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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, 2014

[Board@aslc-nm.org](mailto:Board@aslc-nm.org)

President: Rich Richins; [President@aslc-nm.org](mailto:President@aslc-nm.org)  
 Vice President: Steve Shaffer; [VP@aslc-nm.org](mailto:VP@aslc-nm.org)  
 Treasurer: Patricia Conley; [Treasurer@aslc-nm.org](mailto:Treasurer@aslc-nm.org)  
 Secretary: John McCullough; [Secretary@aslc-nm.org](mailto:Secretary@aslc-nm.org)  
 Director-at-Large: Tracy Stuart; [Director1@aslc-nm.org](mailto:Director1@aslc-nm.org)  
 Director-at-Large: Jerry Gaber; [Director2@aslc-nm.org](mailto:Director2@aslc-nm.org)  
 Immediate Past President: [csterling@zianet.com](mailto:csterling@zianet.com)  
 Director Emeritus: Walter Haas

ALCor: Patricia Conley; [tconley00@hotmail.com](mailto:tconley00@hotmail.com)  
 Apparel: Ron Kramer; [ronjkramer@aol.com](mailto:ronjkramer@aol.com)  
 Calendar: Chuck Sterling; [csterling@zianet.com](mailto:csterling@zianet.com)  
 Education: Rich Richins; [Education@aslc-nm.org](mailto:Education@aslc-nm.org)  
 Grants: Sidney Webb; [sidwebb@gmail.com](mailto:sidwebb@gmail.com)  
 Librarian: Brenner Fody; [mebrenner@live.com](mailto:mebrenner@live.com)  
 Loaner Telescope: Ron Kramer; [ronjkramer@aol.com](mailto:ronjkramer@aol.com)  
 Membership: Judy Kile; [jkile@elp.rr.com](mailto:jkile@elp.rr.com)

### May Meeting

Our next meeting will be on Friday, May 23, 2014, at the DACC Main Campus, Room 141, Technical Studies Building, starting at 7:00 p.m.

Our guest speaker will be Nick Ule, a PhD student in the NMSU Astronomy Department. The title of his presentation is:  
*Alien Star Systems; How NASA Learns About New Stars and Planets*

### 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.

### 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.

At our Leasburg Dam State Park Observatory, we hold monthly star parties. Located just 20 miles north of Las Cruces, our 16" Meade telescope is used to observe under rather dark skies.

Please see *Calendar of Events* for specific dates and times.

### Annual Dues

Please note that annual dues were due in January. Please contact our Treasurer, Patricia Conley ([treasurer@aslc-nm.org](mailto:treasurer@aslc-nm.org)) for further information. Dues can be paid at the next meeting or via mail, sent to Treasurer ASLC, PO Box 921, Las Cruces, NM 88004.

### Committee Chairs

Night Sky Network: *OPEN*

Observatory:

Leasburg Dam: Rich Richins; [President@aslc-nm.org](mailto:President@aslc-nm.org)  
 Jerry Gaber; [jerrygaber@gmail.com](mailto:jerrygaber@gmail.com)

Tombaugh: Steve Shaffer, [VP@aslc-nm.org](mailto:VP@aslc-nm.org)

Outreach: Chuck Sterling; [csterling@zianet.com](mailto:csterling@zianet.com)

Web-Site: Steve Barks; [steve.barks@gmail.com](mailto:steve.barks@gmail.com)

*HDO* Editor: Ron Kramer; [ronjkramer@aol.com](mailto:ronjkramer@aol.com)

President's Column

by Rich Richins

Texas Bound...

Each year for the past 10 years, I've packed up my imaging and observing equipment and headed for the über-dark skies near Fort Davis, TX for the annual Texas Star Party. It's an opportunity to do something I love (actually several activities that I love) with a bunch of my ASLC friends. ASLC has had a strong presence at the Texas Star Party for many years, and over the years the star party has evolved into a astronomy, hiking, epicurean, cycling, Chuck's-chips-eating, RC flying, golfing - and new this year - a scuba/snorkeling experience. It seems like each year we find more to do in the Davis Mountains.

This year, there will be at least half a dozen of us hanging out in the middle field under our signature ASLC canopy (one of the largest shade structures on any field. We've even got our trusty old ASLC banner back to proudly display along with the alien head that has also become one of our ASLC-TSP hallmarks.



Over the years, we've tried to share some of our experiences through various blogs - often scripted by 'Kid' Kirbini. This year, through the magic of Facebook, we should be able to connect with an even wider audience (we're nearly at 100 'likes' as of this writing). Keep tuned to the ASLC Facebook page for images and stories. However, since I know that that's not going to be enough for you (or for us), we'll be sharing our stories at the June ASLC meeting. Basically, whether you're there in person, or there via Facebook, or are unfortunate enough to be at DACC on the evening of June 27, you're going to know about our antics. And while it's probably too late for most of you to change your plans and join us, I do hope that you'll join us in spirit this year (and join us in person next year).

I'll be working the front gate on opening day and Tuesday along with my pet wolverine.

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Recent Outreach Events

by Jerry McMahan and Steve Shaffer

**Friday, April 4; NMSU Open House, Tombaugh Observatory**

Clouded out, could sometimes see a bit of Jupiter and the Moon. Jerry McMahan and Steve Shaffer showed the telescope and mount to 20 people. Did not open the dome.

**Saturday, April 5, 2014; Sky Safari, Tombaugh Observatory**

Trish Conley and Steve Shaffer showed Jupiter and the Moon to 11 viewers. Most the viewers came back from the night before.

**Friday – Sunday, April 11 – 13; Project in Motion**

Project in Motion is a program worth seeing. It is a dance program mostly performed well above the floor. The dancers are swinging on rings, trapeze and curtains, often 40 feet above the old cotton gin floor without a net. The program is based at the corner of Compress and Hadley streets. They do travel with their act, but call Las Cruces home. The program theme was the Moon.

Telescopes were brought by Jerry McMahan and, well just me, on that first night. That means that I had he dancing girls to myself. You bought that didn't you? I had the ETX-125 and had it on the Moon and Jupiter. I stayed out with the telescope, but often walked over to watch the program through the window. Spectators came out to look through the scope during intermission and after the program.

The second night was covered by Steve Schaffer, Chuck Sterling and Jerry McMahan. Steve and Chuck took all the dancing girls. Steve brought the 4.5-inch Dobsonian and Chuck set up his 100mm refractor.

The three of us were also present for the third night. Chuck replaced the refractor with the 10-inch LX200. All three nights started cloudy and windy, but finished with fair viewing conditions.

***Thursday, April 15; Sierra Middle School***

We had good club participation at this event and it was a good thing since we had large crowds of students, teachers and parents. Rich Richins brought the 10-inch Dobsonian. Chuck, Steve and I had the usual scopes. Ed Montes came to help out. New Mexico State Astronomy students also brought two scopes. Both were 8-inch Schmidt Cassegrains with one being a Meade and the other a Celestron.

The evening started cloudy, but did clear enough to provide a number of telescope targets. Jupiter, Mars, the Moon, the double star Castor, and the double Mizar and Alcor were seen.

***Saturday – Monday, April 17 – 19; Project in Motion***

Ed Montes joined Chuck, Steve and Jerry McMahan. Ed brought the small refractor and pointed it at the Orion Nebula and Castor, the double star. Steve also doubled up with Mizar and Alcor again. Chuck used the 10-inch on Jupiter and Mars. I spent most of the time on Jupiter and had trouble with the right ascension drive.

The four of us also came the next night. It was cloudy. Chuck went home. The others watched the program inside the building. It very well may be the best show in town. I went out, from time to time, to check on the clouds with no luck. I was outside, looking in the window as the performers were taking their bows. It was still cloudy with Mars peeking through the clouds from time to time. I went back inside and 10 minutes later the clouds had cleared. Jupiter and Mars were in the clear, but Ed and Steve left, and by the time I set up the scope everyone would be gone, so we had no viewing session, just some questions to answer.

On April 19, the last day of the dance program, Trish Conley joined Steve, Chuck and myself. We had clouds and even some rain. Chuck brought a laptop and set up a slide show in case we could not set up the telescopes. There was also a session planned for Leasburg, which was canceled due to the weather. Like the previous night, we checked a short while before the end of the dance program and it was misting a little. A short while later, the sky cleared almost completely. I scrambled to set up the ETX-125 just as the program ended while Trish and Steve went to the car to get the 4.5-inch Dobsonian. The standing-room only crowd came out before I was completely set up. The dancers did have an after party, so there were still a number of people inside the building. I stayed until about 11:00 p.m., so we did have some observing time.

***Thursday, April 24; Oñate High School***

We had an excellent turnout at Oñate High School, including club members and observers. We had eight people who brought nine telescopes. Chuck Sterling had his 10-inch SC and his 100mm refractor. Bert Verstraete, Tracy Stuart and Jerry McMahan brought 8-inch Schmidt Cassegrains. Sid Webb and Rich Richins set up 10-inch Dobsonians. Steve Shaffer used his 4.5-inch Dob and Ron Kramer had his 5-inch Meade refractor.

It was a good night for observing with the sky being reasonably dark not far out of town. We were able to see Jupiter, Mars and Saturn (late and low in the sky). Double stars and open star clusters, along with one globular cluster were also seen. We did have a large crowd of students, their family members and teachers.

***Sunday, April 27; Earth Day, Young Park***

Rich Richins, Ron Kramer, Judy Kile, Ed Montes and Chuck Sterling set up telescopes for solar observing on Earth Day. Rich had the clubs' single stack H-Alpha scope. The others had refractors with white light filters on their scopes. Chuck said they spent about 3 and a half hours showing the public Sunspots and prominences.

***Saturday, May 3; Moon Gaze. International Delights Café***

Chuck Sterling and Jerry McMahan set up the 10-inch SC and the ETX-125 Maksutov Cassegrain. Where were you Steve Shaffer? We saw Jupiter, Mars and Saturn.

Saturn was low and hard to focus early, but, as the planet got higher, the Cassini Division in the rings became visible. It was a clear night and we had a larger than usual group of people come by to observe. One lady brought out some Greek food that she bought in the restaurant and insisted that she give it to us. Chuck wasn't sure about it, so I proved that I will eat anything and ate the whole thing.

**Friday, May 9, 2014; NMSU Open House, Tombaugh Observatory**

Jerry McMahan and Steve Shaffer assisted 85 viewers. Looked at Jupiter, Mars, Saturn and the Moon. This is the last Open House until September or October.

**Saturday, May 10, 2014; Sky Safari, Tombaugh Observatory**

Steve Shaffer assisted 11 viewers. Looked at Jupiter, Mars, Saturn and the Moon. Two of the people were grabbed as they walked by, one went home and brought back his two sons. One person came back from Open House the previous night and brought along three other friends. The sky was not as good as the night before.

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**Calendar of Events (Mountain Time - 24 hr. clock)**

MAY 21	06:59	Last Quarter Moon
23	19:00	ASLC MEETING; Room 141, DACC Main Campus, Technical Studies Bldg.
24	00:15	Probable Meteor Storm from Comet LINEAR debris trail
24	18:00	OUTREACH; Music Under The Stars, Leasburg Dam State Park Observatory Performance by the Hotnotes
25	09:43	Moon - Venus Conjunction
25	7 days	Texas Star Party
28	12:40	New Moon
31	dusk	OUTREACH; Observing at Upham
JUN 05	14:39	First Quarter Moon
07	18:44	Moon - Mars Conjunction
07	Dusk	OUTREACH; MoonGaze at International Delights Café
07	21:00	OUTREACH; Sky Safari at Tombaugh Observatory, NMSU Campus
08	16:05	Moon - Spica Conjunction
10	13:11	Moon - Saturn Conjunction
12	22:11	Full Moon
19	12:39	Last Quarter Moon
21	04:52	Summer Solstice
21	18:30	OUTREACH: Music Under the Stars; Leasburg Dam State Park Observatory Performance by Randy Granger
23	07:00	Venus - M45 Conjunction
24	06:54	Moon - Venus Conjunction
25	00:22	Moon - Aldeberan Conjunction
27	02:08	New Moon
27	19:00	ASLC MEETING; Room 141, DACC Main Campus, Technical Studies Bldg.
28	Dusk	DSO at Upham

Be sure to visit our web site for the latest updates: [www.aslc-nm.org](http://www.aslc-nm.org)

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April Meeting Minutes

by John McCullough

**Show & Tell**

Rich Richins started tonight's session by reporting on the pre-meeting meal with tonight's speaker.

Ron Kramer followed by presenting a large tektite, i.e., a piece of impact or natural glass that was formed from terrestrial debris ejected during an extraterrestrial impact, that he recently acquired. Ron described the process of the tektite's formation; this one was reportedly found in Malaysia but more likely in the Philippines. Most tektites are gravel-sized, this one is a little larger than a baseball. Ron purchased the tektite for \$500 from a collector that was disposing of his collection; Ron estimates it may have a value of \$2000-\$5000. Ron plans to bring other items from his collection to future meetings.

Dave Dockery brought a large box of mostly astronomy-related "stuff" he is giving away in an attempt to downsize. Vince Dovydaitis gave a brief report on the upcoming AAVSO/SAS/CBA Spring Meeting in Ontario, CA, 12-14 June.

Rich Richins noted there is still time to register for this year's Texas Star Party (TSP) at Ft. Davis, TX, 25 May to 01 June.

Fred Pilcher reported that the NMSU library is disposing of a number of archived print technical journals, in particular *ICARUS*. He has talked with a number of people to examine this issue and plans to pursue it further.

**Call to Order**

Rich Richins, President, Astronomical Society of Las Cruces (ASLC, the Society), called the April business meeting to order at 7:35 p.m., 25 April 2014, Room 141, Doña Ana Community College (DACC), Las Cruces, New Mexico.

**President's Comments**

He welcomed the group to tonight's meeting.

There was one guest present at tonight's meeting, Raf Chavez.

**Secretary's Report**

Rich Richins reported the minutes for the March meeting had been submitted by the Secretary, John McCullough, for publication in the April issue of the Society newsletter, the *High Desert Observer* (HDO). As there were no corrections or discussion, Rich asked that the minutes be accepted as submitted. Ed Montes moved that the minutes be accepted as published, Sid Webb seconded and the motion passed by acclamation. John asked that members register their attendance on the roster at the room entrance. There was not an additional Secretary's report.

**Treasurer's Report**

The Treasurer, Trish Conley, was not present at tonight's meeting. There was not a Treasurer's report.

**Committee Reports**

**Outreach**

Chuck Sterling, Outreach Coordinator, reported the last two (2) school star parties, 15 April at Sierra Middle School and 24 April at Oñate High School, were unqualified successes. Earth Day 2014 will be 27 April (this Sunday) at Young Park. Chuck and Rich Richins will be there with solar scopes, but more volunteers are needed. The event starts at noon. More discussion regarding Earth Day transpired. There will be a Moon Gaze at International Delights Café on 03 May.

**Apparel**

Ron Kramer, acting Chairman, reported he is ready to order the first dozen of the new dark green Society golf shirts but needs at least six (6) committed orders. Members present committed to buying at least the minimum of shirts to support the order. Ron will also order other staple items with the Society logo.

## Membership

Judy Kile, Committee Chairman, announced that she has put together a draft membership packet and has distributed copies for additional input. She will also circulate a form requesting additional member information to better serve the membership.

## Loaner Telescopes Program

Ron Kramer, Program Coordinator, reported he has received a 90 mm refractor telescope from Joseph Mancilla. He reported he is having some issues with several units that are in the program. When all the telescopes are working, one or more may be used as a door prize, raffle prize, or be auctioned to the membership. Other options are open for discussion.

## ALCon 2015

Ron Kramer, Chair, reported the first meeting of volunteers was held this month and fourteen (14) committee positions were filled. He asked that members contact him or Bert Stevens if they can help with planning or the convention itself.

Rich Richins entertained a motion to adjourn. Bert Stevens moved to adjourn the business portion of tonight's meeting, Ron Kramer seconded. The business meeting concluded at 7:45 p.m..

## Presentation

This month's presentation was by Carlos J. Vargas, astronomy PhD candidate at New Mexico State University. His topic was *To Stack or Not To Stack: Lessons from  $z = 2.1$  Lyman Alpha Emitting Galaxies*. From the ASLC website synopsis: "We use the Cosmic Assembly Near-Infrared Deep Extragalactic Legacy Survey (CANDELS) GOODS-S multi-wavelength catalog to identify counterparts for 20 Ly $\alpha$  emitting (LAE) galaxies at  $z = 2.1$ . We build several types of stacked spectral energy distributions (SEDs) of these objects. We combine photometry to form average and median flux-stacked SEDs, and postage-stamp images to form average and median image-stacked SEDs. We also introduce scaled flux stacks that eliminate the influence of variation in overall brightness. We use the SED fitting code SpeedyMC to constrain the physical properties of individual objects and stacks. Our LAEs at  $z = 2.1$  have stellar masses ranging from  $2 \times 10^7$  solar masses to  $8 \times 10^9$  M solar masses (median =  $3 \times 10^8$  solar masses), ages ranging from 4 Myr to 500 Myr (median = 100 Myr), and  $E(B - V)$  between 0.02 and 0.24 (median = 0.12). Although still low, this represents significantly more dust reddening than has been reported for LAEs at higher redshifts. The SED parameters of the flux stacks match the average and median values of the individual objects, with the flux-scaled median SED performing best with uncertainties reduced by a factor of two. Median image-stacked SEDs provide a poor representation of the median individual object, and none of the stacking methods capture the large dispersion of LAE properties."

## Post-Presentation Discussion on Astronomy Day 2014

Rich Richins reported that he had not received much response from email/Yahoo! group requests for input on the approaching Astronomy Day 2014, 10 May, to be held at the ASLC Observatory at LDSP. He would like to have a telescope showcase and asked how many members will commit to bringing at least one telescope to the event. Six members present committed to bringing telescopes. Jerry Gaber asked if there would be a plan to coordinate types of telescopes so that all the 'scopes weren't just a variety of Dobsonians. Rich feels that is too much detailed planning for this event and that variety will be natural. Rich then asked if anyone had a topic or interest they would like to make a presentation about. There were no volunteers. Rich would like to provide solar observing during the late afternoon/evening and asked for volunteers. Two members volunteered to assist Rich. Rich offered other activities, primarily aimed at children and youth and asked for volunteers: constellation cookies (none), coloring (none), scale/weight on other astronomical objects (Frank Fiore), Galilean telescopes (Jerry Gaber), moon phases with flash light and Styrofoam balls (none), and eye candy/astrophotos (to be determined). Daniel Giron will put together a flyer. Activities will open to the public at 5:00 p.m. and last until 10:0 p.m..

The April meeting of the Astronomical Society of Las Cruces concluded at 9:01 p.m..

-Respectfully submitted by John McCullough, ASLC Secretary

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**Back at the Telescope**

by Berton Stevens

Our modern world introduces change at an amazing rate. Back in the 1980s, when my then employer gave me a cell phone for the first time, one of those large bricks that could usually connect with a cell tower to make a call, I would not have imagined that today I would use a smartphone to read e-mail, browse the web and have planetarium apps that show me the sky in the middle of the day. I can also see images taken around the world of live astronomical events, such as eclipses and transits.

My first view of the heavens was of Saturn through one of my friend's 50mm refractor. After that I was hooked on astronomy and science. I had seen pictures of Saturn in books and magazines, but had not seen it for myself. As I got older, I joined astronomical societies to learn more about astronomy and gain access to larger telescopes. Shooting astrophotos on film was the only option and there was no way to stack the exposures. I remember spending hours at the guide 'scope keeping the guide star centered as my astrophotos slowly built up on the film.

Sometimes I would use the Racine (WI) Astronomical Society's 16-inch Cassegrain in the dead of winter. I could not even drive up to the observatory, since snow was blocking the road. I would get my sub-zero observing gear on in the car parked on the side of the road, and then struggle through deep snow to get to the observatory. You had to physically work to get good astrophotos.

Things have changed greatly since I started. We now have go-to telescopes, autoguiders, and CCD cameras to take the actual exposures. More importantly, we have very sophisticated image processing software that can take a series of images, stack them, and combine multiple color exposures into a single color image. The work I have seen from ASLC members is simply amazing to a guy who started in the film era.

As amazing as these images are to me, to the young generations currently coming up, they are the norm. Youngsters have access to smartphones, Hubble ST images, and astrophotos from experts throughout the world that can use larger telescopes and better equipment than most of us can afford. The twenty-year olds and younger have always had access to the Internet and all the sites on the World Wide Web.

These youngsters have been in front of a screen all their lives. It is part of their lives. They contact their friends electronically, get and submit their homework electronically, and lookup information electronically. More and more, their books are electronic and the ability to send and receive images electronically is second nature to them. Talking to their friends is easy, whether they are two feet away or two thousand miles away. They can text, e-mail, or even phone them, if necessary. Their friends are no longer necessarily nearby, they could be anywhere in the world and still be in instant communication.

Add to this mix, the increasing number of robotic observatories that are available over the Internet. There is no need to own all the hardware needed to take images, you can rent them as you need them. No telescopes taking up space in the closet. You can just rent time on a large telescope when you want to take an image of some object for yourself.

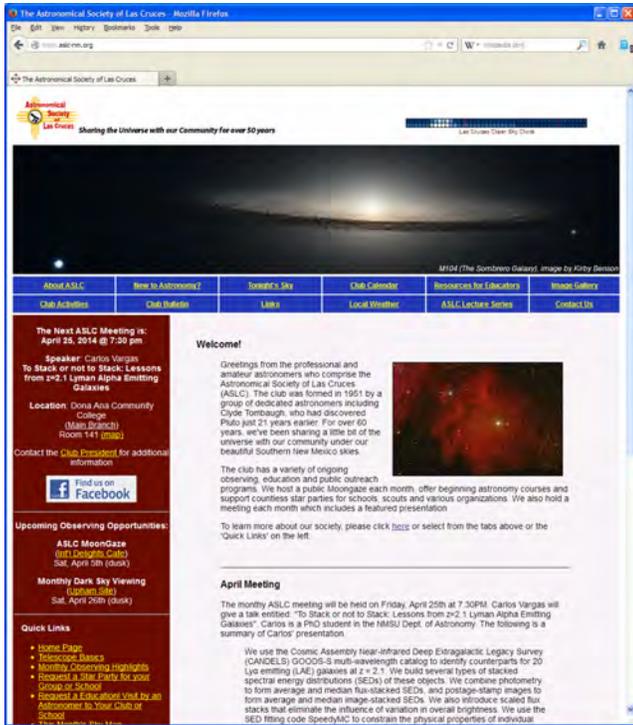
Of course, with most astronomical objects, you do not need to image them yourself. Their tremendous size and distance means that they will not change significantly in a human lifetime. So if you need a picture of, say, M13, you can just get it off the Web.

So how does the ASLC attract the new generation of always-connected, social-media savvy people? Well, we have already made a start with the ASLC Facebook page. This is a portal for the public informing anyone who looks at it on what the ASLC is doing in addition to our excellent website. We need to find things that we can publicize on our Facebook page and website.

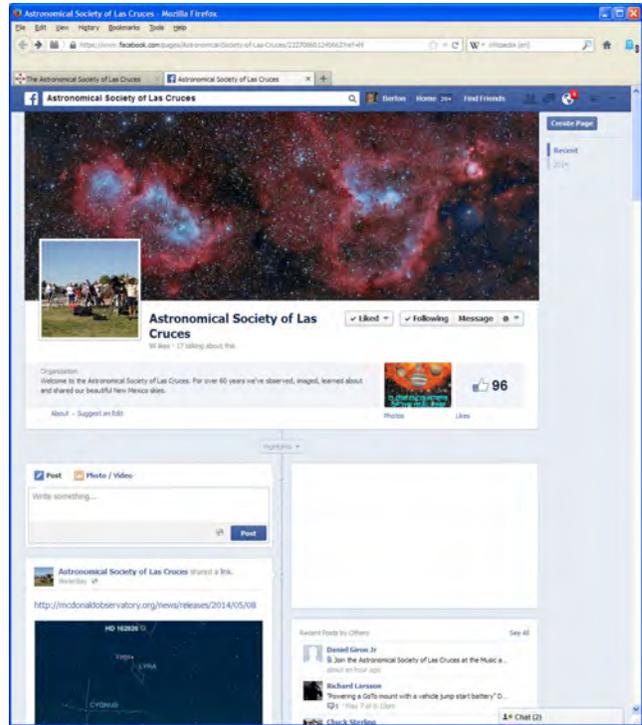
This is where you come in. We need you to create content that can appear on our website, Facebook page

and in the *High Desert Observer*. If you find astronomical information, events, observing session results, etc, please write it up and get it posted. The only way can reach the youngsters is to go where they are.

If you are retired, you might also consider doing some volunteer work with the various school districts. I am sure that you can find opportunities to talk to students about astronomy and being an amateur astronomer. We need to fan the flames of their interest in astronomy and science so they can eventually become scientists and engineers that we need to improve our economy. They might even join the ASLC!



The ASLC's website. We try to keep everyone informed on the current activities of the Society by keeping the website updated regularly.



This is the ASLC's Facebook page. All of our followers will see anything that is posted to home page.

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### Images of the Month

Earth Day was officially held on April 22 this year and there was a celebration at Young Park on Sunday, April 27. As usual, the ASLC was well represented, as shown in the following images taken by our very own Chuck Sterling. It was a beautiful day with plenty of sunshine, and neither the crowd nor the Sun disappointed





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