

The High Desert Observer

September 2024



**This Month's Meeting
September 27th**

IN-PERSON & Zoom, Friday at 7 p.m.
Mesilla Valley Radio Clubhouse
6609 Jefferson Ave. Las Cruces, NM

At the corner of Wilt and Jefferson -- take the Porter exit from US 70, about 5 miles east from the I-25 interchange. Go south on Porter until you come to Jefferson. From there, turn left and go to the corner of Jefferson and Wilt. The meeting will also be available to members via Zoom.

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Tombaugh Lecture Series Presentation for the Month Status of Spaceport America

**Scott A. McLaughlin - Exec. Dir. of New
Mexico Spaceport Authority**

Mr. McLaughlin provides a brief history of the economic development project that is Spaceport America, along with current status and vision for the future.

Scott A. McLaughlin is an experienced executive and



engineer with a diverse background in both design and business, and has worked in both private and government sectors. Mr. McLaughlin was born and raised in New Mexico, and after graduating from New Mexico State University with a B.S. in Electrical Engineering, he moved to Colorado where he later became a principal in establishing a wind radar design and manufacturing business. After a business acquisition, he returned to New Mexico after more than a 25-year absence, to continue working and living in the beautiful southwestern desert. With a life-long love of aerospace, in 2019 Scott started working for the New Mexico Spaceport Authority (NMSA), becoming Executive Director in February 2021.

From the President

Tim Kostelecky

As much as those of us living here in southern New Mexico appreciate the bit of moisture the monsoon season brings, as astronomers, we're glad to see the clouds depart. We're also happy to welcome the lengthening evenings. It's now time to get geared up for some serious observing and imaging. A few members including yours truly, will join in celebrating the new observing season by heading later this week and next to the western tip of the Oklahoma panhandle for the annual Okie-Tex Star Party, organized by the Oklahoma City Astronomy Club. This has become one of the nation's popular star parties in an impressively dark-sky venue.

This autumn season also presents great opportunities to engage in our regular monthly outreach programs: The MoonGaze at the Plaza de Las Cruces downtown, and of course our dark-sky monthly event at our own Walter Haas Observatory at the Leasburg Dam State Park near Radium Springs just a half hour or so north of Las Cruces off of I-25. Check our [website](#) to see the calendar of events and directions to the sites. I'd like to thank our outreach coordinator, Steve Wood, for his terrific efforts in making these events successful!

Also keep in mind that the Las Cruces Renaissance ArtsFaire will be taking place on November 2nd and 3rd at Young Park. The ASLC has been a fixture there now for many years, and it has exposed our club to hundreds (thousands?) of Faire goers, having a chance to gaze at the sun through our solar telescopes and exhibits we have on display. We're always looking for ASLC members to volunteer to help us, so if you're interested, please contact me at president@ASLC-NM.org. And if you don't volunteer, head out to the RenFaire anyway. It's a nice event.



I'd like to have you make note now that I will be hosting our annual ASLC Holiday Party, which is open to all ASLC members and their families, on Saturday evening, December 7th. So mark your calendars, I'd love to see you there! More information will be coming out as the date approaches.



Our beloved VP, Ranimo Bush, at the RenFaire

So enjoy the crisp, clear nights...and as always,
Cheers and Clear Skies everyone!

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, providing opportunities to work on Society and public educational projects. Members receive electronic delivery of The High Desert Observer, our monthly newsletter, plus membership in the Astronomical League including their quarterly publication, Reflector, available in either paper or digital format. ASLC members are also entitled to a discount on a subscription to Sky and Telescope magazine. Annual Individual Dues are \$36; Family \$42; Student (Full Time) \$24. Dues are payable in January and partial year prorated for new members. Please contact our Treasurer, Patricia Conley, treasurer@aslc-nm.org for further information.

Coming Events

Monthly, on an evening close to the first-quarter moon, ASLC hosts a public “MoonGaze” observing session in Las Cruces. We also hold periodic special evening sessions at Tombaugh Observatory on the NMSU campus.

Also monthly, the ASLC welcomes public viewing at the Haas Observatory in Leasburg Dam State Park, located just 20 miles north of Las Cruces. Our 16-inch Meade LX200 telescope at this site is used to observe under rather dark skies.

Keep updated on the dates, times, and locations through this [link](#) with additional information available at our website www.aslc-nm.org as well as our [Facebook](#) page.

ASLC Board of Directors

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Featured Article

Catch Andromeda Rising!

By Dave Prosper

Updated by Kat Troche



This article is distributed by NASA's Night Sky Network (NSN). The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

If you're thinking of a galaxy, the image in your head is probably the Andromeda Galaxy! Studies of this massive neighboring galaxy, also called M31, have played an incredibly

important role in shaping modern astronomy. As a bonus for stargazers, the Andromeda Galaxy is also a beautiful sight.

Have you heard that all the stars you see at night are part of our Milky Way galaxy? While that is mostly true, one star-like object located near the border between the constellations of Andromeda and Cassiopeia appears fuzzy to unaided eyes. That's because it's not a star, but the Andromeda Galaxy, its trillion stars appearing to our eyes as a 3.4 magnitude patch of haze. Why so dim? Distance! It's outside our galaxy, around 2.5 million light years distant - so far away that the light you see left M31's stars when our earliest ancestors figured out stone tools. Binoculars show more detail: M31's bright core stands out, along with a bit of its wispy, saucer-shaped disc. Telescopes bring out greater

detail but often can't view the entire galaxy at once. Depending on the quality of your skies and your magnification, you may be able to make out individual globular clusters, structure, and at least two of its orbiting dwarf galaxies: M110 and M32. Light pollution and thin clouds, smoke, or haze will severely hamper observing fainter detail, as they will for any "faint fuzzy." Surprisingly, persistent stargazers can still spot M31's core from areas of moderate light pollution as long as skies are otherwise clear.

Modern astronomy was greatly shaped by studies of the Andromeda Galaxy. A hundred years ago, the idea that there were other galaxies beside our own was not widely accepted, and so M31 was called the



Spot the Andromeda Galaxy! M31's more common name comes from its parent constellation, which becomes prominent as autumn arrives in the Northern Hemisphere. Surprising amounts of detail can be observed with unaided



Generated version of the Andromeda Galaxy and its companion galaxies M32 and M110. Credit: Stellarium Web

“Andromeda Nebula.” Increasingly detailed observations of M31 caused astronomers to question its place in our universe – was M31 its own “island universe,” and not part of our Milky Way? Harlow Shapley and Heber Curtis engaged in the “Great Debate” of 1920 over its nature. Curtis argued forcefully from his observations of dimmer than expected nova, dust lanes, and other oddities that the “nebula” was in fact an entirely different galaxy from our own. A few years later, Edwin Hubble, building on Henrietta Leavitt’s work on Cepheid variable stars as a “standard candle” for distance measurement, concluded that M31 was indeed another galaxy after he observed Cepheids in photos of Andromeda, and estimated M31’s distance as far outside our galaxy’s

boundaries. And so, the Andromeda Nebula became known as the Andromeda Galaxy.

These discoveries inspire astronomers to this day, who continue to observe M31 and many other galaxies for hints about the nature of our universe. One of the Hubble Space Telescope’s longest-running observing campaigns was a study of M31: the Panchromatic Hubble Andromeda Treasury (PHAT). Dig into NASA’s latest discoveries about the Andromeda Galaxy, on their Messier 31 page.



While M31’s disc appears larger than you might expect (about 3 Moon widths wide), its “galactic halo” of scattered stars and gas is much, much larger – as you can see here. In fact, it is suspected that its halo is so huge that it may already mingle with our Milky Way’s own halo, which makes sense since our galaxies are expected to merge sometime in the next few billion years! The dots are quasars, objects located behind the halo, which are the very energetic cores of distant galaxies powered by black holes at their center. The Hubble team studied the composition of M31’s halo by measuring how the quasars’ light was absorbed by the halo’s material. Credits: NASA, ESA, and E. Wheatley (STScI)

Monthly Meeting Minutes August 2024

John McCullough - Secretary

Call to Order:

Tim Kostelecky, President, Astronomical Society of Las Cruces (ASLC, the Society), called the August 2024 meeting to order at 7:00 pm on 23 August 2024 at the Mesilla Valley Radio Clubhouse. There were sixteen (16) members, spouses, and guests in attendance, as well as five (5) attendees via Zoom at the start of the meeting.

Tim welcomed the group to tonight's meeting. He announced that the meeting minutes from July 2024 were published in the August 2024 issue of the Society newsletter, the High Desert Observer (HDO). He asked if there were corrections, clarifications, or modifications required. None being offered, Rich Richins moved that the July minutes be accepted as published and Bernie Jezercak seconded the motion. The minutes were accepted by acclamation.

Presentation:

Tonight's Tombaugh Series presentation was by Dr. Jon Holtzman on "Protecting Dark Skies in New Mexico". Jon talked about the increasing problem of light pollution and approaches on how to mitigate it. He also discussed the formation of the NM chapter of DarkSky International (formerly International Dark Skies Association) and described some of the activities that they are involved in. Dr. Holtzman's presentation generated extended discussion about the current state of New Mexico's skies and how ASLC could become more involved in their protection.

Jon Holtzman is the current chair of the State Council of New Mexico DarkSky, the state chapter of DarkSky International, that was formed in 2023. He is an emeritus Professor of Astronomy at New Mexico State University (having just retired last month but remains active). He has done extensive work to get the Tortugas Mountain Observatory operational again and is involved in multiple projects at Apache Point Observatory (APO), including the Sloan Digital Sky Survey and, currently, the construction of a very high resolution spectrograph for a new Planewave 1m at APO to study stellar oscillations.

Tim welcomed guests Paul and Terry Gutierrez to tonight's meeting. They are interested in astrophotography.

Officer/Committee Reports:

Treasurer:

Trish Conley, Treasurer, presented a report on the status of the Society's finances. The ASLC has received \$32.30 in interest and \$32.50 in membership dues since the last meeting. She has made several payments recently, including DarkSky International dues and Zoom access fees.

Budget:

The committee (Tim Kostelecky, Patricia Conley, Bernard Jezercak) reported on their efforts. Tim presented the proposed line-by-line budget for 2024-2025. Rich Richins made a motion to accept the proposed budget.

as presented; Steve Barkes seconded.

In the discussion that followed, Steve Barkes recommended adding a donation to the Mesilla Valley Radio Club to support maintenance/upkeep of the clubhouse. Rich Richins made a motion to increase the donation to DarkSky International from \$100 to \$200 annually. He then amended his motion to have the annual donation to DarkSky International remain \$100 but add a donation of \$100 to the New Mexico Chapter of DarkSky. He then withdrew the motion.

The 2024-2025 budget was approved by the members present.

Outreach:

Stephen Wood, outreach coordinator, reported on recent and upcoming events. Events and attendance were:

| Event | Date | Members | Visitors |
|-----------------------|--------|---------|----------|
| LDSP (3rd Qtr. Moon)* | 27 Jul | 0 | 0 |
| August Moon Gaze | 10 Aug | 3 | 120 |

| Event | Date |
|---|--------|
| LDSP (3rd Qtr. Moon) | 31Aug |
| Spaceport America Open House | 08 Sep |
| September Moon Gaze/ Intl. Observe the Moon Night | 14 Sep |
| LC Catholic School Star Party | 26 Sep |

Contact Stephen if you can support any or all events. He would like to see more members support the smaller events with telescopes.

Apparel:

Rani Bush, committee chair, was not present at tonight's meeting; Tim Kostelecky reported in her stead. The order for caps and polo shirts displaying the ASLC logo has been submitted. The items should be available by the September meeting.

ASLC-West:

The Deming group is on hiatus for the rest of the summer for 'monsoon' season.

Old Business:

Nominating Committee – A committee must be formed to provide a slate of officer and director candidates for 2025. Three (3) positions must be filled, i.e., President, Vice-President, and one Director-at-Large (current office holders are term limited). All other officer/director positions are available. Patricia Conley (Chair), Bernie Jezercak, and Mark Gorman will be the committee this year.

2024 RASC handbooks – Trish Conley still has three (3) copies of the handbook available. Cost is \$8.66 each.

There was no additional old business for discussion.

New Business/Announcements:

There was no new business offered for discussion.

The August 2024 meeting was adjourned at 8:56 pm.

-Respectfully submitted:

John McCullough
Secretary, ASLC

Member Images

Lunatic Edition

Colorful Partial Lunar Eclipse - Rich Richins



This is what happens when radical lunatics take control of the contrast and saturation sliders...
Orion ED80, Canon T2i, and a wee bit of Photoshopping

Partial Lunar Eclipse - Bert Stevens



Here is an image of the Moon around the time of maximum partial eclipse.. Taken at my home in NE Las Cruces with a Meade ETX-125 and a Canon 6D set at ISO 400.

Moonrise and Desert Plants **Ed Montes**



Taken during partial lunar eclipse - penumbral stage

Comparison Shots of the Partial Lunar Eclipse Tim Kostelecky



Taken near maximum partial eclipse through Televue 85 at f/5.6 with ASI533MC Camera.



Same exposure settings after moon left the penumbra. Interesting how flat the fully illuminated version looks compared with the "3-D" eclipsed moon.