

# The High Desert Observer

January 2024



## This Month's Meeting - Feb 26th

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

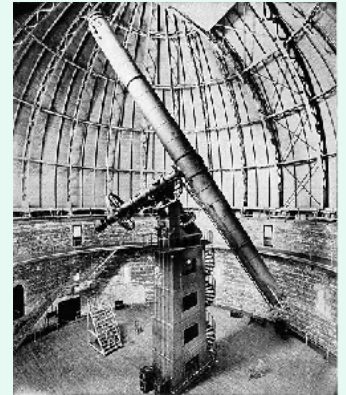
At the corner of Wilt and Jefferson -- take the Porter exit from US 70, about 5 miles east from the I-25 interchange. Go south on Porter until you come to Jefferson. From there, turn left and go to the corner of Jefferson and Wilt. The meeting will also be available to members via Zoom.

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## From the President Tim Kostelecky

This iconic image of the 40-inch Yerkes refractor from 1897 stirs me now as much, if not more, than when I imagined this great telescope as a



kid. When proposed in the late 19th century, many doubted whether a refractor with a pair of glass disks of that size could be successfully annealed and figured, the worlds largest. Famed telescope builders, Alvin Clark & Sons were up to the task, and the Yerkes refractor was their fifth and final "largest telescope in the world". It was surpassed in size by the Great Paris Exhibition Telescope of 1900, at 49 inches, but that scope was so impractical that it was never used for any astronomical observations, and was disassembled for scrap shortly after the Paris Exhibition ended.

I had the fortune to tour the U.S. Naval Observatory in Washington DC, which houses a 26-inch Alvan Clark Refractor, another of the world's largest at the time of its unveiling in 1873. The telescope is magnificent (and I was also impressed with its beautiful setting circles).



I'm really looking forward to this month's speaker, Mallory Conlon, the outreach coordinator for Yerkes Observatory.

## ***Tombaugh Lecture Series* - Speaker for the Month**

### **Mallory Conlon**

**Outreach Coordinator**

**Yerkes Observatory, Williams Bay, WI, | Yerkes Future Foundation**

### **“Rejuvenating Astronomy Education and Research at Yerkes Observatory”**

Often called the birthplace of modern astrophysics, Yerkes Observatory maintained its status as one of the world’s premier astronomical observatories throughout the 20th century. Yerkes is now entering a period of rejuvenation. In an effort to reconnect communities across Wisconsin with Yerkes and the field of astronomy in a meaningful way, we are rebuilding Yerkes’ education and research programming. In this talk, we will highlight what we have done since taking over ownership in 2020 and provide insight into Yerkes’ plans for the future.

Mallory earned her M.S. in astronomy in 2014 from the University of Illinois at Urbana-Champaign. Since then, she has spent her career at the intersection of science and education, working to inspire a curiosity and appreciation for science in people of all ages and support those that want to make the pursuit of science their career. At Yerkes, she is responsible for developing and implementing outreach and education programming, continuing her mission of ensuring astronomy is truly for everyone.



## **ASLC-West Outreach**

### **Mike Nuss**

Happy New Year!

Even though we got clouded out on Friday, January 5th at Rockhound State Park, there was plenty of activity on Saturday the 6th at City of Rocks State Park with 25 participants.

We observed tiny, tiny Europa’s shadow transit, and then the Io shadow was a special treat! Bill Nigg, Charles and myself hosted the event.



**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](mailto: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](http://www.aslc-nm.org) as well as our [Facebook](#) page.

**ASLC Board of Directors**

		<a href="mailto:board@aslc-nm.org">board@aslc-nm.org</a>
President:	Tim Kostelecky	<a href="mailto:president@aslc-nm.org">president@aslc-nm.org</a>
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**Committee Chairs**

ALCOR:	Patricia Conley	<a href="mailto:treasurer@aslc-nm.com">treasurer@aslc-nm.com</a>
Calendar:	Stephen Wood	<a href="mailto:outreach@aslc-nm.org">outreach@aslc-nm.org</a>
Education:	Rich Richins	<a href="mailto:education@aslc-nm.org">education@aslc-nm.org</a>
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Observatories:		
Leasburg Dam:	Steve Barks	<a href="mailto:LDSPObservatory@aslc-nm.org">LDSPObservatory@aslc-nm.org</a>
Tombaugh:	Open	<a href="mailto:ASLCObservatory@aslc-nm.org">ASLCObservatory@aslc-nm.org</a>
Outreach:	Stephen Wood	<a href="mailto:outreach@aslc-nm.org">outreach@aslc-nm.org</a>
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HDO Editor:	Tim Kostelecky	<a href="mailto:HDO@aslc-nm.org">HDO@aslc-nm.org</a>

## Featured Article

### Constant Companions: Circumpolar Constellations, Part I

By Kat Troche



This article is distributed by NASA's Night Sky Network (NSN).

NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit [nightsky.jpl.nasa.gov](https://nightsky.jpl.nasa.gov) to find local clubs, events, and more!

Winter in the northern hemisphere offers crisp, clear (and cold!) nights to stargazers, along with better views of several circumpolar constellations. What does circumpolar mean when referring to constellations? This word refers to constellations that surround the north and south celestial poles without ever falling below the horizon. Depending on your latitude, you will be able to see up to nine circumpolar constellations in the northern hemisphere.

Today, we'll focus on three that have gems within: Auriga, Cassiopeia, and Ursa Minor. These objects can all be spotted with a pair of binoculars or a small

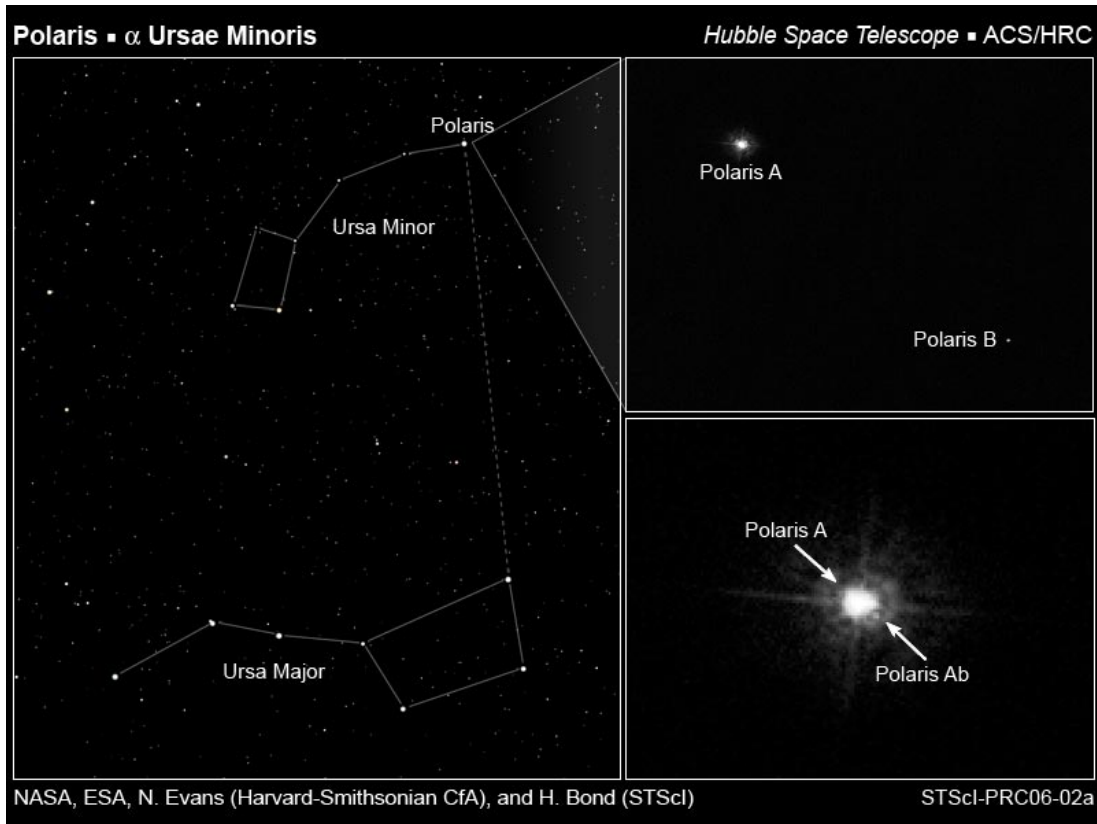
to medium-sized telescope.

- **The Pinwheel Cluster:** Located near the edge of Auriga, this open star cluster is easy to spot with a pair of binoculars or small telescope. At just 25 million years old, it contains no red giant stars and looks similar to the Pleiades. To find this, draw a line between the stars Elnath in Taurus and Menkalinan in Auriga. You will also find the Starfish Cluster nearby.

- **The Owl Cluster:** Located in the 'W' or 'M' shaped constellation Cassiopeia, is the open star cluster known as the Owl Cluster. Sometimes referred to as the E.T. Cluster or Dragonfly Cluster, this group of stars never sets below the horizon and can be spotted with binoculars or a small telescope.



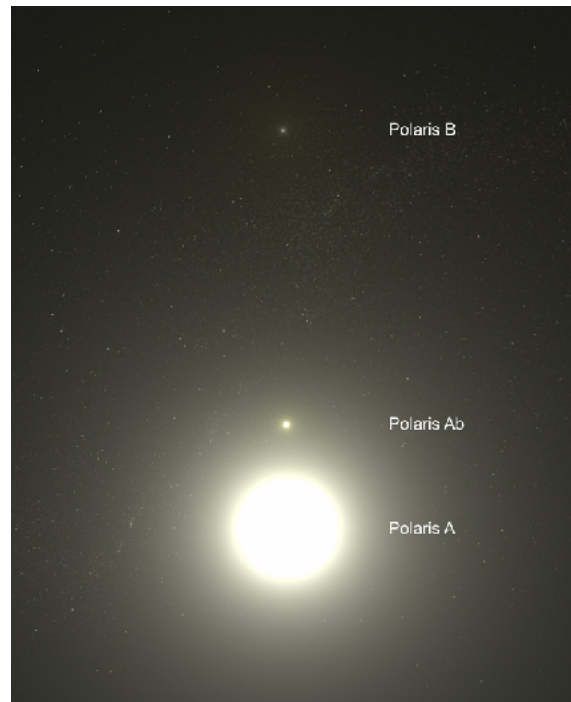
Stellarium Web Sky Chart Image: <https://i.imgur.com/MDYZX6n.png>



Hubble Telescope Polaris Observation: <https://i.imgur.com/syReki2.jpg>

• Polaris: Did you know that Polaris is a triple star system? Look for the North Star on the edge of Ursa Minor, and with a medium-sized telescope, you should be able to separate two of the three stars. This star is also known as a Cepheid variable star, meaning that it varies in brightness, temperature and diameter. It's the closest one of its kind to Earth, making it a great target for study and conceptual art.

Up next, catch the King of the Planets before its gone for the season with our upcoming mid-month article on the Night Sky Network page through NASA's website!



Artist's Concept of Polaris System, Annotated: <https://i.imgur.com/37doqpQ.jpg>

## Monthly Meeting Minutes November 2023

### John McCullough - Secretary

#### Call to Order:

Tim Kostelecky, President, Astronomical Society of Las Cruces (ASLC, the Society), called the November 2023 meeting to order at 7:00 pm on 17 November 2023 at the Mesilla Valley Radio Clubhouse. There were fourteen (14) members, spouses, and guests in attendance, as well as eleven (11) attendees via Zoom at the start of the meeting.

Tim welcomed the group to tonight's meeting, being held one week earlier than usual, and announced that the minutes from the October 2023 meeting (thanks to John McCullough, Secretary) were published in the November 2023 issue of the Society newsletter, the High Desert Observer (HDO). Tim asked if there were any required additions, deletions, or corrections to the minutes as submitted. There being none, a motion to accept the October 2023 minutes as submitted was offered by Bernie Jezercak and seconded by Rani Bush. There being no objections, the motion was passed by acclamation.

#### Presentation:

Tonight's Tombaugh Series speaker was Dr. Tod R. Lauer, Astronomer at NOIRLab, Tucson, AZ, on "How Dark is Space?" Dr. Lauer will attempt to answer the question of "How Dark is Space?" Does the Universe have a background of ordinary light? This question has been asked for decades but has been extremely difficult to answer from the bright vantage point of the inner solar system. The New Horizons spacecraft is now in deep space far beyond Pluto, the darkest environment ever available to a telescope. It's instruments have been able to make precise measurements on light given off by the Universe

itself.

Dr. Lauer received a BS in astronomy from Caltech in 1979, and a PhD from the University of California, Santa Cruz in 1983. He served on the research staff at Princeton University Observatory from 1983 to 1990, before joining the NOIRLab scientific staff. Lauer was a member of the Hubble Space Telescope WFPC-1 team, and in 1992 he received the NASA Exceptional Scientific Achievement Medal in recognition of his early work with the instrument. In 2014 Lauer joined the science team of NASA's New Horizons mission to Pluto and beyond. In 2018 Lauer also joined the Event Horizon Telescope collaboration, which obtained the first images of super-massive black holes.

There were no new members or guests in attendance at tonight's meeting.

#### Officer/Committee Reports:

##### Treasurer:

Trish Conley, Treasurer, reported net income of \$70 for the past month, primarily from interest paid to the various accounts.

##### Loaner Telescope Program:

Tim Kostelecky, program coordinator, plans to publish an updated list of instruments available in the program. Several newly acquired telescopes have been added to the inventory, including an 8inch Celestron being added soon.

##### Outreach:

Stephen Wood, outreach coordinator, reported on recent and upcoming events. There were approximately sixty (60) attendees and two ASLC members at the Spooky Science Fair Festival at St. Paul's United Methodist Church on 28 October. The Sunrise Elementary Math/Science Night on 02 November had about one hundred (100) students/parents in attendance and three ASLC members.

Renaissance Arts Faire 2024 had approximately one thousand (1000) visitors and eight (8) members on 04 November. Approximately four hundred (400) people visited the booth on 05 November when six (6) members supported the booth. Stephen thanked all members who supported Ren Faire. There were six (6) members and approximately sixty (60) students/parents at the Mission Academy event on 07 November. The Vista Middle School event on 08 November was supported by two (2) members and had approximately one hundred (100) students/parents. The Leasburg Dam State Park (LDSP) event on 11 November had about twenty-five (25) visitors and seven (7) members on hand.

The next Moon Gaze will be 18 November on the Plaza de Las Cruces. There will be a STEAM Night event at Loma Heights Elementary on 07 December. White Sands National Park Starry Night Astronomy Program will be held on 14 December.

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

#### ASLCWest:

Mike Nuss, ASLCWest coordinator, was not present at tonight's meeting. Tim Kostecky reported on public outreach programs at Rockhound and City of Rocks State Parks. There was a large group of attendees at City of Rocks on 10 November and the Animas High STEM Night on 08 November. Viewing at Rockhound on 11 November was clouded out.

#### Old Business:

2023 Holiday Party – This year's party will be 16 December at Tim Kostecky's home. This will be in a potluck dinner format. More details pending, please RSVP via the groups.io page with a suggested dining item.

RASC Handbooks and Calendars – Trish Conley plans on placing the order before the end of the month. Contact her to place your order.

There was no additional old business offered for discussion.

#### New Business/Announcements:

John Kutney, Astronomical League (AL) Master Observer, is donating his collected observing material to members that are interested in completing any of the several AL observing programs.

There was no new business offered for discussion. An open discussion regarding observing questions and techniques took place.

The November 2023 meeting was adjourned at 8:25 pm.

-Respectfully submitted:  
John McCullough  
Secretary, ASLC



## Member Images

**Congrats Jeff Johnson! - His image of M20 made it into the Dec '23 Reflector Magazine**



A nice surprise in the mail! Dec 2023 issue of Reflector magazine...and ASLC in the text :) It is too bad hard copy printing sometimes "hides" the fainter areas captured in the original image - and to see those, here is the original (that you may have seen):





**M78 in Orion - Bob Kimball**

Here is an image of M78 in Orion I took earlier in December. When you image in the city you get a lot of strange gradients you have to process out. This image is 3 hrs each RGB and 1-1/2 hours of Hydrogen.

**NGC 2207, IC 2163 Colliding Galaxies in Canis Major  
Alex Woronow**

Image data set acquired from Heaven's Mirror Observatory, Mansion NSW, Australia  
Alex's processing description: This image data set came with both Ha and L subs. I processed three data set versions: RGB, LRGB, and LHRGB. Of the three, my best result, in terms of sharpness, detail, and color, was the simple RGB subset, which I show here.