



President's Message - January 2011



It's a new year, and as Gaea starts another orbit around Sol, I would like to reminisce a bit about 2010. Under President Bert Stevens we:

- started the Loaner Telescope Program
- effected repairs to the NMSU Tombaugh Observatory
- had great Astronomy Day and Renaissance Faire events
- hosted many public outreach events, educating and entertaining thousands of Las Cruces (and El Paso) residents in the process.

We were also represented at ALCon, as well as the Texas and Okie-Tex star parties.

In addition, we applied for and were granted the honor of hosting the upcoming Association of Lunar and Planetary Observers Conference. Overall we had a very good year and I would like to thank Bert for his leadership. He has left some very big shoes to fill.

Looking forward to 2011, some of the major goals include:

- Increasing Membership
- Start Observatory Construction
- Improve Society Financials
- Reducing Las Cruces Light Pollution
- A Successful A.L.P.O. Conference

Of course there are others and these will be discussed in detail at the January 10 Board Meeting and the January 28 ALCS meeting.

We are also looking for Society members to give presentations during the meetings. Your new Vice President, Tracy Stuart (tracystuart@comcast.net) will be coordinating the presentation schedule, so please contact him if you are interested.

Finally, we need someone to manage the ordering and sales of apparel; I've been handling this for the past 18 months and it is time to give another member the opportunity to act as Quartermaster. Please let me know if you are interested.

Your President,
Ron Kramer



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 \$30.00 per year, including electronic delivery. 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.

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Next Meeting

Fred Pilcher will give us "Some Highlights from the October, 2010, Convention of the Division of Planetary Sciences of the American Astronomical Association Meeting."

Of the hundreds of oral and poster presentations he will describe only five, but invite questions from the audience on other topics which may have been covered. The audience will be presumed to have only a very elementary background in planetary science. For each topic, he will start with these basic principles and build up slowly and carefully with the new finding as a climactic ending. Get the latest on the planets at this month's meeting.

Articles Needed

The High Desert Observer is **your** astronomical society newsletter. The quality of the newsletter can only be obtained if we get high quality articles from people like **you**. Please take some time and write an article on what you are doing in astronomy that you would like to share with your fellow amateur astronomers. Thanks in advance for your efforts!.

Events

ASLC hosts both a deep sky viewing and imaging at our dark sky location in Upham and a public in-town observing session for the public at the International Delights Cafe. Both sessions begin at dusk. For information on these and other events, please see the ASLC website at <http://www.aslc-nm.org> .



A Busy Month for Outreach.

By Jerry McMahan

The November Moongaze was held at the International Delights on the Thirteenth. Chuck Sterling, Jerry McMahan, and Steve Shaffer were in attendance. Chuck had his 100mm Orion refractor, Steve brought an 8-inch Dobsonian and I (Jerry), had a 120mm Orion refractor. As usual, the first quarter Moon and Jupiter were the main targets. Mohammad Hijazi also came to help.

Mohamed told us that his parents, who just completed their Doctorates at NMSU, had jobs in San Antonio, so they would be moving in December. Mohammad said that he would try to attend the December Moongaze before moving. He will be missed. We need more young members!

A star party was held at Highlands Elementary on November 18. I wrote down the information about this, but my cats ate my homework. I hope I am remembering correctly and have not left out anyone who was there.

Rich Richins brought his 16-inch, home made Dobsonian and was on M31. Rich did a lot of teaching that night. I had the 120-mm refractor and was on the Double Cluster. Chuck Sterling had the 10-inch and the 100-mm refractor. He was on M45 and Jupiter. Steve Barkes had an 8-inch telescope, I think. I do remember that he was using a Meade LXD 75 mount and had his scope on the Ring Nebula. Bert Verstraete was using an 8-inch and viewed Jupiter. Ron Kramer was using a 5-inch Meade refractor and, I think, 80-mm binoculars. Steve Shaffer, who attends all events, had an 8-inch Dobsonian, or maybe it was the 3.5-inch Questar.

There was a Star Party at Hermosa Heights Elementary School on December 7. Chuck brought both his 10-inch Schmidt-Cassegrain and an Orion 100-mm refractor. Steve Shaffer brought the 8-inch Dobsonian, Jerry McMahan had the 120-mm refractor and Bert (who is not Stevens) Verstraete came with an 8-inch Schmidt-Cassegrain.

The session lasted only an hour, but a large group of kids and parents observed M31 on the Dobsonian, M45 on the 100-mm, the Double Cluster on the 120-mm, and Jupiter on the 10- and 8-inch Cassegrains.

We also had a Moongaze at the International Delights on December 11. Chuck Sterling had his Meade 10-inch, Steve Shaffer bought the Orion 8-inch Dobsonian, and I used the 120-mm Orion refractor. Chuck was on Jupiter, Uranus and the Orion Nebula. Steve had the Moon and Jupiter. I looked at the Moon and the M45 open cluster.

We were surprised to learn that the Cafe was closing at 10:00 p.m., rather than the usual midnight. It will close early the entire winter.

Observing the Caldwell Catalog

By John Kutney

Introduction

The Caldwell list is an ideal set of diverse objects appropriate for all levels of astronomers and instruments. Observing the list of objects requires “patience, stamina, and knowledge of the various objects”.

It was my recent privilege to obtain the Astronomical League’s (AL) Caldwell Catalogue Award. What makes this award unique and very special is that my observing logs (along with other submissions from the AL) were hand carried to England where Sir Patrick Caldwell-Moore personally reviews the logs and signs the awards. This shows his commitment and interest in this Catalogue that he started in a letter to *Sky & Telescope* over 15 years ago in 1995. What makes this latest batch of awards historic is that this may very well be the last set of logs and awards that Sir Patrick Caldwell-Moore may review and sign due to his deteriorating health.



Here Sir Patrick is reviewing my logs.

Along with my reward, I received a few pictures of Sir Patrick and a short video of him commenting on the set of observing logs that were submitted. These items will be cherished by me and indicate the high level of support that the members of the ASLC have provided to complete this catalogue.

The Catalogue

The Caldwell List took 22 months from January 2009 until October 2010 to complete the 89 objects that are visible from the Las Cruces, NM area. My observing skills were certainly enhanced when the catalogue was completed. Also, the preparation and location of observing sites became part of the schema to finish the list.

The catalogue covers a robust set of 109 objects, consisting of 35 galaxies, 28 open clusters, 18 globular clusters, 13 planetary nebulas, 12 bright nebulas, 2 segments of remnants of a super nova (Veil Nebulas) and one dark nebula. The Catalogue covers the entire heavens and you need all the seasons to catch the 89 objects that can be seen from Las Cruces.

The Sir Patrick Moore's original plan was to have all the Caldwell Objects accessible to 4-inch and larger aperture telescopes under dark skies. Dark skies are the foci of the above original objective. NGC 55 (Caldwell #72) with declination of $-39^{\circ} 13'$ in Sculptor was the southern limit of observing from England for Sir Patrick when he compiled the list. However, he had the foresight to include objects from the southern hemisphere because of their magnificence and location. In Las Cruces the limit is $-57^{\circ} 54'$ declination, in Norma, to observe all 89 objects.

The Astronomical League supports two levels of award: the 70 objects suited to the observer in a single hemispheric location and the total 109 objects. To complete all the objects from North America, one needs to go below the Tropic Of Cancer such as in Hawaii or South America. Steven O'Meara has an excellent reference book for the Caldwell List. He was able to observe most of the objects from Hawaii.

Exotic Names

One of the interesting sidelights of the Caldwell catalogue is the exotic and mysterious names associated with some of the objects. The following list is an example of some of the objects that one comes across:

- Flaming Star Nebula (C#31)
- Silver Needle galaxy (C#26)
- Intergalactic Tramp (C#25)
- Blue Snowball (C#22)
- Ghost of Jupiter (C#59)
- Bug Nebula (C#69)
- Spindle Galaxy (C#53)
- Tweezer Galaxy (C#83)
- Rat tail Galaxy (C#60& C#61)



Sir Patrick holds up my Caldwell Observing Award.



Very Special Objects

There were some Caldwell Objects that presented special challenges while another led to an area covered with multiple objects within the field of view. The most difficult object to observe was C#5, the unassuming face-on spiral galaxy in Camelopardalis. It was very hard to see and required five separate sessions to finally observe the fainter details. When one looks at the Hubble Telescope view of this galaxy, it makes one laugh at the differing aspects that are presented by visual observing from Earth. See <http://antwrp.gsfc.nasa.gov/apod/ap101222.html> for a nice view.

Then there was the Bubble Nebula (C#11). It was hard to find and also hard to see. I needed a very special night to actually see the bubble.

I cannot forget the so called “bifurcated” galaxy (C#77). It actually looks like a hamburger with a thick burger between two buns. A black strip seems to separate the galaxy into two separate parts. It was a very unusual sight and one that should not be missed either by a visual observer or the astrophotographer.

The real surprise was C#68, the bright nebula in Corona Australis. It was interesting in itself, but this is a crowded neighborhood. Within a 30-minute radius there is the double nebula NGC 6726-27, the Globular Cluster NGC 6723, and IC 4812, a nebula with a nice double star embedded. This is an area for spending some beautiful time viewing these wonders.

Equipment Utilized

Orion 120MM ED APO Refractor:

Focal length: 900 mm, F7.5 yielding 0.97 arc second resolution

Eyepieces

Size	Brand	Focal	Native	2X	4X	AFoV/TFoV/ArcMin
2 “	Orion Q70	32mm	60X	120X	240X	70d / 1.2d / 72
2“ / 1.25“	Televue Panoptic	22mm	87X	175X	349X	68d / .7d / 48
1.25”	Orion Ultrascopic	15mm	128X	256X	640X	52d / .4d/ 24
2“ / 1.25“	Televue Ethos	6mm	320X	640X	1280X	100d / .3d / 18

Barlows: 1.25-inch 2X Orion Shorty Plus 3-element; 2.0” 4X Televue Powermate

Finder Scope: 9 X 50 - 5.5 degree (330 arc-minutes) field of view

Obsession 457MM Reflector:

Focal length: 1905 mm, F4.2, 79 mm diameter secondary (16% obstruction), yielding 0.25 arc-second resolution

Eyepieces

Size	Brand	Focal	Native	2X	4X	AFoV/TFoV/ArcMin
2 “	Orion Q70	32mm	60X	120X	240X	70d / 1.2d / 72
2“ / 1.25“	Televue Panoptic	22mm	87X	175X	349X	68d / .7d / 48
1.25”	Orion Ultrascopic	15mm	128X	256X	640X	52d / .4d/ 24
2“ / 1.25“	Televue Ethos	6mm	320X	640X	1280X	100d / .3d / 18

Barlows: 2.0-inch 2X Televue Powermate; 2.0-inch 4X Televue Powermate;

Telrad: 4.0 degree (240 arc-minutes) field of view

Locations

There are four locations utilized for observing in our area.

A. Three dark sky sites, 25 miles from Las Cruces

1. Upham, NM – (official dark observation site (DSO) for the ASLC) - Bortle 2/3



- 2. U.S. Route #10 West Exit 116 – (alternate DSO site west of Las Cruces) - Bortle 3
- 3. Corralitos Ranch – (alternate DSO NW of Las Cruces - high and dry) - Bortle 3

B. Las Cruces – backyard of my residence (moderate light pollution) - Bortle 5

Each of the locations had a unique role to complete the Caldwell List. Upham was definitely required to observe faint galaxies and nebulas that require dark skies along with excellent transparency and seeing conditions. U.S. Route #10 West Exit 116 was necessary for an above average southern exposure for those objects that were near the horizon. Corralitos Ranch was necessary to complete my last object Caldwell #87 in Horologium. I had waited several months for it to be viewable. Corralitos Ranch also has a good southern exposure. My backyard, with the tremendous convenience of easy setup with decent visibility, helped hasten the completion of the Caldwell list.

The following table breaks down the distribution of objects and locations:

	Las Cruces	Upham	116W	Cor. Ranch	TOTALS
Open Clusters	12	2	6	-	20
Globular Clusters	2	4	5	1	12
Galaxies	14	12	8	-	34
Plant. Nebulas	6	1	4	-	11
Bright Nebulas¹	4	6	2	-	12
TOTALS	38	25	25	1	89

Observing Techniques

After a slow start, a structured program was put into place that helped to complete the planned project of an observing night and take advantage of good seeing and transparency. As with all observing, some nights just do not work out due to equipment issues or the skies do not cooperate.

The following is the 10-step structure that was helpful to me for visual observing:

- 1) Review star finders and charts to plan a set of accessible objects for a given night.
- 2) Print and review Caldwell Telrad Finder Charts for the selected Caldwell Objects.
- 3) Prepare a template based upon the Royal Astronomical Society of Canada’s (RASC) *Finest NGC List* for each object. I have attached an example of a completed template for Caldwell #85.
- 4) Select equipment required for the object including telescope, eyepieces, filters, etc. Objects very low on the horizon and those that require low magnification require a refractor. The Dobsonian sometimes looked right thru an object such as a galaxy.
- 5) Print computerized charts from Starry Night with the true FOV for Telrad or Finder scope plus other images for two other eyepieces used on the selected telescope. The images for the eyepieces are flipped both horizontal and vertical to match the view from the eyepieces.
- 6) Find and view the object at the location.
- 7) Describe the object in detail and sketch the object on the prepared template, fill in data for all the conditions plus final equipment that was utilized.
- 8) Post mortem on the description and sketch of the object to ensure the correct object was viewed and catalogued. The O’Meara book plus astro-images of the objects were utilized to ascertain the match.

¹ I included the Veil Nebulas as part of the Bright Nebula category



This can be accomplished at the location or at a more convenient place. This technique was essential for the various open clusters; especially, those embedded in rich star fields.

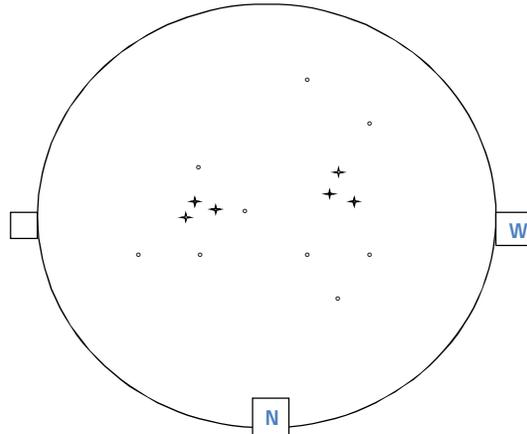
- 9) Enter all data and descriptions into a master log for the Caldwell List.
- 10) Enter all objects viewed that night into a general observer log. This log records every time that I have observed along with the pertinent data.
- 11) At the end there is a large binder with a Telrad Chart, object template with data and sketch, and star hopping or star field views for each Caldwell object. A great reference when one returns to these objects.

Template for Caldwell #85

Below is an example of the template and Excel log entry utilized for each Caldwell Object. In addition, a general log is used to record all objects that may have been viewed on an observing night. The form is available from the RASC or a modified version can be provided if there is any interest.

Caldwell Catalog
C # 85

NGC Number	IC 2391		
Constellation	Vela		
Type	OC (Omicron Vela)		
Visual Magnitude**	2.5		
Size Distance	50'		
R.A. (Epoch 2000.0)	8 40.2		
Dec. (Epoch 2000.0)	-53 deg 04'		
Sky Atlas 2000			
Season	winter		
Remarks***	Very low on south horizon		
Date	2/17/2010	2305	
Seeing	1 (2)	3	4 5
Transparency	(1)	2	3 4 5
Telescope	120mm refractor		
Eyepiece Magnification	32mm/22mm	28x / 41X	
Observing Location	Exit 116W		



Notes _____

Busy dense Open Cluster, 32 mm provides major structure and outline; 22mm provides some nebulosity around bright stars.
Very low on the horizon, patience needed and limited window of observation, Slight central concentration and a small amount of stars. Trumpler II 3 P.

PN: Planetary Nebula	RN: (diffuse) Reflection Nebula	Seeing: 1 = Best 5 = Poor	* = Number of stars in cluster
SNR: Supernova Remnant	EN: (diffuse) Emission Nebula	Transparency: 1 = Best 5 = Poor	** p = Photographic Magnitude
GC: Globular Cluster	G-: Galaxy, with Hubble type given	Time: DD:MM:YYYY	*** !! = Showpiece Object
OC: Open Cluster	E/RN: Diffuse emission and reflection Nebula	Date: Specify Time Zone or UT	



Observer Log

C#	NGC/IC	Con.	Type	R. A. h m	Dec. ° ' "	Mag.	Size Ø	Description
85	IC 2391	Vel	OC	08 40.2	-53 04	2.5	50	o (Omicron) Vel cluster



Date	Loc	Moon	temp	trans	seeing	RH	wind	eye	Clds	Time	Notes	Comments
2/17/2010	116W	set	40	2	2	35	0	32/22mm	0/10	2305	120mm Refractor /SGF/41X/60X	Busy dense open cluster with vivid stars; 28X shows major structure and outline; 41x provides some nebulosity around the brighter stars; Very low on the horizon; slight central concentration and a small amount of stars; Trumpler II 3 P

Conclusion

The robust nature of the set of objects makes this list one of the most rewarding for a visual observer. The history behind the catalog and the nature of a dual world view of the heavens makes this not only exotic and mysterious, but very complete in its coverage of the types of encounters one finds in the deep skies.

The 2011 Association of Lunar and Planetary Observers Convention in Las Cruces, NM

By Berton Stevens

Last fall, the ASLC voted to host the Association of Lunar and Planetary Observer's 2011 Convention. We have narrowed it down to either the weekend of July 14-16 or July 21-23. We need to determine where it will be held and work out the rest of the details.

We are expecting forty to fifty attendees for the convention. We are also thinking that there might be a few bus trips the day(s) before the convention. ALPO usually does not have a vendor room or door prizes. We have much work to do and not much time to do it.

The most important thing we do need to do is get the committee in place. The committee members all chair subcommittees that will do the actual work. We need volunteers. Here is a list of the positions we need to fill as subcommittee chairs. If you are interested in filling a position, please let me know which one(s) you are interested in managing.

Convention Chair: Berton Stevens

Preregistration Chair:

- Participate in preregistration form design/web design
- Mail preregistration forms out as required
- Receive preregistration by mail, phone(?), and web(?)
- Assemble packets for preregistration and registration
- Mail confirmations to preregistrants



Registration Chair:

- Create schedule for volunteers at the registration table
- Distribute pre-registered packets as attendees arrive
- Register additional attendees
- Print out badges on site

Papers Session Chair: Richard Schmude

- Receives papers abstracts
- Creates papers schedule
- Gather A/V requirements and communicates to venue
 - He needs: PowerPoint (screen/projector/laptop)
 - 35 mm slide (unlikely to be used)
 - Overhead (unlikely to be used)
- Introduces papers/keeps on schedule

Venue Liaison Chair:

- Works with venue to schedule events
- Schedules rooms for papers, registration, and poster papers
- Make sure that electricity is available as needed
- Arrange refreshments for papers session
- Arrange lunch options at venue for papers days (if available)
- Arrange meal tickets for those wishing them
- Arrange locked rooms for storage of supplies and equipment

On-Campus Housing Chair:

- Work with NMSU to arrange dorm rooms
- Receive dorm room requests from Preregistration and Registration
- Provide dorm room assignments to registration
- Provide staff to be available in dorm to handle issues (NMSU may do this)

Off-Campus Housing Chair:

- Determine nearby hotel(s) for housing (inexpensive and full service?)
- Negotiate discount for a block of rooms
- Possibly arrange for banquet venue

Banquet Chair: Ron Kramer

- Arrange location and menu for banquet
- Arrange A/V from technical services
- Obtain Guest Speaker for Banquet (not necessary, but possibly Walter, and Cecil)

Technical Support Chair: Ron Kramer

- Provide A/V equipment as needed
- Determine rental location for contingency equipment
- Provide support for printing at Registration

Publicity Chair:

- Create press releases as needed
- Web design for the convention web page and registration functionality
- Interface with media as needed



Excursion Chair:

Plan preconvention trips

Negotiate with bus company

Contact destinations and arrange tours

Arrange lunches as needed

Options: Sunspot/Apache Point; Space Museum; White Sands Missile Museum; VLA; El Paso locations for spouses?

Swap Table Chair:

Room for attendees to swap equipment. Needs some monitoring, but no preregistration.

Please volunteer for one of these positions. We will also need volunteers to fill in each subcommittee. There is plenty of work and we will need everyone to make this a great convention for the A.L.P.O.

Minutes, November 2011 ASLC General Meeting

By John McCullough, Secretary, ASLC

Call to Order:

Bert Stevens, President, Astronomical Society of Las Cruces (ASLC), called the meeting to order at 7:34 pm., 19 November 2010, Rm. 77, Doña Ana Community College (DACC), Las Cruces, New Mexico.

President's Comments:

Bert Stevens welcomed the group and recognized new members and/or visitors present. Robert Williams, president of the Albuquerque Astronomical Society, has relocated to Las Cruces and was present. New members Ann McBee and Stan and Carol Keokes were also present.

Secretary's Report:

The minutes for the October meeting were published in the most recent issue of the Society newsletter, the High Desert Observer (HDO). Vince Dovydaitis moved that reading of the minutes be dispensed with; Wes Baker seconded. The motion passed by acclamation. There was not an additional Secretary's report.

Treasurer's Report:

The Treasurer provided a report on the status of the Society's accounts. Funding for the purchase of additional Society apparel was required. There was not an additional Treasurer's report.

Committee Reports:

Observatory Committee:

Rich Richins, Committee Chairman, was not present and there was no report.

Apparel Committee:

Ron Kramer, Committee Chairman, provided an update on apparel sales and availability. Apparel worth \$1159 has been sold, leaving approximately \$800 in inventory remaining, including twelve (12) new "hoodies" and ten (10) caps. These and other items are available for purchase following tonight's meeting. This is a fund raising effort for the Society.



Outreach Committee:

Chuck Sterling, Outreach Coordinator, reported on the star party schedule for the rest of the year: 18 Nov. at Highland Elementary, 07 Dec. at Hermosa Heights Elementary, and a star party at Mesilla Valley Bosque State Park. Refer to the yahoogroups.com for details. Ron Kramer will continue coordination with the Mescalero Apache schools for a mass star party during the school year.

Tombaugh Observatory:

There was no update on receipt of keys for the new doors at the observatory.

Loaner Telescope Program:

Janet Stevens, Committee Chair, emphasized the need for eyepieces for Society-owned telescopes. An eyepiece has been donated by Frank Miller.

There were no additional committee reports.

Old Business:

There was no old business discussed.

New Business:

December Meeting/Christmas Party:

The meeting/party is planned for 04 December at the EAA hangar. Planning continues: the party will consist of a potluck dinner. Details will be disseminated via email as they are finalized.

2010 Renaissance Arts Faire:

Ron Kramer reported that he received numerous requests for copies of the astronomical images the Society had on display at the 2010 Renaissance Faire. He suggested that the Society could offer images in the future for a “suggested donation” as a fund raiser. Ron offered a motion to provide reproductions of members’ work to raise money for the Society; Vince Dovydaitis seconded. Some discussion followed regarding use of the members’ work for the Society’s benefit. The means and use of the images needs to be clarified. The motion carried.

2011 Officer Nominations:

The position of Society Vice-President still requires nominees. Kirby Benson is stepping down but described the responsibilities of Vice President. Tracy Stuart volunteered to stand for the position. The floor was opened for nominations for each position. When none were received, Steve Barkes moved that nominations be closed and the current slate of officers be accepted by acclamation; Ron Kramer seconded. The motion carried unanimously. The Society officers for 2011 will be:

- President - Ron Kramer
- Vice-president - Tracy Stuart
- Treasurer - Janet Stevens
- Secretary - John McCullough
- Director - Wes Baker
- Director - Nils Allen.

There was no additional new business for discussion.

Bert Stevens adjourned the business portion of the meeting at 8:00 pm.



Announcements:

Items for Sale:

Dave Dixon has back issues of Sky & Telescope to give away.

No additional items were announced for sale.

Recognitions/Achievements:

No recognitions or achievements were announced.

Announcements:

Several members of the international astronomical community have passed away recently, including Brian Marsden, IAU, Elmer Reese, and Ellen Sandich.

There were no additional announcements made.

Presentation:

The November program was presented by Society members Nils and Bonnie Allen. Their topic was “Living and Serving as NPS Astro-VIPs”. 2010 is the second year the Allens have served as astronomy interpretation volunteers in the National Parks. Nils learned about the program via an advertisement in Sky & Telescope magazine and also from the Night Sky Team web site. They had worked at two parks in 2009 as both Astro volunteers and campsite hosts. This year they focused on the Astro interpretation program and worked in four parks. It is a great experience but requires commitment and they recommend it to any astronomy enthusiasts interested in public outreach. This presentation was not recorded for rebroadcast on the Internet. Other meeting presentations can be accessed on the web at http://www.aics_research.com/lectures/aslcnm/.

RASC handbooks have arrived and are available for pickup. Renew memberships if due.

The November 2010 monthly meeting concluded at 9:05 pm.

-Respectfully submitted by John McCullough, ASLC Secretary



Calendar of Events January 2011 (MST)

Jan. 12	4:31 a.m.	First Quarter Moon
19	2:21 p.m.	Full Moon
26	5:57 a.m.	Last Quarter Moon
28	7:30 p.m.	January ASLC Meeting
Feb. 02	7:31 p.m.	New Moon
11	12:18 a.m.	First Quarter Moon
18	1:36 p.m.	Full Moon
20		Look for Zodiacal Light for the next 2 weeks in the west.
24	4:26 p.m.	Last Quarter Moon
25	7:30 p.m.	February ASLC Meeting

Be sure to visit our web site for the latest updates: <http://www.aslc-nm.org>

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

