San Diego Astronomy Association Celebrating Over 50 Years of Astronomical Outreach



March 2024

https://www.sdaa.org/ A Non-Profit Educational Association P.O. Box 23215, San Diego, CA 92193-3215

Next SDAA Business Meeting

March 13th at 7:00pm 10070 Willow Creek Rd San Diego, CA 92131 Via Zoom

Next Program Meeting March 20th Mission Trails Regional Park Visitor and Interpretive Center 1 Father Junipero Serra Trail

CONTENTS

March 2024, Vol LXII, Issue 3
Published Monthly by the
San Diego Astronomy Association
Incorporated in California in 1963
Program Meeting1
February Minutes2
Annual Banquet Report7
Night Sky Charts10
Another Look15
SDAA Contacts19
NASA Night Sky Notes20
TDS 2024 Star Party Schedule 22

March 20th Program

Topic: Totality Eclipse Prep with discussions led by SDAA in-house experts



THESE ARE THE STAGES OF A TOTAL SOLAR ECLIPSE. THE PARTIAL PHASES LAST ABOUT AN HOUR AND 20 MINUTES. From Great American Eclipse website.

The meeting will be held in-person at MTRP

https://us02web.zoom.us/meeting/register/tZMude-sqz4sGN1qXv7qSlBwnYp-gaQEZZ8LU#/registration

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

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

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



San Diego Astronomy Association Board of Directors Meeting February 13, 2024 – Unapproved and subject to revision

1. Call to Order

The meeting was held via Zoom and was called to order at 7:03pm with the following board members in attendance: Dave Decker, President; Bee Pagarigan, Vice President; David Wood, Corresponding Secretary; Hiro Hakozaki, Director; Gracie Schutze, Director; Kin Searcy, Director; Steve Myers, Director. Treasurer Mike Chasin and Recording Secretary Gene Burch were absent (excused).

2. Approval of Last Meeting Minutes

The January meeting minutes were approved.

3. Treasurers & Membership Report

The January 2023 Treasurer's report was approved. The final bank reports from Chase were included in this month's report. Preliminary results from the January Banquet were included.

4. Standard Reports

a. <u>Site Maintenance Report</u>

LIPP/Warming Room Building Improvements – reinforce weight-bearing walls that support observatory roll-back roof. Divert water from exterior walls.

Work in progress report (Steve). Waiting for better weather to start work. Ben Grunbaum has become available to assist.

Identify/Manage side-projects for volunteers (clean up known overgrown pads, new user orientation, etc.)

Owner of Pad #69 requesting resolution to situation at his pad where there has been no power for over one year.

b. <u>Observatory:</u>

The LIPP Observatory is in excellent condition. Weather has continued to be favorable. Nothing else to report.

c. <u>Loaner Scope Report:</u>

All but two of the loaner scopes are currently out. Three are overdue for return, but the inclement weather has made it impossible to coordinate returns at TDS.

SDAA-001 (Coulter Odyssey) and SDAA-025 (Meade 2080) were successfully sold at the banquet auction, together raising \$500 in funds for the club. The glitchy CG-5 mount was also sold (for \$90!) at the auction.



There is an Orion XT8 donation pending that seems likely to enter the loaner program. The Bushnell Voyager may be jettisoned to make room for it.

The CGX mount was recalled from the lessee and will be removed from the loaner program. It will be stored in the Cruzen observatory until it makes sense to swap out the G11 mount. There may be a potential issue with the mount, but Paul will look into that.

A massive cache of astrophotography gear and some new mounts were donated recently, and so once there is time to get it all organized and documented, the following will be introduced as new loaners:

Meade LX85 equatorial mount with Orion 8" f/4 Astrograph, 60mm guide scope with Lodestar X2 guide camera, and a Canon DSLR. Plus, a ton of other imaging accessories.

iOptron MiniTower Pro alt-az mount with Meade 8" SCT - this will be our second GOTO loaner alongside SDAA-004 Meade LX90. We now have a Celestron NexImage solar system imaging camera, which will likely pair with this scope, for those that want to try planetary photography. It will also be a fine visual setup.

SDAA-027 (Celestron C6-N f/5 on CG-5 mount) will be upgraded with a guide scope once Paul can get a guide camera for it.

The Meade 16" Dobsonian still needs some TLC before it can be put into service. A new secondary will be ordered so that this scope can be put into service. Paul will look into the specs and review the Chinese version which may cost approximately \$300-400.

d. <u>Private Pad Report:</u>

After the new leases and reclaimed pads, we have 7 pads available and 8 people on the waiting list (1 is a current pad holder looking to upgrade). Only 3 of those on the waiting list appear to be actively looking for pads.

The new lessee of Pad 60 is looking to make a significant upgrade that will involve removing the existing structure and replacing it with a new one. Per the Board's decision, the site structure is not to be removed and is to remain in place. The Board has the option of offering a new site (when available) to lessee.

As part of SDAA's responsibility to keep our site safe, the Board will have the pad lease agreements reviewed. Bee Pagarigan will be the committee lead. Bee will contact Mark Smith who manages the leases and will undertake the task of updating wording to make the content current.

We also need to decide what to do with Pad 52. There is a donated dome on the pad and a donated scope inside. Originally the club was developing the pad as a turnkey on site imaging



setup that a member could reserve nights on. That has been in process now for at least 4 years with no progress having been made for at least 3 of them. Pad 52 is in a prime location and could easily be leased. We really need to either find out what the status of the original plan is or find something else do to with the pad.

At this time, the Board has decided to defer this topic to another date.

e. <u>Program Meetings Report:</u>

Sharon Flemings, speaker for February 21, 2024, program meeting confirmed.

Seeking Board approval to give away SDAA club stickers to winners of "Get to Know Your Club" short quizzes held at end of meetings. Winners to be determined via Chat. The Board has approved this request.

March 20, 2024, meeting will be in-person at Mission Trails Regional Park (confirmed via Searcy). Topic to be Totality Eclipse Prep with discussions led by SDAA in-house experts.

April program meeting topic to be "Show and Tell Adventures" from Totality SDAA member trips.

Speakers for Science in Space at the ISS National Laboratory confirmation in progress. Possibly large enough topic to span two consecutive programs. Bee Pagarigan will look into this.

f. <u>AISIG Report:</u>

The next AISIG meeting is on 2-29 and our guest speaker will be Greg Crinklaw, the developer of Sky Tools 4 imaging.

g. <u>Newsletter Report:</u> All looks great!

h. <u>Website Report:</u>

There haven't been any requests for updates to the Website.

Dave Decker will send out emails to each Chairman asking they update their respective sites and to continue to monitor for any necessary changes to content.

The intent is to finish the new Julian StarFest website soon so it can be used for this year. The prototype website is <u>https://wp.julianstarfest.com/</u>. Please send any comments.

We should make sure that new board members get their SDAA email regularly. The Google Workspace email does not automatically forward to a personal email and each user needs to set that up unless they intend to check the SDAA email frequently.



i. <u>Social Media:</u> No report.

j. <u>Outreach Report:</u>

Well, another wet month for SDAA and cancellations all over the city. Although not reflected on the calendar, a few of the cancellations were rescheduled for February. Our Stars-in-the-Park seems to be the major casualty the last few months, in that it's a fixed date. The three schools, Jefferson, La Mesa Dale, and Solana Santa Fe were great successes. The hosts at these schools were just wonderful and very supportive to us. The children and parents were very excited to view and learn what we were showing them.

The weather at Cabrillo National Monument's 'Moon Rise' event succeeded in limiting the views of the Moon and Jupiter, sending clouds to obscure them from the waiting observers. Still the night view of the city was beautiful from the lighthouse, a view off-limits to the general public because of the monument's sensitive location on a military reservation.

2024	Previous Total	January	YTD
Completed	0	8	8
Canceled	0	2	2
Total Attendance	0	770	770

Here are the numbers for January:

k. <u>TARO Report:</u>

TARO activity has been minimal due to weather conditions. Hiro H asked David W for a document showing TARO usage and activity and David agreed to provide this.

I. <u>Cruzen Report:</u>

Cruzen was reserved only one time in January. No current issues to report. A training session for new Cruzen users will be scheduled for March, but between the weather and the upcoming April eclipse, this may not happen. If it doesn't happen in March, it will likely be pushed to after the eclipse, in May.



- m. <u>Merchandise Report:</u> Nothing to report this month.
- n. <u>Astronomical League Report:</u> Nothing new at this time.
- o. <u>JSF Report:</u> Dave Decker will contact Dan Kiser to discuss JSF Coordinator position for 2024.
- p. <u>Primary Grid Reconstruction Report:</u>
 After several e-mails and phone calls, both electrical general contractors have recommitted to getting plans and bids out by this week.

A Scope of Work was submitted, and David Wood will contact them again. It has been difficult to get people out to our site.

5. Old Business:

- a. Website updates suggested and TBD by Webmaster. Contact information Pagarigan for Board members will be reviewed to make sure it's current.
- b. Pad #69 electrical and interim solutions After discussion of this issue, Decker the Board will need to determine the power requirement(s) of this site. Dave Decker and Bee Pagarigan will contact the pad lessee. Once this is done, the Board will be able to offer temporary solutions to the pad. As was noted earlier, the entire SDAA power grid is in the rebuild stage so a temporary solution is the only available option.

6. New Business:

- a. JSF Coordinator Bill Cecil and Dan Kiser. Dave D will contact Dan. Decker
- b. Dave Decker will have another scope to be checked out. Gracie Schutze Decker has been in contact with another member who will be donating an Orion Skywatcher 120 EQ Equatorial Refractor. The member lives in North County, so Gracie will pick up the scope in the near future.
- 7. Adjournment: The meeting was adjourned at 9:02pm.



SDAA Annual Banquet - January 27, 2024

Once again, our SDAA Banquet was held at the Handlery Hotel in Mission Valley. For those that weren't able to attend, a fun time was had by all...especially the auction and raffle winners!

The event started with cocktails at 5pm with dinner and our annual meeting following at 6pm. Dave Decker presided over the business section of the evening.



As you know, this is an important fundraiser for the club. Lots of raffle tickets were purchased and the bidding was furious for several auction

items. As you can see here the 'telescope forest' was impressive! Paul, Bee, Gene, Dave(s), and the rest of the team assembled, stitched and set up items for sale. Additional tables held raffle items and our NEW STICKERS!! Go check them out!!











After the dinner and our annual meeting, it was time for our Guest Speaker, Steve Murray. The topic: "New Eyes -New Universe" - the celestial surprises of the James Webb Space Telescope. Steve is currently a freelance science writer, an SDAA member and a NASA/JPL Solar System Ambassador. The presentation was impressive with lots of new information.



During our Banquet, Dennis Amman

honored outstanding outreach individuals with a special presentation - The Astronomers Monument Figures. (This particular figure stands prominently in front of the Griffith Observatory). The six Astronomers featured on the monument are among the most influential and important in history. They are: Hipparchus (Greek astronomer), Nicolaus Copernicus, Galileo Galilei, Johannes Kepler, Isaac Newton and William Herschel.



In Dennis' words... "In the past, I've recognized some of

our outreach astronomers by presenting them with these 'Golden Globe' awards, or should I say Griffith Park Monument pedestals. Engraved on this monument are some of the greatest minds of astronomy.

I have five people in front of you tonight, they are: Annette Brown, Jennifer Koles, Dave Whigham, Ken Hotelling, and Craig Storms. Each one of these people have helped at various locations around the San Diego County these past years.

My sister Annette has been driving down from Temecula, assisting us at Stars-inthe-Park and K.Q. Ranch. Jennifer has been a regular at K.Q. Ranch with her



two telescopes. Dave Whigham and Ken Hotelling are a team, two for one, you might say at Oakoasis County Park and various schools. Finally, Craig Storms has been like a shooting star, all over the city and county."



Thank you, Dennis, for recognizing your shining stars in our Outreach Program.

The remainder of the evening was waiting for raffle winners to be announced by our very own Mike Chasin.

All in all, it was a really fun evening! Perhaps we shall see you next year?



Clear Skies,

Gracie Schutze SDAA Board Member Director Delta





Binocular Highlights

A: Between the "W" of Cassiopeia and Perseus lies the Double Cluster. B: Examine the stars of the Pleiades and Hyades," two naked eye star clusters. C: M42 in Orion is a star forming nebula. D: Look south of Sirius for the star cluster M41. E: M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux. F: Look high in the east for the loose star cluster of Coma Berenices.



Astronomical League www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.





Liga Astronómica www.astroleague.org/outreach; Duplicación permitida y fomentada para toda distribución gratuita Traducción al español por Dr. Salvador Aguirre

11

M44, un cúmulo de estrellas apenas perceptible a simple vista, se encuentra al sureste de Pólux. F: Mira alto en el este

para ver el cúmulo de estrellas perdidas de Cabellera de Berenice.





Mercury's best evening apparition of 2024!

From 40 to 60 minutes after sunset after March 15th, look to the west for a point of light shining low above the horizon.

- Outstretch your arm and make a fist. Place one side at the true horizon. At it its other side should be Mercury.
- Over the next week, the little planet rises slightly higher each evening into the darker twilight while brightening, making it easier to spot.

• On the 24th, Mercury appears as far from the set sun as it will be. This point in its orbit is called Greatest Eastern Elongation. Just three nights later as it descends in the twilight, it will become much more difficult to spot.



ASTRONOMICAL LEAGUE Double Star Activity





Otros Soles: Alfa Ursae Majoris Cómo encontrar a Alpha Ursae Majoris en una tarde de Marzo

Mire al noreste. Busque la Osa Mayor de pie sobre su mango. Alfa es la estrella en la esquina superior izquierda del Cazo.







14



Another Look March 2024

The New moon in March is on the 11th at 0358. The Full moon in March is on the 25^{th} at 0983.

Daylight Savings time begins March 10.

A Penumbral lunar eclipse is visible this month from the continental United States, Hawaii and eastern Alaska beginning about 2200 and ending 4 hours later Pacific Daylight Time. Maximum immersion will be at 0013 PDT. The moon will be quite high, it will be interesting to see if we are able to register any appreciable dimming.

March is the Full Worm moon, referring to the larvae emerging from the bark



of trees at this time. Native American names include the Crow Comes Back Moon, the Eagle Moon, Goose Moon, Snow Crust Moon, Sore Eyes Moon, Sugar Moon and the Wind Strong Moon.

The Vernal Equinox, i.e. the first day of spring arrives at 2004 PDT on Tuesday March 19. During much of March this year the Christian world celebrates the season of Lent. As a word, lent goes way back to the Old English and the Old German dialects and essentially means spring.

There are a number of lunar/planetary conjunctions this month including an occultation of Antares visible from Florida. Mercury and Neptune are being occulted on the 11^{th} , visible from Antarctica, the So. Pacific and Central/So. America. On the 14^{th} , the Pleiades will be less than $1/2^{0}$ from the moon and on the 21^{st} Venus will be a $1/4^{0}$ from Saturn.

In Spanish its Luna Llena de Marzo, in German Vollmond im März, in French Pleine Lune de Mars, in Italian Marzo Luna Plena, and in Greek Μαρτίου πανσἑληνος (Martíou pansélinos) In Gaeilge – Leo Mór agus Leo Mion.



I really wanted to talk this month about the bowl of the Dipper. Years ago I had the opportunity to spend an evening with Rev. Robert Evans of Hazelbrook, New South Wales. I believe he still holds the record for visual discovery of supernovas, over 40. He came to visit Southern California and I had the chance to spend an evening with him at the eyepiece of the 18" reflector at

Ford Observatory near Wrightwood, CA. Robert was consummate at his profession and wanted to spend as much time as he could looking for supernova in the northern skies he couldn't see at home. He passed a year ago. So, I figured another evening galaxy hopping in Ursa Major was a good idea.

Londyn Brown



I was hoping to remember Robert this month by concentrating on the bowl of Ursa and to add to the fun the tail of Leo. It didn't work out. Most of the bowl's galaxies are too dim, you need some mirror and you need decent

skies. Still, its hard to resist. So this month and next month in April we will look at several historically famous galaxy clusters, many of them bright galaxies, Messier's and even a Caldwell. We will search for a few of the over 500 NGC and IC objects in Ursa Maj and the over 135 in Leo. To add a dollop of whipped cream to our galaxy pie we will also find two Abell galaxy clusters, one in Ursa and another in Leo.





Dan Schechter <u>https://ocastronomers.org/wp-content/uploads/2019/01/m081-02.jpg</u>

Ursa Maj. Has two well know galaxy groups and two Abell clusters. The M81 & M82 group is well placed for viewing this month and the M101 group is rising steadily. Abell 1377 and Abell 1314 are also well placed at 2100 this evening. M81, also know as Bode's galaxy, it a big, bright centerpiece of a family of over 70 galaxies. It is 7th magnitude, so easy to see and can be viewed in the same field as M82 and NGC 3077. M82 is 8th magnitude and 3077 is 10th. We have all seen those https://apod.nasa.gov/apod/ap230120.html beautiful images of M82 with red filaments boiling out from the top and bottom of the galaxy disc like a mad explosion.

https://apod.nasa.gov/apod/ap230802.html Sadly you won't see anything like that. In your eyepiece you can tell its oddly shaped and you may see a little bit of structure in M81, but count yourself successful if you can identify all three galaxies in your field. Just outside the field is 10th magnitude

2787. 10th magnitude 2976 is also easily seen. 2892 is dim at 13th magnitude and small. 2959 is nearly 13th magniude, a tight spiral. Almost touching it is a nearly 15th magnitude lenticular (rod shaped) galaxy, 2961. The circle represents one degree.

The M101 galaxy, called the Pinwheel, is the center for a number of group members. 5474 and 5477 are the closest members to 101. They are

U5692 U5688 3077 12474 2959 2976 2892

both dwarfs. 5474 has a big halo gravitationally bound to 101. You will find it at 11th magnitude. 5477 is near invisible at 14th magnitude. 5473 is 11.5 magnitude. 5475 is quite dim at 13th magnitude. 5485 and 5486 are close, but 14th magnitude. 5422 will be easier. It is a 12 magnitude lenticular galaxy with a quite bright nucleus and rather long arms. 5368 and 5443 are both near 14th magnitude, another tough find. The last galaxy on the

chart is UGC 8837, a 13^{th} magnitude dwarf that along with 5474 and 5477 are a family of

(Jeff Malmrose from 2008 includes N5473 and 5474) https://ocastronomers.org/wp-content/uploads/2018/12/ M101.jpg

interacting galaxies with M101. U8837 is a small active galaxy, in fact all three galaxies are pretty messed up by the huge gravity of M101.

Donald Lynn 2010 m95-96-105 https://ocastronomers.org/wp-content/upload 2018/12/10.77112.16_06442_RGB_150secV2POvlysm.jpg

Other objects to look for in Ursa Major are M40, M97, M108, M109, Abell 1377 and Abell 1314.

August Winnecke is a German astronomer who published one of the shortest catalogs in our literature. The Winnecke Catalogue of Double Stars has seven items listed, Messier 40 is number 4 on the list. The two stars are magnitude 9 and 10. M108 and M97 are less than a degree apart and can be seen in the same field of view. https://www.raysuniverse.space/





M97 is the famous Owl planetary and M108 is much larger but about the same brightness, around 9^{th} magnitude. M108 is a flat spiral showing us about a 30° face. The more mirror you have the more blue M97 will appear.

M109 is a spiral with about a 60° tilt. It is the same apparent size as M108 and about the same brightness. With a little bit of glass you should be able to see the rather apparent bar and stringy spiral arms. This rather over processed image I cropped from jgscience.org (a good one, check it out), shows M 109 and Phecda, γ Ursae Majoris.



Abell'1314 and 1377 are not among the popular Abells. A1377 is13th and A1314 is 15th magnitudes. A1377 does have a 3rd magnitude star near the brighter galaxies that can be used as a finder. In A1314 is the famous 14th magnitude "Papillon" galaxy, IC708.



3628 🥏

.

'6

Between Theta and Iota Leonis lie the Leo Triplet. The principle components are M65, M66 and NGC 3628. The three are all about 9th magnitude and will be visible as a group in your wide angle eyepiece. They are an interesting study in galaxy formation. In the one field of view you have a 30° galaxy, M66, a 60° galaxy, M65 and an edge-on galaxy, 3628. Only a degree away from M66 is a smallish, 12th magnitude, nearly lenticular galaxy, N3593. Close by are four 14th magnitude galaxies that will reward careful search: IC's 677, 2666, 2708 and 2763. 2666 is brighter by half a magnitude. 2763, 2666 and 2708 are awarded only a couple of lines and no images in the NGC catalog.

IC 677, however, is interesting since it has an even smaller, close companion galaxy, IC688. 677 is lenticular and active, it will be interesting what you see.

Perhaps a little more satisfying is the Leo II group, located in the triangle of the tail made by Beta, Delta and Theta. The main four galaxies are NGC's 3655, 3681, 3684 and 3686, all 11^{th} and a fraction magnitude and all spiral of one form or another. Leo II could have two dozen or more members, but probably only a dozen or so visible in our larger amateur telescopes. One of the Patrick Stewart Caldwell objects, number 40, NGC 3626 is also right there. 3626 and 3632 are the same galaxy confused back in the day until reconciled by Caroline Herschel. 3626 is between 11 and 12 mag. Perhaps Sir Pat was stretching it a little when he chose this galaxy as

number 40. Gary Imm <u>https://www.astrobin.com/337342/?q=ngc 3626</u>

In the immediate vicinity of NGC 3842, and part of the Abell 1367 cluster are seven galaxies, all 14th or so, and all looking like what we think a galaxy cluster should look like. It will be great fun when you point your cannon to the tail of Leo.



group in Leo in near his midsection. There are over half a dozen galaxies 10th magnitude and brighter anchored by M95, M96 and M105. All the galaxies I have plotted are 10th and 11th magnitude or brighter, so galaxy hopping in your big Dob is right up your alley. Leo I is surrounded by a gigantic cloud of Hydrogen and Helium called the Leo ring. It was only discovered in the last 50 years or so and is not observable in our visual wavelengths. Messier 105 and

its companion NGC 3384 are surrounded by a vast ring of neutral hydrogen gas. I took a Wikisky image and reduced it to the point were we can see the bridge of hydrogen gas between the two. You have to figure that that whole region of space is lying in a vast cloud of hydrogen and helium. We see the Leo ring as a ring but it is actually a sphere, the greater density of the gas on the sides being more visible and the center of the sphere blown out by the activity of M105, N3384 and N3389.



3239



The Lion flames. There the sun's course runs hottest Empty of grain the arid fields appear When first the sun into the Lion enters. Aratos.

From late Bronze and Early Iron Periods, to roughly the 1600's, at least in parts of the world, Regulus, the diminutive of Rex, was considered the "Ruler" of the heavens. This was true in Persia, Babylonia, India, and Arkkadiaancient Greece. He was king because for much of this time the summer solstice was in Leo which coincided with rivers rising, and the summer sun

> heating the earth and ripening the crops. Thank You http://www.rhysy.net/

http://www.quickmeme.com/ The image of a lion up at the top can be found in early Egypt, inscribed on fountains and gates, on Paleolithic cave walls in Chauvet to Druid, Scots, Central American and Asian civilizations. Leo has been identified world wide for thousands of years. Dark Skys, Dave Phelps











SDAA Contacts Club Officers and Directors President Dave Decker President@sdaa.org (619) 972-1003 Vice President VicePresident@sdaa.org Bee Pagarigan (760) 703-6183 **Recording Secretary** Gene Burch Recording@sdaa.org (858) 926-9610 Treasurer@sdaa.org (858) 210-1454 Treasurer Mike Chasin Corresponding Secretary Dave Wood Corresponding@sdaa.org (858) 735-8808 DirectorAlpha@sdaa.org Director Alpha Steve Myers Director Beta Hiro Hakozaki DirectorBeta@sdaa.org (858) 869-9507 Director Delta Gracie Schutze DirectorDelta@sdaa.org (619) 857-0088 Director Gamma DirectorGamma@sdaa.org (858) 586-0974 Kin Searcy *Committees* Site Maintenance Committee TDS@sdaa.org **Observatory Director** Ed Rumsey Observatory@sdaa.org (858) 722-3846 Private Pads Mark Smith Pads@sdaa.org (858) 484-0540 Outreach@sdaa.org Outreach Dennis Ammann (619) 247-2457 N. County Star Parties -Vacant-NorthStarParty@sdaa.org S. County Star Parties -Vacant-SouthStarParty@sdaa.org E. County Star Parties Dave Decker EastStarParty@sdaa.org (619) 972-1003 CentralStarParty@sdaa.org (619) 247-2457 Central County Star Parties Dennis Ammann Camp with the Stars -Vacant-CampWiththeStars@sdaa.org K.O. Ranch Coordinator Dennis Ammann KQ@sdaa.org (619) 247-2457 Newsletter@sdaa.org Newsletter Andrea Kuhl (858) 547-9887 New Member Mentor Dan Kiser Mentor@sdaa.org (858) 922-0592 Webmaster Webmaster@sdaa.org Jeff Stevens (858) 566-2261 AISIG Dave Wood AISIG@sdaa.org SecondSite@sdaa.org Site Acquisition -Vacant-FieldTrips@sdaa.org Field Trips -Vacant-Grants/Fund Raising -Vacant-Grants@sdaa.org info@julianstarfest.com Julian StarFest Bill Cecil Merchandising@sdaa.org Merchandising Gene Burch (858) 926-9610 Publicity Jeff Flynn Publicity@sdaa.org (619) 806-6505 Loaner Scopes Paul Krizak loanerscopes@sdaa.org cruzen@sdaa.org Cruzen Observatory Director Paul Krizak TARO Observatory Director Dave Wood TARO@sdaa.org **TDS** Network Dave Wood TDSNet@sdaa.org (858) 735-8808 **TDS** Operations Bee Pagarigan TDS@sdaa.org ALCOR (Astronomical League Correspondent) Dave Decker ALCOR@sdaa.org (619) 972-1003

SDAA Editorial Staff

Editor - Andrea Kuhl 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.



NASA Night Sky Notes

March 2024



This article is distributed by NASA's Night Sky Network (NSN). The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Constant Companions: Circumpolar Constellations, Part II By Kat Troche

As the seasons shift from Winter to Spring, heralding in the promise of warmer weather here in the northern hemisphere, our circumpolar constellations remain the same. Depending on your latitude, you will be able to see up to nine circumpolar constellations. This month, we'll focus on: Lynx, Camelopardalis, and Perseus. The objects within these constellations can all be spotted with a pair of binoculars or a small to medium-sized telescope, depending on your Bortle scale – the darkness of your night skies.



In the appearance of left to right: constellations Perseus, Camelopardalis, and Lynx in the night sky. Also featured: Cassiopeia as a guide constellation, and Capella as a guide star. Credit: Stellarium Web

- **Double Stars:** The area that comprises the constellation Lynx is famous for its multiple star systems, all of which can be separated with a telescope under dark skies. Some of the notable stars in Lynx are the following:
 - **12 Lyncis** a triple star that can be resolved with a medium-sized telescope.
 - **10 Ursae Majoris** a double star that was once a part of Ursa Major.
 - **38 Lyncis** a double star that is described as blue-white and lilac.



NASA Night Sky Notes

March 2024

• **Kemble's Cascade:** This <u>asterism</u> located in Camelopardalis, has over 20 stars, ranging in visible magnitude (brightness) and temperature. The stars give the appearance of flowing in a straight line leading to the Jolly Roger Cluster (NGC 1502). On the opposite side of this constellation, you find the asterism **Kemble's Kite**. All three objects can be spotted with a pair of binoculars or a telescope and require moderate dark skies.



A ground-based image from the Digitized Sky Survey (DSS) in the upper left shows Caldwell 14, the Double Cluster in Perseus, with an outline of the region imaged by Hubble's Wide Field and Planetary Camera 2 (WFPC2). Ground-based image: Digitized Sky Survey (DSS); Hubble image: NASA, ESA, and S. Casertano (Space Telescope Science Institute); Processing: Gladys Kober (NASA/Catholic University of America)

Double Cluster: The constellation Perseus contains the beautiful Double Cluster, two open star clusters (NGC 869 and 884) approximately 7,500 light-years from Earth. This object can be spotted with a small telescope or binoculars and is photographed by amateur and professional photographers alike. It can even be seen with the naked eye in very dark skies. Also in Perseus lies Algol, the Demon Star. Algol is a triple-star system that contains an eclipsing binary, meaning two of its three stars constantly orbit each other. Because of this orbit, you can watch the brightness dim every two days, 20 hours, 49 minutes – for 10-hour periods at a time. For a visual representation of this, revisit NASA's What's Up: November 2019.



NASA Night Sky Notes

March 2024

From constellations you can see all year to a once in a lifetime event! Up next, find out how you can partner with NASA volunteers for the April 8, 2024, total solar eclipse with our upcoming mid-month article on the <u>Night Sky Network</u> page through NASA's website!

Date	Туре	Sunset	Astro. Twi.	Moonrise(set)	Closing	Illumination
Jan-06-24	Public	4:57 PM	6:24 PM	3:07 AM	9:30 PM	26.5%
Jan-13-24	Member	5:03 PM	6:30 PM	(7:50 PM)	9:30 PM	8.5%
Feb-03-24	Public	5:22 PM	6:47 PM	1:55 AM	9:30 PM	44.0%
Feb-10-24	Member	5:29 PM	6:52 PM	(6:39 PM)	9:30 PM	1.4%
Mar-02-24	Public	5:47 PM	7:09 PM	12:46 AM	10:00 PM	61.4%
Mar-09-24	Member	5:52 PM	7:14 PM	5:52 AM	10:00 PM	0.6%
Apr-06-24	Member	7:12 PM	8:37 PM	5:20 AM	11:00 PM	6.0%
Apr-27-24	Public	7:27 PM	8:57 PM	11:36 PM	11:00 PM	88.3%
May-04-24	Member	7:33 PM	9:04 PM	4:20 AM	11:30 PM	16.0%
May-11-24	Public	7:38 PM	9:12 PM	(11:53 PM)	11:30 PM	17.7%
Jun-01-24	Public	7:51 PM	9:31 PM	2:50 AM	11:30 PM	28.5%
Jun-08-24	Member	7:55 PM	9:36 PM	(10:31 PM)	11:30 PM	6.8%
Jul-06-24	Member	7:59 PM	9:40 PM	(9:07 PM)	11:30 PM	1.1%
Jul-27-24	Public	7:50 PM	9:24 PM	11:58 PM	11:30 PM	56.6%
Aug-03-24	Member	7:44 PM	9:17 PM	(7:44 PM)	11:30 PM	0.6%
Aug-31-24	Public	7:13 PM	8:38 PM	4:59 AM	11:00 PM	5.2%
Sep-07-24	Public	7:04 PM	8:28 PM	(9:20 PM)	11:00 PM	20.0%
Sep-28-24	Member	6:36 PM	7:58 PM	3:52 AM	10:30 PM	14.5%
Oct-05-24	Member	6:27 PM	7:48 PM	(7:54 PM)	10:30 PM	8.6%
Oct-26-24	Public	6:02 PM	7:25 PM	2:42 AM	10:30 PM	28.1%
Nov-02-24	Public	5:56 PM	7:19 PM	(6:30 PM)	10:00 PM	1.7%
Nov-30-24	Member	4:42 PM	6:09 PM	7:11 AM	9:30 PM	0.4%
Dec-21-24	Public	4:47 PM	6:15 PM	11:15 PM	9:30 PM	63.2%
Dec-28-24	Member	4:51 PM	6:19 PM	6:00 AM	9:30 PM	5.2%

2024 TDS Star Party Schedule

SDAA is now registered with the employer fund-matching platform Benevity. If your workplace offers matching charitable donations for non-profits and uses Benevity to distribute funds, you can now designate the San Diego Astronomy Association. Thank you for supporting the SDAA!

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; \$40 for Basic Membership; \$70 for Private Pads; \$5 for each Family membership.