

San Diego Astronomy Association

Celebrating Over 50 Years of Astronomical Outreach



February 2025

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

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

Next SDAA Business Meeting

February 11th at 7:00pm

Via Zoom

Next Program Meeting

February 19th

Via Zoom

February 19th Program Meeting

Topic: Zwicky, Rubin, and Friends – new tools and new questions for time-domain astronomy

Speaker: Steve Murray, SDAA Member and NASA Solar System Ambassador

Time Domain astronomy is the study of how astronomical objects change with time, from seconds to decades. Understanding these events is essential to understanding the workings of the Universe. A new field of study is centered on those objects with rapid change called “transients.” New telescope and machine learning technologies have increased the cadence of observations, accuracy of measurement and classification, and collaboration between programs. Palomar Observatory and others have been advancing systematic transient studies. In 2025, the Vera C Rubin Observatory will boost them further still. These instruments - some dedicated and some adapted to purpose - are answering critical questions about how the Universe “runs.”



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San Diego Astronomy Association

Incorporated in California in 1963

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The meeting will be held via Zoom.

See <https://sdaa.org/program-meeting/>

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>



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San Diego Astronomy Association Board of Directors Meeting January 14, 2025 – 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; Mike Chasin, Treasurer; Kin Searcy, Recording Secretary; David Wood, Corresponding Secretary; Gracie Schutze, Director; Drew Koning, Director; Jerry Hilburn, Director; Ross Salinger, Director; and 10 SDAA members.

2. Approval of Last Meeting Minutes

The December meeting minutes were approved.

3. Treasurers & Membership Report

The Treasurer's report was approved. SDAA membership is presently 798. Mike reported that initial banquet costs are \$39,500 and SDAA received \$29,000 in revenue. This was expected as the Board decided to subsidize ticket costs. Significant transactions were reimbursement for loaner scope repairs, raffle item and merchandise purchase, and tax return preparation and filing. Budget execution is on track with a slight deficit as expected.

Bee noted that banquet attendees were overcharged \$60 for self-parking at the Hyatt. The discounted rate should have been \$15 total. She resolved a refund process with our event coordinator and an e-blast has been sent to all attendees.

The treasurer's report was approved.

4. Standard Reports. The standard reports are included as submitted with Board discussion and action in italics.

a. TDS Operations Report for December 2024

Pagarigan/Myers

- Private Pads to be inspected and identified with respective numbers on a date TBD by Private Pad Committee Members.
- Member feedback survey for grid rebuild in-progress
- Request from Pad 1&2 owners for permission/guidance to install radio astronomy telescopes
- CAL Fire Brush Mitigation Report. *Jerry and Gracie talked with the individual who conducted the inspection. There is no concern at this time as it was a generic inspection. SDAA will invite CalFire to do a walk through and survey at the Spring Cleanup and BBQ.*
- *The board scheduled the Spring cleanup for 26 April 2025.*



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b. Lipp Observatory

Rumsey

We continue to have excellent star parties. Number of visitors has been very high this holiday season.

c. Loaner Scopes

Krizak

15 loaner items are currently out. 9 loaner items were returned in December; 3 were checked out.

We have three total Meade Autostar controllers (one for each LX-90, and one spare). I was able to flash updated firmware to all three handsets. I also confirmed that the garbled display data on one of the handsets was due to a poor connection between the LCD module and the mainboard in the controller. Some DeoxIT cleared that up for the most part. Both LX-90s are back in rotation with the updated handsets.

SDAA-050 (SBIG ST-10XME) was re-tested and the filter wheel is no longer exhibiting the connection issue. Since I can't reproduce the issue, I've returned it to the inventory and it's available for loan again.

Another Coronado PST was donated to the loaner program, along with a very nice iOptron Cube mount to carry it. I've tested this setup and added it to the inventory, replacing SDAA-037, which is now listed in the banquet auction.

A member has offered to donate a 10" dob to the loaner program; I am coordinating with them to pick it up.

The new loaner equipment donated by Woody is still pending assembly, testing, and documentation.

d. Storage Facility

Krizak

A flat cart has been procured and assembled so we always have access to it.

The storage facility is acting as a staging area for the raffle and auction items for the banquet, which is consuming a substantial amount of floor space. This will all be cleared up by mid-January after the banquet.

The Starmaster is still pending pickup by Ed.

e. Private Pads

Smith

For my Pads report for the month, we have 8 unleased pads and a waiting list but there hasn't been much interest in new leases with the lack of clarity about power.

The bottom line is that there is a growing feeling among the Private Pad lessees that the most urgent TDS problem isn't being addressed in favor of "upgrading" parts of the site that are currently functional.



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The Pad Usage Report for 2024 is available for Board review.

f. SDAA Private Pad Policy Committee

Gracie/Mark/Bill/Bee

(1) Tasks to be completed by Committee

- Website private pad photos, visible to public, need to be updated.
- A photo catalog of the inside of private pad structures to be completed to satisfy annual audit of structures per current lease agreement statement 6 and 10 (photos will not be posted publicly).
- Method to track remote pad owner annual usage.
- Clarification of pad transfer process to ensure waiting list is honored.
- Identify all pads with reflective numbers posted on a permanent rebar stake or similar
- Inspection and evaluation report of all pad areas

(2) Ongoing tasks completed and in progress

- Continue review/revision of SDAA Private Pad related documents (Lease, Pad Site Development & Regulation, TDS Rules, and Pad Offering Letter.
- Work alongside Private Observatory Committee to harmonize language where feasible.
- Employ terms and language as advised by legal consultation
- All polices are currently under review and revision via Google Workspace by committee members. Goal is to work alongside Private Observatory to finalize.

(3) Board Action:

1. Assign new chairperson. *The Board agreed that Bee has too many jobs and Dave asked the group for recommendations for a new chair.*

g. SDAA Monthly Programs Report for November 2024

Pagarigan/Searcy/Dorothy Wood

(1) Tasks Completed

- January Business Meeting completed; newly elected BOD members installed.
- March 2025 in-person meeting moved to June or later, venue TBD

(2) Suggestions for Program Meeting Venues by Members

1. SD Natural History Museum – John Downing is the contact (We've done this before)
2. Brian MacFarland's Suggestion – options vary, reported price range is 2.5K to \$3350
3. Suggest board member lead vetting process



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(3) Board Action

- Purpose/Goal of monthly programs under discussion *General discussion concluded that the present approach with technical talks and other events was expected and satisfactory. Member how-to topics can be handled via social media.*
- Request new budget line item to attract intriguing speakers for monthly programs - \$200/speaker suggested, February, March, April, May, July, August, September, October; Eight months would be 1.6K. (Not included – June in-person meeting speaker)
- Tap in-house expertise speakers to reduce cost
- *The Board approved the \$200 stipend on a trial basis.*

h. AISIG

Wood

The next scheduled AISIG meeting is via Zoom on 2-26. Subject is TBD

i. Newsletter

Kuhn

Nothing new to report this month.

j. Website

Stevens

I will be updating contacts on the website with the new Board (<https://sdaa.org/contacts/>). I need a picture for Drew Koning. Please review and let me know if there are any errors or changes in committee chairs. *Dave asked the board members to review the contacts.*

k. SDAA Social Media Report for November 2024

Pagarigan

Social Media Admins:

Facebook/Instagram (Pagarigan/Flynn - limited admin control)

YouTube (Burch/Pagarigan)

Google io.groups (Vander Vorst)

SDAA Podcast Hosts – Pagarigan/Morquecho

Tasks WIP or Completed

- Video/Audio from 2024 SDAA Events undergoing edit
- Video from 2025 Banquet undergoing edit
- Wireless mics purchased and being evaluated; used at 2025 SDAA Banquet for various interviews and overall event experience. *The Board agreed that SDAA equipment will be needed and noted that editing the video is a large effort.*



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I. Outreach Report

Ammann

Considering December is an 'off' month because of the holidays, we did have quite a few outreach events, one of which was our first Radio Astronomy meeting, led by Curt Kinghorn on December 12th. The initial Radio Astronomy objectives will include public outreach demonstrations of this technology. The Birney Elementary School point of contact invited the public too at their joint use athletic field, we had about 250 people lining up for a look at Saturn, Jupiter, and the Moon. All of the other events were routine as reported in the past, i.e., Stars-in-the-Park, Sycamore Canyon West, TDS, etc. We did have to cancel Garfield Elementary School, but looking back as a 'Monday Morning Quarterback', we could have worked around the partly cloudy night sky. We had to make a decision the day before which indicated mostly cloudy skies. We hope Santa brought new telescopes and eyepieces to all the SDAA elves so that they will test them out at our outreach events in January.

Here are the numbers for December:

2024	Previous Total	December	YTD
Completed	74	6	80
Canceled	33	2	35
Total Attendance	6901	570	7471

m. TARO

Wood

TARO operations have been severely limited over the past month due to multiple power outages and unfavorable weather conditions. As a safety precaution, any power loss lasting more than 24 hours, as TDS has encountered during recent fire emergencies, triggers the UPS to shut down power to the system until it can be locally restarted. When this situation arises, I visit the site once the fire emergency is resolved and the weather stabilizes to inspect the observatory, restart the UPS, and test the system to ensure its proper functioning.

- 1 project has been completed
- No new imaging requests have been entered in the scheduler. I'm working with one member on collecting additional data for a prior request.
- 2 new requests for TARO archive access have been processed.
- Total current project time is estimated to be 120 hours.
- *The Board noted that there were 4 power outages at TDS last month.*



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n. **Cruzen**

Krizak/Pagarigan

Ross Salinger took over as Cruzen director. I held a knowledge transfer session with Ross and he's eagerly diving into the new role. This will be my last committee report for Cruzen. *The Board thanked Ross for stepping up as Cruzen director.*

o. **Merchandise Report**

Burch

Nothing new at this time

p. **Astronomical League Report**

Smith

There have been no inquiries in response to the newsletter articles, but I plan to continue them.

q. **JSF Report**

Vacant

No Report. *Dave indicated that we need to find a new coordinator soon.*

r. **Grid Reconstruction -**

Wood

Revisions to the contract for the North side of the property have been agreed to by Neal and approved by our lawyer. The contract will be signed off by the Foundation CEO and CFO and returned to Neal electric this week. This portion of the design will move all North side facilities off the South-West service and connect them to a new North service. *The contract was signed prior to the meeting.*

There are a wide range of options for the South side of the property to meet the requirements stated in the RFP. Solutions for this more complex scope of work are still being evaluated.

The Board agreed that timely resolution of the South area is critical. Jerry will generate a member survey on design priorities for the South side and the Board approved a motion to establish a committee to assess options (restoration, portable power, solar, etc.) and report recommendations in three months. Drew Koning will chair the committee.

4. **Old Business:**

a. **Strategic Planning Update.**

Searcy

Process is on track with issuance of the member survey. Kin has discussed professional support for our process with a supplier recommended by the Foundation banker and received a proposal. Drew will solicit another proposal. See item b(1) below.



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b. SDAA Logos

BOD members reviewed the new SDAA logos submitted by members and a few were chosen for graphic design enhancements. SDAA sticker packs will be sent to the six members that participated in the contest to thank them for their efforts.

5. New Business:

a. Websites - WA - Privacy and ADA, DMCA Hilburn/Koning

Jerry and Drew are evaluating our websites and Wild Apricot to protect SDAA against nuisance lawsuits for lack of compliance and misuse of records. Jerry has extensive professional experience in these areas and recommended that we develop solutions first and subject them to legal review afterwards. He noted that there is an ADA compliance module that SDAA can adopt. SDAA will need formal policies in these areas.

b. Survey Response Reading Assignment Decker

Dave has reviewed the initial survey results and noted that SDAA members are submitting a rich content of ideas, priorities, and recommendations. He asked all board members to review the survey responses to assess member priorities and identify member leadership.

c. Telescope Build Member Competition *No Action* Krizak

d. Zoom Account Upgrade Wood

The present SDAA Zoom account provides for up to additional separate sub accounts that can be used to call Zoom meetings and 1 (president@sdaa) is being used. In the future, these sub-accounts can be used by SDAA committees. The present pricing is \$15.99 per month and this can be grown to 99 sub licenses if needed.

e. Where to post Foundation Docs and Policies Decker

Foundation document posting on the Foundation website is satisfactory at this point.

f. Calendar / WA posting for Board meetings Decker

SDAA member participation at board meeting is important and Dave thanked the 10 members in attendance. The links will continue to be posted on the SDAA Outreach Calendar and sent by Wild Apricot e-blasts to encourage additional participation.



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g. New Member Mentor

Several new members have indicated a need for a more robust new member process. Jerry graciously offered to take over the new member mentor responsibility, and Dave will contact Dan Kiser, current member mentor, in this regard.

h. Banquet Coordinator

Mike announced that he does not intend to coordinate the SDAA banquet in the future. He has done an outstanding job organizing the banquet and serving as MC and has the thanks of the Board and membership for his important service.

6. Member Comments

Kevin Swanson, who has been an SDAA member for 1 month, asked how to become more involved with SDAA, reinforcing the need for new member communications and mentorship. The Board welcomed his enthusiasm and recommended attending star parties as a good first start.

Sonny Adams recommended that SDAA install some sort of red ground lights at TDS to aid exiting the site in the dark. This excellent recommendation was assigned to the TDS committee for action.

7. **Adjournment:** The meeting was adjourned at 8:47 pm.

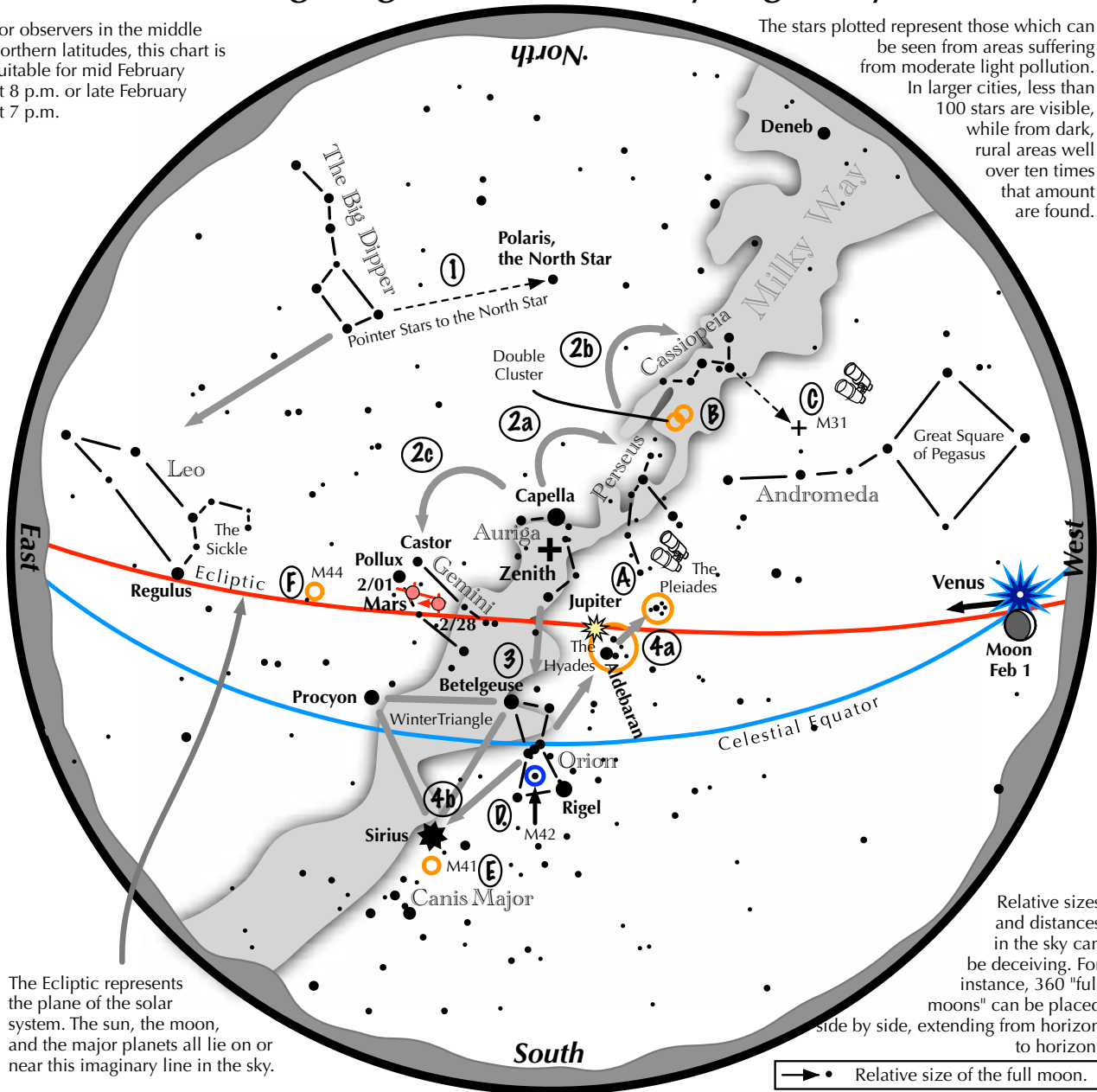


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Navigating the mid February Night Sky

For observers in the middle northern latitudes, this chart is suitable for mid February at 8 p.m. or late February at 7 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 February night sky: Simply start with what you know or with what you can easily find.

- 1 Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star.
- 2 Face south. Overhead twinkles the bright star Capella in Auriga. Jump northwestward along the Milky Way first to Perseus, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars of Castor and Pollux in Gemini.
- 3 Directly south of Capella stands the constellation of Orion with its three Belt stars, its bright red star Betelgeuse, and its bright blue-white star Rigel.
- 4 Use Orion's three Belt stars to point northwest to the red star Aldebaran and the Hyades star cluster, then to the Pleiades star cluster. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius, a member of the Winter Triangle.

Binocular Highlights

- A: Examine the stars of two naked eye star clusters, the Pleiades and the Hyades.
- B: Between the "W" of Cassiopeia and Perseus lies the Double Cluster.
- C: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.
- D: M42 in Orion is a star forming nebula. E: Look south of Sirius for the star cluster M41. F: M44, a star cluster barely visible to the naked eye, lies southeast of Pollux.



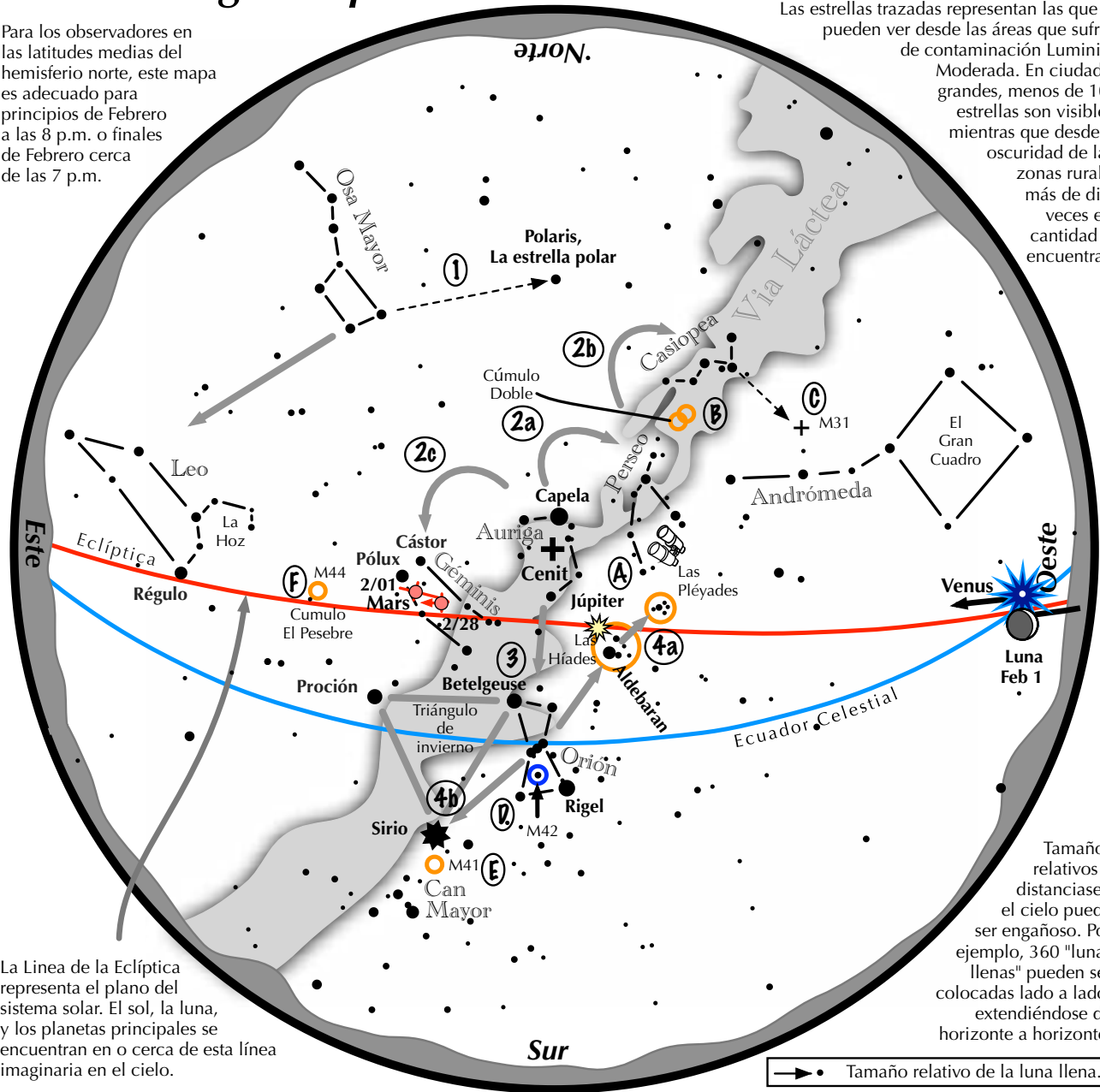


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Navegando por el cielo nocturno de Febrero

Para los observadores en las latitudes medias del hemisferio norte, este mapa es adecuado para principios de Febrero a las 8 p.m. o finales de Febrero cerca de las 7 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 pueden ser engañosos. 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 Sobre el horizonte noreste se alza la Osa Mayor. Dibuja una línea desde sus dos estrellas finales hasta la estrella polar.
- 2 Desde Capela, salte hacia el noroeste a lo largo de la Vía Láctea hacia Perseo, luego hacia la "W" de Casiopea. Siguiente salto hacia el sureste desde Capela a las estrellas gemelas de Cástor y Pólux en Géminis.
- 3 Directamente al sur de Capela se encuentra la constelación de Orión con sus tres estrellas del Cinturón de Orión, su brillante estrella roja Betelgeuse y su brillante estrella azul-blanca Rigel.
- 4 Usa las tres estrellas del Cinturón de Orión para apuntar al noroeste hacia la estrella roja Aldebarán y el cúmulo estelar Híades, y luego hacia el cúmulo estelar de las Pléyades. Viaja hacia el sureste desde las estrellas del cinturón hasta la estrella más brillante en el cielo nocturno, Sirio. Es un miembro del Triángulo de invierno.

Puntos destacados con binoculares

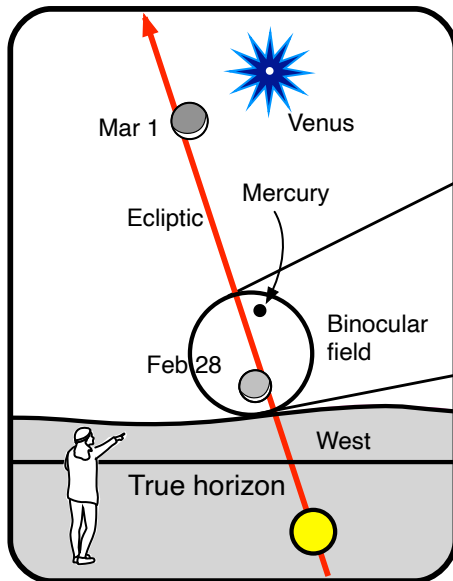
A: Examina las estrellas de las Pléyades y las Híades. **B:** Entre la "W" de Casiopea y Perseo se encuentra el Doble Cúmulo de Perseo. **C:** Las tres estrellas más occidentales de la "W" de Casiopea apuntan hacia el sur hasta M31, la Galaxia de Andrómeda, un óvalo "borroso." **D:** M42 en Orión es una nebulosa formadora de estrellas. **E:** Mire al sur de Sirio para ver el cúmulo estelar M41. **F:** M44, un cúmulo de estrellas apenas perceptible a simple vista, se encuentra al sureste de Pollux.





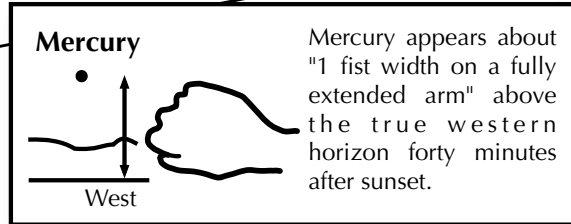
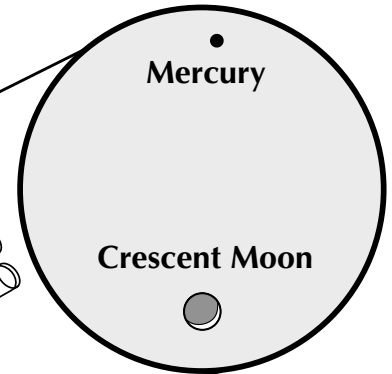
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Mercury, Venus, and the young moon in the evening twilight



**February 28 and March 1, 2025:
Mercury and the young crescent moon
forty minutes after sunset in the west**

View through
10x50 binoculars
on February 28



The young moon & Mercury in the evening twilight

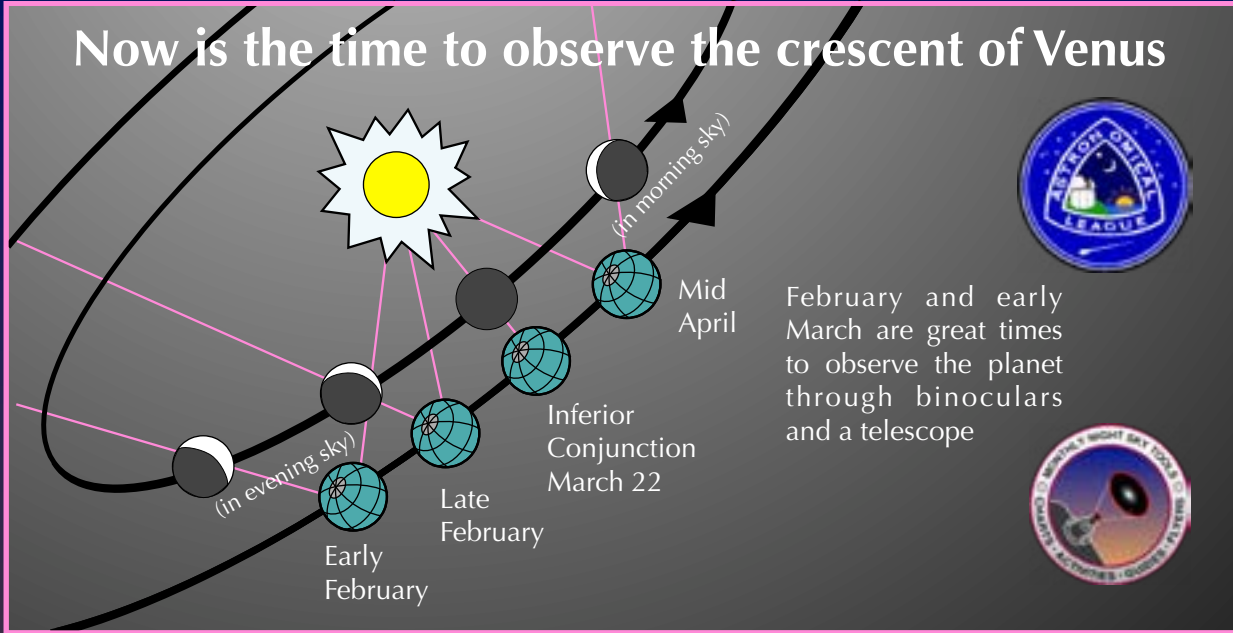
Have you ever spotted Mercury? Many stargazers have not. The early evening on February 28 presents a good opportunity to catch the elusive little planet. Look low into the western twilight forty minutes after sunset.



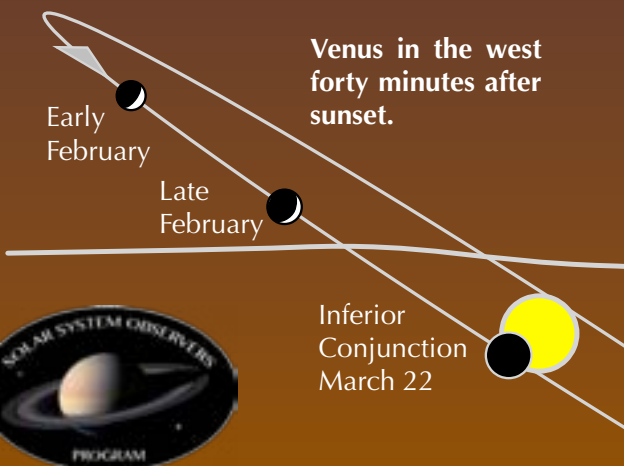
- Using binoculars, look on February 28 for the very thin crescent Moon floating above Mercury. Can you see Earthshine on the Moon's dark side or is the twilight too bright?
- On the next evening, Mercury is in the same place, but the moon has moved to higher and closer to brilliant Venus. Earthshine should be more easily visible.



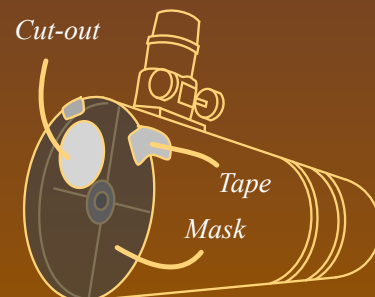
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The view through a telescope changes quickly in just six weeks. As the Venus - Earth gap narrows, Venus becomes a thinner, but wider crescent.



If you use a reflector or SCT, placing an off-centered cut-out mask over the optical tube entrance helps give a sharper view.





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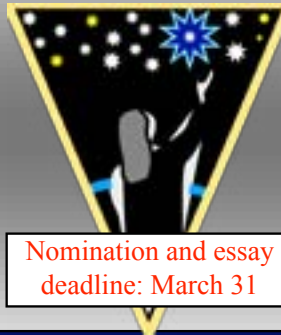


Attention Grandparents!

Do you have a grandchild who

- is 8-14 years of age,
- enjoys writing, and
- loves astronomy?

Encourage your young person to enter the **AL Horkheimer/O'Meara Youth Journalism** competition!



<https://www.astroleague.org/jack-horkheimer-youth-awards/>

Actually, the young writer may be nominated by anyone, not just by a grandparent. But they must be sponsored by an Astronomical League regional officer or by an Astronomical League club officer. Only one nominee per sponsor is permitted.

<https://www.astroleague.org/wp-content/uploads/2007/11/Journalism-Form.pdf>

AL Horkheimer/O'Meara Youth Journalism Award



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NEWS from the Radio Astronomy Special Interest Group (RASIG)

The Society of Amateur Radio Astronomers (SARA) is hosting its Western Conference at the Very Large Array (VLA) in New Mexico from March 14–16. The VLA, managed by the National Radio Astronomy Observatory (NRAO), is one of the world’s premier radio telescope facilities, alongside others such as the 110-meter Green Bank Telescope in West Virginia. For more details about the VLA, visit : <https://public.nrao.edu/telescopes/vla/>.

Conference information, including the full agenda, can be found here: <https://radio-astronomy.org/node/390>.

This exciting event will feature presentations by SARA members and professional radio astronomers from the VLA. Highlights include a special VIP tour of the VLA, where attendees can ascend into one of the iconic dishes, as well as a visit to the nearby Long Wavelength Array (LWA).

The conference is open to both in-person and virtual attendees:

- In-person registration: \$55
- Online registration: \$15

RASIG is organizing a group for those interested in attending in person. If you’d like to join the group, attend virtually, or learn more about RASIG, SARA, or radio astronomy in general, please reach out to Curt Kinghorn at CurtKinghorn@gmail.com.

Don’t miss this incredible opportunity to explore the fascinating world of radio astronomy!





Astronomical.League

on Facebook ...

Monthly sky maps,
Observing activities,
AL LIVE sessions,
League news & a whole lot more!



AL YouTube Channel

Observing Program Previews: What a program requires of the Observer.

Our View from Earth: How to find interesting celestial objects in three minutes. Perfect for club viewing.



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Private Pad News

by Mark Smith

As the Private Pad Chair, one of the common comments I hear is “I went back to check out the private pads Saturday Night and there was nobody there.” It can often seem that way, especially when wandering in from the Public Pads. The Private Pads are, by design, more isolated with a lot of brush obscuring the pads and it can take some real effort to find the people set up on the Private Pads on any given night. So how does the club know who is using the pads or even what is back there? Settle in because there is a bit of a story to tell.

The club has requirements for usage and development of the private pads. Essentially, almost all changes to a Private Pad that go beyond routine pruning require approval by the Board of Directors and we require every Private Pad Lessee to use their pad at least 4 times every calendar year. Because of this, we have extensive records of what is out there and how much they are being used going back decades. I took over as Pad Chairman in 2011, but I have lease, development, and usage records going back for much farther.

So what does all of this data tell us? Let’s start with what is there and how it has evolved.

As mentioned last month, the Private Pads were developed in sections and there was no real master plan. All you need to do is look at the pad numbering to get an idea about how that section of TDS evolved over time. Today there are 66 leasable pads, one club operated remote imaging pad (TARO), and one loaner pad. The pads are numbered 1 through 70 but pads 36 and 47 don’t exist. The lease rate is usually about 95% and although it is lower than that at the moment, there have been long stretches where all of the pads have been leased.

All of the improvements you see on the pads were put in over the years by the various lessees, but once a lease is over, the improvements revert to club ownership. Originally the pads were developed with some kind of flat surface, often brick or pavers of some sort, with the occasional pier. The majority of improved pads now have concrete pads but there are still some with the original pavers and even some that are completely unimproved. Structures were originally banned on the Private Pads but that rule was changed about 20 years ago and you can now find a variety of structures on the Private Pads. Because of our use permit for the property, all of the structures on the Private Pads must be temporary and less than 120 square feet.

The first real structures on the Private Pads were roll-off observatories. In fact, two of the oldest can still be seen on pads 41 and 68. They were followed by a proliferation of domes and roll offs and there are now over 14 structures of various types with more in the works. The first fully automated, remote-control observatory was the “Roboscope” that was originally installed on Pad 2. This was long before TARO and was a partnership between the SDAA and NASA and ran for several years before the facility was turned over to the Boyce’s for their educational work and morphed into the BARO facility that is currently on that pad. There are now 8 facilities on the Private Pads that can be operated fully remotely with 2 more in development.

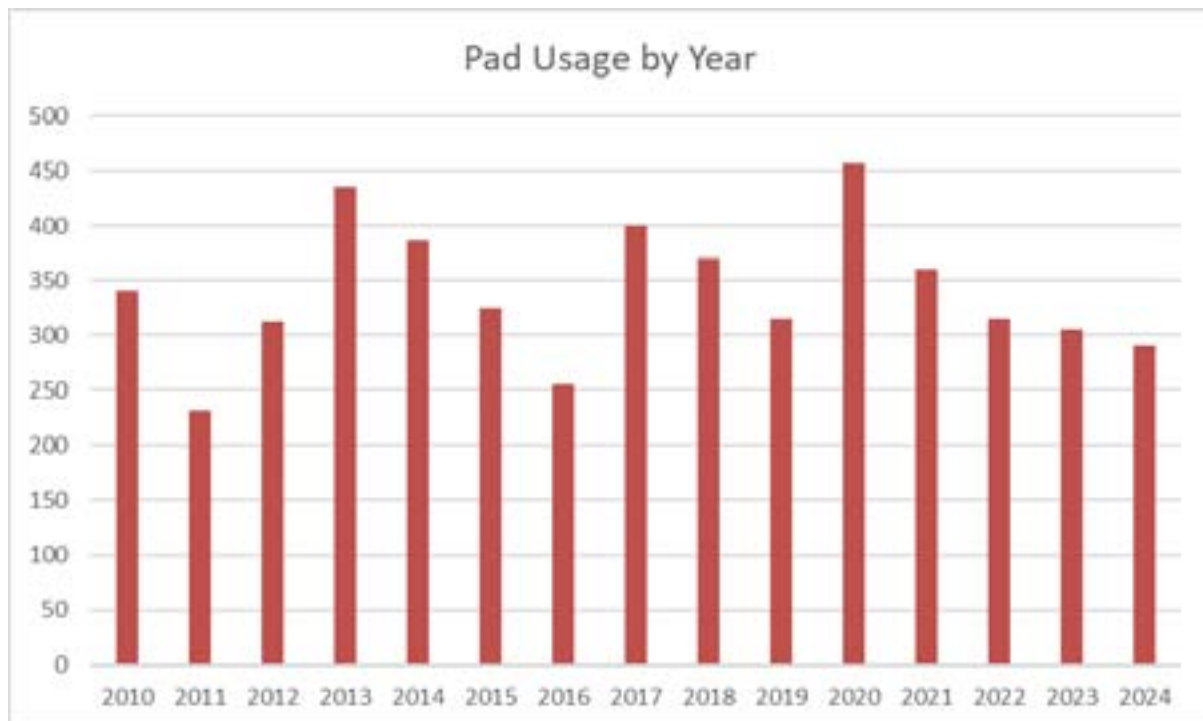
As for pad usage, it is a bit variable from year to year because it depends on a lot of factors including weather (especially on weekends around a New Moon) and time of year. Since 2010, the Private Pads have seen an average of 340 use nights per year with a low of 232 in 2011 and a high of



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457 in 2020. In 2024 we managed 291 use nights even with the power being shut off for a good portion of the prime use season. Taking into account club pads, unleased pads, and remote facilities, we are averaging a bit over 5 ½ use nights per leased pad per year or, looked at another way, on average each pad gets used about half of the new moon weekends. Obviously usage varies widely by pad with some pads getting used 20+ times in a year and some not at all, but the data shows that there are regularly people out on the Private Pads. Still, pads that meet their minimum usage requirement tend to outnumber those that don't. The club makes a serious effort to encourage pad use and regularly revokes leases of chronically underutilized pads.

Pad Usage Days	Number of Pads by Year				
	2024	2023	2022	2021	2020
0	10	12	11	11	17
1-2	14	9	10	14	11
3	1	6	1	8	5
4-10	23	25	26	20	21
11-20	6	8	9	9	6
21-30	1	0	1	1	3
31+	0	0	0	1	3



So why do the Private Pads always seem so empty? After all, the data is showing that on any



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given new moon weekend there should be 30 or so people on the pads. Part of the reason is geography. The 68 pads are spread out over an area a little larger than the combined area of the public pads and observatories and were intentionally isolated to cut down on light trespass and cut down on wind. Take into account the remotely operated facilities and there are 60 places you might see people hidden in the bushes. Given that astronomers tend to be pretty quiet with little to no light while we are doing our observing, a dozen people can easily disappear into brush. There have been nights when I thought I was alone on the private pads only to find many other people out there with me, some only a couple of pads away.

Perhaps the biggest reason the Private Pads seem so empty comes down to usage patterns. While the Public pads see the vast majority of their usage on Saturday nights, 40% or more of the usage on the Private Pads happens on other days of the week, including significant usage on weekdays. Since the Private Pads often have piers and have equipment already on site, it is easier for lessees to run up for an evening mid-week and many Private Pad lessees do just that.

Am I saying don't bother trying to find people out on the Private Pads? Absolutely not. We generally like visitors and are happy to share what we are doing. Keep in mind that many Private Pad lessees are imagers so be very careful with your red flashlights, but do come out to visit us. The key to finding the people is to know where to look. Since we keep records of how often people use their pads, there is a logbook in the warming room that Private Pad lessees are required to sign in order to log their pad usage. Before heading out on your search of the pads, head to the warming room and figure out who is there that night and what pads they are on. Then take a look at the map to figure out where on the site you need to look and head out into the brush to find us. We'll be happy for the visitors.

If you are interested in leasing a Private Pad, or just have questions about them, please don't hesitate to contact me at pads@sdaa.org or emarksmi@san.rr.com.



San Diego Astronomy Association

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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?

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San Diego Astronomy Association

NASA Night Sky Notes

February 2025



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!

February Night Sky Notes: How Can You Help Curb Light Pollution?

By Dave Prosper

Updated by Kat Troche



Before and after pictures of replacement lighting at the 6th Street Bridge over the Los Angeles River. The second picture shows improvements in some aspects of light pollution, as light is not directed to the sides and upwards from the upgraded fixtures, reducing skyglow. However, it also shows the use of brighter, whiter LEDs, which is not generally ideal, along with increased light bounce back from the road. Image Credit: [The City of Los Angeles](https://www.cityoflosangeles.org/)

Light pollution has long troubled astronomers, who generally shy away from deep sky observing under full Moon skies. The natural light from a bright Moon floods the sky and hides views of the Milky Way, dim galaxies and nebula, and shooting stars. In recent years, human-made light pollution has dramatically surpassed the interference of even a bright full Moon, and its effects are now noticeable to a great many people outside of the astronomical community. Harsh, bright white LED streetlights, while often more efficient and long-lasting, often create unexpected problems for communities replacing their older streetlamps. Some notable concerns are increased glare and light trespass, less restful sleep, and disturbed nocturnal wildlife patterns. There is increasing awareness of just how much light is too much light at night. You don't need to give in to despair over encroaching light pollution; you can join efforts to measure it, educate others, and even help stop



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or reduce the effects of light pollution in your community.

Amateur astronomers and potential citizen scientists around the globe are invited to participate in the [Globe at Night \(GaN\)](#) program to measure light pollution. Measurements are taken by volunteers on a few scheduled days every month and submitted to their database to help create a comprehensive map of light pollution and its change over time. GaN volunteers can take and submit measurements using multiple methods ranging from low-tech naked-eye observations to high-tech sensors and smartphone apps.

Globe at Night citizen scientists can use the following methods to measure light pollution and submit their results:

- Their own smartphone camera and dedicated app
- Manually measure light pollution using their own eyes and detailed charts of the constellations
- A dedicated light pollution measurement device called a Sky Quality Meter (SQM).
- The free GaN [web app](#) from any internet-connected device (which can also be used to submit their measurements from an SQM or printed-out star charts)

Night Sky Network members joined a telecon with Connie Walker of Globe at Night in 2014 and had a lively discussion about the program's history and how they can participate. The audio of the telecon, transcript, and links to additional resources can be found on their [dedicated resource page](#).





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Light pollution has been visible from space for a long time, but new LED lights are bright enough that they stand out from older streetlights, even from orbit. Astronaut Samantha Cristoforetti took the above photo from the ISS cupola in 2015.

The newly installed white LED lights in the center of the city of Milan are noticeably brighter than the lights in the surrounding neighborhoods. Image Credit: [NASA/ESA](#)

The [International Dark-Sky Association \(IDA\)](#) has long been a champion in the fight against light pollution and a proponent of smart lighting design and policy. Their website provides many resources for amateur astronomers and other like-minded people to help communities understand the negative impacts of light pollution and how smart lighting policies can not only help bring the stars back to their night skies but also make their streets safer by using smarter lighting with less glare. Communities and individuals find that their nighttime lighting choices can help save considerable sums of money when they decide to light their streets and homes "smarter, not brighter" with shielded, directional lighting, motion detectors, timers, and even choosing the proper "temperature" of new LED light replacements to avoid the harsh "pure white" glare that many new streetlamps possess. Their pages on [community advocacy](#) and on [how to choose dark-sky-friendly lighting](#) are extremely helpful and full of great information. There are even [local chapters of the IDA](#) in many communities made up of passionate advocates of dark skies.

The IDA has notably helped usher in "[Dark Sky Places](#)", areas around the world that are protected from light pollution. "[Dark Sky Parks](#)", in particular, provide visitors with incredible views of the Milky Way and are perfect places to spot the wonders of a meteor shower. These parks also perform a very important function, showing the public the wonders of a truly dark sky to many people who may have never before even seen a handful of stars in the sky, let alone the full glorious spread of the Milky Way.

More research into the negative effects of light pollution on the [health of humans](#) and the [environment](#) is being conducted than ever before. Watching the nighttime light slowly increase in your neighborhood, combined with reading so much bad news, can indeed be disheartening! However, as awareness of light pollution and its negative effects increases, more people are becoming aware of the problem and want to be part of the solution. There is even an episode of PBS Kid's [SciGirls](#) where the main characters help mitigate light pollution in their neighborhood!

Astronomy clubs are uniquely situated to help spread awareness of good lighting practices in their local communities to help mitigate light pollution. Take inspiration from [Tucson, Arizona](#), and other dark sky-friendly communities that have adopted good lighting practices. Tucson even reduced its skyglow by 7% (as of 2018) after its own [citywide lighting conversion](#), proof that communities can bring the stars back with smart lighting choices.

Originally posted by Dave Prosper: November 2018

Last Updated by Kat Troche: January 2025



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2025 TDS Star Party Schedule

Date	Type	Sunset	Astro. Twi.	Moonrise(set)	Closing	Illumination
Jan-04-2025	Public	4:56 PM	6:23 PM	(10:11 PM)	9:30 PM	28.3%
Jan-25-2025	Member	5:15 PM	6:40 PM	4:44 AM	9:30 PM	16.3%
Feb-01-2025	Public	5:21 PM	6:46 PM	(9:08 PM)	10:00 PM	14.9%
Feb-22-2025	Member	5:40 PM	7:02 PM	3:26 AM	10:00 PM	31.8%
Mar-01-2025	Public	5:46 PM	7:08 PM	(8:00 PM)	10:00 PM	5.0%
Mar-29-2025	Member	7:06 PM	8:30 PM	(7:47 PM)	11:30 PM	0.2%
Apr-19-2025	Public	7:21 PM	8:49 PM	1:47 AM	11:30 PM	65.5%
Apr-26-2025	Member	7:26 PM	8:56 PM	5:45 AM	12:00 PM	1.7%
May-17-2025	Public	7:42 PM	9:17 PM	12:27 AM	12:00 PM	79.6%
May-24-2025	Member	7:46 PM	9:24 PM	4:16 AM	12:00 PM	8.6%
Jun-21-2025	Member	7:59 PM	9:41 PM	2:50 AM	12:00 PM	19.3%
Jun-28-2025	Public	8:00 PM	9:41 PM	(10:55 PM)	12:00 PM	15.1%
Jul-19-2025	Public	7:55 PM	9:32 PM	1:29 AM	12:00 PM	32.1%
Jul-26-2025	Member	7:51 PM	9:26 PM	(9:22 PM)	12:00 PM	5.2%
Aug-16-2025	Public	7:31 PM	9:00 PM	12:15 AM	12:00 PM	46.0%
Aug-23-2025	Member	7:23 PM	8:50 PM	7:39 AM	12:00 PM	0.4%
Sep-13-2025	Public	6:56 PM	8:19 PM	11:06 PM	11:00 PM	60.5%
Sep-20-2025	Member	6:47 PM	8:09 PM	6:27 AM	11:00 PM	1.1%
Oct-18-2025	Member	6:11 PM	7:33 PM	5:17 AM	10:30 PM	7.1%
Oct-25-2025	Public	6:04 PM	7:26 PM	(8:37 PM)	10:30 PM	16.9%
Nov-15-2025	Public	4:47 PM	6:12 PM	3:07 AM	9:00 PM	18.1%
Nov-22-2025	Member	4:44 PM	6:10 PM	(6:26 PM)	9:00 PM	6.3%
Dec-13-2025	Public	4:43 PM	6:11 PM	1:58 AM	9:00 PM	33.2%
Dec-20-2025	Member	4:46 PM	6:14 PM	(5:17 PM)	9:00 PM	0.7%

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.