

San Diego Astronomy Association

Celebrating Over 50 Years of Astronomical Outreach



June 2021

SDAA Update

<https://www.sdaa.org/>

A Non-Profit Educational Association
P.O. Box 23215, San Diego, CA 92193-3215

Next SDAA Business Meeting

June 8th at 7:00pm
10070 Willow Creek Rd
San Diego, CA 92131
Via Zoom

Next Program Meeting

June 16th at 7:00pm
Live Stream

SDAA is now actively using online facilities like Zoom and YouTube to provide access to club meetings, events, and outreach programs in keeping with state and local mandates regarding physical distancing requirements during the COVID-19 pandemic. In person events will start again in 2021 as soon as allowed by state and local mandates. Look for updates on the Lipp telescope.

Since TDS is private space there is no reason to lock down the facility but there are actions you can take to help keep the site safe for all of us. If you plan to visit and use the facility, please bring along some disinfectant wipes or disinfectant spray cleaner. When you finish using the restrooms or the warming room, please wipe down the areas that you touched in order to help prevent the spread of any viruses. As much as we love sharing the views of the night sky, try to maintain the recommended 6-foot physical distance guideline.

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Incorporated in California in 1963

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June 16, 2021 Program Meeting

Speaker: TBD
Topic: TBD

You can register in advance for the meeting at the following link. After registering, you will receive a confirmation email containing information about joining the meeting.

<https://us02web.zoom.us/j/89298162225?pwd=TVZsTTg3dzRXcERDY0tXcHErVXArQT09>

Thank you volunteers and donors at the TDS spring cleanup!

A big thanks to everyone who helped us clear paths and roads, spruce up overgrown areas and clean the patio area. We appreciate the donors who helped defray the dumpster cost as well. Although we missed having the potluck spread this year, the afternoon bring-your-own lunch was a welcome opportunity to catch up and relax. Thank you for supporting the SDAA!

Newsletter Deadline

The deadline to submit articles
for publication is the
15th of each month.

Link to SDAA Merchandise Store <https://sdaa28.wildapricot.org/SDAA-Store>

Link to Outreach Calendar https://calendar.google.com/calendar/embed?src=g-calendar@sdaa.org&ctz=America/Los_



San Diego Astronomy Association

San Diego Astronomy Association Board of Directors Meeting

May 11, 2021- Unapproved and subject to revision

1. Call to Order

The meeting was held via Zoom and was called to order at 7:28pm with the following board members in attendance: Dave Wood, President; Melany Biendara, Treasurer; Gene Burch, Recording Secretary; Alicia Linder, Corresponding Secretary; Mike Chasin, Director; Dave Decker, Director; Hiro Hakozaiki, Director; Pat Boyce, Director and member Jerry Hilburn.

2. Priority / Member Business

None

3. Approval of Last Meeting Minutes

The April meeting minutes approved.

4. Treasurers & Membership Report

Everything is looking good – we've sold some telescopes for \$540 and have received \$150 in donations to help defray the cost of the spring clean-up. Checks were sent to our Science Fair winners. We need to schedule our annual budget meeting; Mel is going to work on a preliminary budget and we'll set a date for the meeting.

5. Standard Reports

a. Site Maintenance Report:

Jerry Hilburn has taken over for Bill Quackenbush as the site maintenance chairman – many thanks to Bill for his years of service!

An Electrical short on segment 2 on the private pads was reported. Brian and I fixed the problem by removing Pad 38 service from the segment. We believe there is an open wire in the location where the pier once stood. Further investigation to follow.

There are a mix of site related and pad related electrical issues that need to be addressed. Several Electrical boxes are open which could cause safety issues.

b. Observatory/Loaner Scope Report:

No Report

Observatory:

Loaner Scopes:

c. Private Pad Report:

We currently have 4 unleased pads and 15 people on the waiting list. One of the vacant pads was never improved and 2 of the people on the waiting list are current pad lessees looking to upgrade. I'll work up my recommendation (and an option or two) for the annual letters for the BOD to approve in the next week or two and send them to you/BoD. The pads we currently have available have proven difficult to lease but with the waiting list growing, I have hopes of leasing some of the less desirable pads with the caveat that they can always go back on the waiting list and upgrade later.

d. Program Meetings Report:

We had 57 attendees at last month's meeting which was posted to our YouTube channel.
Current Program Meeting Petty Cash as of 6 Aug 2020 = \$524
Expenses Since 6 Aug 2020 Report – None



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- e. AISIG Report:
The April AISIG ZOOM meeting featured a talk by Greg Crinklaw on image capture planning. About 15 members were on the zoom call. Next Month Jerry Hilburn will explain the art of asteroid imaging.
- f. Newsletter Report:
Current issue looks good – nothing new to report. Andrea will be unable to do the July issue so we may not have a newsletter.
- g. Website Report:
Nothing new to report.
- h. Social Media:
No Report.
- i. Outreach Report:
Mid-April, we were contacted by Ranger Kyle Icke at OakOasis County Preserve, who advised that the County of San Diego policies had changed a bit regarding in person gatherings at their outdoor public facilities. Ranger Icke furthermore invited the SDAA to host an outreach star party at the Preserve, following the now updated policies. He advised that the gathering would be limited to 50 persons, and that the existing policies for wearing masks and social distancing would remain.

Following a careful review of the invitation, the Board of Directors approved such an event for Saturday, May 8, with the stipulation that we would, indeed, follow the current County policies. Discussions with Ranger Icke led to our joint decision to forgo the posting of this event on the standard public media sites, to avoid an overcrowding situation. The event was included on the SDAA public calendar but was not posted on the website nor on social media sites. Ranger Icke invited a scout troop who had previously requested such an event.

The traditional, in person outreach star party was held on May 8, with 12 SDAA members present, and Supervising Ranger Kyle Icke with staff present to interact with our members and a few other park patrons. Attendance was estimated at 12 SDAA members (10 with scopes), a Cub Scout troop of about 8 persons, and approximately 10 to 15 other public patrons. The event was well controlled, with no lines necessary due to the ratio of members to visitors. The event ended about 10:00pm.

Ranger Icke has already invited the SDAA to return soon and suggested a date after the anticipated changes in County policies on June 15. We agreed to pursue that opportunity after such changes were known.

As mentioned last month, the SDAA will be assisting Timeanddate.com once again, with live imaging of the Lunar Eclipse on May 26, during the early morning hours. Currently we are anticipating the use of a private residence with better site lines for the eclipse than we would have at OakOasis Park. That event would only include the owner of the residence, Gary Hawkins and myself.

- j. TARO Report:
TARO is operational and is accepting DSO/EXO target imaging requests, weather permitting.
- k. Cruzen Report:
Gene and Ed (mostly Ed) fine-tuned the G-11 mount, set the limits, park and home positions and built a nice model. The mount seemed to track just fine and the go-to function centered the objects in the field of view each time. We added a TelRad finder and there doesn't seem to be a need for a finder scope at this time. We currently have the following 2" eyepieces:
 - TeleVue 55mm Plossl
 - TeleVue 22mm Nagler
 - Pentax XL 40We'll probably need to add another one or two to have a nice selection for either the TAK or the Cass. The training manual is nearly complete, and we have a couple of people who have volunteered to go through the training process to see if it's complete.



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- l. Merchandise Report:
Ordered and received 6 “trucker” style caps, 6 “dad” style caps, which have a lower profile and three knit “stocking” caps, all with the SDAA 2 color logo. The Wild Apricot store has been updated.
- m. Astronomical League Report:
Nothing new to report this month.
- n. JSF Report:
No Report but the 2021 JSF is cancelled and we haven’t had anybody volunteer to make it a “virtual” event.

6. **Old Business:**

- a. Software Asset Updates:
Mike C is making a list of all our digital assets and will send it out to the board for review.
- b. Outreach Support for US Naval Base Coronado:
Dave D has been in contact with the Naval Base in Coronado regarding an outreach event but it will probably be postponed for another month or two.
- c. Other old business
None

7. **New Business:**

- a. JSF Trademark Renewal:
The JSF trademark is up for renewal, but we’d need to hire an attorney at a significant expense, so it was decided not to renew.
- b. Budget Planning meeting:
Mel is going to plan the budget meeting for next month.
- c. Other New Business:
None

8. **Adjournment:** The meeting was adjourned at 8:28pm.

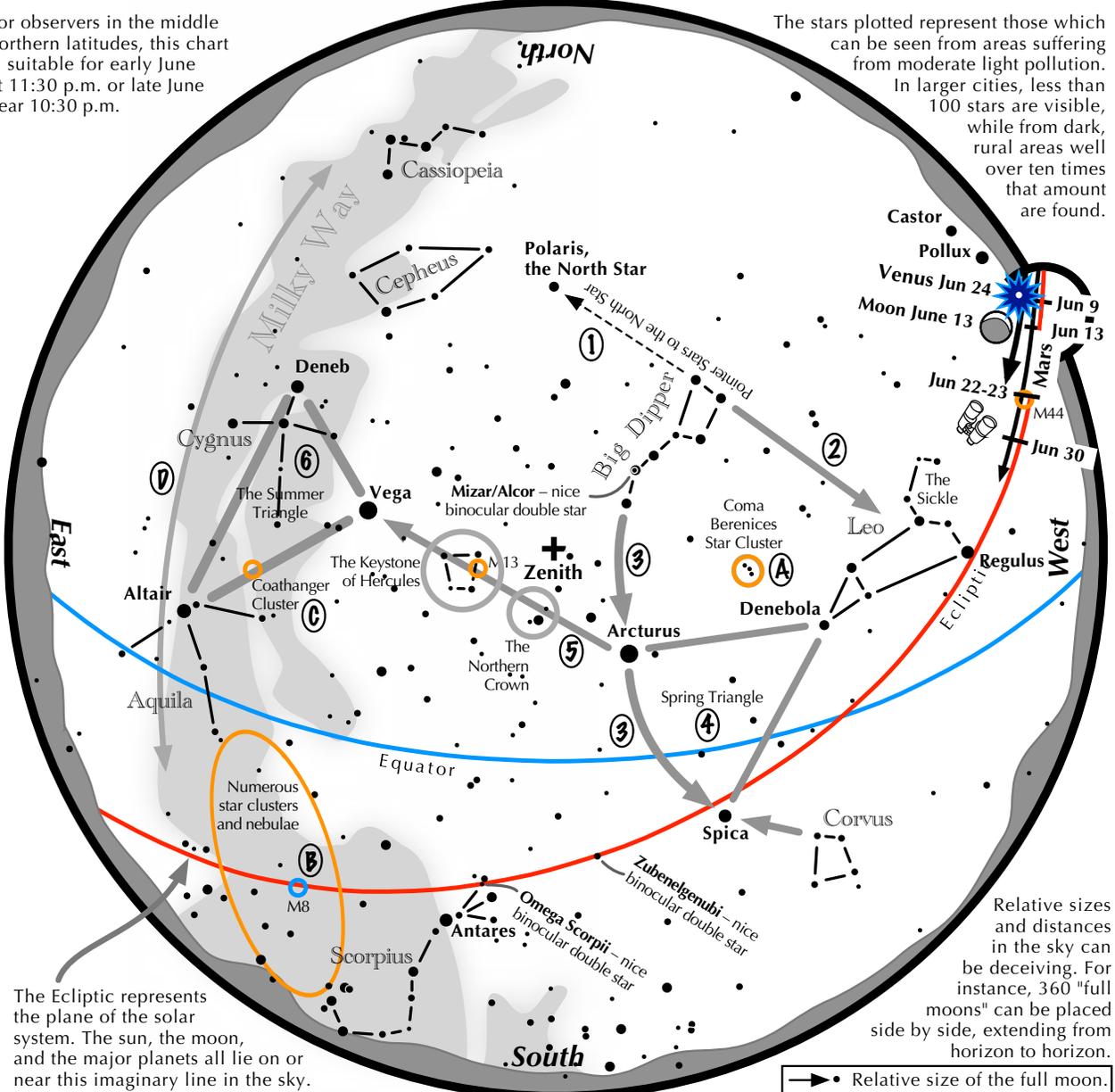


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Navigating the June Night Sky

For observers in the middle northern latitudes, this chart is suitable for early June at 11:30 p.m. or late June near 10:30 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→• Relative size of the full moon.

Navigating the June night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Draw another line in the opposite direction. It strikes the constellation Leo high in the west.
- 3 Follow the arc of the Dipper's handle. It first intersects Arcturus, the brightest star in the June evening sky, then Spica.
- 4 Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
- 5 To the northeast of Arcturus shines another star of the same brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 6 High in the east are the three bright stars of the Summer Triangle: Vega, Altair, and Deneb.

Binocular Highlights

- A: Between Denebola and the tip of the Big Dipper's handle, lie the stars of the Coma Berenices Star Cluster.
- B: Between the bright stars of Antares and Altair, hides an area containing many star clusters and nebulae.
- C: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
- D: Sweep along the Milky Way for an astounding number of faint glows and dark bays.



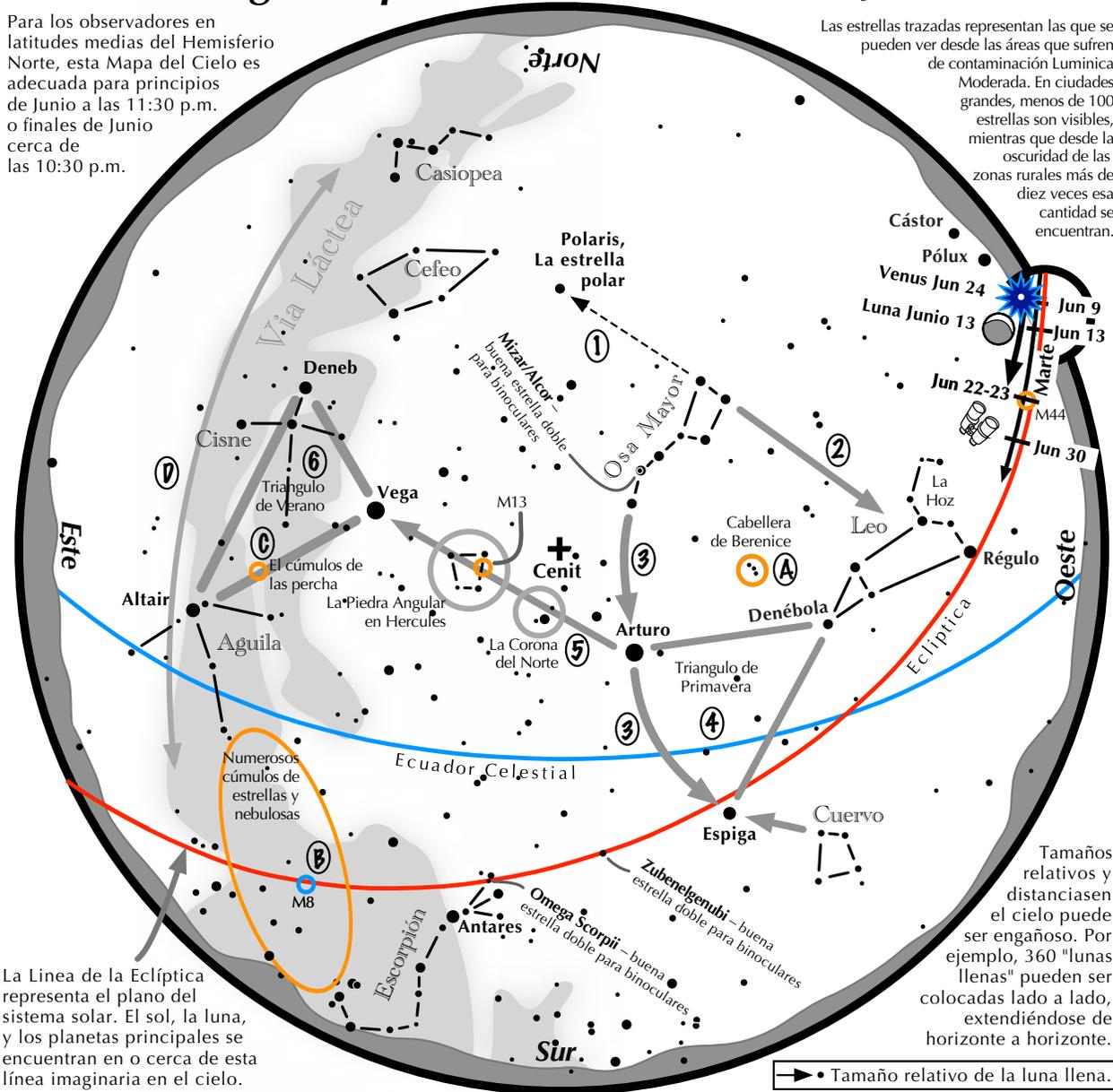


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Navegando por el cielo nocturno de Junio

Para los observadores en latitudes medias del Hemisferio Norte, esta Mapa del Cielo es adecuada para principios de Junio a las 11:30 p.m. o finales de Junio cerca de las 10:30 p.m.

Las estrellas trazadas representan las que se pueden ver desde las áreas que sufren de contaminación Luminica Moderada. En ciudades grandes, menos de 100 estrellas son visibles, mientras que desde la oscuridad de las zonas rurales más de diez veces esa cantidad se encuentran.



La Línea de la Eclíptica representa el plano del sistema solar. El sol, la luna, y los planetas principales se encuentran en o cerca de esta línea imaginaria en el cielo.

Tamaños relativos y distancias en el cielo puede ser engañoso. Por ejemplo, 360 "lunas llenas" pueden ser colocadas lado a lado, extendiéndose de horizonte a horizonte.

→ • Tamaño relativo de la luna llena.

Navegando por el cielo nocturno: simplemente comience con lo que sabe o con lo que puede encontrar fácilmente.

- 1 Haz una línea hacia el norte desde las dos estrellas en la punta de la Osa Mayor. Pasa por Polaris, la estrella polar.
- 2 Directamente debajo del tazón de la Osa Mayor se encuentra Leo con su estrella principal, Régulo.
- 3 Siga el arco del mango del tazón de la Osa Mayor. Primero cruza Arcturo, luego continúa hacia Espiga, luego Cuervo.
- 4 Arcturo, Espiga y Denébola forman el triángulo de primavera, un gran triángulo equilátero.
- 5 Dibuja una línea desde Arcturo a Vega. Un tercio del camino se encuentra "La Corona del Norte". Dos tercios de esa distancia llevan a la "piedra angular de Hércules." Se necesita un cielo oscuro para ver estas dos configuraciones estelares tenues.
- 6 En lo alto del este se encuentran las tres estrellas brillantes del Triángulo de verano: Vega, Altair y Deneb.

Puntos destacados con binoculares

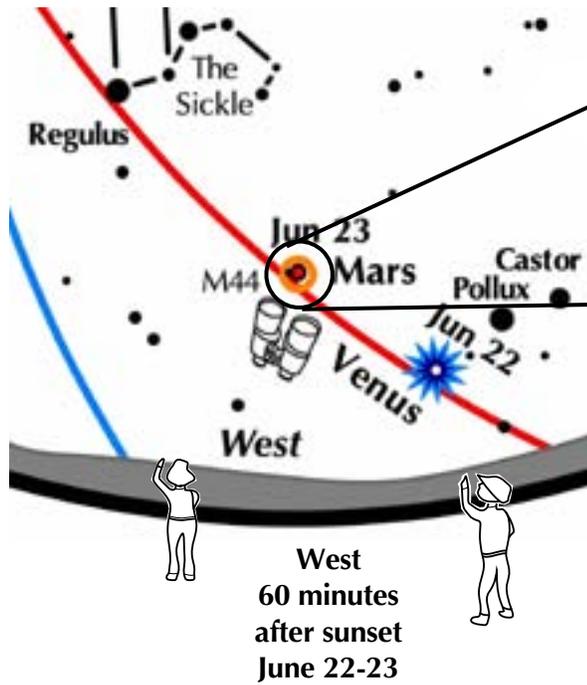
A: Mira alto en el este para ver el cúmulo de estrellas perdidas de Cabellera de Berenice. **B:** Entre las brillantes estrellas de Antares y Altair, se esconde un área que contiene muchos cúmulos de estrellas y nebulosas. **C:** El 40% del camino entre Altair y Vega, centellea el "Colgador", un grupo de estrellas que describe un perchero. **D:** Barrer a lo largo de la Vía Láctea para obtener una cantidad asombrosa de brillos tenues y bahías oscuras.



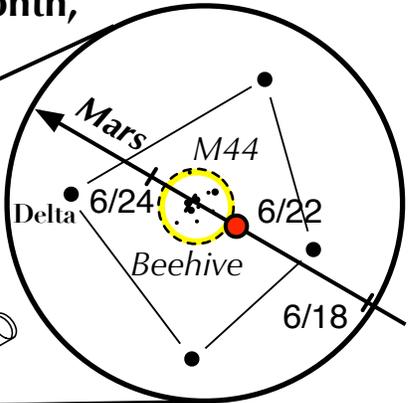


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If you can observe only one celestial event this month, consider this one:



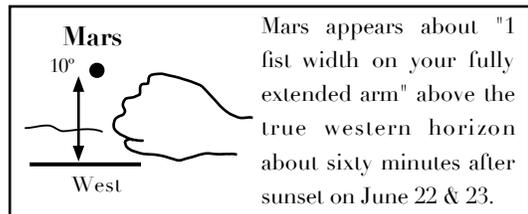
View through 10x50 binoculars



Mars tangles with a Hive of Stellar Bees

Look to the west 60 minutes after sunset June 22 & 23.

- The brilliant star-like object low above the horizon is Venus.
- Mars, shining much fainter than Venus, lies to the upper left.
- Aim binoculars at Mars to spot the faint star cluster M44, also known as the Beehive.
- The stellar bees are 610 light-years away, some 16 million times farther than Mars.





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American Association of Variable Star Observers (AAVSO)

2021 Spectroscopy Workshop TEACHER GRANT APPLICATION

Information for teacher candidates
applying to be an AAVSO/NSF grant recipient



An educational opportunity with tools for engaging your students
in a hands-on astronomy and physics curriculum.

The AAVSO is proud to announce a National Science Foundation (NSF)-funded workshop on stellar spectroscopy with small telescopes. The goal of the Spectroscopy Workshop is to enhance the skills of amateur astronomers.

We are offering grants for five (5) high school teachers to attend the Workshop with other AAVSO citizen astronomers to learn the basics of stellar [spectroscopy using small telescopes](#). The goal of the Teacher Grant is for teachers to take the knowledge and skills acquired in the Workshop back to their classroom and incorporate it into their science curriculum. Participating teachers who successfully document their spectroscopy curriculum and student projects will be invited to present at a future AAVSO Annual Meeting.

The NSF grant will reimburse the 5 teachers chosen to participate for travel and lodging costs up to \$1,350.00 while the AAVSO will provide the recipients' free workshop registration. Continental breakfast, two coffee/snack breaks and lunch will also be provided on both workshop days for workshop participants.

The Workshop will be held on November 3 & 4, 2021 from 8:00AM to 7:00PM at [The Row Hotel](#) in Somerville, MA (just a few miles from downtown Boston). Participants are also welcome to stay and attend the AAVSO Meeting on November 6–7. The registration fee will be waived, but you must contact the AAVSO in advance to register for the meeting and contact the hotel to book any additional room nights at your cost.

Participants who successfully complete the Workshop will receive the following free of charge:

- License to [RSpec software](#)
- [Star Analyzer 100 Grating](#)
- 1-year complimentary [AAVSO](#) membership
- Complimentary registration for the [2021 AAVSO Annual Meeting](#)
- Opportunity to present your spectroscopy curriculum at a future AAVSO meeting

Please complete the Teacher Application below in as much detail as possible and submit by August 15, 2021, 11:59 p.m. ET. You may scan and email your application to kspirer@aavso.org or send via U.S. mail to:

AAVSO
ATTN: Teacher Workshop
49 Bay State Road
Cambridge, MA 02138

Email questions about the application to: kspirer@aavso.org
No telephone calls please. To learn more about the AAVSO, please visit our website, <http://www.aavso.org/>



San Diego Astronomy Association

SDAA Contacts

Club Officers and Directors

President	Dave Wood	President@sdaa.org	(858) 735-8808
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Field Trips	-Vacant-	FieldTrips@sdaa.org	
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Governing Documents	TBD		
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Amateur Telescope Making	-Vacant-		
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SDAA Editorial Staff

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newsletter@sdaa.org

Assistant Editor: Craig Ewing

Have a great new piece of gear? Read an astronomy-related book that you think others should know about? How about a photograph of an SDAA Member in action? Or are you simply tired of seeing these Boxes in the Newsletter rather than something, well, interesting?

Join the campaign to rid the Newsletter of little boxes by sharing them with the membership. In return for your efforts, you will get your very own byline or photograph credit in addition to the undying gratitude of the Newsletter Editor. Just send your article or picture to Newsletter@SDAA.Org.



San Diego Astronomy Association

NASA Night Sky Notes

June 2021



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 nightsky.jpl.nasa.gov to find local clubs, events, and more!

Astrophotography With Your Smartphone

David Prosper

Have you ever wanted to take night time photos like you've seen online, with the Milky Way stretched across the sky, a blood-red Moon during a total eclipse, or a colorful nebula? Many astrophotos take hours of time, expensive equipment, and travel, which can intimidate beginners to astrophotography. However, anyone with a camera can take astrophotos; even if you have a just smartphone, you can do astrophotography. Seriously!

Don't expect Hubble-level images starting out! However, you can take surprisingly impressive shots by practicing several basic techniques: steadiness, locked focus, long exposure, and processing. First, steady your smartphone to keep your subjects sharp. This is especially important in low light conditions. A small tripod is ideal, but an improvised stand, like a rock or block of wood, works in a pinch. Most camera apps offer timer options to delay taking a photo by a few seconds, which reduces the vibration of your fingers when taking a shot. Next, lock your focus. Smartphones use autofocus, which is not ideal for low-light photos, especially if the camera readjusts focus mid-session. Tap the phone's screen to focus on a distant bright star or streetlight, then check for options to fine-tune and lock it. Adjusting your camera's exposure time is also essential. The longer your camera is open, the more light it gathers - essential for low-light astrophotography. Start by setting your exposure time to a few seconds. With those options set, take a test photo of your target! If your phone's camera app doesn't offer these options, you can download apps that do. While some phones offer an "astrophotography" setting, this is still rare as of 2021. Finally, process your photos using an app on your phone or computer to bring out additional detail! Post-processing is the secret of all astrophotography.

You now have your own first astrophotos! Wondering what you can do next? Practice: take lots of photos using different settings, especially before deciding on any equipment upgrades. Luckily, there are many amazing resources for budding astrophotographers. NASA has a free eBook with extensive tips for smartphone astrophotography at bit.ly/smartastrophoto, and you can also join the Smartphone Astrophotography project at bit.ly/smartphoneastroproject. Members of astronomy clubs often offer tips or even lessons on astrophotography; you can find a club near you by searching the "Clubs and Events" map on the Night Sky Network's website at nightsky.jpl.nasa.gov. May you have clear skies!



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NASA Night Sky Notes

June 2021



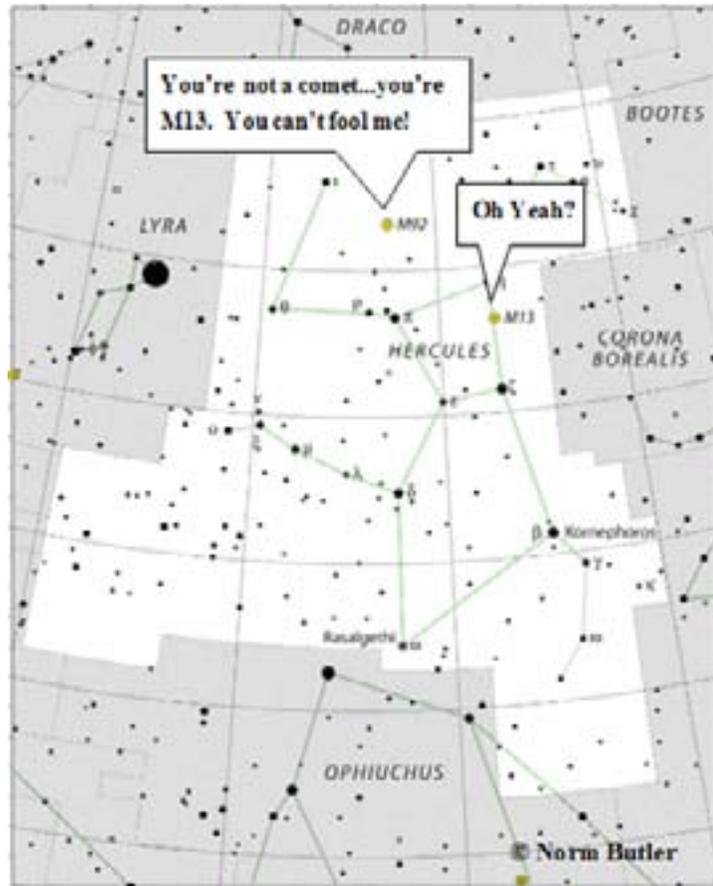
A small tripod for a smartphone. They are relatively inexpensive – the author found this at a local dollar store!



The Moon is large and bright, making it a great target for beginners. The author took both of these photos using an iPhone 6s. The crescent moon at sunset (left) was taken with a phone propped on the roof rack of a car; the closeup shot of lunar craters (right) was taken through the eyepiece of a friend's Celestron C8 telescope.



San Diego Astronomy Association



AmazonSmile Donations

The SDAA board wants to thank members for using the AmazonSmile donation link as you've helped us raise over \$300 in 2020 at no cost to you. This is three times the amount we received in 2019. Our URL is smile.amazon.com/ch/51-0183640 and, if you are an Amazon user, we hope you will encourage your family to use this option.

MEMBERSHIP INFORMATION

Send dues and renewals to P.O. Box 23215, San Diego, CA 92193-3215 or renew on-line. The notice that your membership in SDAA will expire is sent by email. Dues are \$60 for Contributing Memberships; \$35 for Basic Membership; \$60.00 for Private Pads; \$5 for each Family membership.