Lake Powell

By Nils & Bonnie Allen

It's a rough job but somebody's got to do it! Our second AstroVIP (Volunteer-In-Park) experience was spending September in a premiere vacation location, Lake Powell on the Arizona/Utah border (officially the Glen Canyon National Recreation Area [GLCA]). This stint was much different than our first one in just about every way - climate, scenery, co-workers, clientele, duties, etc. Odd since we were only 2 hours away from our first volunteer assignment at Cedar Breaks (CEBR).



A quick trip back to Page, AZ brought us to our trusty motor home, parked in the employee housing area for 6 weeks waiting for us – all was as we left it, telescopes & all. The September weather was quite warm but not hot...a great time to be at Lake Powell! Bonnie & I quickly got into the swing of things with initial briefings, volunteer outfits, and deciphering “the matrix” (a detailed spreadsheet of all personnel duty assignments...who, where, when, function). We meet our neighbor (in the RV beside us) – Bob was a volunteer from Tucson using his kayak to serve as an on-lake NPS ‘ambassador’. He became a good friend & major supporter of our nightly star parties – think we convinced him to get a ‘real’ telescope. ;~)

Other AstroVIPs we quickly got to know were Craig Gates & Richard Blake – we were definitely not alone in our efforts. In addition some GLCA rangers were astro-trained & provided regular night-sky programs, which we supplemented (but the volunteers had better hardware!) In particular I learned a lot from Richard, a veteran of three years of long-term service as an AstroVIP. He is a master at enthralling visitors with great sights & compelling gab, and brought a top-of-the-line 20” Starmaster to the party. He and I would swap views in our big Dobs, and trade-off various activities like doing constellation tours, telling star stories, and keeping the line moving at the big scope eyepiece. We also enjoyed

‘training’ several of the new youthful seasonal rangers who were excited about astronomy, telescopes and doing nightly presentations – it was more fun than work.

The public star party locations weren't that dark (due to local lighting), instead being picked so as to attract larger crowds. As previously, many of the visitors were non-Americans, so at times explaining targets like nebulas became difficult. But probably the neatest part of these events personally was how Bonnie's astro-knowledge & skills had improved to the point that she could point out & explain several DSOs, and even operate the 22” mostly by herself. This was a real change from her past stance on observing, when she would declare “it's a dot!” and “it's cold – I'm going in”. I just love it.... ;~)





Another new activity was spending lots of time at the Visitor's Center (VC), mostly at the Info Desk and some offering views of the Sun with their PST. To get us the knowledge we needed to work at the Desk (and keep us motivated), Bonnie & I were the recipients of several sought-after tourist adventures, all gratis. We really felt these freebies were part of our compensation – half-day trips to Rainbow Bridge, river rafting to Lee's Ferry, plane flight over the Lake, tour of the Glen Canyon dam, etc. The sights we saw were amazing to say the least (must of shot a thousand pictures!) The Recreation Area is HUGE – in a month we only saw a few of all the great places it contains...kinda left us wanting more (a typical reaction).

Thankfully our work schedules were much easier here than our prior stint at CEBR. No campground hosting here, just duties at the VC and evening star parties. Keeping our

focus on promoting & doing astronomy was entirely pleasurable. We set up star parties at both the campground amphitheater and the back lawn at 'The Lodge'. It wasn't unusual for some of our visitors to be a little tipsy (not unusual at the Lake). Joan, our 'boss', is really excited about showing the universe to anyone & everyone, and even holds workshops to teach others how to do effective night sky programs. And she was fun to party with too! The volunteers often did potluck dinners together, and a few times we joined the rangers for neighborhood 'parties'. I know, I know – it's a tough job but someone has to do it....

Side-trips: The beauty of having 3 days off every week was that we could make 2 day visits to nearby parks, like the Grand Canyon North Rim and Bryce Canyon. These are both great places with hours of inspiring views & a neat history – being NPS volunteers we got free housing over nite. I always made efforts to connect with any astronomy VIPs and/or 'Dark Rangers' at these sites, planting seeds for possible future volunteering there (I have learned that it helps...) We really milked that strategy on the trip home from GLCA –we took 6 days to hit Bryce Canyon (again), Capitol Reef, Natural Bridges, and Chaco Canyon. All had some sort of night-sky program in the works, but each was quite different (as were the parks themselves...it's amazing!)

As before, leaving was hard because of the good friends we made – I hope to stay in touch till next year. Again, I heartily recommend this program to just about anyone. Bonnie and I are looking forward to exciting visits to new parks -- Canyon lands, Glacier, Death Valley...who knows!?



Galileo's Telescope

By Cathy James



I doubt there are many amateur astronomers out there who are unaware that this year marks the 400th anniversary of Galileo's discovery of the craters and mountains of the moon, the phases of Venus, and the satellites of Jupiter. But the number of American observers who have traveled to Philadelphia this year to see one of his original telescopes is much lower. Because of remodeling work being done at the museum in Italy where the Galileo exhibit normally lives, it is on temporary loan to the Franklin Institute. It is unlikely to cross

the Atlantic again in my lifetime, so I made a pilgrimage there last weekend to see the foundation of modern astronomy. I regret that pictures were not permitted, so I can't illustrate this article. You'll have to follow along in your mind's eye.

Much of the exhibit revolves around the Medici dynasty and how they developed their power and patronage of the arts and sciences. It is interesting to history buffs, but probably less so to astro-nuts. However, it is important historically to realize why Galileo lived and worked where he did, and who it was that was able to fund his work of discovery (once he left behind his teaching in Padua).

Near the end of the historical exhibit we see one of the two remaining telescopes build by the master telescope maker himself. The focal ratio is unbelievable to modern amateurs. I didn't have a tape measure with me, but it appears to be a little less than a yard long, with an OTA about 2" in diameter and an aperture of about 1". That's a focal ratio greater than 30! Why is the aperture so small and the focal ratio so high?

These questions and others are answered in the final section of the exhibit, which explains the actual optical design and includes several hands-on modern reproductions. The visitor can look through several telescopes who images illustrate the limitations of 1609. Most amateurs will have heard of chromatic aberration and the color fringes that it adds to images, but some may not realize that Galileo did not have access to achromatic objectives, much less modern apochromatics. This dictated a very long focal ratio to suppress the color as much as possible. (Apochromats were not invented until 1733, over a hundred years later.)

Another problem was the poor figuring quality of the lenses, which caused much blurring and distortion in the outer half of the lens diameter. This issue was corrected with a trick of which John Dobson would approve--a diaphragm is placed over the objective to block light from passing through the outer section. (Hence the 1" aperture in a 2" OTA.) One of the hands-on exhibits lets the visitor look through a 'scope while adjusting a variable diaphragm on the objective. The image is not sharp by any means with the objective stopped down, but unstopped, it provides only a featureless blur. Of course, stopping down the eyepiece increases the focal ratio still further. You have to actually look through a replica to realize just how tiny the field of view really is. And after looking at a simulated image of Saturn, you'll never again wonder how Galileo could have been fooled into descriptions of the rings as "cup handles", or three bodies in a row. (I had always wondered about this, since I can see the rings very clearly even at extremely low magnification. I had never considered that the resolving power might be limited by optical quality rather than design.)

The design of the optical system seems strange to modern eyes. The objective is a single plano-convex lens, and the eyepiece a single plano-concave lens. Although the use of a convex eyepiece was invented by none other than Johannes Kepler in 1611, the optical figuring capability of lens-makers was not adequate to make the Keplerian telescope a practical tool until the mid-17th century. This is a good reminder that it's not enough to have the right theory; you also have to have the tools that you need to make the tools.

If you can make it to the Franklin Institute before the September 7 closing of the exhibit, I encourage you to pay a visit. It's well worth the trip, and greatly increased my appreciation of the challenges and difficulties that Galileo had to overcome on the first steps toward our modern optical wonders.

ASTRONOMICAL SOCIETY of Las Cruces
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ASLC - Sharing the Universe
With Our Community
for Over 50 Years

