

# SIRIUS ASTRONOMER

www.ocastronomers.org The Newsletter of the Orange County Astronomers

General information and contacts for the Orange County Astronomers club can be found at [www.ocastronomers.org](http://www.ocastronomers.org)

**October 2026**

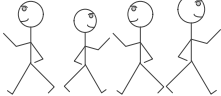
Free to members, subscriptions \$12 for 12 issues

**Volume 53, Number 10**



This is NGC6888, called the Crescent Nebula seen against the widespread H-alpha emissions in the constellation Cygnus. It was imaged by Naveen Ravindar remotely from a telescope hosting site using a 103mm refractor, ASI2600MM camera and narrow band filters in August 2025.

## Upcoming Events - free and open to the public

|                                                                                                                        |                                                                                                                                                                                                                                                                                                                                           |                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>Beginner's class</b>                                                                                                | Monday, 6 November at 7:00 to 9:00 PM<br>This is the 3rd session of the Beginners Astronomy Class. It covers various methods of finding objects in the night sky.                                                                                                                                                                         | <b>ONLINE</b>                                                    |
| <b>Club Meeting</b><br>             | Friday, 9 October at 7:30 to 9:30 PM<br>"What's Up": Chris Butler from OCA<br>Main speaker: Dr. Saavidra Perera from Caltech<br>Whose talk will be "How to Image an Exoplanet "<br><b>Orange Coast College, Lecture Hall 1, building 40</b><br>Parking fee must be paid in advance via Passport Parking app – see page 2 for more details | <b>IN PERSON, ONLINE</b><br><b>IN PERSON</b><br><b>IN PERSON</b> |
| <b>Astro-Physics</b><br><b>SIG</b>  | Friday, 16 October, at 7:00 PM to 9 PM<br>Orange Coast College, Building 40, Astronomy House                                                                                                                                                                                                                                              | <b>IN PERSON</b>                                                 |
| <b>Star Parties</b>                                                                                                    | Saturday 10 October at the OCA Anza site.<br>No Irvine site star party will be held in October.                                                                                                                                                                                                                                           |                                                                  |

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)**

## Location of Our General Meetings



OCA meets in Lecture Hall 1 – which is in Building 40 shown (in orange) just above the planetarium in this rotated campus map.

### Parking at Orange Coast College

Parking at Orange Coast College must be paid via Passport Parking, a smart-phone app.

Parking Lot E = Zone 92847 may be the most convenient one for the meeting location.

Standard parking rate is \$5 + \$0.35 processing fee and is good for the entire evening.

Please access this site well before visiting OCC to establish an account for Visitor parking.

<https://ccd.t2hosted.com/Account/Portal>

# President's Message

By Barbara Toy

## **New Home for Our Meetings**

We had our first in-person meeting at our new location at Orange Coast College in September and it went very well, particularly for a first time. We were later than we'd hoped in getting word out confirming the new location, with directions and all, because it took a bit longer to get all of the final paperwork done, but we had a good turnout despite that. Thank you to all who came, and I hope you enjoyed the new facilities as we did.

I've mentioned Jessica, the person from the Planetarium we have been working with to set this up, but without giving her full name – Jessica Artinger is the Planetarium Program Director. She's an alum of the OCC Astronomy program herself, then got her BS in Astrophysics with minors in Geophysics and Planetary Physics from UCLA, and then her MS in Mechanical Engineering with a focus on Thermal and Fluids Engineering from Cal State Fullerton, so she seems uniquely qualified to run the Planetarium at OCC. She has certainly been welcoming to us and was with us for much of that first meeting – it would not have run as smoothly without her help. If you have a chance to talk to her at future meetings, I hope you'll take advantage of it, as she's interesting and fun to talk to. And her Planetarium is definitely worth a visit!

Jessica is kindly making some space available so we can store things we need for the meetings, particularly for the refreshment table, but we don't have any place for the club's library. Since Covid, members were making minimal use of our library, and Karen Schnabel (our librarian) had already raised the question to the Board about whether we should continue with it before the problem with Chapman developed. It seems to have outlived its utility and there isn't any point in trying to find a way to continue with it in its current form. We expect to disburse many of the books and other materials – stay tuned for further announcements! Though those who attend the in-person meetings can reasonably expect to see periodic raffles of some of the books at future meetings as part of the plan.

## **OCA Board Election**

OCA's election process for next year's Board has formally started, and we will take nominations in October and through the day of the November general meeting before finalizing the ballot. If you would like to run for office, please contact Alan Smallbone to be put on the ballot.

Our Board has seven Trustee positions and four officer positions (President, Vice President, Secretary and Treasurer), so there are eleven members total. The qualifications for running for a Trustee position are that you must have been a member of the club for a year, and you must be a member in good standing at the time you would be taking office (and while you are in office). The "member in good standing" rule applies to all members of the Board, not just Trustees.

There are no specific additional qualifications for Secretary or Treasurer, but the additional requirement for President or Vice President is that you must have been a member of the Board for at least a year, not necessarily the year before running for office. There are many club members who amply meet all of these requirements, and we hope some of you will add your name to the ballot to help give the club the leadership it needs and deserves.

© Barbara Toy, September 2026

# AstroSpace Update

October 2026

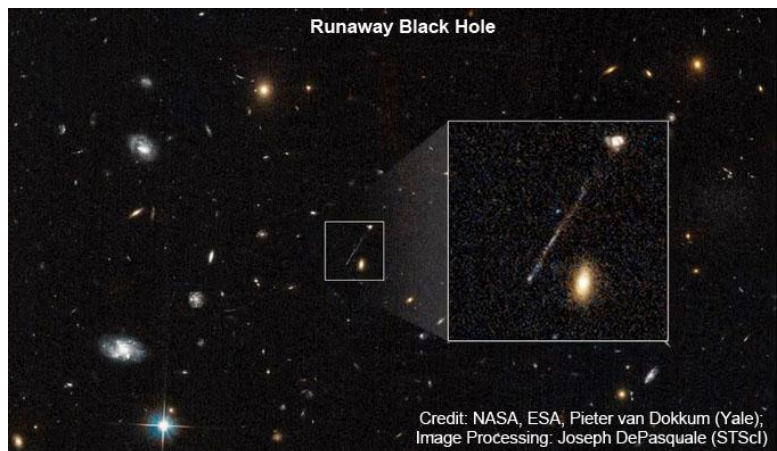
Astronomy and space news summarized by Don Lynn from NASA and other sources

**Space Telescope Launched** – The Nancy Grace Roman space telescope was launched and is on its way to the L2 Sun-Earth Lagrange point, about 1 million miles from Earth, where it will perform its mission. It has the same size primary mirror as the Hubble Space Telescope (HST) and has therefore about the same resolution of fine detail. But it uses a 3 mirror design, unlike HST's 2 mirror Ritchey-Chretien design, so that it corrects coma and other aberrations over a far larger field of view than HST, and has a monster image detector to match. The result is that it takes in about 100 times the area of sky in each image. The telescope was named after the first NASA chief astronomer, who promoted the concept of space telescopes. The telescope was completed ahead of schedule, on budget, and lighter than its weight budget. That latter factor, along with near-perfect rocket burns, has left the telescope with a huge surplus of rocket fuel, which will be used to extend its mission from the planned 5 to 10 years to a now projected 22 years. It is predicted that the telescope will be able to image nearby Jupiter-sized exoplanets, will map the large-scale structure of the Universe, discover 100,000 exoplanets, catalog 20 billion stars and 2 billion galaxies, discover tens of thousands of supernovas, and discover and characterize huge numbers of asteroids, including more than 100,000 asteroids whose orbits bring them near Earth.



**Black Holes Too Massive** – Most large galaxies contain a central supermassive black hole that has a mass about half a percent of the mass of the galaxy as a whole. This relationship tends to support the theory that each galaxy and its black hole grew in mass to their present sizes in related processes. However, there are a few exception galaxies. A new study using X-rays looked at 20,000 quasars (quasars are strongly feeding supermassive black holes). Of these, 8 were found to have black hole masses much larger than the half percent rule. Of the 8, three were found to be much brighter than usual, indicating that they are consuming matter at a much higher rate than the others. The 8 also differed in that their host galaxies had fewer stars than normal. More study is needed to tie together all these findings.

**Speeding Black Hole** – Four years ago astronomers noticed a bright line on a distant galaxy with the line measuring more than 200,000 light-years. It was determined to be a line of newly-formed stars left in the wake of a speeding supermassive black hole. A new paper studied this further by comparing the observations to simulations of black hole collisions. They concluded that this speeding black hole was formed by the merging of two black holes, which had masses only a little different but quite misaligned spins, which tends to kick the resulting black hole away at high speed. The two predecessor black holes were likely the central supermassive black holes of two separate galaxies that collided. Unfortunately, existing gravitational wave-detectors such as LIGO are not sensitive to merging supermassive black holes, but the LISA mission, to launch in a few years, will be sensitive to such.



**Impostor** – Supernovas can emit outbursts before they explode. Astronomers thought they were seeing this when a star designated AT 2016blu was caught outbursting 27 times. But new research shows that these outbursts have a completely different cause. The star has a companion that makes an eccentric orbit every 113 days. The outbursts occur when the pair makes close approaches. The primary star of the pair is a luminous blue variable (LBV) with about 33 times the mass of our Sun. X-rays from the pair burst out when the stars get so close that material from the primary star falls onto a compact companion. The companion may be either a neutron star or a black hole. This was believed to be the first case of an LBV star acting like an impending supernova but was shown to be an impostor caused by binary material transfer. The team that made this discovery plans to observe other stars having outbursts like an impending supernova to see if they actually have causes similar to this case.

**Soft X-ray Emitters** – A new study of old X-ray data observing 6 nearby galaxies targeted soft X-ray emission, where “soft” means that the X-ray photons are in the low-energy range of X-rays. The scientists were specifically looking for objects whose photon energies were between 150 and 300 eV (electron volts) and had little emission of more energetic photons. The thought was that astronomers may be overlooking soft X-ray objects because X-ray telescopes are subject to much soft X-ray noise in their observations, leading astronomers to sometimes discard soft X-rays observations and use only harder (more energetic) X-ray observations. This thought was correct: the new study found 84 rather bright soft X-ray emitting objects that had been overlooked in all previous observations of the 6 galaxies. They are calling these objects “HSS”s, standing for HyperSoft X-ray Sources. The existence of HSSs may solve two long-standing mysteries: 1) searches for stars that may in the future explode as a Type Ia supernova always come up short; the HSSs may add to this count; 2) searches for the sources that ionize interstellar helium come up short; the HSSs may be contributing to this ionization.

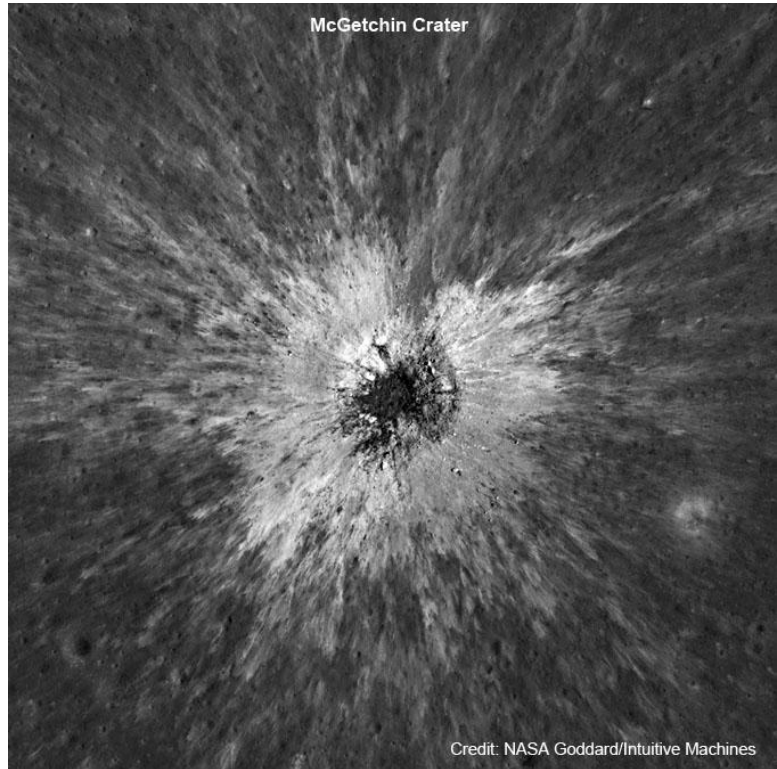
**Brown dwarfs** are objects too large to be exoplanets, but too small to be stars. Defining too large has led astronomers to disagree upon brown dwarf definitions. The distinction of brown dwarfs from stars has fairly well settled with stars being defined as massive enough to achieve nuclear fusion of ordinary hydrogen. This type of fusion has long been known to power ordinary stars during their Main Sequence phase. Brown dwarfs can achieve a temporary phase where heavy hydrogen is fused, but not ordinary hydrogen. But the distinction between planets and brown dwarfs is still under debate. One definition is that brown dwarfs form from collapsing gas clouds as stars do but not as planets form, from disks about stars. Another definition is that brown dwarfs have to be massive enough to fuse heavy hydrogen. The latter definition requires brown dwarfs to be over about 13 times the mass of Jupiter, while the how-formed definition keeps the limit creeping down as more small objects are found in star-forming regions. New observations of the star-forming region IC 348 in Perseus made by the James Webb Space Telescope (JWST) add to the debate. The observations found objects forming like stars, but with masses as small as twice the mass of Jupiter. One of the least massive of the objects seen had a planet-forming disk about it. The new observations also found some young stars emitting jets, including some Herbig-Haro objects, adding to our knowledge of how stars form.

**Weird Exoplanet Orbit** – Using an infrared spectrograph on the 3.6-meter telescope at La Silla in Chile, astronomers have measured the tilt and direction of orbiting of an exoplanet known as GJ 3090 b. It was found to be orbiting highly inclined and of opposite (retrograde) revolution compared to how its star rotates. This is unusual: only 5 other exoplanets are known to orbit like this. All of the others have a massive companion orbiting their star that likely disturbed those planets’ orbits, but GJ 3090 b’s star has no companion. Astronomers have guessed that something (other than a companion) disturbed the planet-forming disk before the planet formed. The planet has 2.2 times Earth’s diameter and 4.5 times Earth’s mass, making it a sub-Neptune type of planet.

**Star Cluster Formation** – JWST in infrared and HST in visible light observed nearly 9000 star clusters in 4 nearby galaxies (M51, M83, M74 and NGC 4449) to determine their ages and masses. Astronomers found from these observations that more massive star clusters took about 5 million years to complete the cluster formation process, while less massive ones take 7 to 8 million years. The star formation process ends when ultraviolet light from newly formed stars carries away the remaining gas and dust out of which stars are formed. In other words, the more massive clusters complete this formation faster. This will likely affect the sizes of planets forming and how the surrounding galaxy evolves.

**X-ray Data Release** – The second release of data (known as DR2) was made from the eROSITA X-ray space telescope. The data contains almost 2 million point-like sources of X-rays, many of which are stars or supermassive black holes, and about 64,000 extended sources, which include galaxy clusters and supernova remnants. Many of these are previously unknown objects. The data release links X-ray sources to objects seen in visible light and infrared. This data release was built from all observations in three scans of the whole sky. A complementary catalog was also released that contains only objects emitting high-energy X-rays (over 2.3 keV photons), which has 15,000 objects.

**Impact Cools Surface** – Sometime in spring of 2024 a new crater about 240 yards across appeared on our Moon, which has been named McGetchin Crater, honoring a pioneer lunar scientist. While the impact heated up the crater itself (but only for hours), it was found that an area more than 4 miles across surrounding the crater has cooled, at least during lunar night. It is believed that the impact fluffed up the surface dust, changing its heat conductivity and reflectivity, resulting in a colder surface. Previous observations made by the Lunar Reconnaissance Orbiter have shown about 2000 similar cooler spots that were likely caused by previous impacts. The Apollo 16 landing happened to land in one of these cooler spots. It was noticed that bootprints there were deeper than at other landing spots, probably because the surface dust had been disturbed by a nearby previous impact.



**Mercury Volcanic Activity** – Observations from the Messenger spacecraft, which observed Mercury from 2011 to 2015, showed the planet has vast plains of lava covered by impact craters. Volcanic features on those plains indicate they formed from explosive eruptions roughly 4 billion years ago. Lava rich in volatiles (chemicals that easily vaporize) is known to cause such explosive eruptions. A new study measured the abundance of SiO<sub>2</sub> (silica) in Mercurian lava and compared it to the Moon. The new result showed Mercurian lava has up to 25% less silica than previous estimates. This implies that the lava came from deeper in the planet than previous estimates and was hotter. This may mean the volcanic activity was more extreme than previously thought. The BepiColombo mission will soon begin observing Mercury and will be able to confirm or deny the new lava findings.

**Mercury Shrinkage** – The wrinkle ridges found on much of Mercury's surface have long told scientists that the planet has shrunk over its life, due to the interior slowly cooling from a very hot planet formation. The best previous estimate from analysis of the wrinkles is that the planet's diameter lost between 2.5 and 10 miles. A new analysis takes into account how much more wrinkling has been covered by impact crater debris estimates that the diameter loss figure is actually 10 to 30% larger. More shrinkage could affect the estimates of other parameters, such as core size, core composition, and temperature achieved during planet formation.

**Mercury Mission** – BepiColombo is a mission to Mercury, consisting of two spacecraft and a propulsion module, all attached together since launch in 2018. The European and Japanese space agencies each built one of the two spacecraft. The package has completed 9 gravity-assist flybys of 3 different planets. The ion drive propulsion module was released from the package in early September, since it is not used to go into orbit about Mercury. Achieving orbit is scheduled for November, and then in December the two spacecraft will separate and modify their orbits into a higher and a lower one. After checkout, full science operation is scheduled to begin in April. This is only the third mission to ever visit Mercury.

**Asteroid Rings** – JWST was used to observe the Centaur Chariklo, which was known to have two rings about it, as it passed in front of a star. The dimming of the star attributable to the rings indicated that those rings have changed since they were discovered in 2013. One of the rings was found to have darkened, while the other has thinned considerably. This was the first time that a stellar occultation has been predicted and observed by JWST. Centaurs are asteroids that orbit between Uranus and Neptune. Chariklo is the largest known Centaur at about 160 miles across. More observations of Chariklo occulting stars are needed to understand the changes seen with this occultation.

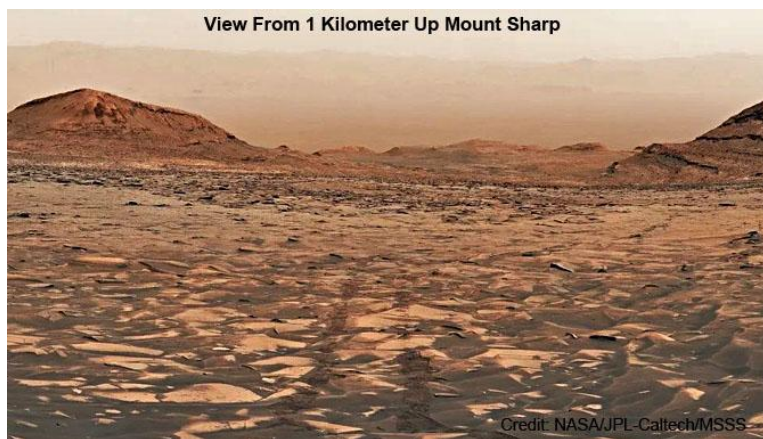
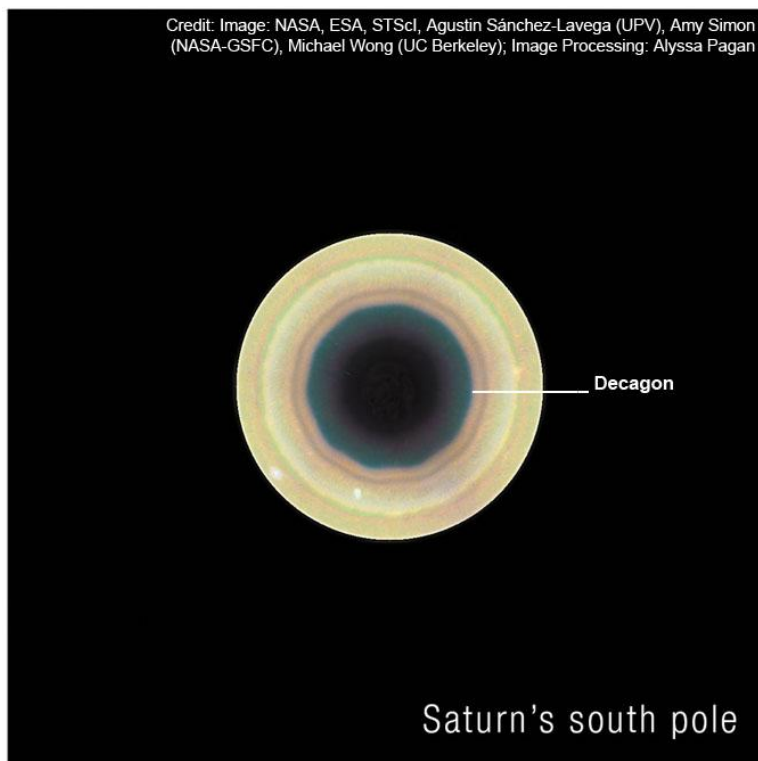
**Interstellar Comet** – Analysis of observations of the interstellar comet 3I/ATLAS, made with the LIFU on the 4-meter William Herschel telescope, which takes a spectrum of each pixel of an image, confirmed radio observations that 3I formed in a very cold environment, far from any star. Five different ions were identified in the comet's gas. Nitrogen gas was found to be plentiful. The observations showed ions changing as the material progressed out the comet's tail. As the 3I designation indicates, this was only the third object ever discovered whose velocity showed that it definitely originated outside our Solar System.

**Saturnian Decagon** – Recent images of Saturn from HST show a wave in the atmosphere near the planet's south pole that looks like a decagon, or 10-sided polygon. Archived images of Saturn from various telescopes show that the figure has emerged in just the past 3 years or so. On the other hand, the six-sided polygon about Saturn's north pole has persisted for more than 40 years. Images taken in various wavelengths of light, which penetrate the planet's atmosphere to varying depths, show that the decagon extends through several atmospheric layers.

**Martian Rock History** – The Mars rover Perseverance has been using its SuperCam, which determines the mineralogy of rocks by their spectra after zapping them with its laser. The latest results are from about 180 observations of an area being called the "Margin Unit" because it is where the shoreline of a lake existed billions of years ago. Scientists expected to find sedimentary rocks left by the ancient lake. But instead, they found much igneous (volcanic) rock. They found evidence that the rocks had been modified by exposure to water over at least 3 different periods. The first was ground water reacting with the rocks, the second was exposure to the ancient lake, and the third was a hot water event generating veins of minerals such as calcium sulfate and fluorite. This shows that the history stored in these rocks is more complex than previously thought. The layering of the rocks tells scientists the order of these water exposures, but not the ages when they occurred.

**Rover Milestone** – The Mars rover Curiosity has climbed a kilometer (3,281 feet) vertically during the past 12 years of its roving. The mountain that the rover is climbing is Mount Sharp, which is 3 miles tall and is located in Gale Crater. Curiosity is expected to continue exploring for many more years.

**TNOs** – For the first time astronomers used both HST (using visible light) and JWST (using infrared) to simultaneously observe Trans-Neptunian Objects (TNOs), objects orbiting beyond Neptune's orbit. The studied objects included some of the smallest and faintest TNOs ever seen. An unexpected result is that there are fewer very small TNOs than theory predicts. The size distribution, color, and composition were determined for 27 newly discovered tiny TNOs. The same early history of planet growth is expected for the TNOs as for the inner Solar System, except that no large objects resulted. TNOs can be categorized as either "cold" (having relatively circular orbits in the plane of the planets) or "hot" (having elliptical orbits tilted to the planets' plane). It is believed that the hot TNOs formed closer to the Sun but were pushed beyond Neptune by gravitational interactions of gas giant planets, while the cold TNOs formed beyond Neptune. Both hot and cold, as well as large and small TNOs showed similar surface composition. This was unexpected, because theory had it that some of the classes should have undergone more collisions in their histories, which would disturb the surface composition. This finding implies that studying TNO surface composition will tell astronomers much about how they formed rather than how later collisions modified them. The smallest TNO observed in this study was about 3 miles across, smaller than can be detected by ground-based telescopes.



# News About Our Anza Site

## Upper Pads Area

The mini-refrigerator in the warming hut has been replaced.

## From the Editor

Has anybody an idea for a new article or interesting column of articles for the newsletter ?

The newsletter is once again looking for front cover picture contributions. We have had one suggestion that is being looked into and are very open to additional ones.

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

| <b><u>Issue</u></b> | <b><u>Due date</u></b> |
|---------------------|------------------------|
| November            | 31 October             |
| December            | 28 November            |
| January             | 26 December            |

## Help Wanted

- OCA representative to the Western Amateur Astronomers
- Anza Maintenance Coordinator

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 Alan Smallbone at [alan@ocastronomers.org](mailto:alan@ocastronomers.org) is the person to contact. He can describe the job.

## 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](mailto: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.

Want to Buy      contact      Norbert Ulbrich      [janmaatcalifornia@yahoo.com](mailto: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.

For Sale      contact      Jerry Floyd      [jlfloyd720@gmail.com](mailto:jlfloyd720@gmail.com)

- 11" Celestron Rowe-Ackermann Schmidt Astrograph v2 \$ 2900
- Aperture 11" (279mm), Focal Length 620mm, f/2.2, Ultra-Stable Focus System  
OTA Weight 43 lbs/19.5kg.

Includes top and bottom mounting rails,  
42 and 48mm T-thread camera adapters,  
dust cover, dew shield, Pegasus focus motor.  
Does NOT include camera or guide scope.



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

David Pearson

(714) 293-5684

- Orion slow-motion control mount with RA axis polar scope, tripod, and counterweights  
Great for small scopes including SeeStar and Dwarf lab

\$ 50



For Sale

contact

David Pearson

(714) 293-5684

- Ioptron EQ45 mount with case, one counterweight and Tripod

\$300



For Sale

contact

Karen Levine

949-842 2819 text

Karenle1@cox.net

- Meade 10 Inch LX200GPS Schmidt-Cassegrain Telescope with Autostar II Hand Controller \$1500  
DS-2000 series Tripod, X3 Three wheeled dolly coasters  
10 inch Dew cap, AC-DC Adapter power cord, Meade telescope eyepiece cap  
Eye-pieces: Meade MA 20mm, 25mm, 17mm, 12 mm and 6mm  
Meade Super Plossl 26mm multicoated, Meade super wide angle 18mm multicoated  
Parks GS, 3 elements 2x Barlow 1.25 inch, fully multicoated K25 mm  
Filters: Parks No. 82A,12,23A, and 21  
Meade Instructional DVD and Autostar Suite Astronomer Edition Software for PC

I have a 10-inch Meade telescope for sale that we purchased in 2003. It's in excellent condition with many accompanying pieces. The right ascension lock needs to be tightened or repaired. If someone has any knowledge on how to repair or would be able to repair this for me, please let me know.

It has the original box and manual. The telescope has always been stored in our home, never outside, basement or garage.

No shipping due to delicate equipment and weight. Buyer will be responsible for pickup



For Sale

contact

David Pearson

(714) 293-5684

\$200

- ZWO SeeStar S50 system
- ZWO Seestar S50 Smart Telescope Body
- Original carbon fiber tabletop tripod
- Original custom foam carrying case
- White light Solar filter (unscratched)
- USB-C charging/data cable
- Bahtinov mask
- Dust cover (On -telescope and only removed during actual imaging)
- Telescope weighs 2.5Kg

Up for sale is an original ZWO Seestar S50 Smart Telescope. This all-in-one apochromatic triplet refractor rig has been an incredible gateway into deep sky, solar, lunar, and land scape photography, but I have upgraded to the S50 pro and no longer need this scope.

The Seestar is an integrated all-in-one smart telescope that searches, focuses, and captures images with built-in Bluetooth/Wi-Fi, dual-band light pollution filter (Oii (30nm), Ha(20nm)), and dew heater. Capable of alt-azimuth or equatorial mode.

The telescope is 100% functional, tracks beautifully, and has absolutely no scratches on the objective lens. It has been factory reset, meaning the internal storage is cleared and the Wi-Fi is restored to the default factory name and password (12345678) so it's ready to connect right out of the box.

Condition Details: Minor cosmetic wear



For Sale

contact

Jeff Magy

[sittingcool@gmail.com](mailto:sittingcool@gmail.com)

Costa Mesa, CA

- Meade LX200GPS 10" \$1400
- Item includes telescope, base with motor and computer, power supply, 2 sighting side scopes, lens tray, heavy duty tripod, heavy duty tripod roller. Last known running condition was excellent.
- Eye Pieces: Meade Super Plossl multi coated: 40mm, 32mm, 26mm, 20mm, 15mm, 12.4mm, 6.4mm, Series 4000 Meade Super Plossl multi coated: 9.7mm.
- Parks GS-5 7.5mm, Parks GS 3 element 2x barlow – 1.25", has side screw

No more than 8 hours of owner use during ownership. Last known running condition was excellent.

SOLD AS IS - no warranty. Two person lift. Contact seller to arrange an on site viewing / test.



For Sale

contact

Greg Schedcik

[gsched@pm.me](mailto:gsched@pm.me)

- 11 inch Celestron CPC 1100 GPS perfect shape – has the OTA, mount, tripod, hand controller \$1999 obo
- Dew and solar shields
- Eye pieces 40,32,30,26 mm visual black and 2x Barlow, aluminum case for eye pieces.
- Color Filters (O, Y, R, G, B) Narrow band O-III, UHC/LPR

I need to sell everything at one time. Not separate parts. Contact me regarding delivery or pickup.

