

The High Desert Observer

November 2022



This Month's Meeting - Nov 18

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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Speaker for the Month

Dennis Conti

AAVSO Exoplanet Section

The Wacky World of Exoplanets and How We Discover Them

Exoplanets (planets outside our solar system) we now know come in all sizes, compositions, and orbital configurations around their host star. Some are even free floating!



Although there are several theories, we still do not know for certain how most exoplanets were formed. What is certain, however, is that our overall knowledge of these distant and strange worlds has grown exponentially in the last few years and amateur astronomers have played a key role in their discovery.

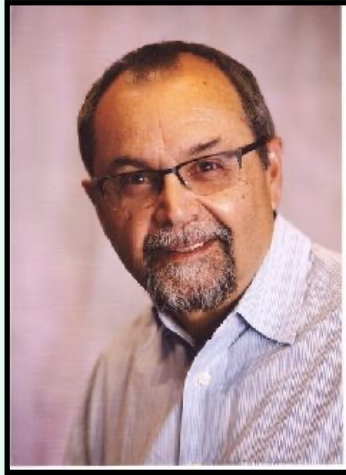
This presentation will review the role exoplanet discoveries play in our quest for life outside our solar system, what some of the challenges are in discovering exoplanets, and how observations by amateur astronomers have been essential in making these discoveries.

Dennis Conti is a retired telecommunications professional and an amateur astronomer with a strong interest in exoplanet research. In 2015, he founded the AAVSO's Exoplanet Section and has continued as section leader since.

From the Desk of Ed Montes ASLC President

Live Meeting

Once is chance, twice is a coincidence, three times is a pattern. With our upcoming meeting scheduled for Nov. 18, we have the opportunity to set a great pattern. We will be able to say for sure that our live meetings are now on the right footing and in the right place and have all the momentum for continuing successfully. I thank the members for supporting this pattern.



So, this month again, same place, same time – 7:00pm at the clubhouse of the Mesilla Valley Radio Club. The address is 6609 Jefferson Ave. Las Cruces, NM. It's on the corner of Wilt and Jefferson -- take the Porter exit of US 70. It is about 5 miles east from the I 25 interchange. Go south on Porter until you come to Jefferson. There turn left and go to the corner of Jefferson and Wilt. You'll recognize it by all the tall antennas around the building. There is a fence around the property but the gate will be open and there is room to park in ground within the fence. Parking on the street is also allowed and safe.

The Zoom link for those of you who want to participate virtually is:

<https://us06web.zoom.us/j/86481032295?pwd=TDJDbHhzR3A2c2V1ajZHY3M0bW9aZz09>

The link is also on our chat session on <https://groups.io/g/ASLCNM/messages>

RenFaire

Big time thanks to all the volunteers who helped make our booth at this year's RenFaire a resounding success. From our Friday morning set-up to Sunday evening tear-down everyone was enthusiastic, helpful and quite positive. During the Saturday and Sunday while the fair was open, we had multitudes of folks stopping by and peering at sunspots and prominences. Since we had a prime location near the entrance, our booth was practically the first thing they saw. Trish Conley tried to keep count with her tabulator, so we had about 1000 people look through our scopes on Saturday and about 750 on Sunday. We got some new members, some donations, and some sunburn. All told, a fine showing for our organization.

Holiday Party

The ASLC holiday party will be held on Saturday Dec. 10 at my house: 5621 Camino Escondida. The board selected this date to avoid conflicts with any scheduled outreach events. As always, it will be a potluck event and we always have an abundance of goodies. I will be posting more information on groups.io, including a request for an RSVP if you are planning to attend. Hope to see you there!

So Long

Well, my time as President has come to an end. Thanks to everyone who stuck in there as a member and attended the Zoom meetings and heard the speakers. I've had lots of fun being President and am gratified that you trusted me with the responsibility of shepherding the club through the pandemic. I especially want to thank the members of the Board for their help and support: Tim Kostelecky, Trish Conley, John McCullough,

Ranimo Bush, Mike Nuss and Tracy Stuart. Many, many thanks for all that you contributed, you made my life easier and better.

Speaker this Month

Our speaker this month is Dennis Conti. He is a long-time member and leader of the American Association of Variable Star Observers. His main

interest is exoplanet research, which is the topic of the Tombaugh lecture this year.

That’s it for now. Clear skies!

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 Walter 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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President:	Ed Montes	president@aslc-nm.org
Vice President:	Tim Kostelecky	vp@acslc-nm.org
Treasurer:	Patricia Conley	treasurer@aslc-nm.org
Secretary:	John McCullough	secretary@aslc-nm.org
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Director:	Rani Bush	director2@aslc-nm.org
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Pictures from 2022 Renaissance Arts Faire



Featured Article:

The Orion Nebula: Window Into a Stellar Nursery

This article is distributed by NASA Night Sky Network. The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit <https://nightsky.jpl.nasa.gov/> to find local clubs, events, and more.

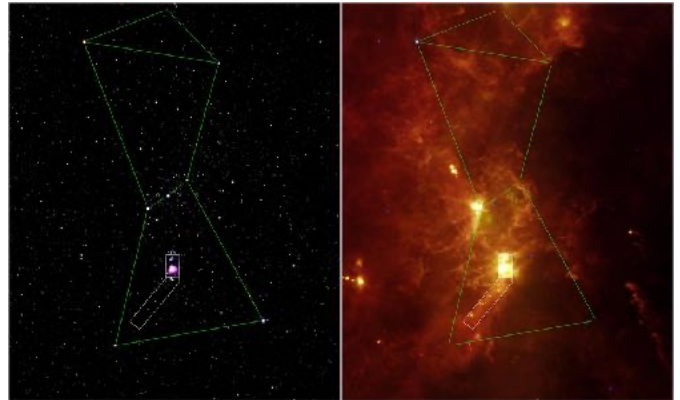


By David Prosper

Winter begins in December for observers in the Northern Hemisphere, bringing cold nights and the return of one of the most famous constellations to our early evening skies: Orion the Hunter!

Orion is a striking pattern of stars and is one of the few constellations whose pattern is repeated almost unchanged in the star stories of cultures around the world. Below the three bright stars of Orion's Belt lies his sword, where you can find the famous Orion Nebula, also known as M42. The nebula is visible to our unaided eyes in even moderately light-polluted skies as a fuzzy "star" in the middle of Orion's Sword. M42 is about 20 light years across, which helps with its visibility since it's roughly 1,344 light years away! Baby stars, including the famous "Trapezium" cluster, are found inside the nebula's whirling gas clouds. These gas clouds also hide "protostars" from view: objects in the process of becoming stars, but that have not yet achieved fusion at their core.

The Orion Nebula is a small window into a vastly larger area of star formation centered around the constellation of Orion itself. NASA's Great Observatories, space telescopes like Hubble, Spitzer, Compton, and Chandra, studied this area in wavelengths we can't see with our earthbound eyes, revealing the entire constellation alight with star birth, not just the comparatively tiny area of the nebula. Why then can we only see the nebula? M42 contains hot young stars whose stellar winds blew away their cocoons of gas after their "birth," the moment when they begin to fuse hydrogen



This image from NASA's Spitzer missions shows Orion in a different light – quite literally! Note the small outline of the Orion Nebula region in the visible light image on the left, versus the massive amount of activity shown in the infrared image of the same region on the right. Image Credit: NASA/JPL-Caltech/IRAS /H. McCallon. From bit.ly/SpitzerOrion

into helium. Those gas clouds, which block visible light, were cleared away just enough to give us a peek inside at these young stars. The rest of the complex remains hidden to human eyes, but not to advanced space-based telescopes.

We put telescopes in orbit to get above the interference of our atmosphere, which absorbs many wavelengths of light. Infrared space telescopes, such as Spitzer and the James Webb Space Telescope, detect longer wavelengths of light that allow them to see through the dust clouds in Orion, revealing hidden stars and cloud structures. It's similar to the infrared goggles firefighters wear to see through smoke from burning buildings and wildfires.

Learn more about how astronomers combine observations made at different wavelengths with the Night Sky Network activity, "The Universe in a Different Light," downloadable from bit.ly/different-light-nsn. You can find more stunning science and images from NASA's Great Observatories at nasa.gov.

Minutes of October 2022 Meeting

John McCullough - Secretary

Call to Order:

Ed Montes, President, Astronomical Society of Las Cruces (ASLC, the Society), called the October 2022 meeting to order at 7:01 pm on 28 October 2022. He welcomed attendees to tonight's meeting, the second post-COVID pandemic lock-down, in-person, face-to-face meeting of the ASLC. There were thirteen (13) members, spouses and guests in attendance, as well as twelve (12) attendees via ZOOM at the start of the meeting.

Ed welcomed the group to tonight's meeting and thanked Steve Barkes and the Mesilla Valley Radio Club for ASLC's use of their building for meetings. Ed also announced that the minutes from the September 2022 meeting (thanks to John McCullough, Secretary) were published in the October issue of the Society newsletter, the High Desert Observer (HDO) (thanks to Tim Kostelecky, HDO Editor). Ed asked if there were any required additions, deletions, or corrections to the minutes as submitted. A motion to accept the September 2022 minutes as submitted was offered by Robert Kimball and seconded by Bernie Jezercak. There being no objections, the motion was passed by acclamation.

Ed introduced tonight's speaker, Dr. Eric Hintz.

Presentation:

Tonight's Tombaugh Series speaker was Dr. Eric Hintz. Professor Hintz is currently the associate chair of the Department of Physics and Astronomy at Brigham Young University (BYU) in Utah. He is also the section leader for Short Period Pulsating Stars at the American Association of Variable Star Observers (AAVSO). Dr. Hintz has been observing variable stars for approximately 35 years and still finds new and interesting things to explore about their nature. He

also still enjoys running telescopes at public star parties and for students in descriptive astronomy classes. His topic tonight was "Using Your Telescope to Observe Short Period Pulsating Stars".

Unlike other sciences, astronomy has always had a unique place. Amateur astronomers play a much larger role in new discoveries in astronomy and the line between amateur and professional can sometimes be blurred. The study of variable stars has benefited greatly from the data gathering skills of many people who work in many professions. These can be visual observations all the way to modern digital photometry. Of particular interest are short period pulsating stars that can complete an entire cycle of brightness changes in under 1 hour. Professor Hintz discussed the nature of some of these stars and how small telescopes can be used to provide the time coverage needed to more fully understand the nature of these stars. The configurations of 6 robotic telescopes on the BYU campus, used for variable star studies, was also discussed.

Officer/Committee Reports:

Elections:

Tracy Stuart and Preston Hager, as the members of the Nominating committee present, acted as Election tellers. They announced the result of the 2023 Officer and Director election as follows:

President: Tim Kostelecky
VicePresident: Rani Bush
Secretary: John McCullough
Treasurer: Trish Conley
Director-at-Large #1: Mark Gorman
Director-at-Large #2: Steve Barkes

Note: Tracy Stuart received write-in votes for Director-at-Large #2.

Ed Montes will serve on the Board as Immediate Past President.

Treasurer Report:

Trish Conley, Treasurer, gave her annual report on accounts. \$56.34 had been received since the last

meeting and all accounts had a balance of + \$618.85 for the current fiscal year. The Society had expended approximately \$2130 in the last year, primarily covered by member dues.

Apparel:

Rani Bush, committee chair, reported she had performed an inventory of the apparel articles on hand. She had turned over \$200 to the Treasurer while retaining \$453 in inventory. She reported that Adidas shirts, short-sleeved polos and long-sleeved ¼ zips, are available for \$5 and \$10, respectively, through the Las Cruces Space Festival. The ASLC logo can be added for an additional \$12. She will have an additional report next month. Steve Barkes offered a motion to add \$150 to the apparel budget to obtain the Adidas shirts; Tracy Stuart seconded. The motion passed.

The Walter Haas Observatory at Leasburg Dam State Park (LDSP):

Steve Barkes, committee chairman, reported continuing power issues with the 16" Meade. He was working to obtain a backup/replacement. Steve reported a good turnout at the last open house with 18-20 very engaged attendees. The next event is 19 November.

Outreach:

Stephen Wood, outreach coordinator, reported on recent events. There was a daylight viewing event at the Museum of Nature and Science. Several hundred people attended the Moon Gaze on 01 October. An event at the Veterans' Memorial Park on 19 October was well attended. There will be a star party at Mission Academy; watch email for details. The next Moon Gaze will be 05 November. Contact Stephen if you can support any or all events.

ASLCWest:

Mike Nuss, committee chairman, reported recent events at City of Rocks (CoR) and Rockhound State Parks were "clouded out". Approximately thirty (30) parents and 60-80 students attended a star party at Hatch Elementary. The group continued to wait on weather for most events. He was also investigating a source for chairs for future

events.

Loaner Telescope Program:

Tim Kostelecky, program coordinator, reported that the program was working as several members were trying out different types of telescopes. He had no recent activity to report but will post an update in the next HDO.

Tombaugh Observatory (NMSU):

Steve Shaffer, chairman, must relinquish the post. Preston Hager volunteered to fill the position for the time being. The Observatory needs cleaning, and the dome requires maintenance. Additional keys and gate combination are needed. Steve Barkes will check on availability.

Old Business:

Renaissance Arts Faire 2022 – This year's Faire will be 0506 November at Young Park. This is a major public outreach event for the Society. Volunteers are needed for setup on Friday 04 November, teardown on 06 November, and to man the booth during Faire hours Saturday and Sunday. Booth workers must be in costume. Members should contact Trish Conley if they can help.

New Business:

Holiday Party – This year's party will be 10 December at Ed Montes' house. More details to follow.

Kudos – to Tim Kostelecky for obtaining a recognition plaque for the Observatory at LDSP. Installation to follow.

November meeting – The November meeting will be on 18 November to not conflict with Thanksgiving weekend. There will also be a star party at Rockhound State Park.

Guests/New Members – John Wright from Alamogordo has attended other Society events. Don Dopkus(?) is building a house in Sonoma Ranch and plans to participate in person in the future rather than via ZOOM.

Announcements:

Okie-Tex 2022 – Robert Kimball reported on this year's event. He displayed two images he had

made at the event.

Las Cruces Space Festival 2023 – Rani Bush announced next year’s event will be 30 March to 02 April. An organizer/sponsor mixer will be 10 November.

Stephen Wood had items to give away. He also reported on a source for green lasers.
Chris Brownwell successfully imaged a newly discovered super nova.

The October 2022 meeting was adjourned at 8:35 pm.

-Respectfully submitted:
John McCullough
Secretary, ASLC

Member Astro Images

NGC 891 in Andromeda - Jeff Johnson



From my backyard in Las Cruces. I compiled data over two nights (13 and 28 Oct 2022). TOA-130F, EM200, QSI 690wsg, 26x10min L (bin1x1), 6x5min ea RGB (bin2x2)

Soul Nebula (IC1848) in Cassiopeia - Bob Kimball



Captured at the 2022 OkieTex Star Party. LRGBH - 7.2 hours, 2 minute subs; W.O. FLT 110 Refractor; N.I.N.A. and PixInsight

Lunar Eclipse, Nov 2022 - Dave Doctor



Had to get this in since it will be the last one for awhile. There were a couple of brief windows in between clouds. I would say this one was a little darker than average. Taken with DSLR and 200mm lens.

NGC 206 in M31 (Andromeda Galaxy) - Jeff Johnson



At the center of this image is NGC 206 that lies within M31 - At a distance of 2.5 M l.y., individual stars can be seen (very tiny blue spots), as well as star clusters. Tak TOA-130F (5 in refractor), EM200 mount, QSI 690wsg camera. 7x10min L (bin 1x1), 3x5min ea RGB (bin 2x2).

NGC 4217 in Canes Venatici - Chuck Sterling



This was taken from my back yard using my normal rig, a Canon 60Da on an Astro Tech 8" f/4 Newtonian mounted on a Celestron CGE. All started as 30 subframes shot at ISO1600. 90 sec subs.