

The High Desert Observer

September 2022

This Month's Meeting - Sep 23, 2022

Meeting will be **IN-PERSON** & Zoom
Friday at 7 p.m. at the
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: <https://us06web.zoom.us/j/88493820544?pwd=d0Z4OXFSSXdFUktGdmhsK3lWN2NuQT0>

Door prizes will be randomly awarded to those personally attending the meeting. [It's been hinted that one of the prizes is a 15-60x Bausch & Lomb 60mm Spotting Scope with photo tripod.](#)

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In-Person Meeting !!



Speaker for the Month

Professor Stephen Lowry

University of Kent, Great Briton

**"Citizen Science" project: Hunting
Outbursting Young Stars – HOYS**

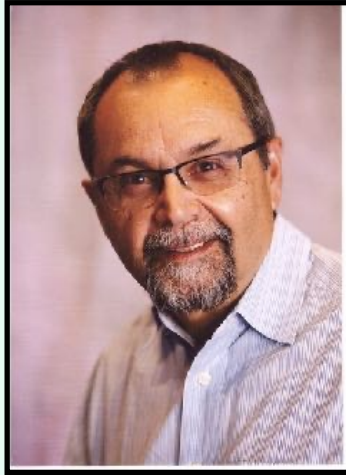
After completing his degree in Physics at the Universität Leipzig in Germany, Dr Dirk Froebrich went on to study for his PhD at the Universität Jena. From Germany, he moved to a researcher position at the Dublin Institute for Advanced Studies and was appointed Lecturer in Astronomy/Astrophysics at the University of Kent in 2009.

From the Desk of Ed Montes ASLC President

August, 2022

Live Meeting

This is a bit of a rehash from last month. After 2 years of Zoom meetings, it's time to gather in person once again. For our September 23, 2022 meeting we will be gathering at the clubhouse of the Mesilla Valley Radio Club. Several of our members are also in the Radio Club, including Steve Barks. Steve asked their Board to let us use their building for our meetings and they were kind enough to agree. They have an excellent facility, complete with kitchen and restroom, so they don't mind us bringing food and drink into it.



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. 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.

Be prepared for a real celebration as we face each other in astronomical fellowship. We will still have a Zoom component to our meeting, so remote members and folks who are not yet comfortable meeting in person can still participate. I will post the Zoom link on our groups.io chat. Also, here it is...

<https://us06web.zoom.us/j/88493820544?pwd=d0Z4OXFSSXdFUktGdmhsk3IWN2NuQT0>

We will have snacks and drinks. We will have drawings for door prizes for folks who are physically attending the meeting.

Ren Faire

On the premise that it's never too early to start preparing, please consider volunteering to help with the ASLC's participation in the Renaissance Faire during the first weekend of November. I will be posting a schedule of when we will need volunteers to help set-up, staff the booth, and tear down.

Speaker this Month

Our speaker this month is Dr. Dirk Froebrich of the University of Kent in Great Britain. He will be speaking to us from their observatory. His topic is a "citizen science" project called Hunting Outbursting Young Stars – HOYS. The goal is collect data based on long-term photometric monitoring of young stellar clusters to find outbursting and other interesting objects for detailed followup as well as the study of star and planet formation.

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:

Fomalhaut: Not So Lonely After All

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

Fall evenings bring a prominent visitor to southern skies for Northern Hemisphere observers: the bright star Fomalhaut! Sometimes called “The Autumn Star,” Fomalhaut appears unusually distant from other bright stars in its section of sky, leading to its other nickname: “The Loneliest Star.” Since this star appears so low and lonely over the horizon for many observers, is so bright, and often wildly twinkles from atmospheric turbulence, Fomalhaut’s brief but bright seasonal appearance often inspires a few startled UFO reports. While technically not of this world – Fomalhaut is about 25 light years distant from our Earth – it has been extensively studied and is a fascinating, and very identified, stellar object.

Fomalhaut may appear solitary, but it does in fact have company. Fomalhaut’s

entourage includes two stellar companions, both of which keep their distance but are still gravitationally bound. Fomalhaut B (aka TW Piscis Austrini, not to be confused with former planetary candidate Fomalhaut b*), is an orange dwarf star almost a light year distant from its parent star (Fomalhaut A), and Fomalhaut C (aka LP 876-10), a red dwarf star located a little over 3 light years from Fomalhaut A! Surprisingly far from its parent star – even from our view on Earth, Fomalhaut C lies in the constellation Aquarius, while Fomalhaut A and B lie in Piscis Australis, another constellation! – studies of Fomalhaut C confirm it as the third stellar member of the Fomalhaut system, its immense distance still within Fomalhaut A’s gravitational influence. So, while not truly “lonely,” Fomalhaut A’s companions do keep their distance.

Sky Map - Fine Fomalhaut

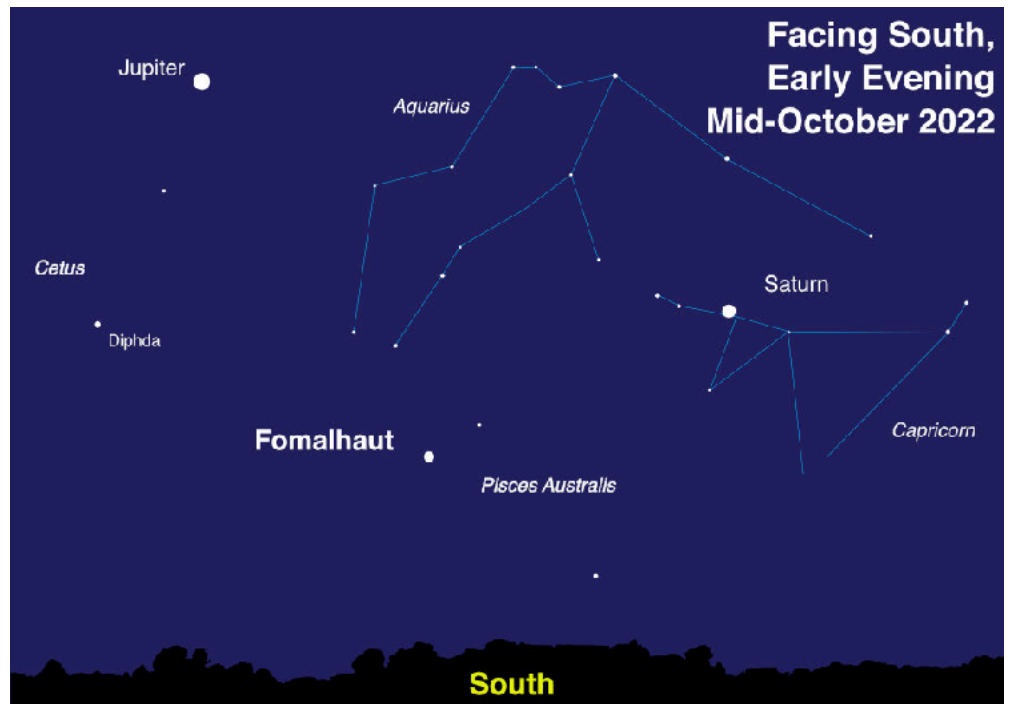


Illustration of a nighttime sky with a simplified horizon and the star Fomalhaut prominently labeled in the lower middle, along with Jupiter on the top left and Saturn on the center right. At the bottom a black silhouetted horizon is labeled SOUTH and in the upper right the text FACING SOUTH. EARLY EVENING. MID-OCTOBER 2022 is shown.

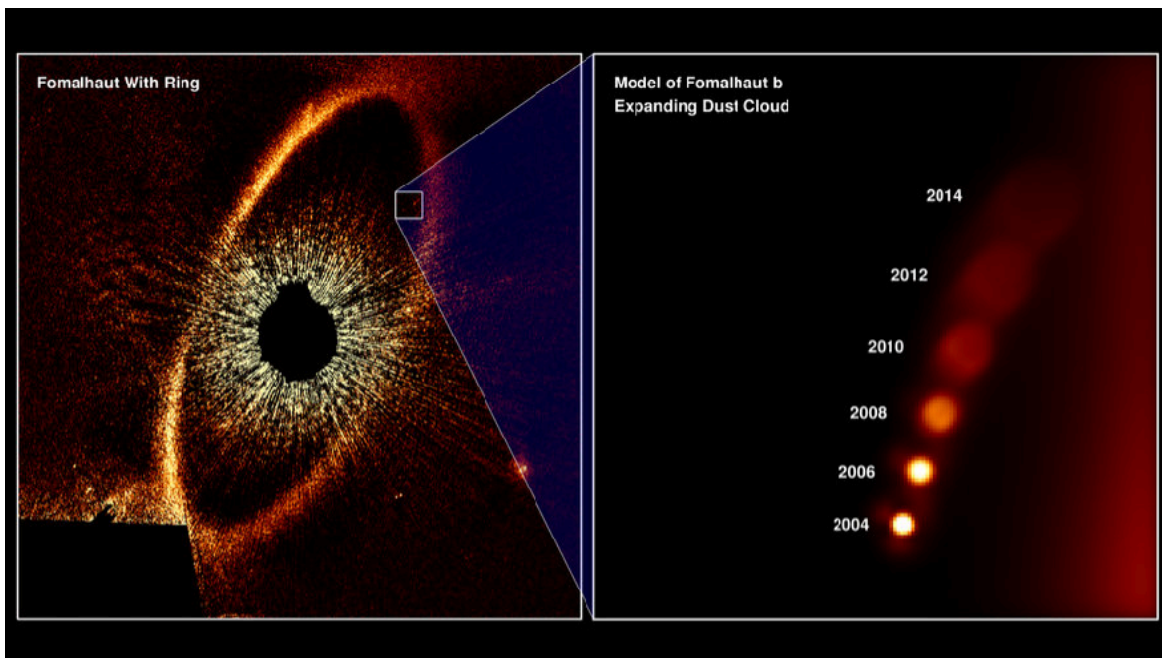
Fomalhaut's most famous feature is a massive and complex disc of debris spanning many billions of miles in diameter. This disc was first detected by NASA's IRAS space telescope in the 1980s, and first imaged in visible light by Hubble in 2004. Studies by additional advanced telescopes, based both on Earth's surface and in space, show the debris around Fomalhaut to be differentiated into several "rings" or "belts" of different sizes and types of materials.

Complicating matters further, the disc is not centered on the star itself, but on a point approximately 1.4 billion miles away, or half a billion miles further from Fomalhaut than Saturn is from our own Sun! In the mid-2000s a candidate planetary body was imaged by Hubble and named Fomalhaut b. However, Fomalhaut b was observed to slowly fade over multiple years of observations, and its trajectory appeared to take it out of the system, which is curious behavior for a planet. Scientists now suspect that Hubble observed the shattered debris of a recent violent collision between two 125-mile wide bodies, their impact driving the remains of the now decidedly non-planetary Fomalhaut b out of the system!

Interestingly enough, Fomalhaut A isn't the only star in its system to host a dusty disc; Fomalhaut C also hosts a disc, detected by the Herschel Space Observatory in 2013. Despite their distance, the two stars may be exchanging material between their discs - including comets! Their co-mingling may help to explain the elliptical nature of both of the stars' debris discs. The odd one out, Fomalhaut B does not possess a debris disc of its own, but does host at least one suspected planet.

While Hubble imaged the infamous "imposter planet" of Fomalhaut b, very few planets have been directly imaged by powerful telescopes, but NASA's James Webb Space Telescope will soon change that. In fact, Webb will be imaging Fomalhaut and its famous disc in the near future, and its tremendous power is sure to tease out more amazing discoveries from its dusty grains. You can learn about the latest discoveries from Webb and NASA's other amazing missions at nasa.gov.

Fomalhaut with Ring



The magnificent and complex dust disc of the Fomalhaut system (left) with the path and dissolution of former planetary candidate Fomalhaut b displayed in detail (right). Image credits: NASA, ESA, and A. Gáspár and G. Rieke (University of Arizona) Source: <https://www.nasa.gov/feature/goddard/2020/exoplanet-apparently-disappears-in-latest-hubble-observations>

Minutes of August 2022 Meeting

John McCullough - Secretary

Call to Order:

Ed Montes, President, Astronomical Society of Las Cruces (ASLC, the Society), called the August 2022 meeting to order at 7:05 pm on 26 August 2022. He welcomed attendees to tonight's meeting via ZOOM. Twenty-three (23) 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 July 2022 meeting (thanks to John McCullough, Secretary) were published in the August 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 July 2022 minutes as submitted was offered and seconded. There being no objections, the motion was passed by acclamation.

Ed introduced tonight's speaker, Dr. Chris Churchill.

Presentation:

Tonight's Tombaugh Series speaker was Dr. Christopher Churchill on "Galactic Evolution". Dr. Churchill is Professor of Astronomy and Astrophysics at New Mexico State University and is engaged in teaching and research. His teaching passions are "Life in the Universe" and the "History and Future of Human Space Flight". Life in the universe places our amazing planet and all its life in a cosmic context in both time and in space and teaches our place in the cosmic story. Human space flight is the coming chapter of humanity and represents the next major phase of life on earth in that we humans have the honor and privilege to evolve into a completely new world of possibilities.

Professor Churchill's research goals are to

contribute to our understanding of how galaxies form and evolve over cosmic time. In particular he studies the so-called baryon cycle, which describes how gas is incorporated into galaxies from intergalactic space, turns into stars, and then how the dying stars eject gas back out of the galaxy or how it gets engaged in cycling through the galaxy.

Officer/Committee Reports:

Treasurer:

Trish Conley, Treasurer, reported receipts of \$79 in dues payments and expenditures of \$162 for Zoom usage, thus -\$83 for the last three weeks but +\$731 for the current year.

ASLCWest:

Mike Nuss reported the group activities remain on hold pending the end of monsoon season around midSeptember.

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

Steve Barkes, committee chairman, reported weather issues with viewing sessions but no other changes.

Apparel:

Rani Bush, committee chair, reported she will sell remaining apparel in inventory and plans to take orders for new items at the next inperson meeting. She is also investigating obtaining lapel pins of the ASLC logo for member use at public events.

Outreach:

Stephen Wood, outreach coordinator, reported the August Moon Gaze had good attendance by the public. Upcoming events include a star party planned at Rockhound State Park on 16 September and one at City of Rocks State Park on 17 September. Moon Gazes are planned for 03 September and 01 October on the Downtown Mall in Las Cruces. 01 October is International Observe the Moon Night and Las Cruces Gay Pride on the Downtown Mall. He

plans to clarify the access situation well before the event(s).

New Business:

In-Person Meetings: The Society will resume inperson meetings with the September 2022 Monthly Meeting. The new location is the Mesilla Valley Radio Clubhouse at 6609 Jefferson Avenue. This will be a hybrid meeting with a Zoom component for those not able to attend. Food and

drinks are allowed and there will be door prizes and apparel for purchase. Officer candidates for 2023 will be announced.

The August 2022 meeting was adjourned at 8:50 pm.

-Respectfully submitted:
John McCullough
Secretary, ASLC

Member Images

NGC 891 Galaxy in Andromeda - Bob Kimball



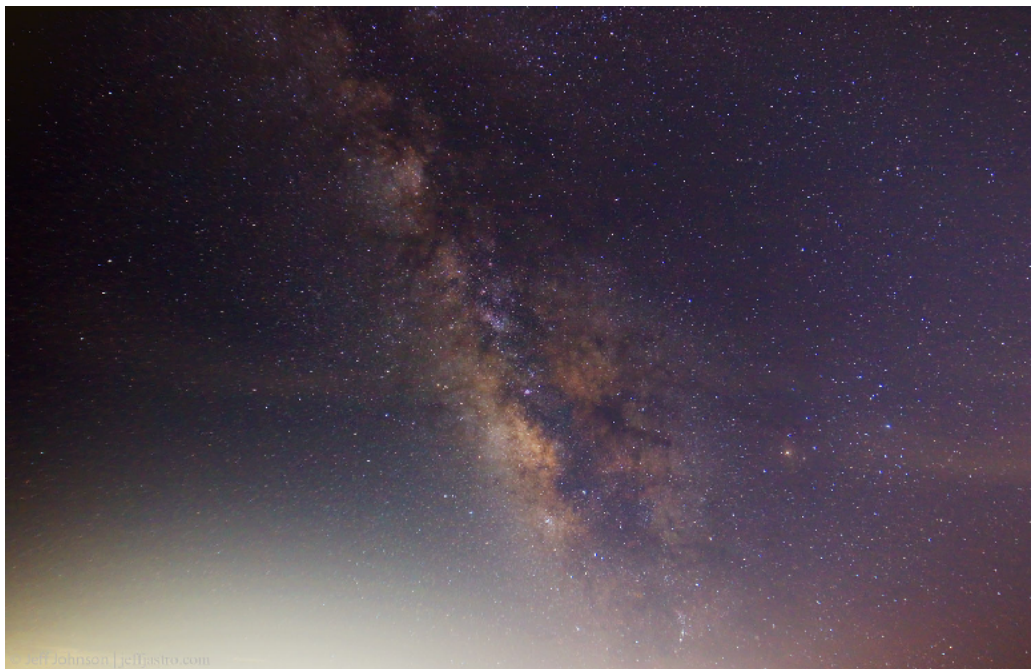
This is my first fully automated image using N.I.N.A. Before I took this image, I used a N.I.N.A. automated plugin to create a set of filter offsets. I also used another plugin to correct my back focus issues.. The image is very dark, because some thin clouds rolled through during my green imaging and I just drove them into the background. This is 10 X 120 sec. LRGBH image from my backyard in Las Cruces. (1-2/3 hours) with my W.O. FLT110 (F1 616 mm).

Star Streaks from Black Canyon of the Gunnison NP, Colorado Rich Richins



A single frame from a tripod-mounted DSLR taken at Black Canyon of the Gunnison NP. The park is an IDA certified dark park, and at 8100 feet, there's less atmosphere to deal with (at least that's what my lungs were telling me). It was definitely dark - M8 was naked eye and I found the western Veil Nebula with 10x50's. I meant to do a much longer series, but everything dewed up. I tried to process so that subtle star trails would appear behind the stars.

Milky Way Above El Paso Skyglow - Jeff Johnson



This is from my front patio where I live in Las Cruces. I think this is my best shot of the MW to date. Just my T3i sitting on a normal tripod. 20x15secs stacked... that's the El Paso light dome you see in it (if you didn't guess, haha).