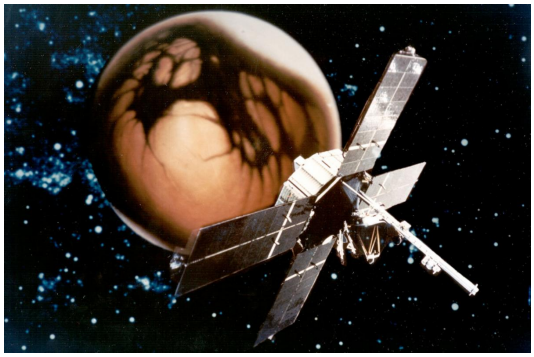
NEVADA COUNTY ASTRONOMERS

Newsletter for November 2026

November Presentation: How Mariner 4 Fundamentally Changed our View of Mars



In the mid-1960's the space race was on. While the main event was getting humans to the moon, in another arena there was contest to see who would be first to get a spacecraft to another planet. Both sides were banging away. On November 28, 1964, the US launched Mariner 4 and it made it. Not only did it make it, it fundamentally changed humankind's impression of the red planet. This talk will give the history of that mission.

The presentation will be given by Roger Bourke (pronounced "Burk"). Roger was educated at Stanford University where he received BS, MS, and PhD degrees in 1960, '61, and '64, respectively. The last was in Aeronautics and Astronautics. Upon graduation he joined the Caltech Jet Propulsion Lab in the early years of planetary exploration. At JPL he was involved in designing several planetary missions including the first orbiter of another planet, the first multi-planet mission, and the Voyager mission to the four outer planets, which was launched in 1977 and is still returning data from well beyond the solar system. Prior to his retirement from JPL in 2000, he was on the team planning the international Mars exploration program that has since resulted in multiple orbiters, landers and rovers on the surface.

He now splits his time between La Cañada, California, and Alta, Utah, where he was elected mayor in 2021. He continues to enjoy mountain sports including skiing in winter and hiking in summer. He is married to Margaret (nee Dunk), has three children and four grandchildren.

General Meeting Wednesday, November 4, 7 pm

Join In person:

Gene Albaugh Community Room, Madelyn Helling Library
980 Helling Way, Nevada City
Google Maps location

Members please look to your email copy of the Newsletter for the keys to the Zoom conference simulcast, or contact a Board member.

Dinner before the meeting, 5 pm:

Asian Garden
2074 Nevada City Hwy, Grass Valley
Google Maps location

Members please watch the Groups.io email list to RSVP

Image credit: NASA via Roger Launius

A universe of possibilities: Nevada County Library's Recreation Collection is out of this world

The article below ran in *The Union* on October 20, 2026 (link to original article). I am sharing it here for those who do not receive the local newspaper. Additionally, not everything I explained to the reporter was included in the article, so I want to recognize and thank a few folks here. We all stand on the shoulders of those who came before, and the telescope program at the Nevada County Library would not exist without their contributions.

- **Bill Thomas**, who kicked off the library telescope program at the Nevada County Library by donating a telescope that he made a tabletop mount for. Bill also recently made another tabletop mount for a telescope that was donated to the club, and which we have now donated to the library.
- **John Griffin** and **Paul Bacon**, who provided maintenance support for these telescopes for many years.
- The Nevada County Superintendent of Schools office, who donated funds to help the library acquire more telescopes.

- The national **Library Telescope Program**, which actively supports and encourages programs like this. (I have also been actively volunteering with this program to broaden their offerings.) Learn more about this nonprofit organization at https://librarytelescope.org/.

If you would like to help with this program, with either maintaining the telescope or outreach programs to library patrons, please let me know!

Rod Brown

Entire galaxies are waiting to be discovered overhead, but Nevada County residents don't have to look far or spend hundreds of dollars to see them. Through the Nevada County Library's telescope lending program, locals can borrow equipment for free, allowing aspiring astronomers and amateur stargazers alike to explore the night sky without committing to an expensive new hobby. The program is part of the library's broader "Recreation Collection," offering cardholders the ability to rent items beyond traditional books and media.

Beyond the bookshelves



Nevada County Adult Services Librarian Ian Boalt manages the Recreation Collection and said the idea behind acquiring and lending the items is simple: allowing people to try something new without financial barriers. A telescope, for instance, can cost hundreds of dollars, often hindering space enthusiasts from learning and pursuing the hobby long-term.

"I think the big idea is that a library not only brings people a certain kind of equality in knowledge, but we're also able to provide people some degree of economic equality," Boalt said. Each telescope also comes with instructional materials, constellation guides, and accessories to help borrowers get started. Local astronomy hobbyists also help maintain the equipment and select telescope models that are approachable for beginners. "There are a lot [of telescopes] out there that I don't think are very user-friendly for beginners," Boalt said. "So we definitely try to make sure we've got a very easy entry point for folks." Boalt said the ability to circulate unconventional items amongst patrons is part of a broader movement known as the "Library of Things" (LOT). The LOT movement began gaining traction in the 2010s and is defined as an initiative in which

public libraries, non-profits, and community hubs lend physical goods such as tools, appliances, instruments, and outdoor gear rather than traditional books.

“We’re always trying to push the boundaries of what’s possible,” Boalt said.

While the telescope program predates the Recreation Collection, which launched around 2022, the broader collection has expanded to include items such as retro board games, musical instruments, and a wide variety of outdoor equipment, ranging from metal detectors and snowshoes to state park passes and even a set of curated ghost hunting kits — just in time for spooky season. Boalt says additional free programs offered at the library have also come about with the help of numerous local partnerships, including a collaboration with the Master Gardeners of Nevada County to provide a “seed library” where patrons can take up to five free packets of seeds per day to plant.



A partnership written in the stars

The telescope program began with a generous donation from a member of the Nevada County Astronomers Club who won a telescope he didn’t need, according to Rod Brown, the club’s president. To make the telescope more user-friendly, the member modified the telescope’s base to make it easier to set up on a tabletop before donating it to the library. The club has worked to donate additional telescopes over the years, while other equipment has been supported by funding from the Nevada County Superintendent of Schools Office and even the National Library Telescope Program.

Brown, who has been interested in astronomy and space since childhood, began pursuing the hobby more seriously after buying a friend’s unwanted telescope. “One thing led to another, and I got really interested in it, and I started enjoying going out and observing the night sky,” he said. That interest eventually led Brown to Nevada County Astronomers, where he has been a member for about three years. He now serves as club president and helps maintain the telescope inventory. While Boalt handles the library’s administrative and grant-related work for obtaining the telescopes, Brown said he’s “always been a bit of a tinkerer,” providing assistance to the program that includes cleaning and repairing the telescopes, determining which accessories are needed, and preparing instructional materials for patrons.

The collaboration with Nevada County Astronomers has also helped obtain equipment through unique opportunities with telescope manufacturers. Boalt said larger-scale

companies such as Celestron have offered telescopes they no longer sell, but believe could still benefit the public through the lending system. One of the newest additions to the library's collection is an electronic telescope with a built-in camera that connects to a smartphone, allowing users to view objects that may be too faint to see with the naked eye. The program has also experienced immense growth since its establishment, with Boalt estimating the library's telescopes have been circulated approximately 1,000 times since 2019. Boalt added that the demand for the telescopes can be especially high at larger branches, while smaller branches in the system may have shorter waits as the library continues to add more equipment. Nevada County Library patrons can check out telescopes for a maximum of 5 days, while members of the Nevada County Astronomers can check out telescopes through the club for up to a year, according to Brown.

The sky's (not) the limit



For Brown, the telescope lending program's value doesn't just lie in giving residents access to the equipment, but also in helping them discover something they might not otherwise have thought to experience. "I think it gets people out under the night sky and appreciating what's up there in the heavens and things they wouldn't be able to see or know about otherwise," he said. Brown added that some residents who borrowed telescopes through the library later learned about Nevada County Astronomers and attended the club's regular observing sessions, helping introduce a wider collection of people to the joy of exploring the cosmos. Founded around 2007, the Nevada County Astronomers host monthly meetings at the Madelyn Helling Library, generally on the first Wednesday of the month at 7 p.m., which typically feature presentations from local speakers and astronomy experts. The club also organizes regular outdoor "star parties" about once a month with varied dates and times depending on the moon and viewing conditions. Membership fees are $20, according to Brown.

As for the best spots to view the stars, planets, and everything in between? Brown advises starting simple. "I always encourage people to just go out in their backyard because it's the easiest thing," he said. "If you have to go out somewhere, you always forget something." Brown recommends starting with the moon, which offers an accessible, easy-to-spot first target for telescope novices. "Binoculars are also a great way to get started," Brown added. Nevada County's high elevation and low light pollution ordinances also make it a prime location for exploring the stars close to home. For some borrowers, that first glimpse may be the start of a deeper interest in what lies beyond, and a connection with others who share it.

More information about the Nevada County Library's Recreation Collection is available at nevadacountyca.gov/3602/Recreation-Collection. For more on renting a telescope through the program, search "telescope" in the library catalog at nevadacountyca.gov/4149/Library. To learn more about the Nevada County Astronomers, visit ncastronomers.org.

To contact Staff Writer Natalie Hays, email nhays@theunion.com.

Natalie Hays | Staff Writer

Image credits: Ian Boalt/Nevada County Library/The Union

Links to monthly observing guides and more

- **Night Sky Network November's Night Sky Notes: Light-Day Away** ***(New each month!)***
- Sky & Telescope magazine's current observing information
- Astronomical League's current observing guides
- Sky Tour Astronomy podcast of celestial events this month
- High Point Scientific YouTube playlist of What's in the Sky This Month
- Actual Astronomy podcast, including monthly Observer's Calendar
- Nevada County Astronomers website
- Nevada County Astronomers YouTube channel

Telescopes available to borrow for free

The club has several telescopes and a star tracker available. Any one of them could be yours to borrow for a year for free! Due to the many donations we have received recently, we are also ready to sell some of these telescopes. We are offering them first to members at a substantial discount from what they could be purchased elsewhere before advertising them to others. Please email club president Rod Brown at rodney.et.brown@gmail.com to learn more.

Sky-Watcher Star Adventurer tracking mount



Use this mount with your own camera, tripod, and remote shutter release to take tracked exposures of the night sky. This is a great way to try your hand at making your own night landscape shots.



Meade ETX-125EC 5-inch f/15 Maksutov-Cassegrain telescope

The bigger brother of the ETX-90EC This telescope is great for looking at even more objects. It includes an electronic hand controller and motorized mount, allowing you to quickly go to any object in the telescope catalog. A tripod, storage case, and eyepieces are also included.



Celestron NexStar 8SE telescope

This computer-controlled telescope is a great all-rounder, capable of seeing many deep-sky objects but still very portable and relatively easy to use. The loan includes eyepieces, filters, and a 2x Barlow.

Celestron Super C8 on German equatorial mount



This telescope is capable of seeing many deep-sky objects, and the equatorial mount makes it useful for exploring astrophotography. It is a bit more complex to used, but it is quite capable if you take the time to learn how to use it. The loan includes eyepieces, filters, and a 2x Barlow.



Custom 10-inch approx. f/5 Dobsonian telescope

This telescope is easy to use and capable of observing all of the Messier catalog objects. Recently donated to the club, this scope is well-made, including several good eyepieces, a 2x Barlow, a Telrad reflex finder, and color filters.



Custom 10-inch f/5.68 Dobsonian telescope

This telescope is easy to use and capable of observing all of the Messier catalog objects. Donated by club member Tim Hogan and recently completed by Lonnie Robinson, this scope is quite sharp and fully equipped, including eyepieces, a 2x Barlow, a Rigel QuikFinder, and color and moon filters.

Get your Nevada County Astronomers merch



Show your love of the night sky and support for our club with a t-shirt, mug, apron, hat, or sticker with the club logo. A wide variety of items, styles, and colors are available. All items are printed to order and shipped directly to you. Visit our store to browse and get something just for you!

Miss a meeting? Watch a past presentation on YouTube!

Many of our past presentations are available to watch on the Nevada County Astronomers YouTube channel. Here are a few suggestions:

- Red Star Over the Moon: Apollo's Soviet Competition
- Quick Start Guide to Observing the Night Sky
- Expanding Our View: The Nancy Grace Roman Telescope

Questions or comments? Send an email to club president Rod Brown at rodney.et.brown@gmail.com.