

The High Desert Observer

January 2021

January Meeting Presentation Walking Tour of Optical History

Artifacts and Anecdotes from the Astronomical Lyceum
with John W. Briggs



The Astronomical Lyceum in New Mexico, originally built in 1936 as a theater and gymnasium, now houses a collection of instrumentation and literature representing the ascendancy of American astronomy. John W. Briggs' ASLC presentation will illustrate unusual items, large and small, created by some of the America's greatest early optical artists. John hopes to remind participants how history of science and technology can be powerfully engaging and interesting.

John W. Briggs has worked in a technical capacity at various observatories worldwide including Mount Wilson, Yerkes, National Solar, Maria Mitchell, Venezuelan National, Chamberlin, and South Pole Station. John came to New Mexico in 1997 to assist in the commissioning of the Sloan Digital Sky Survey. He was assistant editor at Sky & Telescope magazine in the 80s and is now a member of many astronomical organizations. John is a new board member-elect of the century-old American Association of Variable Star Observers.

Masthead Image: M82 & M81 Galaxies in Ursa Major - courtesy of ASLC Member Jeff Johnson



In This Issue

January's Mtg Presentation - John W. Briggs	Page 1
From the Desk of the President - Ed Montes	Page 2
Featured Article - NightSky Network	Page 3
Member Images	Page 5
Jeff Johnson, Ed Montes	
John Kutney, John Love	

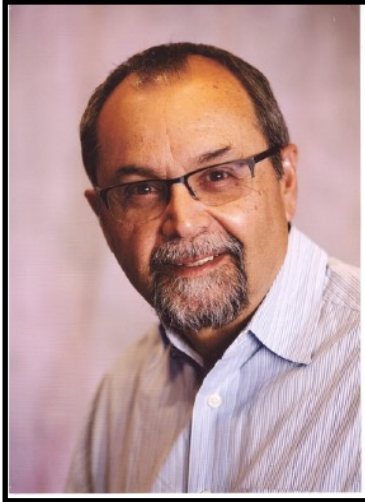
Coming Events (postponed due to Covid-19)

Typically, ASLC hosts public in-town observing sessions at the Pan Am Plaza on University Ave. and at Tombaugh Observatory on the NMSU campus. All sessions begin at dusk.

At our Leasburg Dam State Park Observatory, we normally hold monthly star parties. 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.

From the Desk of Ed Montes ASLC President

I am honored and privileged to have been elected President of the Astronomical Society of Las Cruces in 2021, 70 years since the founding of this organization. The history of the ASLC is anchored on the vision of Clyde Tombaugh and it is buoyed by the work and memory of his co-founders,



including Walter Haas and Cecil Post. They set the tone for this club as one of observation and outreach.

Observation and outreach – that seems to me still to be the core of the ASLC. We love to look at the sky (visually or photographically) and we love to share what we've seen. The last 10 months haven't been so good with respect to the outreach part, but judging from all of the astro-photos I've seen posted and the tales of trips to Rusty's, the observation part is still going strong. I know I've had fun monitoring and photographing the Jupiter/Saturn conjunction (and the recent Mercury incursion) from my front yard.

I don't claim to have a crystal vision that will guide the club into a new and glorious age of expansion. Observation and outreach will continue to be our touchstones, almost by definition. What I would like us to consider is how to do outreach in the face of the pandemic that has stifled us since last March. Some things are simple and obvious: keeping our website up-to-date (thanks Rich for your efforts there), maintaining a lively presence on Facebook (thanks Chuck for your contribution) and other social media, and renewing our relationship with the Astronomy department and

student astronomy club at NMSU. Other ventures might be more of a challenge -- perhaps establishing a relationship with KTAL radio or the Las Cruces Bulletin to do regular updates for what's happening in the sky. Another example of updated outreach is Rich's live-stream of the conjunction on Dec. 21. He's also suggested doing a "virtual" Moongaze, where we would stream a view of the moon and perhaps other objects and provide live commentary, much as at the "real" moongaze events. Please, if you have ideas, send them to me (ejm.astron@gmail.com) or post them on our groups.io discussions.

I would like to thank Tracy Stuart for ably serving as President of the ASLC for the last 2 years, especially for keeping us going when we couldn't meet physically and we had to turn to the virtual. In this light, I'd also like to express my thanks to Steve Barkes and Trish Conley for establishing and maintaining our Zoom presence.

Finally, I'd like to recognize those we lost this year: Jerry McMahan and Dave Dockery. These two men were important to us and enriched our club. They will be missed.

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 \$30; Family \$36; 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.

ASLC Board of Directors

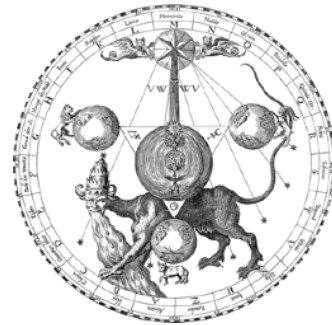
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Next Monthly Meeting - January 22, 2021

Our next ASLC meeting will be virtual, to be held on Friday, January 22nd at 7 p.m. Future meetings will continue to be virtual until the Covid-19 situation allows us to meet safely in person. Please note that the ASLC will not be holding other meetings, gatherings or public outreach events until it is deemed safe to do so. Please practice proper hygiene, social-distance and wear your mask!

**Featured Article****Check Your Sky's Quality with Orion!**

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

Have you ever wondered how many stars you can see at night? From a perfect dark sky location, free from any light pollution, a person with excellent vision may observe a few thousand stars in the sky at one time! Sadly, most people don't enjoy pristine dark skies – and knowing your sky's brightness will help you navigate the night sky.

The brightness of planets and stars is measured in terms of apparent magnitude, or how bright they appear from Earth. Most visible stars range in brightness from 1st to 6th magnitude, with the lower number being brighter. A star at magnitude 1 appears 100 times brighter than a star at magnitude 6. A few stars and planets shine even brighter than first magnitude, like brilliant Sirius at -1.46 magnitude, or Venus, which can shine brighter than -4 magnitude! Very bright planets and stars can still be seen from bright cities with lots of light pollution. Given perfect skies, an observer may be able to see stars as dim as 6.5 magnitude, but such fantastic conditions are very rare; in much of the world, human-made light pollution drastically limits what people can see at night.



The Dark Sky Wheel, showing the constellation Orion at six different limiting magnitudes (right), and a photo of Orion (left). What is the limiting magnitude of the photo? For most observing locations, the Orion side works best on evenings from January-March, and the Scorpius side from June-August.

Your sky's limiting magnitude is, simply enough, the measure of the dimmest stars you can see when looking straight up. So, if the dimmest star you can see from your backyard is magnitude 5, then your limiting magnitude is 5. Easy, right? But why would you want to know your limiting magnitude? It can help you plan your observing! For example, if you have a bright sky and your limiting magnitude is at 3, watching a meteor shower or looking for dimmer stars and objects may be a wasted effort. But if your sky is dark and the limit is 5, you should be able to see meteors and the Milky Way. Knowing this figure can help you measure light pollution in your area and determine if it's getting better or worse over time. And regardless of location, be it backyard, balcony, or dark sky park, light pollution is a concern to all stargazers!

How do you figure out the limiting magnitude in your area? While you can use smartphone apps or dedicated devices like a Sky Quality Meter, you can also use your

own eyes and charts of bright constellations! The Night Sky Network offers a free printable Dark Sky Wheel, featuring the stars of Orion on one side and Scorpius on the other, here: <https://bit.ly/darkskywheel>. Each wheel contains six "wedges" showing the stars of the constellation, limited from 1-6 magnitude. Find the wedge containing the faintest stars you can see from your area; you now know your limiting magnitude! For maximum accuracy, use the wheel when the constellation is high in the sky well after sunset. Compare the difference when the Moon is at full phase, versus new. Before you start, let your eyes adjust for twenty minutes to ensure your night vision is at its best. A red light can help preserve your night vision while comparing stars in the printout.

Did you have fun? Contribute to science with monthly observing programs from Globe at Night's website, <https://www.globeatnight.org/>, and check out the latest NASA's science on the stars you can - and can't - see <https://www.nasa.gov/>

Member Images

Jupiter-Saturn Conjunction - Dec 2020 - Jeff Johnson



TOA-130F with T3i DSLR attached on Tak EM200 mount

Another Perspective of the Jupiter-Saturn Conjunction - Ed Montes



Nightly Composite of Convergence/Divergence - Moon added for reference
Close inspection reveals Jupiter's Galilean moons

Sharpless 2-188 (Simeis 22) in Cassiopeia - John Kutney



APM 152 Refractor/ QSI 6120/ RGB 4x2 min / NB 12 x 10min
CCDstack/ SGP/ PS/ Las Cruces

Sharpless 2-254 in Orion - John Kutney



LRGB plus NB with an HSO setup - Las Cruces NM

B33-Sigma Region in Orion - John Love



ASI-533MCP / SS15028HNT combo - Rusty's (Rodeo NM) - Oct 2020



John Love - Jolly ol' Elf