

The High Desert Observer

June 2021

This Month's Meeting - June 25, 2021

Meeting will be virtual via Zoom®, to be held on Friday, June 25th at 7 p.m.

Speaker for the Month - Vic Maris
The Makings of a World-Class Refractor Telescope as Told by the Maker



Vic Maris is President of Stellarvue Inc. and has had a lifelong interest in astronomy and astronomical telescopes since he made his first 6" reflector back in 1967. Vic spent 30 years working for California State Parks as a park ranger and superintendent. As he

neared retirement, he began teaching astronomy in Sacramento and his students urged him to start a telescope company. So he did and founded Stellarvue, a high end refractor telescope company in 1998. As the company grew, Vic began making optics for defense and space science. The company expanded its shops and invested in state of the art equipment. Stellarvue is now making some of the sharpest telescope optics on the planet. Vic's talk will include a brief history of the telescope. He will show how refractors have developed over time and what makes a truly world class refractor. Bring your questions and when his talk is over he will be happy to answer them for you.



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Coming Events

Monthly, on an evening close to the first-quarter moon, ASLC hosts a public "Sidewalk Astronomy" observing session in Las Cruces. We also hold special evening sessions at Tombaugh Observatory on the NMSU campus. Also monthly, the ASLC welcomes public viewing at the Leasburg Dam State Park Observatory 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.

Covid-19 Update: As we are now re-establishing our public observing programs. Keep updated on the dates, times, and locations through our website at www.aslc-nm.org.

From the Desk of Ed Montes ASLC President

This month's message is about acknowledgement.

First, I want to acknowledge all of the time, effort, creativity, and attention that Chuck Sterling has brought to the role of Outreach Chair. This is a challenging position because it requires a great deal of juggling of time, resource, people, and expectations. Chuck



has managed all of this in an exemplary fashion and in doing so has brought joy and the stars to lots of people, especially school children. Personally, I've enjoyed setting up my scope next to his, each of us finding different targets and having people ooh and aah at whatever we've targeted – Saturn, Jupiter, the Pleiades, you name it. And then, when we hit a lull, just shooting the breeze and hearing about his motorbiking days. Before I get too wistful, I'm acknowledging all this because Chuck has decided that it's time to give up the excitement of the job and let someone else pick up the duties. Chuck, you've earned it. Thanks so much for all you brought to it, and I hope you'll still come out to some events!

Next, I want to acknowledge Stephen Wood. He has been a mainstay in our outreach program. It seems every time I'm at some event, he's there too. And I know that he's at most (if not all) of the events that I don't have the chance to participate in. He was a driving force in identifying and staffing the replacement location – PanAm Plaza Shopping Center -- for

Moongaze after International Delights closed and the lights made that site prohibitively bright. He has generously accepted the role that Chuck is vacating. Stephen, thanks for stepping up and taking over this challenging, and I hope, rewarding job; you have our complete support.

Finally, I'd like to acknowledge our founders. The club was founded 70 years ago in 1951 by Clyde Tombaugh, Walter Haas, Cecil Post, et. al. I know that they were all contributors to the astronomical community, and that each, in their own way, was significant to the formation and perpetuation of the ASLC. What I would like to do is create a designation for our monthly presentations. Through 2022, I suggest calling them, collectively, the "Clyde Tombaugh Lecture Series". The following year we could have the "Walter Haas Lecture Series – 2023", etc. I believe this attaches a certain cachet to being a presenter to the club. It will also help me when I call a prospective speaker. Asking whether they would like to deliver a talk in the "Tombaugh Lecture Series" might carry a bit more weight than just saying we need a speaker for our meeting next month. I'd like to have the backing of the club on this. We'll bring this up for discussion in our next meeting.

Speaking of speakers, I'm excited about our next presenter, Vic Maris. Vic is the owner and founder of Stellarvue Telescopes. He makes excellent instruments. I know Rich Richins has a 115mm apochromatic refractor from Stellarvue. The little 50mm apo that I bring to outreach events is a Stellarvue. I think Vic will bring us some interesting information in an entertaining fashion.

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 \$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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Vice President:	Tim Kostelecky	president@aslc-nm.org
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**Featured Article:****Observe the Milky Way and Great Rift**

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

Summer skies bring glorious views of our own Milky Way galaxy to observers blessed with dark skies. For many city dwellers, their first sight of the Milky Way comes during trips to rural areas - so if you are traveling away from city lights, do yourself a favor and look up!

To observe the Milky Way, you need clear, dark skies, and enough time to adapt your eyes to the dark. Photos of the Milky Way are breathtaking, but they usually show far more detail and color than



the human eye can see – that’s the beauty and quietly deceptive nature of long exposure photography. For Northern Hemisphere observers, the most prominent portion of the Milky Way rises in the southeast as marked by the constellations Scorpius and Sagittarius.

Take note that, even in dark skies, the Milky Way isn’t easily visible until it rises a bit above the horizon and the thick, turbulent air which obscures the view. The Milky Way is huge, but is also rather faint, and our eyes need time to truly adjust to the dark and see it in any detail. Try not to check your phone while you wait, as its light will reset your night vision.

It’s best to attempt to view the Milky Way when the Moon is at a new or crescent phase; you don’t want the Moon’s brilliant light washing out any potential views, especially since a full Moon is up all night.

Keeping your eyes dark adapted is especially important if you want to not only see the haze of the Milky Way, but also the dark lane cutting into that haze, stretching from the Summer Triangle to Sagittarius. This dark detail is known as the Great Rift, and is seen more readily in very dark skies, especially dark, dry skies found in high desert regions.

What exactly is the Great Rift? You are looking at massive clouds of galactic dust lying between Earth and the interior of the Milky Way. Other “dark nebulae” of cosmic clouds pepper the Milky Way, including the famed Coalsack, found in the Southern Hemisphere constellation of Crux. Many cultures celebrate these dark clouds in their traditional stories along with the constellations and Milky Way.

Where exactly is our solar system within the Milky Way? Is there a way to get a sense of scale? The “Our Place in Our Galaxy” activity can help you do just that, with only birdseed, a coin, and your imagination: bit.ly/galaxyplace. You can also discover the amazing science NASA is doing to understand our galaxy – and our place in it - at [nasa.gov](https://www.nasa.gov).

If the Milky Way was shrunk down to the size of North America, our entire Solar System would be about the size of a quarter. At that scale, the North Star, Polaris - which is about 433 light years distant from us - would be 11 miles away! Find more ways to visualize these immense sizes with the Our Place in Our Galaxy activity: bit.ly/galaxyplace.



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 Article: Galaxy Challenge at Rusty's

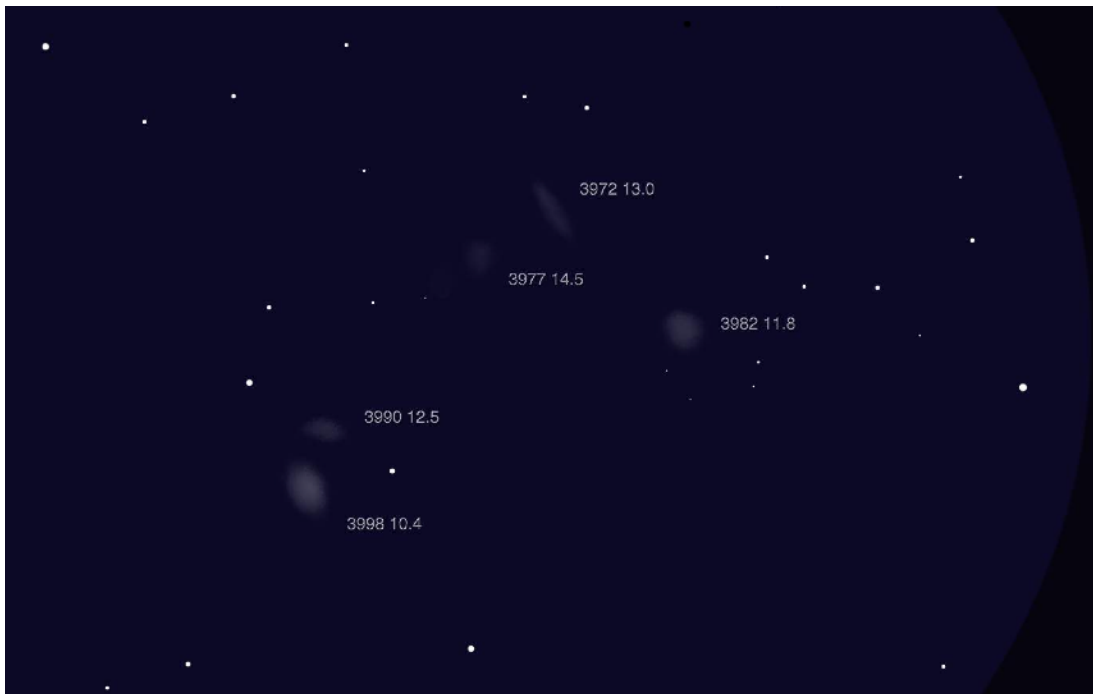
By Tim Kostelecky

There's no doubt that when striving for the opportunity to observe very faint "dim fuzzies" in a dark sky, aperture is king. But big scopes can be a burden, so for many observers there's a diminishing return on the usefulness of a scope that is not easily transportable and a pain to set up - not to mention extra stress on ones back and pocketbook.

One alternative to increased aperture that's often overlooked is that of contrast. Big scopes can bring in a lot of photons, but if your eye can't distinguish a dim galaxy from its surroundings due to less than optimal contrast, it's light wasted. It is in this vein that a few years ago I made a decision to put forth considerable effort to optimize the contrast in my beloved 8-inch F6 Newtonian. It now has little remaining of the original Meade 826 model I bought back in 1980.

Knowing that premium optics would help, I had a discussion with Carl Zambuto, a well-known provider of premium mirrors who touts the effectiveness of his ultra-smooth surfaces that reduce light-scattering and thus increase contrast. I expected that type of sales pitch from him, but nonetheless, his argument was compelling and he believed that an optimized 8-inch Newtonian could out-perform apertures of 10 inches and perhaps match even 12 inchers from popular telescope manufacturers. So I pulled the trigger and installed all new internal components and superior optics into my 8-inch newt, including of course a Zambuto mirror, as well as an upgraded focuser, mirror cell and fan, internal tube flocking and even a light baffle at the bottom end of the tube to protect from ground reflections.

I figured that the dark and transparent sky in early May at Rusty's RV Ranch near Rodeo, NM would be a good opportunity to test the scope's capabilities and my ability to discern faint galaxies beyond normal expectations. Was I a pushover for sales hyperbole or can my *little* scope live up to the hype?



Ursa Major Galaxy Quintet with NGC Designations and Magnitudes

For the test, I picked a quintuplet of galaxies in Ursa Major ranging from 10.4 to 14.5 magnitude visible in the same field of view. Though I knew it would be a real challenge to detect the 14.5 galaxy, I put it on the upper end of my magnitude bracket. It would certainly be a stretch with an 8" objective with an extended object such as a galaxy. Under optimum sky conditions, seeing stars in that range is possible, but galaxies...dream on.

However, I became optimistic when I found I could observe the 13.0 magnitude NGC 3972 without much effort using averted vision. With my experience digging deep for variable stars at the limit of visibility, I have a trained eye and have developed a pretty good knack at being able to concentrate on an object using averted vision. Using this technique beyond quick glances is not easy though...the brain doesn't like it and rails against the effort.

So, doing my best to adhere to renowned visual astronomer Stephen James O'Meara's recommendations for extreme dim-fuzzy viewing, I shut off my red light at my sketching stand, rested my eyes for a bit, took a few deep breaths, and having the advantage of knowing exactly where NGC 3977 was in the star field, I gave it a go.

Bummer - no luck the first go-round. So I rested a while longer and tried again, this time giving the telescope tube a few taps to see if the jiggle would

help. Then, just momentarily, I thought I got a glimpse! But it was gone just as quickly as it seemed to have appeared. Was it my imagination? Now the challenge was to replicate the effort and be convinced that I did indeed see it. Ok. Another go. Rest, deep breaths, averted focus, concentrate, tap the tube. Then...Eureka! There it was again, just a transitory ghostly glimpse with a slight tap of the tube...then as before, gone. But now I'm sure what I saw was real.

I recorded the event with a sketch, that gives a reasonable representation of what I saw through the eyepiece. So if you examine my sketch of the quint galaxies, you will notice that NGC 3977 is tough to pick up, but I believe with a bit of effort on your part, you too can catch this elusive galaxy. Just take a couple of deep breaths, concentrate... and give your laptop screen a little tap. You'll see it.

Minutes of May 2021 Meeting

John McCullough - Secretary

Edward Montes, President, Astronomical Society of Las Cruces (ASLC, the Society), called the May 2021 meeting to order at 7:05 pm on 28 May 2021. He welcomed attendees to tonight's meeting via ZOOM. Twenty-four (24) attendees were signed in for the start of the meeting.

Ed welcomed the group and noted that minutes from the April 2021 meeting (thanks to John McCullough, Secretary) were published in the Society newsletter, the High Desert Observer

(HDO), (thanks to Tim Kostecky, HDO editor). Ed asked if there were any required additions, deletions, or corrections to the minutes as submitted. None being offered, a motion to accept the April 2021 minutes as published was made and seconded. There being no objections, the motion was passed.

Ed introduced tonight's speaker, Scott Ostrem, P.E., Director of Spaceships Operations Engineering, Virgin Galactic.

Presentation:

Scott's presentation was "The Journey to Space aboard a Virgin Galactic Spaceflight System". Scott has been at Virgin Galactic 10 years. It has been an amazing journey! Virgin Galactic is in the final

phase of flight testing in preparation for commercial service. Scott told the story of this journey and explained the exciting engineering behind the World's first commercial passenger space aircraft. Scott is experienced in the engineering design, analysis, testing, and certification of composite vehicle structures and integrated systems. He has 33 years of aerospace engineering experience working at GE Astro Space, McDonnell Douglas, Boeing, NORDAM, The Spaceship Company, and Virgin Galactic.

Officer/Committee Reports:

Treasurer:

Steve Barkes provided a brief financial status report on behalf of the Treasurer, Trish Conley. The Society had income of \$358.02 in April. The Society had a positive balance for the current fiscal year to date of \$1174.93.

Outreach:

Chuck Sterling, program coordinator, was not on tonight's ZOOM. Ed Montes expanded on his recent contact from State Parks personnel at Leasburg Dam State Park (LDSP) regarding resuming observing activities at the park. Rich Richins and Tim Kostelecky would like to perform a trial run on 05 June limited to LDSP campers. They might not use the 16" telescope for this event but would utilize the smaller telescopes. They will need a key to the Observatory and wondered if the alarm is engaged.

There have been no updates from Chuck regarding new star party requests. Steve Wood noted that the Society has lost both Jerry McMahan and Howard Brewington for Moon Gaze support, so member participation needs a boost. Steve is ready to resume Moon Gaze.

Loaner Telescope:

Tim Kostelecky, program coordinator, continues to develop the post-COVID program. He has an 8" C8 and a 4" Celestron back in the program but is working to get both to operational status. He would like to establish a group of ASLC members

to service/support the Loaner program and help new users. Steve Barkes suggested having a set-up session at Tim's to familiarize new users with the telescope they are checking out; Tim was amenable to the concept. Jerry Gaber suggested using Moon Gaze or an LDSP event as opportunities for new users to "work the kinks out".

The Observatory at Leasburg Dam State Park (LDSP):

Upgrades: Jerry Gaber took a Wi-Fi bridge to the park but the unit was damaged. He will repeat the effort when new Cat 6/8 cable is run at the park. ASLC members cannot do the physical work themselves because of certification issues with the state. The Upgrades Committee (Dave Doctor, Steve Barkes, Jerry Gaber) continues to refine the list of necessary computer equipment (primarily laptops) and software for the Observatory.

In-Person Meetings:

Ed hopes to resume in-person meetings of the Society at Good Samaritan Village in the next few months. A new contact person at Good Samaritan is necessary because of personnel changes at the facility.

Old Business:

No additional old business was considered.

New Business:

Steve Barkes announced his retirement effective today. Congratulations!

No additional new business was offered for consideration.

The May 2021 meeting was adjourned at 8:55 pm.

-Respectfully submitted:
John McCullough
Secretary, ASLC

Member Images

Galaxy NGC 3953 - Jeff Johnson - Las Cruces NM



Tak TOA-130F, QSI 690wsg camera, Tak EM200 mount

Galaxies NGC 4631/4656 - Tim Kostelecky - Digitized Sketch - Rodeo NM



Sketched, pencil on white paper - Traced and digitized using Corel Painter