

The High Desert Observer

June 2022

This Month's Meeting - June 24, 2022

Meeting will be virtual via Zoom®
Friday at 7 p.m.



Speaker for the Month - Gary Starkweather

Public Outreach

No Ladder, No Eyepiece

Public outreach programs using large telescopes have always depended upon ladders and eyepieces, but ladders and eyepieces do not always provide a safe or satisfactory experience for many people, and only one person at a time can be served.

So Gary decided to merge several astrophotography and live streaming technologies together to create a public outreach resource that displays night sky objects on display screens or to remote audiences on streaming platforms or simultaneously to both.



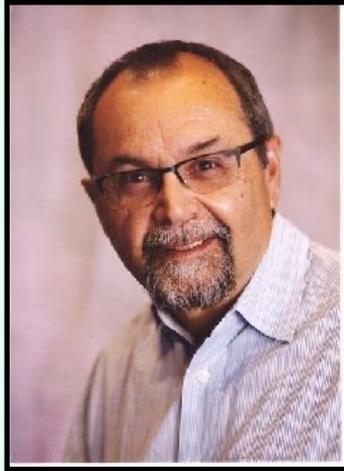
At heart Gary is an audiophile/electronics engineering enthusiast. Upon retiring in 2007, he got his second telescope and began learning astrophotography. In 2012 Gary's and his wife bought land in New Mexico at the New Mexico Astronomy Village (NMAV) near Deming. Today, he's a full time resident at NMAV and the astronomy facilities there are completed. Now for Gary, its all about astronomy, all the time.

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From the Desk of Ed Montes ASLC President

The Changing Face of Entry Level Observing



Last week the club supported a star party event held at the Chapparal Middle School campus. It was not for a class or a typical school event, after all, it is summer break and school is out. Rather, the science teacher there applied for, and received, a grant to conduct a week-long STEM workshop with a focus on astronomy. So, the decision to support this was a no brainer; this is exactly the type of group to which we want to lend our support. These were kids who CHOSE to take this workshop during the summer and who wanted to be there. Much thanks to Steve Wood for organizing this, and to Tom Oler and Bernie Jezercak for bringing their scopes and guiding folks through the night sky. The students and their families and the teachers were extremely happy to have us there.

Now, for the second part of this experience. I was very impressed with the teacher who organized this workshop. She is an astronomy neophyte, but she had the interest and inclination to make it happen. There was no certainty that she would get the grant but she did; probably her enthusiasm came through, as well as her “audacity”. She asked for funds, not just to support the class for a week, but also to buy equipment, and not just anything – the grant enabled her to acquire a Stellina automated telescope. Though “newbie” she might be, she taught herself to use it and had the kids and their families connecting to it and viewing realtime

images that the Stellina was producing. She captured images of M13 and M57 at the same time that we were showing folks those same objects in our scopes. Lots of synergy going on there. She wants to learn more astronomy and even more astrophotography; I encouraged her to join our club and talk to folks in the club who can help her. I hope she joins!

This was definitely an example of one path to starting in astronomy and astrophotography. Not the standard one and certainly one that very few can actually afford – for now. The groundbreakers are always expensive, but I’ve already seen videos on YouTube about how to implement homegrown versions of the Stellina system. Check out <https://www.youtube.com/watch?v=znAhp0Upaw> for one such video. My guess that within 5 years (probably sooner) there will be other significantly cheaper competitors to Stellina. And then the face of entry level observing will definitely change.

Speaker this Month

Our speaker this month will be Gary Starkweather. He’s taken on the very serious task of making outreach star parties extremely accessible. He is going to take us on tour of his observatories (plural) with emphasis on his visual observing setup and how he makes it widely available. Looking forward to it!

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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Featured Article:

Find Hercules and His Mighty Globular Clusters

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

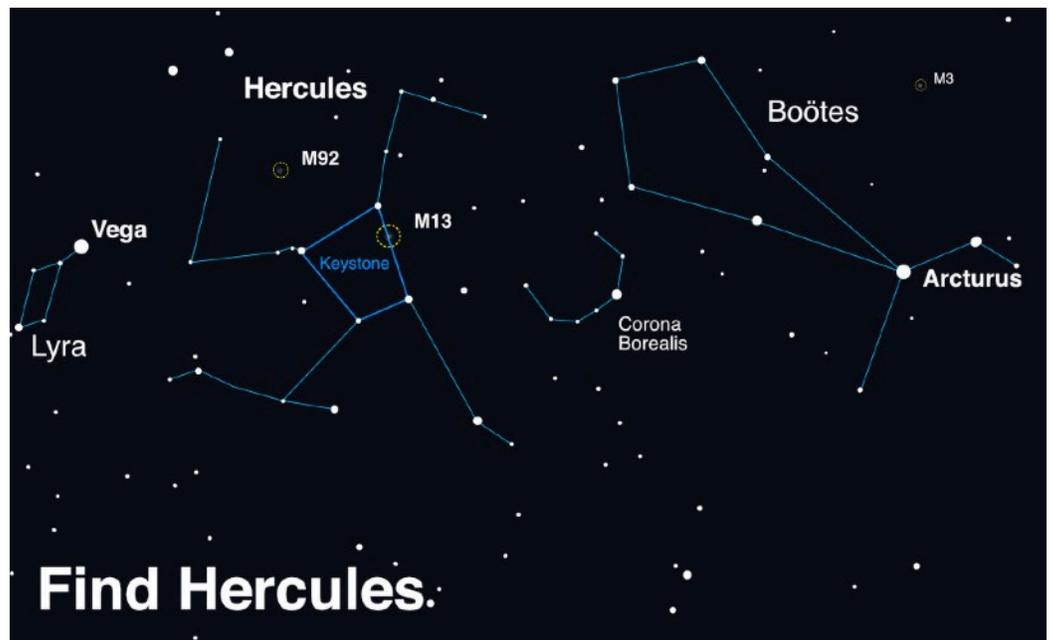
Hercules is one of the standout heroes of Greek mythology, but his namesake constellation can be surprisingly hard to find - despite being one of the largest star patterns in our night skies! Once you find the stars of Hercules, look deeper; barely hidden in the space around his massive limbs and “Keystone” asterism are two beautiful globular star clusters: M13 and M92!

Since the constellation itself is relatively dim but bordered by brighter constellations, you can find the stars of Hercules by looking between the bright stars Vega and Arcturus. They are fairly easy to identify, and we have tips on how to do so in previous articles. Vega is the brightest star in the constellation Lyra and one of the three stars that make up the Summer Triangle (June 2020: Summer Triangle Corner: Vega). Arcturus is the brightest star in the constellation

Boötes, and can be found by “arc-ing to Arcturus” from the handle of the Big Dipper (May 2021: Virgo’s Galactic Harvest). You may be able to Hercules’s “Keystone” asterism first; this distinct pattern of four stars is traditionally shown as the torso of the great hero, though some illustrators prefer marking the Keystone as the head of Hercules. What pattern do you see in the stars of Hercules?

Globular star clusters appear “fluffy,” round, and dense with stars, similar to a dandelion gone to seed, in contrast to the more scattered and decentralized patterns of open clusters. Open clusters are generally made up of young stars that are gradually spreading apart and found inside our Milky Way galaxy, while globular clusters are ancient clusters of stars that are compact, billions of years old, bound to each other and orbit around our galaxy. Due to their considerable distance, globular clusters are usually only visible in telescopes, but one notable exception is M13, also known as the Great Cluster or Hercules Cluster. During very clear dark nights, skilled observers may be able to spot M13 without

Sky Map: Find Hercules



An illustration showing the location of the stars of Hercules, with the constellation Lyra and bright star Vega on its left, and the constellation Boötes and the bright star Arcturus on its right.

M92 by Hubble



Photo of globular cluster M92, showing a dazzling array of stars that increase in density until individual stars cannot be seen at its bright core and appear as a sort of fog.

optical aid along the border of the Keystone, in between the stars Zeta and Eta Herculis - and a bit closer to Eta. Readily visible as a fuzzy "star" in binoculars, in telescopes M13 explodes with stars and can fill up an eyepiece view with its sparkling stars, measuring a little over half the diameter of a full Moon in appearance! When viewed through small telescopes, globular clusters can appear orblike and without discernable member stars, similar in appearance

to the fuzzy comae of distant comets. That's why comet hunters Edmund Halley and Charles Messier discovered and then catalogued M13, in 1714 and 1764 respectively, marking this faint fuzzy as a "not-comet" so as to avoid future confusion.

While enjoying your view of M13, don't forget to also look for M92! This is another bright and bold globular cluster, and if M13 wasn't so spectacular, M92 would be known as the top celestial sight in Hercules. M92 also lies on the edge of naked-eye visibility, but again, binoculars and especially a telescope are needed to really make it "pop." Even though M92 and M13 appear fairly close together in the sky, in actuality they are rather far apart: M13's distance is estimated at about 25,000 light years from Earth, and M92's at approximately 27,000 light years distant. Since M13 and M92 appear so close together in our skies and relatively easy to spot, switching between these two clusters in your scope makes for excellent star-hopping practice. Can you observe any differences between these two ancient clusters of stars?

Globular clusters are closely studied by astronomers for hints about the formation of stars and galaxies. The clusters of Hercules have even been studied by NASA's space telescopes to reveal the secrets of their dense cores of hundreds of thousands of stars. Find their latest observations of globular clusters - and the universe - at [nasa.gov](https://www.nasa.gov).

Minutes of April 2022 Meeting

John McCullough - Secretary

Ed Montes, President, Astronomical Society of Las Cruces (ASLC, the Society), called the May 2022 meeting to order at 7:04 pm on 27 May 2022. He welcomed attendees to tonight's meeting via ZOOM. Twenty-two (22) attendees were signed in for the start of the meeting.

Ed welcomed the group to tonight's meeting and announced that the minutes from the April 2022 meeting (thanks to John McCullough, Secretary) were published in the May 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 April 2022 minutes as submitted was offered by Tracy Stuart, seconded by Tim Kostelecky. There being no objections, the motion was passed by acclamation.

Ed introduced tonight's speaker, Ms. Ranimo Bush.

Presentation:

Tonight's Tombaugh Series speaker was ASLC Board member, Ms. Rani "Mo" Bush. Her topic was "Here Come the Sun...Spots". The current Solar Cycle 25 began in December 2019 and the 11year cycle has been building ever since. Rani began sketching sunspots daily in October 2021 with the aid of an inexpensive solar scope. She took attendees on her journey of making peace with the limitations of her \$60 Celestron EclipSmart Sun Scope while making friends with our closest star. She described the challenges of setting aside time every day to set up her Sun Scope, make observations, and document them physically with pencil and paper. The past eight months have increased her comfort with her observing regimen and improved her sketching technique. Rani thanked ASLC President Ed Montes for his encouragement and support to proceed with this project and present her efforts

to the membership.

Rani "Mo" Bush is currently the town clerk/treasurer of Mesilla, NM. She has been a space enthusiast all her life ever since she watched her first re-run of the original Star Trek television series in the late 60's. Her interest grew during high school in Las Vegas, NV, where she was a member of the Las Vegas Astronomical Society. She has been a member of ASLC since 2019 and currently serves on the Board of Directors as DirectoratLarge. She also serves on the Board of the Las Cruces Space Festival and is a member of the Planetary Society and NewSpace New Mexico. She owns two telescopes and currently documents sunspots daily.

Officer/Committee Reports:

Treasurer:

Trish Conley, Treasurer, reported net income in April of \$23.13 and \$103.63 in May. She reported finances are doing well for the fiscal year. She will pay Astronomical League (AL) dues and an annual donation to the International Dark Sky Association (IDA) this month.

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

Steve Barkes, committee chairman, reported a good group (15-20) at the monthly event last weekend. This included the Browns (ASLC members) from Deming. Steve feels that there is increasing informed interest from the public that attends these events. He also noted the MallinCam was up and running and provided good views for the public.

The official naming process continues but still requires signoff by the Governor of New Mexico.

Apparel:

Rani Bush, program coordinator, and Trish Conley are working on additional apparel options. More details will be available next month.

Loaner Telescope:

Tim Kostelecky, program coordinator, reported

two (2) telescopes are currently checked out to members but more are available.

Old Business:

No old business was offered for consideration.

New Business:

New members – Ed Montes recognized new member Mark Croom and renewing member Francisco Correto Parra. Other non-member attendees were online to view the presentation.

According to the American Meteor Society, there will be a possible meteor outburst beginning

around 11:00 pm, 3031 May in the region of Arcturus.

Astronomical League Convention (ALCon) 2022 – ALCon 2022 will be 2830 July in Albuquerque.

ASLC member Gary Starkweather will be the speaker in June on his new observatory.

A budget auditor must be selected in July.

No additional new business was offered for consideration.

The May 2022 meeting was adjourned at 8:32 pm.

HDO Word Search Puzzle

Constellations Galore

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WORD LIST:

ANDROMEDA	CAMELOPARDALIS	CETUS	DRACO
AQUARIUS	CANCER	CHAMAELEON	ERIDANUS
AQUILA	CANESVENATICI	COMABERENICES	LEO
ARIES	CANISMINOR	CORVUS	ORION
AURIGA	CASSIOPEIA	CRATER	PISCES
BOOTES	CENTAURUS	CYGNUS	SAGITTARIUS

Solve this on-line at <https://mywordsearch.com/630288/Constellations-Galore>

Member Images

Sh2-1, Sh2-7 and LBN 1093-4 in Scorpius - Rich Richins



I took this image at Rusty's RV (Rodeo NM) using an Atik 460 camera attached to a Canon EF 100mm lens (Ha filter) as well as with a Canon T2i attached to an EF 200mm lens (color). Sh2-1 is the smaller emission region on the left. LBN 1093-4 are the two reflection nebula 'tendrils' and Sh2-7 is the larger emission region to the right. All of this is in the vicinity of Pi Scorpii. The reflection nebulosity was extracted from the blue channel of the DSLR images because SOMEBODY forgot to pack his LRGB filters. Anyway, here's what I got...

M81 - Bode's "Nebula" in Ursa Major - Jeff Johnson



This is a color representation of Jeff's monochrome image of the M81 Galaxy seen in April's HDO. So nice, we had to see it twice!

IC 2948 in Centaurus - Alex Woronow



I used my own "true-color" representation of the narrowband captures (Ha, SII, OIII) and processed the image after color calibration and removing the stars...subsequently re-introducing them by transferring them from the earlier color-calibrated version of this image.