



The High Desert Observer

The Bulletin of the Astronomical Society of Las Cruces

March, 2013

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 Society and public educational projects. Members receive the *High Desert Observer*, our monthly newsletter, plus membership to the Astronomical League, which includes their quarterly publication, *Reflector*.

Individual Dues are \$30.00 per year

Family Dues are \$36.00 per year

Student (full-time) Dues are \$24.00

Dues include electronic delivery of the *HDO*. Prorated dues are available for new members. Dues are 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 \$5.00 (per year) Sky and Telescope magazine discount.

ASLC Board of Directors, 2013

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March Meeting

Our March meeting will be held on Friday, March 22, in Room 77 at Doña Ana Community College, with the following schedule:

7:00 pm - 7:30 pm Show & Tell

7:30 pm - 8:00 pm Business Meeting

8:00 pm - 9:00 pm Guest Speaker & Presentation

This month's speaker is member John Kutney. The subject of the presentation is:

The Local Galaxy Group and its Amazing Dwarfs

Events

ASLC hosts deep-sky viewing and imaging at our dark sky location in Upham. We also have public in-town observing sessions at both the International Delights Cafe (1245 El Paseo) and at Tombaugh Observatory (on the NMSU Campus). All sessions begin at dusk.

We frequently offer solar observing at the Farmer's Market on Saturday mornings. For further information please visit our website at www.aslc-nm.org.

Outreach

Outreach is a very important part of ASLC. We are always looking for more volunteers to help us educate the public. Even if you do not have a portable telescope to bring to the events, please consider attending our public outreach programs to help answer questions, share knowledge and point out constellations in the sky.

The President's column-inch...

March started out with WIND this year, finally getting back in sync with the old rhyme that continues with April showers and May flowers.

The observatory at Leasburg is coming together nicely. The scope is performing well after a cleaning of five years of accumulated dust and tweaking some adjustments. More equipment is on order to support the planned public star parties, and a First Light Ceremony is scheduled for the spring Astronomy Day April 20th. We would like to involve Las Cruces middle and high schools with the observatory through helping to establish astronomy clubs in the schools. If anyone has suggestions to move this forward, please stand up and be counted; I'm pretty sure we can use the help...



March 8th will have brought us to another school star party for La Academia de Dolores Huerta by the time you read this. Our past experiences with star parties at this school have always been very positive.

March also brings us the Messier Marathon, hopefully held on the night of March 9th if the weather cooperates, and perhaps on the 16th if it does not. Several ASLC members will converge on the Upham Dark Sky Site just before sundown for the event, and will be at it most of the night except for a brief spell in the wee hours to catch some sleep before the just-before-dawn objects make their appearance. Good luck to each of you, and perhaps this will be your year to view all 110 (even though it's not the best timing for a new moon this year).

Comet C/2011L4 (Panstarrs) will be in the sky this month, and should be a real treat for the Messier Marathon participants.

The Moon Gaze will be the 16th this month, starting about dusk in front of the International Delights Café.

The March 2013 meeting will be held Friday March 22 at the Dona Ana Branch Main Campus room 77. Our presenter will be ASLC member John Kutney, who will speak on the Local Galaxy Group and its Amazing Dwarfs. He will try to cover the following in his presentation:

- What is the Local Group?
- Why is it interesting and important?
- Observing some members of the Local group
- Analysis of the Local Group Dwarfs
- Special members of the Local Group

Have a Good Year; keep looking UP.

Chuck Sterling

Outreach Events for February 2013, by Jerry McMahan

Saturday, February 9; Clyde Tombaugh Day

The Solar telescope event, at the museum, was canceled due to high winds in the morning and early afternoon. It looked like the evening observing session, at Tombaugh Elementary, would also be canceled, for the same reason. Suddenly, near dusk, the wind died down and the telescopes were set up. The remaining breeze made it a cold evening, but the goals were accomplished.

Chuck Sterling, Steve Shaffer, Sid Webb and Jerry McMahan attended. Telescopes were also brought by members of the New Mexico State Astronomy Department. They included Gordon MacDonald, Jean McKeever and Carles Vargas (sorry, I could not read my own writing to get the name correct). Clyde Tombaugh's son, Alden stopped by to talk to us at the end of the program.

The Moon was not visible, so the observing included Jupiter and a number of deep sky objects. I had the 120mm refractor and had trouble aligning it since the red dot finder fell off and hit me in the head while trying to point at Capella. I managed to locate M45 and just stayed on it the entire session.

Friday, February 15; Tombaugh Observatory Open House

Steve Shaffer opened the dome and set up the 12.5 Cassegrain. Jerry McMahan assisted. The Moon was our main target again. We had a lot of trouble with tracking. In fact, there didn't seem to be any tracking at all. We had to constantly push the scope to keep the Moon in view. Later, after the weight from the gravity drive came all of the way down and was cranked back up again, the scope began to track again.

Steve has an idea about where something may have been binding, but is not yet sure. At least the problem was self correcting when the weight was repositioned, but that was after most of the guests had left.

Saturday February, 16; Moongaze

Steve Shaffer, Chuck Sterling and Jerry McMahan set up telescopes at the International Delights. Chuck had both the 100mm refractor and the 10 inch Schmidt Cassegrain. Steve brought the 4.5 inch Dobsonian. I set up the 8 inch Celestron. Tracy Stuart also made an appearance.

Robert Hastings, who teaches Astronomy at the Community College, stopped by as did a number of his students. Robert noticed that the star Sirius was hardly twinkling at all, indicating an evening of good seeing. This indicated an opportunity to see the Red Spot on Jupiter. Some of the visitors described seeing something that would have been in the right position. Chuck and I thought that we may have had glimpses of it. With my bad eyes, I could not be sure.

It was not very cold so we did not pack up to leave until 11:30 pm. Steve usually gives me a strong hint to start taking down the scope since it takes longer for me to do it than it takes Chuck to put up two telescopes.

Thursday, February 28; Desert Hills Elementary

Participants included Nils and Bonnie Allen, Steve Shaffer, Bert V, Tracy Stuart and Jerry McMahan with telescopes. Rich Richins and Sid Webb worked inside the building by providing constellation information and assisting students with cookies decorated with constellation designs. Chuck Sterling was in Houston for activities related to his job. This marks one of the few occasions that Chuck has not attended an outreach event.

Tracy and Bert had their 8 inch Schmidt Cassegrains, Steve had the 4.5 inch Dob, I had the 120mm refractor and Nils brought his 15 inch, home made Dobsonian. Nils had Jupiter in the big scope, even before sundown. I am always impressed when someone can find a planet in broad daylight.

Rich came out, early in the evening, to remind everyone about a pass from the International Space Station. It passed nearly over head and provided an extra treat for the spectators. We did not have a Moon so the objects observed included Jupiter and several deep sky objects including the Orion Nebula, the Double Cluster and the Pleiades. We had clear skies, resulting in a successful event.

Friday, March 8; La Acedemia de Dolores Huerta

Clouds. Wind. Rain. Canceled.



Participation hours in February

We had at least 34 hours of outreach participation, plus a few more from participants attending events that we sponsored. I am also keeping records for individuals on my computer grade book. No, I am not assigning grades. If I were assigning grades, Steve Shaffer would have a 100 average for an "A+". Sorry, I guess I just assigned a grade.

Calendar of Events: March 2013 - May 2013 (Mountain Time - 24 hr. clock)

MAR 19	11:27	First Quarter Moon
20	05:02	Spring Equinox
22	19:00	ASLC MONTHLY MEETING
22	21:00	OUTREACH EVENT; TOMBAUGH OBSERVATORY Open House
27	03:27	Full Moon
28	08:29	Moon - Spica Conjunction
29	14:18	Moon - Saturn Conjunction
31	15:59	Mercury Western Elongation
APR 02	22:36	Last Quarter Moon
10	03:35	New Moon
14	12:23	Moon - Jupiter Conjunction
18	06:31	First Quarter Moon
19	21:00	OUTREACH EVENT; TOMBAUGH OBSERVATORY Open House
20		OUTREACH EVENT; ASTRONOMY DAY (visit www.aslc-nm.org for details)
20	18:00	OUTREACH EVENT; LEASBURG DAM STATE PARK OBSERVATORY First Light Ceremony and Star Party
20	19:00	OUTREACH EVENT; MOONGAZE; International Delights Cafe
21		OUTREACH EVENT; EARTH DAY (visit www.aslc-nm.org for details)
22	05:03	Lyrids Meteor Shower
24	18:10	Moon - Spica Conjunction
25	13:57	Full Moon
25	20:28	Moon - Saturn Conjunction
26	19:00	ASLC MONTHLY MEETING
28	01:42	Saturn Opposition
MAY 02	05:14	Last Quarter Moon
04	18:17	Eta Aquarids Meteor Shower
09	18:29	New Moon
12	07:03	Moon - Jupiter Conjunction
17	21:00	OUTREACH EVENT; TOMBAUGH OBSERVATORY Open House
17	22:35	First Quarter Moon
18	19:00	OUTREACH EVENT; MOONGAZE; International Delights Cafe
22	04:34	Moon - Spica Conjunction
23	03:55	Moon - Saturn Conjunction
24	19:00	ASLC MONTHLY MEETING
24	22:25	Full Moon
28	11:30	Venus - Jupiter Conjunction
31	12:58	Last Quarter Moon

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

Minutes, February 2013 ASLC Meeting

Show & Tell:

David Anderson started the session by recapping his discussion from last month about the variety of star guides available. The two guides he recommends are *Night Watch* and *Turn Left at Orion*. He also recommends *Stellarium* and *Carte de Sol* software for new astronomers. David expanded on how to use the guides and bright stars to star hop to other objects and to identify constellations. The Moon and major planets are also objects that are identifiable and visually interesting, even through a small telescope.

David noted that sketching objects reinforces observing skills and fosters familiarity with the night sky. Fred Pilcher commented he has always enjoyed knowing star and constellation names and locations and being familiar with night sky objects. Robert Williams pointed out that using *Turn Left at Orion* and supporting school star parties has helped immensely with his own sky knowledge.

Jerry Gaber followed with an announcement and description of the annual Messier Marathon planned for 09 March (backup date on 16 March), with an opportunity to view all 110 Messier objects. Participating in past Messier Marathons has greatly helped Jerry become familiar with the local night sky. He has downloaded an application for his iPad to help guide him through this year's Marathon. He encourages everyone to come to the Dark Sky Observing (DSO) site at Upham and participate.

Steve Barks, Messier Marathon organizer, says any observing method, i.e., naked eye, binoculars, telescope of your choice (even Go-To?), is acceptable and that an RV will be available as a warm room and break area if things get cold or slow.

John Kutney, Astronomical League (AL) Master Observer, discussed how most of his current observing is faint objects. He obtained a database of 2140 known open clusters, but the database didn't include constellation location. He and Steve Barks have developed a software routine to provide Right Ascension (RA) and Declination of the objects. He will give a demonstration of the application next month.

Call to Order:

Chuck Sterling, President, Astronomical Society of Las Cruces (ASLC), called the business meeting to order at 7:34 pm., 22 February 2013, Room 77, Dona Ana Community College, Las Cruces, New Mexico.

President's Comments:

Chuck Sterling, President, welcomed the group to tonight's meeting. He thanked David for the "Show and Tell" session and the various volunteers for addressing the several topics of interest. There were several new members and guests at tonight's meeting including new member Ed Bennett, a Las Cruces resident formerly from Washington, D.C.; new member Bob Kimball, who is looking forward to doing some observing; Bob Armstrong, a retired teacher from Virginia Beach, VA; Chuck Barrett from Tucson, AZ, now lives in Hillsboro, enjoys sketching and wants to join the Society tonight; Chuck's niece Melissa Diaz and her daughter, Christina Marie Diaz, who are new to astronomy and are intrigued by the technology and science of astronomy and look forward to the camaraderie of other enthusiasts. Chuck asked that all members be sure to check in on the roster and visitors and guests sign the guest list.

Secretary's Report:

The Secretary, John McCullough, reported that the minutes for the January meeting were submitted for publication in the February issue of the Society newsletter, the *High Desert Observer* (HDO). Ron Kramer moved the minutes be accepted as published; Robert Williams seconded. The motion passed by acclamation. There was not an additional Secretary's report.

Treasurer's Report:

The Treasurer, Trish Conley, provided a status of the Society's accounts. Tracy Stuart moved the Treasurer's report be accepted as announced; Jerry Gaber seconded. The motion passed by acclamation. There was not an additional Treasurer's report.



Committee Reports:

Apparel Committee:

Ron Kramer, temporary Committee chair, noted that jackets, “hoodies”, and other items will be available after the meeting. Ron will continue to fill in as temporary Committee chair, but a new, permanent chair is required.

Education:

Rich Richins, Committee Chairman, plans to conduct an “in-class” session at Booker T. Washington Elementary in the near future. Any volunteers are welcome.

Fund-Raising and Grants:

Sidney Webb, Committee Chairman, announced the award of an up to \$5000 grant from the New Mexico Space Consortium to support the new Observatory at Leasburg Dam State Park (LDSP). The grant will reimburse the Society dollar-for-dollar for most expenses, including some publicity, to establish operation of the new observatory. A final report of qualifying expenditures will be due in December 2013.

Society Library:

Brenner Fody, Society Librarian was not present. There was no Library report.

Loaner Telescope Program:

Ron Kramer, Committee Chairman, reported the program is doing well.

There are currently five (5) telescopes active in the program: 12” and 10” Dobsonians, two (2) ETX 90s, and a Unitron refractor. Members may contact Ron if they have questions about the loaner policy, including how to donate equipment to the program.

Membership:

John McCullough, Committee Chairman, reported that five new members have joined the Society since the first of the year, a pace that could increase membership by 25-30 by year’s end. Some of the new members have become very active in the Society. However, it was noted that participation is also needed from the longer-term membership as well.

Leasburg Dam State Park (LDSP) Observatory Committee:

Ron Kramer, Committee Chairman, described the new observatory. The State of New Mexico built the structure to house a 16” Meade LX200 that is on permanent loan to the Society from the New Mexico State University Department of Astronomy. Chuck thanked Ron for his tireless efforts to get the observatory built and operational and commended him on the rapport Ron has established with the personnel at LDSP and the representatives for the State.

However, in the future, there will be two (2) co-chairs of the committee, Ron and Jerry Gaber. Ron will continue to interface with Leasburg Dam State Park and the State of New Mexico as necessary to continue the well-thought-out business relationship the Society now enjoys with them, and to be involved in the scheduling of star parties which the State Park would like to hold and for the Society to be involved with. Jerry will coordinate day-to-day operations of the Observatory, including coordination with the Outreach and Education committee chairs for other star parties that may wish to take advantage of the Observatory, such as schools, scouts, church groups, and others, and organizing volunteers to support these activities. A small cash account may be authorized by the Board of Directors to fund incidental expenses for supplies and minor equipment, such as cables, cleaning supplies, nuts and bolts, etc., that will be accounted for with receipts for purchases.

Tombaugh Observatory:

Steve Shaffer, Committee Chairman, reported that 20-30 people attended the open house last week to view the Moon. Unfortunately, the Grubb mount did not track accurately.

Outreach Committee:

Chuck Sterling, Outreach Coordinator, reported on recent events. A star party will be held at Desert Hills Elementary on 28 February. There will be presentations indoors and telescopes outside. An email request was received from Booker T. Washington Elementary but the committee couldn't react because of the short notice. Members can check the yahoo group for details.

Publicity:

Daniel Giron, Committee Chairman, was not present at tonight's meeting. Daniel is working on preparations for Astronomy Day in April, including dedication of the Observatory at LDSP.

Society Website:

Joseph Clower, web master, was not present at tonight's meeting. His assistant, Steve Barkes, has made some updates and continues to work to resolve broken and suspect links on the website. David Anderson has been working with Steve on this.

There were no additional committee or officer reports.

Old Business:

1. State-wide Star Party - Ron Kramer has been working on this with TAAS (The Albuquerque Astronomy Society) president. The likely date will be 17-19 May (after Texas Star Party) at the Sevilleta National Wildlife Refuge north of Socorro. Participating clubs are expected to include Albuquerque, Silver City, Carlsbad, El Paso, Alamogordo, and Las Cruces.
2. Field trip - William Wren, assistant director at McDonald Observatory, has offered the Society a "behind the scenes" tour of the facility. Ron Kramer is still working on the details, but he expects this to happen in June.

There was no additional old business discussed.

New Business:

1. "Count-Me-In" – Wes Baker talked about this event for high school students in Las Cruces occurring on 23 May at the Field of Dreams. Jerry Gaber has assisted in the past.
2. Texas Star Party (TSP) – this year's TSP is 05-12 May at Fort Davis, TX.
3. Okie-Tex Star Party – Okie-Tex will be the last week in September at Canton, OK.

There was no additional new business for discussion.

Items for Sale:

One (1) 2013 RASC calendar, \$15, is still available. See Ron Kramer after the meeting.

No other items were announced for sale.

Announcements:

A presentation for March is needed. John Kutney volunteered to speak on the local galaxy group and its dwarfs.

Ron Kramer needs articles for the High Desert Observer. Ron also noted that as the new editor-in-chief of the Astronomical League's quarterly newsletter, the Reflector, he would like Society members to submit articles that can be published in the Reflector.

There were no additional announcements made.

Recognitions/Achievements:

There were no recognitions or achievements announced at tonight's meeting.



Jerry Gaber offered a motion to adjourn and Fred Pilcher seconded. The motion passed by acclamation and the business portion of the meeting was adjourned at 8:00 pm

Presentation:

This month's presentation was made by Candace Gray, PhD Candidate, New Mexico State University Astronomy Department, on "Life on Jovian Moons".

Candace asks, "Why look for life on moons?" and starts with Earth's Moon – life may be possible but it's not likely. What about Jupiter's four largest moons, Io, Europa, Ganymede, and Callisto ("I Eat Green Crayons")? These moons were first observed in 1610 by Galileo and are believed to have formed by accretion, similar to the way the proto-solar system is believed to have formed. Candace then discussed the composition and densities of the solar system planets and Galilean moons. She also noted that rotation of the Galilean moons is synchronous with Jupiter. She will show this to be an important aspect of the Jovian system.

The New Horizons mission showed something interesting about Io, i.e., apparent sulphur volcanoes. Candace performed a demonstration with rubber bands/frictional forces to show how Io is constantly flexed by Jupiter's and the other moons' gravity thus creating internal heating.

Europa has a shiny, cracked surface with few craters, which indicates rapid and recent surface renewal. There is also evidence of flowing ice and colorization along cracks in the ice. This leads to speculation regarding the structure of the crust, but Europa definitely has an intrinsic magnetic field that indicates salt or some other mineral content. Could there also be extremophiles present, similar to those inhabiting hostile environments on Earth? It appears Europa has conditions for some form of life to exist. The European Space Agency (ESA) plans missions called JUICE (JUper ICy moon Explorer) to study Europa, Ganymede and Callisto. These will be orbiter rather than lander missions to avoid possible contamination of the moons' environments, as opposed to the deliberate impact of Galileo into Jupiter in 2003.

Ganymede, the largest moon in the solar system, is covered in ice like Europa, but does not appear to be as active. Ganymede may have an ocean (it does have a magnetic field) but may have less tidal heating. The presence of a definite rock/ice boundary is also unknown.

Callisto has more craters than the other moons, which indicate an older surface, and no magnetic field, so may have reduced possibilities of detectable life.

Titan, one of Saturn's moons, was also discussed. Titan has a thick atmosphere (1-1/2 times Earth's) made primarily of nitrogen and methane but no oxygen. It's also very cold so there may be liquid methane streams and oceans.

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/>.

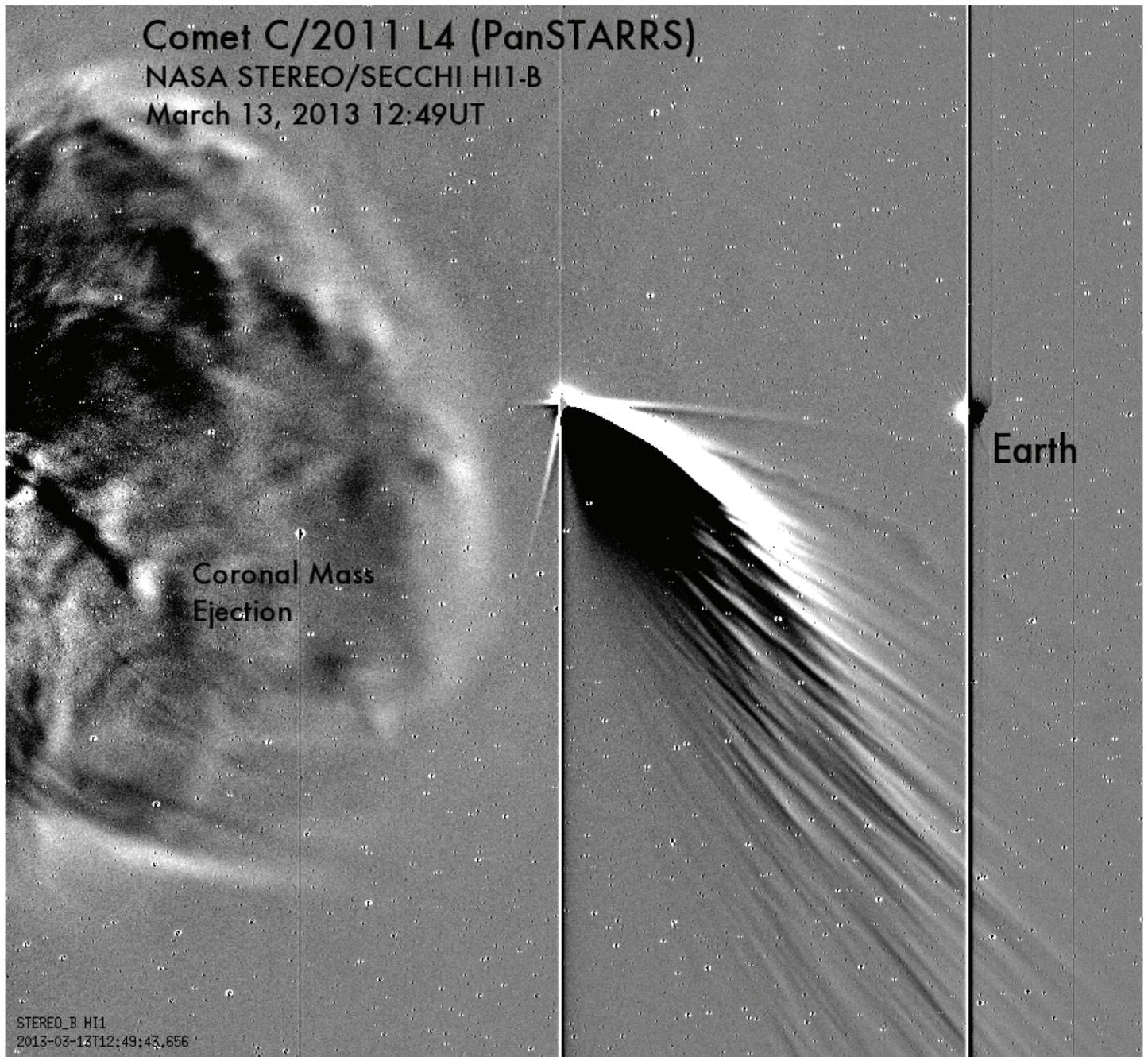
The February meeting of the Astronomical Society of Las Cruces concluded at 9:05 pm.

-Respectfully submitted by John McCullough, ASLC Secretary

Photo of the Month

Here is an amazing photograph taken by one of NASA's spacecraft, in orbit around our Sun. It shows the Earth, a Coronal Mass Ejection (CME) from the Sun and Comet PanSTARRS (C/2011 L4). This image truly depicts our place in the Solar System and is indicative of how far technology in astronomy has really come.

The photo was taken on March 13, 2013



Classifieds

The following items are on a “first-come, first-served” basis, to all readers of the ASLC’s *High Desert Observer*. If you are interested in a particular item, please contact the individual listed next to the item. In some cases the ASLC is assisting the seller, so you can contact the ASLC member.

All items are sold “as is” unless otherwise warranted by the seller. It is suggested that the buyer inspect and evaluate the item prior to purchasing. Items are non-refundable and non-returnable, unless prior agreement is made between the seller and the buyer.

If you have an item to sell, please contact ronjkramer@aol.com

From the Kile estate. Please contact Ron Kramer (ronjkramer@aol.com) if you’re interested in the following:

Meade, 10” LX200 with ETX-60AT Autoguider, dew remover, field tripod, JMI dolly, solar filter, rolling cart with computer and loaded software for telescope/image control, added counter weights, box with cables and accessories, etc.; original price -- more than \$4,000.00; asking \$2,250.00

ASTRONOMICAL SOCIETY of Las Cruces
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ASLC - Sharing the Universe
With our Community
for Over 60 Years

