

General information and contacts for the Orange County Astronomers club can be found at www.ocastronomers.org

March 2026

Free to members, subscriptions \$12 for 12 issues

Volume 53, Number 3



This picture has 2 globular clusters – M4 towards the top and NGC6144 in the lower left. It was captured by Gary Shones and Alan Smallbone from our Anza site using a Takahashi FSQ106 refractor with SBIG ST10XME camera in April 2004.

Upcoming Events - free and open to the public

Beginner's class	Friday, 3 April at 7:00 to 9:00 PM ONLINE This is the 2nd session of the Beginners Astronomy Class. It covers the different types of equipment used to observe the night sky, including telescopes, mounts, eyepieces, filters, and advantages and disadvantages of different options.
Club Meeting 	Friday, 13 March at 7:30 to 9:30 PM ONLINE and IN PERSON "What's Up": Michael Beckage from OCA IN PERSON Main speaker: Dr. Elena Murchikova from Northwestern University IN PERSON whose talk will be "The Milky Way's Central Black Hole: Lessons on accretion physics"
Astro-Physics SIG	Friday, 20 March, at 7:00 PM to 9 PM IN PERSON Orange Coast College, Building 40, Astronomy House
Star Parties	Saturday, 14 March and 21 March at the OCA Anza site. 14 March at Irvine site – tentatively. See more in the President's Message

The monthly club meeting is viewable in progress on Zoom and our social media platforms. The recording is available on these platforms after the meeting is over.

<https://www.facebook.com/OrangeCountyAstronomers>
<https://www.youtube.com/@ocastronomers>

Please consult the calendar on the OCA website to RSVP online meetings (required)

President's Message

By Barbara Toy

I'm not sure where this year is going, temperature-wise. As I write this in the last days of February, when other parts of the country have been buried in snow, we've been dealing with temperatures in the 80s and 90s (Fahrenheit), and not because of Santa Ana wind conditions. It's looking like we may be in for a long, hot summer... From the perspective of viewing or imaging the night sky, hot weather doesn't necessarily translate to clear skies, but the chances should be better than with colder, damper conditions.

If this unseasonably warm, dry weather continues into March, we may have two clear and reasonably comfortable star party nights at Anza, on the 14th and the 21st. As I write this, we're still working on getting the final permit approvals from OC Parks for the Orange County Star Parties, and we are hoping that the first of those in our new location will be on March 14. Alan Smallbone has been sending updates out on the club's email groups, and we plan to put a notice on the club's website when the permit process is complete and we can go ahead with the star party. So, if you are in the mood for a star party and can't go out to Anza on March 14, we'll hope to see you at the OC Star Party instead!

WiFi Password Change

Periodically we have to change the password for our WiFi at Anza and we are doing so this month. The new password will be effective as of the Anza Star Party on March 14. If you have paid the annual fee to use the WiFi at Anza, please get the new password from Charlie Oostdyk before you next go out there. Please don't share it with anyone else – the reason we have the fee is so those who use the service cover the cost of having Internet service at Anza rather than having the general membership pay for it, and it is unfair to those who are paying for the service to have others who are not paying for it able to access it.

If You Are Interested in Doing the 2026 Messier Marathon...

...and if information on it hasn't made it to the home page of our website yet, just type "Messier Marathon" in the search window on the home page and that will take you to information that was posted for the 2025 Marathon – it really hasn't changed. There are links in the article titled "Messier Marathon 2025 – Updated w/ Participation Form" to both an information page about the Messier Marathon in general and the form with all of the Messier objects listed in a recommended search order to assist both in organizing your search and keeping track of which objects you found. If you choose to take on the challenge, I hope you have fun with it and that you see some objects that maybe you hadn't paid much attention to in the past but that you'll want to return to in future viewing sessions.

Mauna Kea Musings

For most astronomers, when they think of Hawaii, they think of Mauna Kea, one of the best sites world-wide for astronomical observation. So, when I went down a recent YouTube rabbit hole that started with Hawaiian hula, it wasn't long before I was looking at information on Mauna Kea, specifically the 2019 occupation of Mauna Kea by native Hawaiians protesting the building of more observatories on the mountain. At the time it was characterized as a battle between native beliefs and astronomy, but protesters themselves indicated their position was more nuanced, and included concerns about the effects of construction (particularly what would be needed for the proposed Thirty Meter Telescope) on the aquifers fed by Mauna Kea, and on native vegetation and wildlife. From other information I found, NASA ultimately had to provide an Environmental Impact Report that confirmed that many of these concerns were justified.

There's a lot of information on the Internet about Mauna Kea, including a Wikipedia article noting there are currently 13 large telescopes operating there (apparently at different points a lot more were planned), and a helpful timeline from Ka Wai Ola (<https://kawaiola.news/aina/mauna-kea-timeline/>) summarizing its history. Mauna Kea was in the crown lands taken by the US when it annexed Hawaii in 1898, which were turned over to the new state government

when Hawaii became a state in 1959 to be held in public trust. The summit was leased to the University of Hawaii; that lease ends on 12/31/2033, as do the subleases for the various telescopes, which were built by arrangement with the university (this was extended to 2042, but that was apparently reversed). There were a number of problems identified with the university's management of the mountain, and several lawsuits and actions by the legislature in response. Now, management is to go fully to the Mauna Kea Stewardship and Oversight Authority in 2028 by legislative mandate; the Authority includes astronomers, native Hawaiians and other stakeholders. What will happen with the leases for the observatories is uncertain, but it seems likely that extensions will be worked out. Whether the Thirty Meter Telescope will ever be built on Mauna Kea is less certain.

That early narrative, that the problem on Mauna Kea was native beliefs vs astronomy, turns out to be a lot more complicated. On the bright side, it seems the parties are more likely to find middle ground working on the individual issues contributing to that complexity than they would if the issue really was a stark divide between native beliefs and astronomy. Per one anecdote about relations in the new Authority, when the astronomers and the native Hawaiians in the group started discussing things face to face, they found they had more interests in common than they expected, and both sides felt that tourists on the mountain were a big problem. No details were given as to what exactly made them a problem, and I hope that they don't decide to restrict tourist access too much, as most of us who would dearly love to see Mauna Kea for ourselves could only do so as tourists.

© Barbara Toy, February 2026

Help Wanted

- OCA representative to the Western Amateur Astronomers
- Anza Maintenance Coordinator
- Orange County Star Party assistants

Both you and the club can benefit with your participation. For the WAA coordinator position, please send Barbara an email and give her a chance to tell you about it.

For the Anza Maintenance coordinator and Orange County Star Party assistants, Alan Smallbone at alan@ocastronomers.org is the person to contact. He can describe the jobs.

AstroSpace Update

March 2026

Astronomy and space news summarized by Don Lynn from NASA and other sources

Early Galaxy Collisions – Infrared images made with the James Webb Space Telescope (JWST) showed a tightly-packed collision of at least 5 galaxies. Because of their extreme distance, we are seeing the collision as it appeared when the light left there when the Universe was only about 6% of its current age. The collision is scattering heavier elements such as oxygen well beyond the galaxies themselves. Computer simulations of the early Universe don't show complex galaxy collisions and spread of heavier elements becoming common until billions of years later. This observation shows that the simulations need adjustment.

Low-surface-brightness galaxies are very difficult to find. They only show up in images taken with long exposures through large telescopes. A team of astronomers noted that such galaxies often have a grouping of globular star clusters about them, which are actually easier to image. So, they made a search for groups of globular star clusters in order to find low-surface-brightness galaxies among them. The low-surface-brightness galaxies were found or confirmed using the Hubble and Euclid space telescopes and the Subaru Telescope in Hawaii. The search turned up 10 low-surface-brightness galaxies that were already known and also two new ones. One of those galaxies, known as CDG-2, was found to have 99% of its mass in the form of dark matter, and only 1% of ordinary matter, including its sparse scattering of stars. This makes it one of the most dark-matter-dominated galaxies known. It is believed that encounters with nearby galaxies gravitationally stripped the galaxy of most of its hydrogen gas, so there was little left with which to form stars.

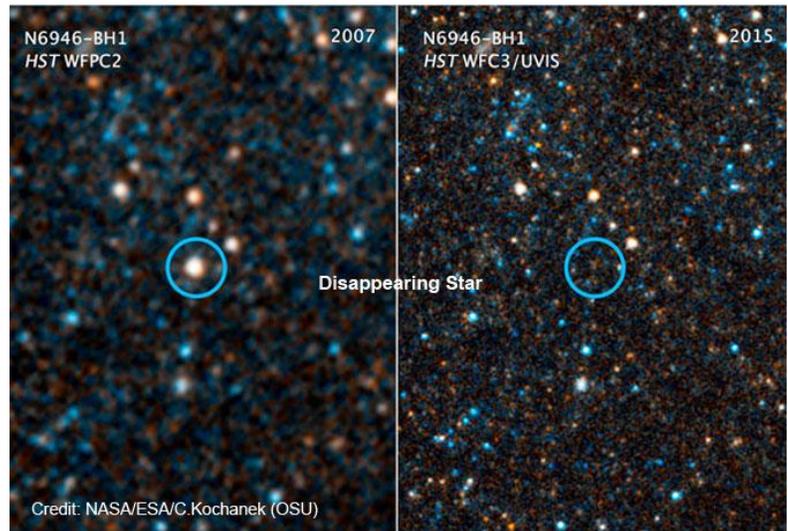
LRDs – Among the objects seen in many JWST images of the distant (and therefore early) Universe are small objects that have become known as Little Red Dots, or LRDs. Many astronomers believed that the LRDs are tiny galaxies containing very active star-forming regions. Others proposed that they are actively feeding supermassive black holes. But it was objected that supermassive black holes could not grow from stellar-sized black holes this early. A new paper claims that LRDs are actively feeding supermassive black holes formed by direct gravitational collapse of huge hydrogen gas clouds rather than by growth from small black holes. Simulations of this process produce the characteristics seen in observations of the LRDs.

Jellyfish Galaxy – JWST discovered that the galaxy known as COSMOS2020-635829 is a jellyfish galaxy. There are several others known, but what makes this one different is that it was present 8.5 billion years ago, the earliest that we know of. What makes a galaxy jellyfish is when it travels speedily through a galaxy cluster that has substantial gas between galaxies. This strips material off the galaxy and shoves it into tentacle-like streams behind it. The tentacles develop knots of star formation, giving them bright lumps. This discovery shows that the conditions to produce jellyfish tentacles behind a galaxy existed at least 8.5 billion years ago.



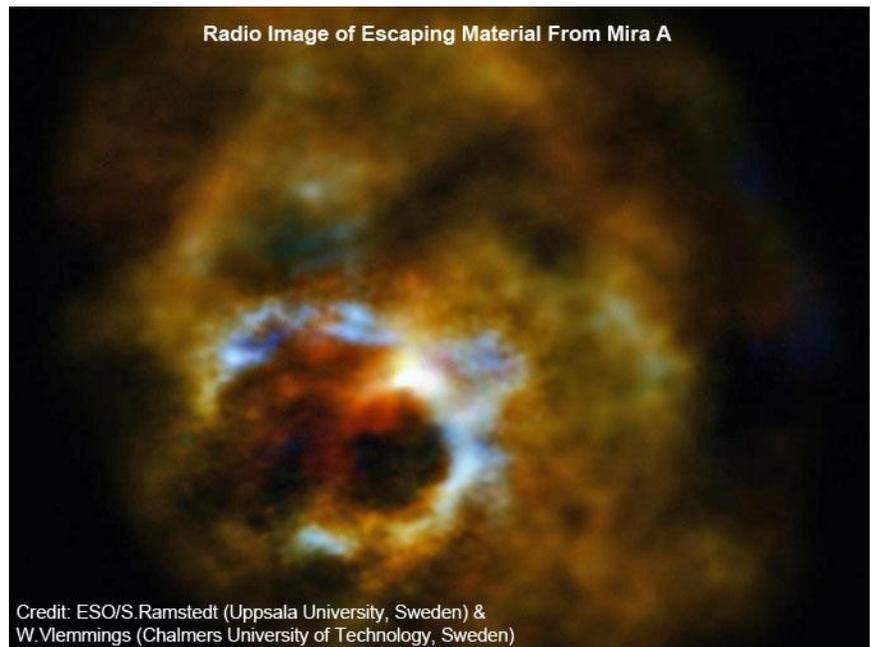
Magnetic Field Mapped – Astronomers using a new radiotelescope in Canada have mapped the magnetic field of the Milky Way for the first time. Simulations of the Milky Way evolution show that without this magnetic field the galaxy would eventually collapse due to gravity. A surprise found in the new magnetic map is that the magnetic field in the Sagittarius Arm of the Milky Way is reversed from the direction of the rest of the galaxy.

Star Disappears – Astronomers have found a star in the nearby Andromeda Galaxy that disappeared entirely in visible light, although a very faint infrared glow remains. Fortunately there are years of archived images of the star, made by the NEOWISE infrared space telescope, to confirm this. The explanation that best fits the observations is that the star collapsed into a black hole, but not by the usual path of going through a supernova explosion. This is one of only two instances ever that a probable collapse without supernova has been well observed. More instances of this need to be observed to eliminate other possible explanations for the disappearance and to work out exactly how a collapse could occur without a supernova explosion.



Star Faded – In 2024, a star known as ASASSN-24fw faded in brightness for about 9 months, much longer than previous fading events of other stars. A team of researchers has come up with an explanation. A brown dwarf star that has a Saturn-like ring system around it orbited in front of the primary star, blocking much of its light. The mass of the brown dwarf is not precisely determined, so it is possible that its mass makes it actually a gas giant planet. The time it took for the ring system to pass explains why the dimming lasted so long. The system is 3,200 light-years away in the constellation Monoceros. The ring system should pass in front of the star again in about 42 years, so the phenomenon should repeat then.

Mira (or more precisely “Mira A”, since it is a double star along with a white dwarf star Mira B) is one of the most famous variable stars. It pulsates in size, temperature and brightness (typically by 5 to 7 magnitudes) with a period of about 332 days. It is the prototype star for a class of variables that behave similarly. Mira also ejects material with periods estimated to be between 50 and 200 years. New observations with the ALMA radiotelescope array show previously ejected material, which consists of a gas cloud surrounded by a dust layer. It is surprisingly large, thick and asymmetrical. Further observations and study are warranted to understand these characteristics.



Red Giant Star Mystery Explained – It has long been known that the surface composition of red giant stars changes with age. The elements being produced by nuclear fusion in the core of the star show up on the surface. The problem with this is that all simulations of internal flow in such stars showed the nuclear fusion products being trapped in the core, because the stable layers of the star above do not allow motion to the surface. The University of Toronto recently got the Trillium supercomputer running, and one of its tasks has been to simulate red giant stars in more detail than ever before. It showed that red giants that rotate pass nuclear fusion products to the surface, just like observations of real red giants have shown. Mystery solved.

Giant Star Undergoes Changes – A red supergiant star known as WHO G64, located in the nearby galaxy the Large Magellanic Cloud, has been monitored by astronomers for years because it has undergone eruptions of material, powerful winds, and other changes. In the last decade or so it was observed to dim, suddenly brighten, then fade again. Its surface temperature rose by more than 1000 degrees, which turned the star from red to yellow. Its spectral lines changed and its diameter dropped to roughly one half. A new study claims that astronomers have witnessed the transition from a red supergiant star to a yellow hypergiant. Some other astronomers say more study is needed to conclude that this the transition being observed. It has long been accepted that red supergiant stars will become yellow hypergiants and eventually explode as supernovas, taking thousands or millions of years to do this. If confirmed, the recent observations will constitute the first time astronomers have actually witnessed such a change.

Lunar Rocks' Ages – Studies of the rock samples brought back from the far side of our Moon by the Chinese Chang'e 6 mission show that the rocks vary in age, with the oldest being 4.247 billion years old, which is older than any of the rocks brought back by the Apollo missions, which all landed on the front side. Dating of Apollo samples showed that asteroid impact cratering activity peaked at about 3.9 billion years ago, a time that has become known as the Late Heavy Bombardment, but the dating of the Chang'e 6 samples does not show such a peak. We need more lunar samples from more locations to determine why the datings disagree.

Ammonia on Europa – New analysis of old infrared data collected by the Galileo spacecraft shows that ammonia-bearing compounds existed on the surface of Jupiter's moon Europa. Such was found near cracks in the surface, implying that the material came up through those cracks from the interior relatively recently to the observations. Long exposure to the space environment would have broken the material down into its constituents. The Europa Clipper spacecraft, due to arrive at Europa in 2030, will likely follow up to see what it can find that emerged from the surface cracks.

Lava Tube on Venus – Study of old radar data from the Magellan mission to Venus has found the entrance to a lava tube on that planet. Lava tubes have been found on the Moon and Mars, but it is easier to find such in visible-light imaging than in radar data. However, future Venus missions with more advanced radar systems should uncover more lava tubes on Venus. The European Envision mission to Venus, scheduled to launch in 2031, has a ground-penetrating radar that will see hundreds of yards below the surface, and will probably discover lots of lava tubes. The thick clouds covering Venus prevent imaging the surface in visible light. Radar, however, penetrates the Venusian clouds. A lava tube forms during a volcanic eruption when the top of a lava flow cools and solidifies, leaving the molten rock flowing beneath. When the eruption ends, it often leaves an empty tube just beneath the surface.

Complex Molecule – Astronomers discovered the largest sulfur-containing molecule ever found in space. It is a ring-shaped molecule composed of 13 atoms, known as 2,5-cyclohexadiene-1-thione. It was found in a molecular cloud dubbed G+0.693-0.027, which is about 27,000 light-years away toward the center of our Milky Way galaxy. It was detected by a spectrometer working in radio frequencies. This supports the theory that complex molecules can form in molecular clouds, not just from stars or planetary systems.

Sulfur Compound Found – For the first time astronomers have detected the gas hydrogen sulfide in the atmospheres of gas giant exoplanets (planets outside our Solar System). The gas was found in 4 gas giants that all orbit the star HR 8799, which is about 133 light-years away in Pegasus. The 4 orbit quite some distance from their star, comparable to the orbital distances of outer planets in our Solar System. The amount of sulfur in these exoplanets is much higher than the amount in their star, which implies that the planet-forming process favors the appearance of sulfur at these orbital distances.

Galaxy With Rich Chemistry – JWST was used to spectroscopically observe an ultra-luminous infrared galaxy known as IRAS 07251-0248 in infrared light, which penetrates well the dust that obscures the galaxy's core. Scientists found unexpectedly rich varieties of complex carbon-containing molecules. The findings included benzene, methane, acetylene, diacetylene, triacetylene, methyl radical, carbonaceous grains and water ice. The types and amounts of carbon-containing molecules imply that the galaxy is continuously producing carbon. The variety cannot be entirely explained by heat and turbulence but must include cosmic rays in the production process.

Exoplanet In Unexpected Place – Most planetary systems have rocky planets closer to their stars and gas planets farther. This fits with how astronomers think planets form in disks about newborn stars. A 4-exoplanet system orbiting a star known as LHS 1903 doesn't fit the pattern. The outermost planet is rocky and two inner planets are gas. Astronomers are debating whether the rocky planet formed in the "wrong" place, or lost its gas, or moved to its present location. One theory gaining favor is that the outer planet formed later than the others, when the planet-forming disk was dissipating, with rocky material left but no gas. The star is a red dwarf 116 light-years away.

Starliner – As you may recall, the first test with crew aboard of the Boeing Starliner spacecraft arrived in June 2024 at the International Space Station (ISS) with two astronauts, for a planned 8-day stay in space. Some of the thrusters failed on approach to the ISS (and other problems arose), so it was deemed unsafe to return to Earth with crew aboard, and it landed without crew. The two astronauts' stay at ISS was extended until the next available non-Starliner craft could pick them up in March, about 9 months later. A 311-page report was just issued analyzing what went wrong and needs correction before Starliner flies again. The corrections include not only hardware, but also decision-making processes at both NASA and Boeing.



From the Editor

Has anybody an idea for a new article or interesting column of articles for the newsletter ? The NASA column will no longer be available.

The newsletter is once again looking for front cover picture contributions.

Due dates for submission of articles, pictures and advertisements are generally 13 days prior to the subsequent general club meeting.

<u>Issue</u>	<u>Due date</u>
April	28 March
May	25 April
June	30 May

Astrophysics Special Interest Group Update

Mark Price

The OCA Astrophysics Special Interest Group is launching a new initiative to connect members with meaningful citizen-science opportunities. We are beginning with guest speakers who specifically can introduce practical ways amateurs can contribute to current research while building their own observing and data-analysis skills.

At our January meeting, Bob Buchheim, founder of the Society for Astronomical Sciences (SAS) and an OCA member and past board member, described how amateurs using typical equipment can support modern astrophysics through projects such as precision light-curve analysis and asteroid or exoplanet occultation timing—work that complements professional large-telescope studies. SAS hosts an annual amateur research symposium each June in Ontario, CA that draws over 100 amateur and professional participants from around the US and internationally. SAS' website provides free access to presentations of past symposia.

At our February ASIG meeting, Justyn Campbell-White introduced the Hunting Outbursting Young Stars (HOYS) program, hosted by the University of Kent (UK). HOYS project studies star and planet formation through long-term, multi-filter photometric monitoring of young star clusters to detect variability and rare outbursts, helping researchers understand eruptive young stars, accretion processes, and circumstellar disks.

HOYS relies on broad citizen participation: amateurs and students use modest telescopes, including smart telescopes such as SeeStars, or shared networks like the Las Cumbres Observatory, to collect calibrated images for a central database that supports professional research. Participants can also utilize HOYS project website resources to analyze light curves, collaborate on projects, and access training resources. HOYS publishes selected results in professional astronomy and astrophysics publications and often includes the names of amateur contributors. This can be an opportunity for university student members to add to their publication lists for grad school or job applications.

We are now exploring next steps in this effort. Several ASIG members plan to attend the Society for Astronomical Sciences Annual Symposium in June to build amateur research connections and learn about current priorities in citizen astronomy and astrophysics. Some ASIG members are also seriously considering beginning participation in the Hunting Outbursting Young Stars (HOYS) project in the near future. If citizen science interests you, please contact us for more information and consider attending our monthly ASIG meetings and the SAS Symposium in June and have a look at the HOYS project website. Also, be sure to visit the Cosmic Special Interest Group section of the OCA website to learn about our ongoing collaboration with the Las Cumbres Observatory.

News About Our Anza Site

WiFi Passwords change this month

We'll be updating the OCA Anza Wi-Fi password on **Friday, March 14 at 2:00 PM.**

Over time, the password has been shared beyond paid subscribers, which has impacted performance and concentrated the cost of the service on a small group. Going forward, the updated password will be provided only to current Wi-Fi subscribers and access will remain exclusive. Please do not share the password — anyone requesting access should be directed to Charlie Oostdyk to verify their subscription.

If you regularly use the site's Wi-Fi and haven't subscribed yet, this is a great time to do so. The cost is \$50 per year, and your contribution helps support a robust network that now covers all on-site structures and supports Wi-Fi calling. Note that mobile coverage has also improved significantly due to a new nearby 5G tower, so some members may find cellular service sufficient.

The Wi-Fi network is intended for administrative and observing needs, not high-bandwidth activities like video streaming or large data transfers. Thanks for helping keep the service reliable for everyone!

Lower Pads Area

There is some electrical work in progress related to the wiring that previously served this area.

Repair of the gully between 10 Pad Alley and Jupiter Ridge has been started. Weather permitting, this will finish in March.

Upper Pads Area

A load of gravel will be spread over some of the areas that were cleared of vegetation last year to limit erosion and make the area less prone to mud following rain and snow. This will happen some time during the next couple of months.

Kuhn Shipping Container Cleanup on Saturday, 21 March at noon

David Fischer will be organizing this effort and would appreciate hearing from people who know about the items that have been stored there. We will need knowledge to decide what to keep. Send email to dkn.fischer@gmail.com to let him know of your interest to help. We don't need a lot of labor, just a few people will be enough to move things in and out of the container. Not everything will be removed at this time. The first goal is to identify items and who may be responsible for them. We expect that some items may require further input from interested parties before determining long-term retention.

There will be some items disposed of as trash and one or two volunteers to haul those things to the dump would be appreciated.

- There is a gas-powered generator in the shipping container. Does anybody remember when it may last have been used (and how it performed at the time) ?
- Same question applies to a gas-powered wood chipper.
- There seems to be a set of unused cupboards that may have been intended for Anza house.

If there is substantial rain on that day, the activity will be rescheduled.

Dealing With Weeds

The club's field mower seems to be missing a critical part, called the Wagner Anti-wrap Bracket, and a replacement has not been found yet either online or through the manufacturer. If the part cannot be obtained by the time we clean up the Kuhn shipping container, we will evaluate alternatives for keeping the weeds in check.

Because of the wet winter, the soil is well moisturized and there is a lot of early season weed growth. Pad and observatory owners should plan on doing harsh weed suppression by March before it gets entirely out of control.

OWENS VALLEY RADIO OBSERVATORY TRIP SCIENCE BEYOND THE BOOK

June 12-13th 2026

With Dr. Mark Hodges and
Dr. Doug Millar and Cecilia Caballero, MA

Please join with us on the above dates for an extraordinary adventure in science education at the Owens Valley Radio Observatory, outside of Big Pine, CA. Included are science demonstrations at the 40m radio telescope and a tour, walking a scale model of the Solar System, solar astronomy, and nighttime astronomy. We will also make ice cream with liquid nitrogen.

This year we are emphasizing the DSA2000 radio telescope. We will have the chance to hear from one of the engineering staff and talk about some of the technical details of the array. We will also review some of the challenges to getting the data transferred and transformed. It should be very interesting. If you want to get a head start look at the DSA2000 website at <https://www.deepsynoptic.org/>

If you want to come on Friday, we have been invited by the owners of the Starlight Motel to be treated to an Indian dinner free of charge to our attendees. It will be served at the motel at 5pm. Please let us know if you would like to attend, because we need a head count. We will also have an evening of astronomy Friday night at the south of Building #10 at the west end of the observatory. You can bring your own telescope and there will be a number of telescopes set up to share their views. 120V AC is available. We will also do astronomy on Saturday night. The main program will be on Saturday afternoon, starting in the dining area in Building #10. We will go to the Pizza Factory in Bishop for dinner.

The tour of OVRO is free and courtesy of Dr. Mark Hodges, OVRO, and Caltech. Attendees are responsible for their own meal expenses. This trip is open to teachers, students with their families, members of local astronomy clubs, and radio hams. You must RSVP to go on the trip to Dr. Millar so that we know how many to expect (contact information below). Please also forward your cell phone number.

This is not a sponsored event. Everyone is on their own for transportation and lodging. You have many options. You can stay at a motel nearby, camp in a campground, or bring a tent or trailer and stay at the OVRO site. Don't camp under the 130ft dish as it is a favorite object for photos. We can give you more ideas of good spots to set up camp. If you do decide to camp at OVRO, you must provide your own bathroom, as the buildings will be locked. There are places to eat in Big Pine and Bishop. The Brewed Awakening in Big Pine is great and Jack's in Bishop is an old favorite.

Please arrive at OVRO by 1:00 PM on Saturday for the program. The weather will be warm and dry. If there are mosquitos, I'll have repellent available. Evenings will be a little cooler, so dress accordingly for the nighttime astronomy. Most popular food to share? Chocolate chip cookies. Coffee will be available. Or bring your favorite K cup.

Schedule:

Friday-

Dinner at the Starlight Motel

Setup telescopes to the south of building #10 for astronomy by sunset. 110v AC, bathroom and coffee and water available.

Saturday

1:00pm: arrive at kitchen in building #10 for start of program and tour.

5pm: check in at your Motel (if not already checked in) and go to dinner in Bishop.

Evening- Astronomy at the site

Sunday

A lot of us like to gather for breakfast about 9:30 at Jack's in Bishop. More information will be available on Saturday.

Leave whenever you like. Check websites about the area and the Highway 395 for sightseeing opportunities.

The directions from the LA area are: Drive north on the I5/CA14 through Palmdale and Mojave. Continue past Inyokern and join US395. Continue on North through Little Lake, Lone Pine and Independence. Continue through Big Pine. Just as you get to the end of town turn right on Highway 168 towards the Westgard Pass. Go about 2 miles and turn left onto Leighton Lane, the observatory road. You should be able to see the 40m dish in the distance, but it is 4 miles away! Continue through the gate, even though it says "authorized personnel only", onto the property and follow the blacktop road. Go past two 90-foot telescopes to the west end of the site and park. Below is a more detailed map. The observatory address is: 100 Leighton Lane, Big Pine, CA.

If you would like to bring your own telescope, please do so.

For any questions and RSVP's, my contact information is

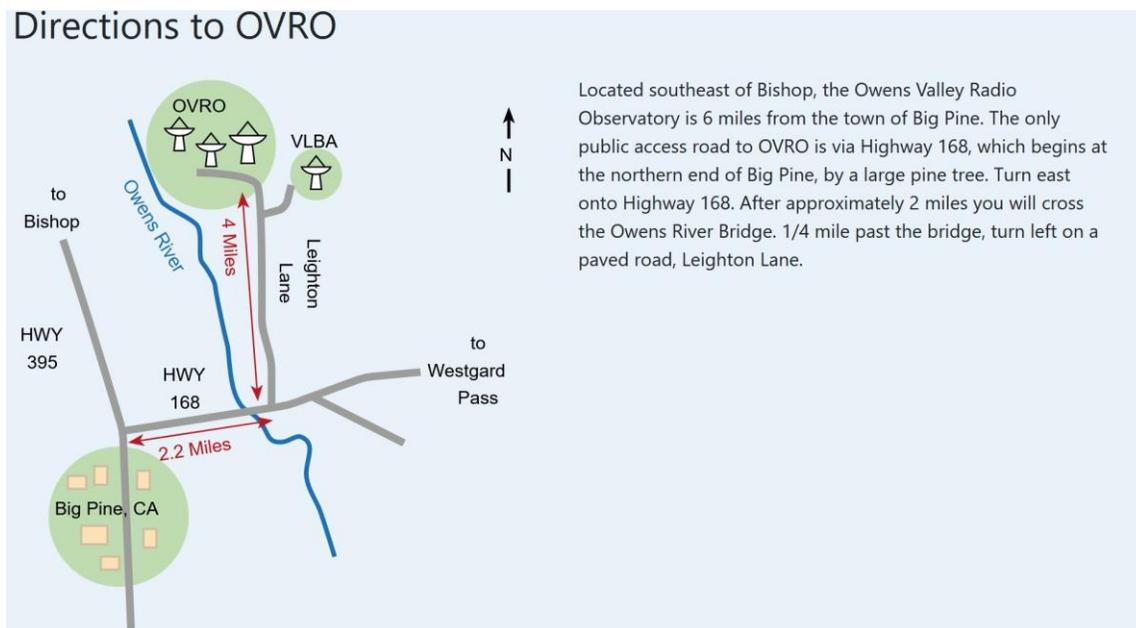
Dr. Doug Millar Cell- 562-810-3989 and email is drzarkof56@yahoo.com

Thank you and I hope to see you on the trip!

Dr. Millar

Local Directions to the observatory:

n.b. The large pine tree no longer exists.



Here are some pictures from past visits.



Students lined up in front of one of the two 90ft. dishes



Our main dish to explore is the middle one at 40m in diameter



Ex CARMA Array dishes at the site



Experimenting with liquid nitrogen. Dr. Mark Hodges from OVRO and Dr. Millar



Astronomers setting up



Getting set up for nighttime astronomy. Lots of great telescopes

Advertisements

Buy, Sell or Trade some of your gear? This is where club members can place advertisements. Please contact the editor at newsletter@ocastronomers.org to place an advertisement or to learn more about placing one. There is no cost to club members for non-commercial advertisements in the newsletter. The editor may resize and re-arrange ad content to fit and will feed back the formatted ad for approval prior to publishing.

Some policy changes have been made to reflect the expanded capacity of the electronically published newsletter.

- Each advertisement may now occupy up to 1/2 of a printed page and may include small pictures within the space permitted. The editor may resize and re-arrange ad content to fit and will feed back the formatted ad for approval prior to publishing.
- Each advertisement may be run for 3 consecutive issues, after which it will be removed unless the advertiser requests extension of the ad by contacting the editor of the newsletter.

For Sale contact Jerry Floyd jlfloyd720@gmail.com

- Stellarvue **SV102EDT** Triplet Refractor, 102mm aperture, 621mm focal length, f/6.1, Serial #23 \$ 600

This is equipped with JMI Focuser, tube rings, and base plate.
Telrad (mounted on custom wood adapter) and star diagonal are included



- Stellarvue **SV80S** apochromatic triplet refractor with High-quality Russian LOMO OK4 glass \$ 600

80mm aperture, 480mm focal length, f/6.0, Serial #0018. Designed by Thomas Back.
2 inch Feather Touch Focuser, saddle plate instead of tube rings.
1.25 inch star diagonal, 2 inch to 1.25 inch reducer, 25mm 1.25" Plossl eyepiece and soft case included

- Stellarvue **SV80L** super apochromatic triplet refractor. 80mm aperture, 600mm focal, f/7.5 \$ 550

2" Feathertouch focuser
Has a single large tube ring with base plate for mounting
Included are 2" star diagonal, Stellarvue red-dot finder, and padded case.

Pick up in Hemet, at OCA Anza site, or I will deliver locally in Southern California area, within approx. 100 mile radius.

For Sale contact Val Akins akins7821@gmail.com

- 4" Celestron f9.8 Refractor with heavy duty Celestron ALT-AZI mounts and slo-mo cables, Red dot finder, star diagonal, 2 lenses \$100
- Celestron Luminos 7, 10, and 15 mm 1 1/4 " eyepiece set in padded Apache case \$150
- University Optics 1 1/4" eyepiece set with Meade RG lenses - (hard to find!) 8 eyepieces with case \$100

For Sale contact David Tassey tasdave@cox.net

- ZWO ASI 2600mc duo camera, lightly used \$1000

Want to Buy contact Norbert Ulbrich janmaatcalifornia@yahoo.com 650-507-9944 Cell

- Aerospace Engineer is looking for a vintage 4-inch refracting telescope from the 1950s or 1960s that was made by the **GOTO Kogaku Company of Tokyo, Japan**. The refractor can be in any condition. I will do personal pick-up and pay a fair price. Please, contact Norbert by email or via my cell phone - text anytime, call after 8:00pm.

Last Page