The High Desert Observer

The Bulletin of the Astronomical Society of Las Cruces

December, 2007

President's Message

Bert Stevens

Almost twelve months have elapsed since I became president, so my term is almost over. January will see our new president, Nils Allen, take the reins of power, such as they are, and move the Society forward on to new goals and higher accomplishments.

We have had a great year. Our public outreach team has held innumerable star parties for both the public and a number of schools. These events will bear fruit in the future and those who attended them will become members of our Society, or at the very least will have a better idea what the universe is all about. The Society owes our members who participated in these events a big "thank you!"

While we did not hold an X-Prize event this year, we had a very successful Renaissance Arts Faire booth that many used as an entrance to the Children's Realm. This gave us exposure that we would otherwise not have had. Add to that the great astrophotos displayed along the booth's walls and everyone who ran the telescopes in front of the booth and we touched another group of people with our love of the heavens.

Our final event of the year, the Christmas Party at Lorenzo's was another success for the Society. Twenty-seven people were in attendance. Nils came up with an astronomer's "Night before Christmas," with everyone attending reading two lines of the story. Rich Richins put together a great retrospective for the year, including the Great Texas Star Party rain-out and tons of astrophotos taken by Society members. Our thanks go out to everyone who made this a success, especially all the members and guests who attended!

Speaking of astrophotos, they just keep getting better. Kirbini San has moved up as his skill level has increased, and Tony has given us some tremendous high-resolution images of the Moon. If you have not seen these on the ASLC-Imagers group, and can tolerate a few attached large images, contact Rich Richins to be invited to join this Yahoo! Group.

Our *High Desert Observer* editor, George Hatfield, placed fourth in the Astronomical League's Mabel Sterns Award for excellence in Society newsletters. This just underscores how great a job he does in getting us our Society news every month. Our members also continued to pile up variable star observations and minor planet astrometric measurements.

The year 2007 will be known in the future as the year that the ASLC Observatory Project was begun. We have obtained the 16-inch LX-200 from NMSU and are negotiating with the Leesburg Dam State Park to build the Observatory. We hope this will be complete next year. There is a large group of our members working on this project, and this may be the most significant thing that comes out of this year.➤➤

➢Finally, I would like to thank the Board of Directors, and the Officers of the Society. John McCullough, our Secretary did a great job in taking and producing the minutes of the Society meetings; Treasurer Janet Stevens kept the cash flowing, and got us our RASC Observers' Handbooks and ordered the Solar Max telescope; and Bill Stein arranged great meeting programs for us.

I am sure Nils will run things differently, but I am also sure that the Society will continue to move forward. If you have not been active in Society events, I urge you to join in the fun and volunteer to help out with our many activities. And now I turn our virtual gavel over to Nils as he opens his term as President. May you have clear, dark, and steady skies!

Next Meeting

There is no meeting scheduled for December. The next meeting will be held on Friday, January 25, 2008. It will be held at the usual place and time (DABCC, room 77, 7:30pm). The program will be announced in the January issue of the newsletter.

Other events planned for December and early January include:

Dark Sky Observing at the Upham dark sky site, Saturday, January 5, dusk

ASLC MoonGaze, International Delights Cafe, Saturday, December 15 and January 12, dusk

Please see the ASLC website for further information (http://www.aslc-nm.org).

This Month's Observer

President -Elect Message

Nils Allen

A Very Merry Christmas to everyone! I hope this finds all of our members enjoying the Season and looking forward to next year in optimistic anticipation. As new ASLC President for 2008, I am excited about our recent past, present, and near-term future. First and foremost, kudos go to Bert Stevens for his excellent get-it-done leadership this year, just what the ASLC needed at this juncture. And also thanks to VP Bill Stein for all his efforts, as well as the other Board members - several are returning again, which really does help.

Next year should be a really special year - we have a super club observatory project started which is supported by a number of enthusiastic volunteers. I really want all of us to make an extra effort to re-focus on why we are in the Society - as part of that I have proposed my own informal mission-type statement for the new year... to "enjoy ourselves and learn through sharing." If we can, I'm betting the Society's future will be bright for sure.

The new Board is an excellent group, with a mixture of old hands and new guys (with that all-important➢➢

➢fresh thinking). We have met and are ready and willing to tackle a number of new challenges - there's plenty for everyone to do. I'm sure George and Rich will continue to do a bang-up job on the HDO and website, respectively - please be helpful and contribute as much as possible. That is what makes these communication methods so useful, and good communications will be essential for every success we have as we proceed.

Likewise we need folks to step up and support our education and outreach efforts, since I will have to back down from leading in those areas to focus on President stuff. Jerry (our new VP) and I especially want to solicit any ideas you have for interesting speakers for 2008 - please put some thought into this. Along that line I hope to soon create and submit a survey to all our members to find out your thoughts about several upcoming issues such as meeting preferences, social and other possible new activities, special interest groups, observatory operation ideas, etc. So buckle your seatbelts, folks — the ride ahead could be an exciting one! (I sure hope so.) Clear & not-so-cold skies! Nils Allen, ASLC President, 2008.

The Evolution of Jornada Observatory

By David Dixon

I started observing in 1980 as a casual visual observer with a Celestron C8 which was usually only set up for particularly good planetary oppositions, Messier objects, taken to star parties, and occasionally chasing a particularly bright asteroid. I would not consider that I had an observatory at the time. Webster defines an observatory as "a place for making astronomical observations; an institution whose primary purpose is making such observations." The start of Jornada observatory was in 1997 and it has continued to evolve ever since. Since the beginning, the observing program has been focused on Minor Planets. The main telescopes have progressed through a series of catadioptric telescopes from 7 inch to 8 inch, 10 inch, 12 inch, and now 16 inch. CCD cameras have gone from 320 by 240 pixels to 1024 by 1024 pixels. The operations have evolved from AltAz mounting and tracking to AltAz mounting and tracking with field derotator to equatorial mounting. From setting up a tripod in the driveway, to a roll out telescope system used from the driveway, to permanently mounted systems in domes and remote observing and control from my study in the house

Figure 1: 1999 rollout Meade 12" LX200 with SBIG CCD

Over the years as I progressed from casual visual observer to where I am today, I can recognize three milestones in the progression that made observation significantly easier or were major milestones in capability. The first milestone was when I moved to CCD imaging in 1997. Imaging was necessary to pursue the objective of minor planet astrometry, first because the asteroids I was interested in were several magnitudes dimmer than could be seen visually with my telescope, also to detect an asteroid by blinking successive images and to allow the measurement of the asteroid position relative to the reference stars also in the image. CCD imaging, once the basics were mastered, worked as expected; I could image, blink, and measure asteroid positions. One thing that was not expected immediately (but probably should have been) was that the working magnitudes limit imaging at dark sky sites and under the fairly low light pollution on the outskirts of Las Cruces are effectively the same. Longer integration times could compensate for the sky brightness, something that is not possible in visual observing or classic film imaging. For CCD ➢➢

➢imaging the "seeing," not sky brightness, was usually the limiting factor, the reverse of visual observing. It also meant that with CCD imaging a backyard (or front yard) observatory was not handicapped compared to a dark site. A better site would come from better seeing at a higher altitude mountain site for example, not a darker sky background.

The second milestone was the step of being able to leave the telescope/CCD system assembled between sessions. In my case it was the roll out of the garage mode, and by definition since observations was from a couple of painted marks on the concrete driveway, "a place for making astronomical observations" was my first observatory. The transition to my home-built version of wheely bars cut setup time to a fourth what it was previously and doubled my observing time. This complements CCD imaging, quick setup without the need to drive to a dark site and assemble then disassemble the telescope system. You have to have the room to store the assembled telescope system and get it outside to the observing point (or points). This method can work well for small to medium size systems. People have moved 16 to 20 inch telescopes in rollout mode, but you should probably avoid going that large unless all movement can be done on level surface. I know from personal experience wheely bars with a 10 or 12 inch SCT and tripod on even a modest incline can be exciting if the telescope starts moving down hill under gravitational influence, a different meaning for the term "runaway scope." If the telescope system is small enough to be placed on a mobile platform for roll out use, then using exiting available storage like a garage or storage shed is a cost effective solution to having a dedicated observatory structure. I operated in that method from 1998 to 2000.and made my first six asteroid discoveries and reported about 500 observations to the MPC from a roll out observatory.

Figure 2: Partially completed domes

Figure 1 is the 1999 rollout configuration used just prior to moving operations into domes. I had two Meade LX200 12 inch SCTs with derotator, Meade 0.33 focal reducer, SBIG ST-7E CCD cameras. Observing control was done from a laptop computer near the telescopes and electric focusing was not used but mechanical focus counters (not visible in the picture) were added to the SCTs.

The third milestone was computer control of the telescope system. From 1992 to 2002 off the shelve components became available to allow computer control of all the routine telescope system operations. Computer controllable mounts, derotators, focusers, autoguiders all became off the shelf items. Do-it-your-self CCD cameras like the Cookbook Cameras and commercial astronomical CCD camera were produced by a number of manufactures. Also PC software to orchestrate observatory operations became available, much of it free. A computer was necessary for CCD imaging in 1997 and it was a small step to add a planetarium package with DRO and later an LX200 goto telescope. During 1997 to 2000 I controlled most operations from a PC at the telescope. In 2000 when I moved to permanent observatories domes I included AC power, Ethernet, and dome control wiring to the domes with the intention of controlling operations from my study in the house. Figure 2 shows the partially completed domes.

A PC in the dome controlling the telescope, CCD camera, autoguider, and focuser, while the PC controller in the dome was in turn controlled by a PC in the house over the Ethernet connection. Dome rotation was controlled manually from inside the house, but never worked well. In 2001 I was happy to add hardware and software to control the dome rotation from the PC in the dome and slave the dome slot position to the telescope pointing. At that point in time the only two connections to the domes were for AC power ➢➢

➢and the Ethernet network. Since 2000 the only operations that require operator presence are opening the dome shutter and turning on the power to the PC, telescope, CCD cameras, and the dome rotation motor.

Figure 3: Remote controlled driveway system

Now even the Ethernet wiring is not necessary. About a year ago I operated a rollout telescope system (Figure 3) that I rolled out from my garage with the computer on a shop dolly. This system used a standard 802.11g WIFI connection to the home network and the only wired connection was for AC power. The control PC on the shop dolly didn't even have a monitor on it and controlled the telescope mount, CCD camera, autoguider, and focuser. This was essentially a mirror of the configuration in the domes, but without dome control or wired network. Observing remotely from the comfort of the house removes the observer as a source of vibration to the telescope and lets the observer work at comfortable temperature and at a convenient light level with literally all the comforts of home.

CCD imaging and computer control of observing functions opens several operational options. The system can be operated at the observatory, but it can alos be operated remotely. Although I am operating Jornada Observatory over a distance of only 120 ft. from my study to the domes, by using the Internet it could just as easily be thousands of miles away. The observatory could be operated in programmed mode following a planned script without even remote interaction.... slewing to the target, starting and stopping the autoguider, focusing the cameras taking a programmed number images and moving to the next programmed target. Bert and Janet Stevens, Desert Moon Observatory, are operating in this mode with tremendous success.

In the fall of 2000 the two LX200 12-inch telescopes were installed in domes, electric focusers were added, and observing was resumed. In 2002 a 16-inch LX200 (Figure 4) was bought to replace an existing 12-inch LX200. It was purchased some months after Meade had discontinued the Classic LX200 and introduced the LX200GPS. I was able to negotiate a price for the 16 inch LX200 Classic that was in the Meade factory observatory and included a refurbishment of the telescope and re-coating and aluminizing the optics. I think I can claim that I got the last LX200 16 inch Classic to leave the factory although Meade has never verified it. The second LX200 12-inch was replaced by a 16-inch LX200GPS which was purchased in 2005. Each of these 16-inch telescopes has a computer controllable Optec temperature compensating Crayford focuser as the principle method of focusing. The primary mirror focus mechanism is used only for rough focus and generally is adjusted only a couple times a year. There are CCD imaging and autoguiding cameras on each telescope. There is a PC in each dome that controls the telescope, the CCD cameras/autoguider, the focuser, and the synchronization of the dome shutter opening and the telescope position.

Figure 4: 16" Meade LX200 Classic

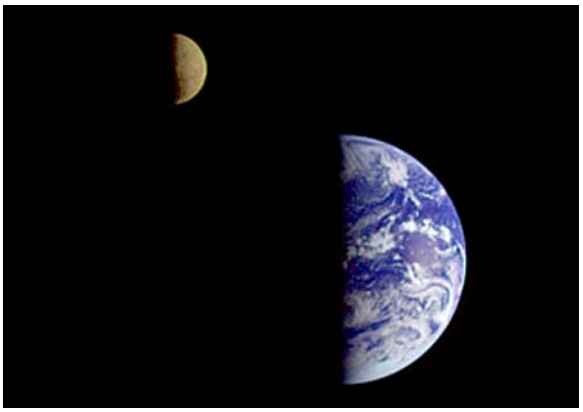
Jornada has sent about 3800 astrometric observations to the Minor Planet Center at SAO. A total of 1800 of these are of NEOs and 12 asteroids discovered at Jornada have been numbered. Eighty eight percent of the NEO observations made at Jornada were of NEOs that were dimmer than 19th magnitude (V) at the time of observation; ten percent were dimmer than 21st magnitude (V). As a rule I attempt to measure and submit observations to the Minor Planet Center as imaging of each NEO is completed to give other observatories the opportunity to avoid over-observing an object when other➢➢

➢NEOs are in need of observations. It is for this same reason that I check the Minor Planet Center Date of Last Observation list before the start of a session to make sure that all the target list of objects are still in need of observation. Occasionally another observatory has just reported and added a new object to the target list. I have experimented with operating both 16-inch telescopes at the same time, but have not solved the problem of being able to measure and submit observations to the Minor Planet Center as imaging of each NEO is completed when both telescopes are in operation. That is the issue I am currently working; the best possible solution would be to streamline and speed the measurement process. An alternative is to drop the objective of reporting results promptly and accept making or allowing another site to make observations of an object already observed, but not reported, which is not an optimal overall solution.

Astronomers Say Moons Like Ours Are Uncommon

From NASA (http://www.nasa.gov/mission_pages/spitzer/news/spitzer-20071120.html)

The next time you take a moonlit stroll, or admire a full, bright-white moon looming in the night sky, you might count yourself lucky. New observations from NASA's Spitzer Space Telescope suggest that moons like Earth's - that formed out of tremendous collisions - are uncommon in the universe, arising at most in only 5 to 10 percent of planetary systems.



Our Earth-moon system, photographed here by NASA's Galileo spacecraft in 1992

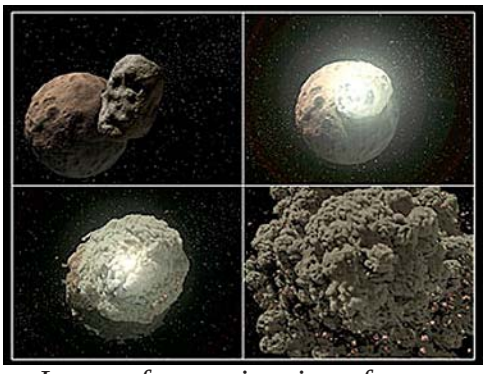
"When a moon forms from a violent collision, dust should be blasted everywhere," said Nadya Gorlova of the University of Florida, Gainesville, lead author of a new study appearing Nov. 20, 2007, in the *Astrophysical Journal*. "If there were lots of moons forming, we would have seen dust around lots of stars - but we didn't."

It's hard to imagine Earth without a moon. Our familiar white orb has long been the subject of art, myth, and poetry. Wolves howl at it, and humans have left footprints in its soil. Life itself might have evolved from the ocean to land thanks to tides induced by the moon's gravity. Scientists believe the moon arose about 30 to 50 million years after our sun was born, and after our rocky planets had begun to take shape. A body as big as Mars is thought to have smacked into our infant Earth, breaking off a piece of its mantle. Some of the resulting debris fell into orbit around Earth, eventually coalescing into the moon we see today. The other moons in our solar system either formed simultaneously with their planet or were captured by their planet's gravity.

Gorlova and her colleagues looked for the dusty signs of similar smash-ups around 400 stars that are all about 30 million years old - roughly the age of our sun when Earth's moon formed. They found that only 1 out of the 400 stars is immersed in the telltale dust. Taking into consideration the amount of time the dust should stick around, and the age range at which moon-forming collisions can occur, the scientists then calculated the probability of a solar system making a moon like Earth's to be at most 5 to 10 percent.

"We don't know that the collision we witnessed around the one star is definitely going to produce a moon, so moon-forming events could be much less frequent than our calculation suggests," said George Rieke of the University of Arizona, Tucson, a co-author of the study. An artist's animation has been created which shows bodies as big as mountain ranges smashing together. Such collisions form the basis of the planet-building process. An even bigger collision between Earth and a body the size of Mars is thought to have created our moon. The animation of a moon creating collision can be seen at the website cited above.➢➢

➢In addition, the observations tell astronomers that the planet-building process itself winds down by 30 million years after a star is born. Like our moon, rocky planets are built up through messy collisions that spray dust all around. Current thinking holds that this process lasts from about 10 to 50 million years after a star forms. The fact that Gorlova and her team found only 1 star out of 400 with collision-generated dust indicates that the 30-million-year-old stars in the study have, for the most part, finished making their planets.



Images from animation of moon building collison (NASA/JPL/ Caltech)

"Astronomers have observed young stars with dust swirling around them for more than 20 years now," said Gorlova. "But those stars are usually so young that their dust could be left over from the planet-formation process. The star we have found is older, at the same age our sun was when it had finished making planets and the Earth-moon system had just formed in a collision." For moon lovers, the news isn't all bad. For one thing, moons can form in different ways. And, even though the majority of rocky planets in the universe might not have moons like Earth's, astronomers believe there are billions of rocky planets out there. Five to 10 percent of billions is still a lot of moons.

NASA's Jet Propulsion Laboratory, Pasadena, Calif., manages the Spitzer Space Telescope mission for NASA's Science Mission Directorate, Washington. Science operations are conducted at the Spitzer Science Center at the California Institute of Technology, also in Pasadena. Caltech manages JPL for NASA. For more information about Spitzer, visit http://www.nasa.gov/spitzer and http://www.spitzer.caltech.edu/spitzer.

Our First Event of 2008! New Scope Owners Clinic

Nils Allen

Did anyone you know get a new scope for Christmas this year? Or have one stashed away that's rarely used? Well, you can be sure that several Las Crucens fall into this category. It so happens that one of our Society's main goals is to assist anyone with the desire to successfully enjoy our night skies. Add to that the fact that many of our members have the technical expertise and people skills to make that happen for just about anyone. Thus the "New Scope Owners Clinic" was born and continues again this year!

New Scope Clinic, 2006

We have set January 5 (and January 12 as back-up) as the date for this free annual Clinic, to be held at Veterans Park on Roadrunner. Knowledgeable volunteers (you know who you are!) are needed to be on-hand between 3 and 5pm to assist new (and not-so-new) owners with operation and maintenance of their telescopes. This year we will definitely publicize the event so hopefully some actual needy people will show up. So put this date on your calendars and join us if you possibly can! Please let me or Chuck Sterling know if you expect to make it - anyone is welcome to join us. If folks hang around and the weather is OK we may do some observing afterwards as darkness falls, assisting folks with possibly their first real stargazing session. Or if the weather is great perhaps we will all adjourn to Upham for some *real* observing! Either way, come prepared!

2008 Texas Star Party - Sign up Now!

The great tradition of dark sky observing continues with the 30th Annual Texas Star Party, June 1 - 7, 2008!

1. You should submit a Registration/Reservation Request Form to enter the TSP drawing before January 20, 2008. This will provide you the highest possible chance of being selected as one of the 700 people who will be able to attend TSP this year. Read about the drawing here:

http://www.texasstarparty.org/draw.html or fill out the Request Form immediately at: http://www.alphadata.net/cgi-bin/forms/forms.cgi?form=3

Please read the rest of this material before submitting your request.

2. Participants at the Texas Star Party can select from a variety of accommodations on the Prude Ranch, including bunkhouses, private cabins, trailer hookups, and campsites with convenient bathhouses. All accommodations include access to a TV lounge, a western-style dining room, and an indoor swimming pool. And of course the convenience of the observing fields! For rates and more information on ranch and nearby accommodations please visit: http://www.texasstarparty.org/travel.html

3. If you plan on staying off site you must send in a Reservation Request form (see #1 above). If want to put an equipment tent on the observing fields, there is now a $5/day charge by the Ranch.

4. The TSP Registration Fee, which does not include your accommodations, is $50/person if you pre-register before April 30, 2008. Each additional family member is just $30 more. For more information about TSP Registration rates and policies, visit: http://www.texasstarparty.org/tspreg.html

The drawing is in late January, and if your name is drawn you will get a link to a TSP Registration Form (and optional Prude Ranch Reservation Form) to send in with your payments in February/March. Please sign up now! Questions? Visit our web site for the latest and complete details! http://www.texasstarparty.org/ or email TSPRooms@TexasStarParty.org. We look forward to seeing you next June!

White Sands School Event a Success

By Nils Allen

We had a really fun time at White Sands School November 14! The clouds were nowhere to be seen, temps were reasonable, and the wind was less than forecast. After I successfully convinced the gate guards that we weren't major security risks (always a new adventure getting on Post!), we set up quite a variety of optics for our guests... everything from mounted binocs to big Dobs. Then my event POC, Bea Lambert, handed out Appreciation Certificates and treated us all to yummy sub sandwiches, chips and cookies - she really knows how to keep us comin' back! Then we had a good 1.5 hours showing kids and parents the best sights in our sky - they all especially loved Comet Holmes (many had not ever seen it!). I think we had from 100 to 150 guests. The Scout troop I am currently instructing was well represented, diligently filling out their observing log-sheets. A special treat was having 'the new guy' Steve Henderson take part with his 10" Dob - a super public-star-party instrument operated by an experienced and enthusiastic astro-guide.... new faces are always welcome at these public events! Overall a good time was had by all. Many thanks to Chuck Sterling, Jerry McMahan, Jerry Gaber, Dave Dockery, and Steve Henderson for their time and effort. I heard many expressions of "thank you for coming" from parents and kids. Certainly, as Dave said, "we'll be back!"

The Astronomical Society of Las Cruces (ASLC)

is dedicated to expanding members and 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 per year. Those opting to receive the ASLC newsletter electronically, receive a $5 membership discount. Send dues, payable to ASLC with an application form or a note to: Treasurer ASLC, PO Box 921, Las Cruces, NM 88004.

ASLC members are entitled to a $10 discount on subscriptions to *Sky and Telescope* magazine.

Minutes, November 2007 Meeting

Minutes, November 2007 ASLC Meeting

Call to Order: Bert Stevens, President, Astronomical Society of Las Cruces (ASLC), called the meeting to order at 7:40 pm., 16 November 2007, Rm. 77, Dona Ana Community College.

Secretary's Report: The reading of the minutes of the October general meeting was dispensed with at the suggestion of the president. Janet Stevens moved and Rich Richins seconded that the minutes be accepted as published in the *High Desert Observer* (HDO), the ASLC newsletter. The motion was carried by those members present. There was not an additional secretary's report.

Treasurer's Report: The treasurer reported there has been no substantial change in the status of the Club's major accounts. The Meade SolarMax telescope has been ordered, but delivery is still pending. Total cost, including shipping and handling, was $3462.20. Payment for the scope will severely deplete the Club's checking account when payment is made. There have not been substantial outlays to support other Club activities.

The treasurer reported that the 2008 RASC Observer's Handbook has been back ordered, but should be available by the December meeting. Each copy is $18.00. A 2008 RASC Observer's photo calendar and a Beginner Observer's Guide are also available, but should be ordered directly via the RASC website, http://www.rasc.ca.

A ballot for the IDA Board of Directors was received last month; the due date is November 26. Steve Barkes moved and Jerry Gaber seconded that the treasurer submit the ballot on the Club's behalf. This concluded the treasurer's report.

Committee Reports:

Observatory Committee: Rich Richins, Chairman, Observatory Committee, reported that he and Jerry Gaber, Observatory Construction sub-committee chair, met with the new Leasburg Dam State Park (LDSP) park manager. They agreed on the proposed site for the observatory and discussed power availability and possibly extending foot paths to the site. The park manager agreed that the state would pour the pad and stucco the exterior of the structure to meet state requirements and to match other park structures. The park manager stated that all parties should know within thirty (30) days whether the project will proceed. One source of delay could be the state archeologist's report which may take as long as ninety (90) days to be submitted after the go-ahead is received. The state's Parks Department will draft a statement of agreement outlining responsibilities and rights of the participants in this project.

Good drawings, plans, and estimates have eased progress to this point. Some "fine tuning" or adjustment to the actual site of the observatory➤➤

➢may result from input by the involved state agencies. Rich estimates that ground breaking will occur in 2 to 4 months.

Chuck Sterling, Telescope sub-committee chair, reports that the Meade 16" LX200 telescope is functioning.

There were no additional standing committee reports.

Old Business: There was no old business discussed.

New Business:

1. The November meeting is the official annual business meeting of the Club. As required in the Club By-Laws, the President submitted a budget proposal for 2008. The proposed budget was as follows:

ASLC Budget, 2008

Income

Dues	$1,885.00
Interest Inc.	3.00
RASC Calendars	0.00
RASC Observers Handbook	325.00
S &T subscriptions	396.00
Xmas Party	630.00
Total Income	$3,239.00

Expenses

Copying of the HDO	$135.00
Liability Insurance Premium	320.00
Dues to Other Organizations	440.00
Postage	100.00
Reimbursement – RASC	325.00
Safe Deposit Box Rental	30.00
S&T Subscriptions	396.00
Public Affairs	600.00
Xmas Party	630.00
Total Expenses	$2,976.00

Net Profit $263.00

Because of the forecast impact to the Club's financial resources from the LDSP Observatory project, including associated operating costs, it may be necessary to consider a member dues increase in the near future.

2. Xmas Party – This year's December meeting/holiday dinner will be at 6:00 pm, December 1, in the Rose Room at Lorenzo's Avanti Restaurant on Lohman. The cost will be $29 per person. An announcement with more details including the menu will be distributed via email. Please respond to Bert Stevens no later than November 23 if you plan to attend.

3. Nils Allen asked to be reimbursed for the purchase of a 10'x10' pop-up canopy that was used for the Renaissance ArtsFaire and will also be available for other daytime Club events; e.g., Astronomy Day. The canopy cost approximately $180 and the receipt is available for the Treasurer. Nils also asked that the Club fund the miscellaneous expenses incurred by the Club's participation in the ArtsFaire, approximately $50. Bob Long made a motion that Nils be reimbursed for the cost of the canopy and also be reimbursed for the miscellaneous expenses, up to $100.00; Jerry Gaber seconded the motion. The motion carried.

4. Accolades for the Club's Renaissance ArtsFaire participation were offered by the membership. Nils thanked the Club members that supported booth setup and tear-down and manned the booth both days of the Faire. He commended them for a "job well-done." ➢➢

➢5. Janet Stevens has had several offers from members to store the Club's new Meade SolarMax telescope between events. She suggested a contract of custodianship, including a possible user's fee, be established. The issue was deferred to the 2008 Board of Directors for consideration.

There was no additional new business for discussion.

Announcements: There were no announcements made.

Rich Richins offered a motion to adjourn and George Hatfield seconded. The business portion of the meeting was adjourned at 8:15pm by acclamation of those present.

General Announcements:

1. Bert Stevens, Steve Smith, Steve Barkes, Rich Richins and Dave Dockery of the Imager's Group recognized Kirby Benson for his progress in imaging/astrophotography.

2. Election results for the 2008 ASLC Board of Directors were presented by Bob Long and Fred Pilcher and were as follows:

Office	Candidate	Votes	Office	Candidate	Votes
President	Nils Allen	20	Director	Wes Baker*	12
Vice-President	Jerry Gaber	20		Kirby Benson*	15
Secretary	John McCullough	20		Frank Miller	10
Treasurer	Janet Stevens	20			

*denotes Directors for 2008

3. Various information resources, including *Reflector* magazine and print copies of the HDO newsletter, were available on the front table.

4. Nils Allen announced a school star party on December 6 at Sunrise Elementary. Details will follow via email and the web page.

There were no additional general announcements made.

Observations: There were no observational reports offered.

Presentation: The program for the November meeting was presented by Tony Gondola, ASLC member. Tony's topic was "High Resolution Lunar Imaging." Tony presented a very impressive summary of his recent work in digital post-processing techniques. He combines hundreds of progressive scan, high-frequency scans (60 frames/sec) into a very stable image that can then be sharpened to image qualities better than could be produced by any professional observatory just a few decades ago. He gave a concise slide presentation of how this works. He also presented views of his imaging equipment set-up and described its capabilities and limitations. This presentation was recorded for playback via the Internet. It and other meeting presentations can be seen on the web at http://www.aics-research.com/lectures/aslcnm/.

The November 2007 monthly meeting concluded at 9:10 pm. Respectfully submitted by John McCullough, Secretary.

January Issue of the HDO

Articles for the January issue should be sent to me by Tuesday, January 8. Material should be sent as email (GMHLCNM@msn.com) or as an attached Microsoft Word document. If you have any questions about submitting something to the HDO, please don't hesitate to contact me (532-5648 or via email). Thanks in advance! George Hatfield, Editor, ASLC Newsletter.

"The Night Before Christmas"

by Astronomers Anonymous

'Twas the anti-solar time before Christmas, when all above our city,
Not a gas-giant was shining, and the clouds they weren't pretty.
All our club scopes were stored by their owners with great care,
But hopes lingered that the Clear-Sky-Clock might soon indicate fair.

Our newbie astronomers were nestled all snug in their beds,
While visions of clusters and nebulae danced in their heads.
And Steve clutching his new Macbook and I with my Millennium star-map,
Had just about decided to settle down for a long cloudy-night nap.

When out by the observatory there arose such a clatter,
I fell outa my bed – say, what the heck is the matter?
Away to the glass portal I flew like a gamma-ray burst,
Tore open the wind-deflectors and then just about cursed….

For up high in the sky a lunar halo 'round the moon did glow,
Giving its solar-simulating light-polluting luster to objects below.
When what to my tired but inquiring eyes should appear,
But bright Mars and Orion – whoopee, let's go get our gear!

With our trusty old scopes, setup was lively and quick,
I knew in a moment we had observing targets to pick.
More rapid than photons, the familiar objects they came,
We aimed lasers and pointed and called them by name.

"Now Rigel, now Mizar, now Pollux and Castor!
Now a Comet, by Mirfak, and there's Sirius, the sky master!"
To the top of the sky, to the high winter "Circle of Stars,"
Dash away did we to our scopes – dash it, don't forget Mars!

As fine dust that before the TSP whirlwinds does fly,
(And surely covers your stuff before it swirls up into the sky)
So my sleep-deprived mind did spin - you see, it was amazed at the view,
Of a transport vehicle full of astro-toys, and the Chief Astronomer too!

In the twinkling of a red-giant, I heard up on our rolled-off roof,
The purring and puttering of steppers – a tracking mount, that's proof.
As I stepped back from my sweet scope and quickly turned myself around,
Down to the floor the Great One crashed – why, then he kissed the ground!

He was dressed like a stargazer, bundled from head to his toe,
And his clothes were all covered with pockets and places to stow.

➤➤

➢A huge knapsack of astro-goodies he had draped on his back,
Why it looked just like the ultimate astro-imaging accessory pack!

His eyes—how tired and red! His face – how gray and hairy!
His cheeks were like red cellophane, his nose like Rudolph's cherry -
Kinda like Rich when it's cold & late, having imbibed of the grape-berry -
Why, the pale stubble on his chin made his appearance…. almost scary!

The handle of a red LED lite he held tight in his teeth,
Its soft glow lit up his face like a holiday wreath;
He had an intense inquisitive face - like Bill Nye on the telly,
And his late-night snacks – Wow, must of come from a deli !

He crept up to my Nagler, looked through it sly as an elf,
And I grinned when he gasped "Wow!," in spite of myself.
In a wink of an eye from one scope to another he sped,
Leaving a neat astro-goodie at each – charity is not dead!

Not a word did he speak, till he had finished all his work,
"Got more astro-geeks to visit", he said with a smirk!
Laying a finger on the GoTo of his remote he did pose,
Then with a quick touch, up thru the open roof he rose.

As he jump-started his mount, all his admirers gave a whistle,
Then he disappeared into the sky - like a sub-orbital missile.
But I heard him boldly exclaim, as his elaborate rig took flight…
Happy stargazing to all and to all a dark clear night!

Images from the Christmas Party by Bert Stevens

Good Turnout for Moongaze

The Moon Gaze on Saturday, November 18, was quite successful. There were as many as seven scopes set up during the evening. We handed out 36 contact cards, so we probably had fifty or more folks stop by for a peek at the Moon, Jupiter, M45, Comet Holmes, M57, and Uranus. M42 was just showing up when we quit a little after 10pm, and although we aimed a scope at it we shut down before anyone viewed it. - Chuck Sterling

ASTRONOMICAL SOCIETY of Las Cruces
PO Box 921
Las Cruces, NM 88004

ASLC - Sharing the Universe
With Our Community
for Over 50 Years