



The High Desert Observer

The Bulletin of the Astronomical Society of Las Cruces

April, 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.

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Table of Contents

- 2 The President's Column-Inch...
- 2 Outreach Events for March, 2013
- 3 Calendar of Events
- 4 Meeting Minutes
- 8 Photo of the Month
- 10 Classifieds

April Meeting

Our April meeting will be held on Friday, April 26, in Room 777 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 Dr. James McAteer, Assistant Professor at NMSU. The subject of the presentation is:

***The Wrath of RA;
Space Weather in the Modern Era***

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.

Starting soon will be regular observing sessions at the new Observatory at Leasburg Dam State Park, which houses an ASLC-run Meade 16" LX-200 telescope.

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...

This month our highlight has to be the April 20th Astronomy Day opening of the Leasburg Dam State Park observatory, a joint project of ASLC, NMSU, and New Mexico State Parks. This has been about five years in the making, and it is finally ready for "First Light". The observatory is a two-room 16 by 20 foot building with an observing room twelve feet by sixteen, and an eight by sixteen foot warm room, and a motorized roll-off roof. The primary telescope is a 16" f/10 Meade LX200 Classic on permanent loan to ASLC from the NMSU Astronomy Department, and will soon be mounted on a powered adjustable mount which will raise and lower the telescope to accommodate different observer needs. In addition, an 8" telescope above the primary scope will have an astronomical video camera mounted. This will show on a projection screen or computer monitor the same object being viewed through the eyepiece.



By the time you read this, the White Sands Star Party, an overnight event at the White Sands National Monument, starting on April 6th, will be a week or two in the past.

There are two school star parties this month, probably the last two for this school year, which is shortly coming to a close. These are on the 11th and 13th and La Academia de Dolores Huerta and Veteran's Park, for the CHIP Home School Group, respectively.

This month's Moon Gaze is April 20th in front of the International Delights Cafe on El Paseo Road, the same night as the observatory opening. We will be stretched a bit thin on this, but there will be at least one telescope set up for public viewing.

On April 26th, the ASLC monthly meeting will be held in Room 77 of the Dona Ana Community College main campus. This month's speaker will be James McAteer, his presentation entitled, *The Wrath of RA; Space Weather in the Modern Era*.

The Texas Star Party is the week of May 5th through the 11th. Several of us will attend this year, along with hundreds of others from across the country.

And I want to mention a tour of McDonald Observatory near Fort Davis, Texas, on Saturday, June 22. The program would include a behind-the-scenes tour of the facility and some observing time on the 36" telescope. Many thanks to Ron Kramer for arranging this trip.

I have noticed that even though this column is the president's, I nevertheless tend to wear my outreach hat while typing it. I guess some things just get in your blood...

Have a Good Year; keep looking UP.

Chuck Sterling

Outreach Events for March 2013, by Jerry McMahan

Saturday, March 16, 2013; Moongaze

Last month, we told people that we would be at the International Delights on March 16. The web site said that it would be on the 23rd so we were obligated to do it both Saturdays. That is not a big deal since we have done this a number of times when the Moon was in an in-between phase.

Steve Shaffer did not make this one, (after I gave him an A+), but that was my fault. I intended to call him to let him know that we would do it both days, but I didn't make the call. He deserves his A+ anyway.

Chuck Sterling brought his 10-inch and I had the 8-inch Schmidt. Rich Richins came with a six-inch Dobsonian. Rich, as mentioned before, helps Robert Hastings with his Community College Astronomy classes. Rich came as a teacher. Several of the Astronomy students attended and Rich showed them how to aim and focus the telescope. He also showed them how to use a Barlow lens and demonstrated the difference in field of view with the different magnifications. It was also good to have John McCullough back. John is great at explaining about our club and answering questions about what was being observed and things in general, to the public.

When I first set up, it was completely overcast and did not look very promising. It did not take long for the sky to clear and for the wind to die down so we had a good session. We observed the Moon, Jupiter, the Pleiades and the Orion nebula.

Friday, March 22; Tombaugh Observatory

The open house occurred on the same night as the club monthly meeting, so Steve Shaffer missed the meeting, but opened the dome and got the 12.5-inch Cassegrain ready for observing. I (Jerry McMahan) attended the meeting, but joined Steve for the last hour of the session.

Steve swept dust off of the observatory floor, but said the wind coming through the doors did most of the job for him. The wind died down when the observing session started and it was a clear night with decent seeing conditions. We again had problems with tracking. Steve has an idea of what to try to prevent the binding. The NMSU telescopes were on the Orion nebula and Jupiter and had the 16-inch Dobsonian on the Moon. We had the Moon at a higher magnification.

Saturday, March 23; Moongaze, part 2

Chuck Sterling came with his 10-inch. I made the first attempt at mounting both the 120mm refractor and the 8-inch Schmidt Cassegrain on the same Meade LX80 mount. The experiment was a failure. We could not get the Moon in both scopes at the same time. The best we could do was about a half of a degree off.

The wind was bad earlier, but died down when we set up the scopes. The targets were the Moon and Jupiter. The moons Ganymede and Europa were about 6 arc seconds apart. Chuck also pointed to Sirius, at the request of a spectator, and the Orion nebula. He used a 6.3 focal reducer and a 55mm eyepiece and was able to get most of the Pleiades in the 10-inch.

Spring Break was in progress, so we did not have as many spectators as usual. There was also a slight breeze and Spring relapsed into winter to make it pretty cold later in the evening. We packed up at about 10:30 PM.

Calendar of Events: April 2013 - June 2013 (Mountain Time - 24 hr. clock)

APR 14	12:23	Moon - Jupiter Conjunction
18	06:31	First Quarter Moon
19	21:00	OUTREACH EVENT; TOMBAUGH OBSERVATORY Open House
20	09:00	OUTREACH EVENT; ASTRONOMY DAY; solar scopes at Las Cruces Museum of Nature and Science, 411 North Main Street
20	18:00	OUTREACH EVENT; LEASBURG DAM STATE PARK OBSERVATORY First Light Ceremony (starting at 6:00 pm) and Star Party (starting 7:30 pm)
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	09:00	McDonald Observatory private tour field trip (return Sunday at 4:00 am)
	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
JUN	07	09:56	New Moon
	10	05:19	Moon - Venus Conjunction
	12	10:59	Mercury Eastern Elongation
	15	20:00	OUTREACH EVENT; MOONGAZE; International Delights Cafe
	16	11:20	First Quarter Moon
	18	13:56	Moon - Spica Conjunction
	19	11:45	Moon - Saturn Conjunction
	20	23:04	Summer Solstice
	23	05:32	Full Moon
	28	19:00	ASLC MONTHLY MEETING
	28	22:54	Last Quarter Moon

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

Minutes, March 2013 ASLC Meeting

Show & Tell:

David Anderson started the session by introducing John Kutney. John demonstrated a software application he wrote to translate the coordinates of 2140 faint clusters to constellation locations. This is freeware running in JavaScript and John thinks it can be uploaded to the Society's web site so all members will have access to it. Referring to previous Show & Tells and useful sky guides, John says he likes an astronomy self-study guide developed by Dinah L. Moché and has found it very useful.

David Anderson followed by showing an LED red light he likes to use when he is sketching objects. He has also adapted a red plastic cover for his LED flashlight to protect his night-adapted vision. David also showed a 1X red dot finder that came with his Orion refractor that he has attached to a "stilt" to move it away from the telescope tube. He compared this to a Daisy BB-gun red dot sight that is less expensive but more cumbersome.

Fred Pilcher was next up. He finds it convenient to sometimes switch between Julian and universal dates/times. He has a simple DOS routine that performs the conversion and will provide it to any member that would like it. He is sure it is compatible with 32-bit Operating Systems (OS), but isn't sure about 64-bit systems – so be forewarned.

Bob Kimball demonstrated his SLRbot (a \$2 or \$3 iPad app) and the \$22 dollar cable that connects his Sony camera to his iPad to perform astro/long exposure photography.

Call to Order:

Chuck Sterling, President, Astronomical Society of Las Cruces (ASLC), called the business meeting to order at 7:31 pm, 22 March 2013, Room 77, Dona Ana Community College, Las Cruces, New Mexico.

President's Comments:

Chuck Sterling welcomed the group to tonight's meeting. He thanked David for the "Show and Tell" session and the various members for addressing the several topics of interest. New member Michael Zura, recently retired to Las Cruces from Anchorage, AK, was present at his first meeting. Glen Brookshear was visiting tonight's meeting; he participated in the recent Messier Marathon. 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 February meeting were submitted for publication in the March issue of the Society newsletter, the High Desert Observer (HDO). Ron Kramer noted that he is now the Loaner Telescope Committee Chair, no longer "acting". This will be corrected in future Minutes. Steve Barkes moved the minutes be accepted as corrected; John Kutney seconded. The motion passed by acclamation. There was not an additional Secretary's report.

Treasurer's Report:

The Treasurer, Trish Conley, was not present at tonight's meeting. There was no Treasurer's report.

Committee Reports:

Apparel Committee:

Ron Kramer, temporary Committee Chairman, noted that jackets, "hoodies", shirts, caps, 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, was not present at tonight's meeting. There was no committee report.

Fund-Raising and Grants:

Sidney Webb, Committee Chairman, described the recent grant from NASA/New Mexico Space Consortium to support the new ASLC Observatory at Leasburg Dam State Park (LDSP). The grant will reimburse the Society dollar-for-dollar for most expenses, including some publicity, up to \$5000, to establish operation of the new observatory. As the Grantor also encourages involving youth in astronomy, this may lead to the Society establishing/sponsoring astronomy clubs in the local high schools or opening Society membership to high school students. The grant could fund some of that effort. More discussion of that effort is required, including the possible need for faculty advisor(s) in the schools. The grant runs through 2013 with a final report of qualifying expenditures due in December 2013. Steve Barkes asked about other deliverables required by the grant and Sid offered to provide those to him.

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. Ron continues to work on smaller telescopes to add to the program. 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, welcomed Michael Zura to the Society and encouraged Glen Brookshear to join. New memberships continue on pace to increase overall membership by 25 this year.

Leasburg Dam State Park (LDSP) Observatory Committee:

Ron Kramer, Committee Co-Chairman, reported that things are in place for a "First Light" ceremony on 20 April, Astronomy Day 2013. The first activity will be a faux groundbreaking followed by a ribbon cutting for the new observatory. He hopes a number of local notables will be able to attend including the governor, local community mayors, county commissioners, NMSU faculty, as well as NM Parks department personnel. There are potential security concerns that may prevent political personages from attending. The Friends of Leasburg Dam State Park will be on hand to provide some light refreshments.

The park will be open to the public at 7:30 pm (following the dedication) for a star party utilizing the new ASLC Observatory at LDSP. The park will remain open until all participants depart and the Friends of LDSP will have snacks and drinks for sale (this will be a fundraiser for their group). Vince Dovydaitis asked about future access to the park and Observatory for Society members and Ron replied that he has the combination to the main gate and keys to the Observatory. The general public will pay the usual parking fee, but the fee will be waived for Society members. For future park-sponsored star parties, Ron or Jerry Gaber will work out the details with park personnel.

Jerry Gaber, Committee Co-Chairman, reported on the efforts to get the Observatory operational. The committee has spent nearly \$4500 on support equipment including two auxiliary 8" telescopes and a video camera for projection purposes. The NASA/NM Space Consortium grant will offset most of this expenditure. The committee has also received significant donations of computer equipment (that the grant won't cover), eyepieces, and furniture (from NMSU). Jerry is very enthusiastic about the progress.

Tombaugh Observatory:

Steve Shaffer, Committee Chairman, was not present at tonight's meeting. The Tombaugh Observatory is open tonight in partnership with the NMSU Astronomy Department's Open House.

Outreach Committee:

Chuck Sterling, Outreach Coordinator, reported on recent events. A second Moon Gaze will be held this month at International Delights Café on 23 March. The April Moon Gaze will be the 20th. An overnight White Sands Star Party will be held at White Sands National Monument on 06 April; contact Chris Jones of the Alamogordo club if you wish to attend. There will be a home school star party on either 12 or 13 April. Members can check the yahoo group for details. Astronomy Day 2013 will also be 20 April. Telescopes and volunteers are needed.

Publicity:

Daniel Giron, Committee Chairman, reported on announcements about the Society that he is getting into the local media. He is working on an article about the new ASLC Observatory at LDSP for distribution. He expects to obtain

more information in the coming weeks to complete the article. Daniel is working on invitations, announcements, posters, a dedication plaque, etc., with LDSP personnel for the dedication and star party on 20 April. Permission for state, county, and local officials to attend the dedication and their RSVPs (due by 05 April) are pending.

Astronomy Day is also 20 April. Daniel is trying to arrange some events at the Museum of Nature and Science on the Downtown Mall during the day. The Society won't be able to do presentations inside the Museum, but may be able to do solar observing outside. Once that is determined, Daniel will promote the Astronomy Day events. That may include television (KVIA-TV) coverage of both Astronomy Day and the dedication of the ASLC Observatory at LDSP.

Society Website:

Joseph Clower, web master, was not present at tonight's meeting. His assistant, Steve Barkes, had no updates to report.

There were no additional committee or officer reports.

Old Business:

1. State-wide Star Party - Ron Kramer has been working on this with the TAAS (The Albuquerque Astronomy Society) president. The planned date will be 08-09 June at the Sevilleta National Wildlife Refuge north of Socorro. Participating clubs are expected to include Albuquerque, Silver City, Carlsbad, El Paso, Alamogordo, Socorro, and Las Cruces. 8-10 members expressed interest in attending.

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 the date is 22 June (day before full Moon). Attendees will have access to the 36" telescope and possibly the 82" telescope for several hours. The \$250 fee is being waived if enough members attend. Approximately 12 members expressed interest.

There was no additional old business discussed.

New Business:

1. New Mexico Non-Profits – Vince Dovydaitis reported that the NM Attorney General is pressuring non-profits in the state to start paying "rent" to occupy public properties. He became aware of this when the Friends of the Las Cruces Museum of Nature and Science (he is on its Board of Directors) were denied office space in the museum's new facility without payment. He is concerned that the Society may have similar issues with the new ASLC Observatory at LDSP or with the Dona Ana Community College.

2. El Paso Museum of Archeology – Ron Kramer will make a presentation on archeo-astronomy at the Museum on 18 May. There may also be a star party in the evening.

3. Mexican Poppies Festival – this event is 23 March (short notice), also at the El Paso Museum of Archeology. The Museum inquired about a star party. See Jerry Gaber if you're interested.

4. Society of Astronomical Sciences (AAVSO) – Vince Dovydaitis announced the 2013 annual symposium will be 21-24 May in Big Bear, CA. This is a professional/amateur meeting with workshops and paper and poster presentations. Contact Vince for more information.

There was no additional new business for discussion.

Announcements:

Items for Sale:

No items were announced for sale.

Announcements:

Ron Kramer needs articles for the *High Desert Observer*. Ron is also editor-in-chief of the Astronomical League's (AL) quarterly newsletter, *Reflector*; he would like Society members to submit articles that can be published in the *Reflector*.

The speaker for April will be James McAteer on "The Wrath of Ra – Space Weather in the Modern Era".

There were no additional announcements made.

Recognitions/Achievements:

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

Ron Kramer offered a motion to adjourn and Jerry Gaber seconded. The motion passed by acclamation and the business portion of the meeting was adjourned at 8:18 pm

Presentation:

This month's presentation was made by Society member and AL Master Observer, John Kutney on *The Local Galaxy Group and Its Dwarves*. John's observations of the local group began nine months ago. He described the local galaxy group which includes more than fifty galaxies bound together by gravity, including the Milky Way and Andromeda galaxies. Most of the local group members are dwarf galaxies that may contain only a few thousand stars and are very difficult to observe or even distinguish from globular clusters. However, study of these dwarves is important because they may contain clues to the origin and composition of dark matter.

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 March meeting of the Astronomical Society of Las Cruces concluded at 9:10 pm.

-Respectfully submitted by John McCullough, ASLC Secretary

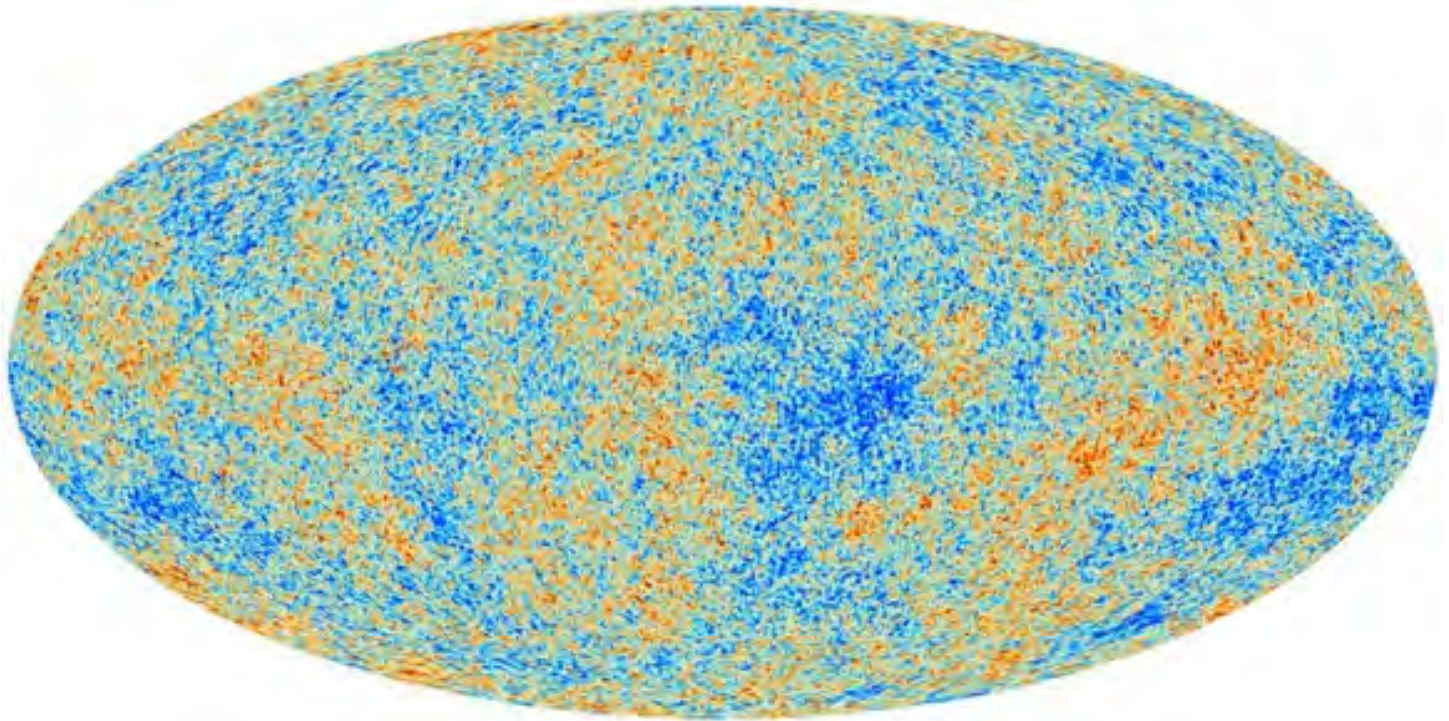
Photo of the Month

Planck reveals an almost perfect universe

The most detailed map ever created of the cosmic microwave background – the relic radiation from the Big Bang – was recently released, revealing the existence of features that challenge the foundations of our current understanding of the Universe.

The image, on Page 8, is based on the initial 15.5 months of data from Planck and is the mission's first all-sky picture of the oldest light in our Universe, imprinted on the sky when it was just 380 000 years old.

At that time, the young Universe was filled with a hot dense soup of interacting protons, electrons and photons at about 2700° C. When the protons and electrons joined to form hydrogen atoms, the light was set free. As the Universe has expanded, this light today has been stretched out to microwave wavelengths, equivalent to a temperature of just 2.7 degrees above absolute zero.



The anisotropies of the Cosmic microwave background (CMB) as observed by Planck. The CMB is a snapshot of the oldest light in our Universe, imprinted on the sky when the Universe was just 380 000 years old. It shows tiny temperature fluctuations that correspond to regions of slightly different densities, representing the seeds of all future structure: the stars and galaxies of today. Credit: ESA and the Planck Collaboration

This 'cosmic microwave background' – CMB – shows tiny temperature fluctuations that correspond to regions of slightly different densities at very early times, representing the seeds of all future structure: the stars and galaxies of today.

According to the standard model of cosmology, the fluctuations arose immediately after the Big Bang and were stretched to cosmologically large scales during a brief period of accelerated expansion known as inflation.

Planck was designed to map these fluctuations across the whole sky with greater resolution and sensitivity than ever before. By analyzing the nature and distribution of the seeds in Planck's CMB image, we can determine the composition and evolution of the Universe from its birth to the present day.

Overall, the information extracted from Planck's new map provides an excellent confirmation of the standard model of cosmology at an unprecedented accuracy, setting a new benchmark in our manifest of the contents of the Universe.

But because precision of Planck's map is so high, it also made it possible to reveal some peculiar unexplained features that may well require new physics to be understood.

Editor Note: For the full article, visit http://earthsky.org/science-wire/planck-reveals-an-almost-perfect-universe?utm_source=EarthSky+News&utm_campaign=64f15b1ff0-EarthSky_News&utm_medium=email

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

