Committed to Supporting Amateur Astronomy since 1933



The IAS News & Views



Volume 92, Issue 2

Indiana Astronomical Society
General Meeting
Saturday, February 22, 7:00 PM
Mooresville Public Library
"Perspectives on Distance"
Chuck Allen (live at MPL)
President Astronomical League

Presentation Abstract:

"Perspectives" uses props and graphics to examine relative distances in the universe and the possible distances achievable through space flight and through the use of human vision and amateur and professional telescopes. Examining scales from the human altitude record to the four cosmological horizons imposed by an expanding universe, the program discusses astrophysicists' current thinking on the biggest questions about the universe: How far can we see, how far will we be able to see, and how big might the universe be? The program ends with thoughts on our size as human observers.



Chuck is current president and also past-president of the 25,000-member Astronomical League. He has given over 550 public presentations to schools and universities, scientific societies, conventions, and other public audiences. He is a League gold-level master observer with 43 observing programs completed and is also a G. R. Wright Award recipient. Chuck coordinates three League observing programs, co-chaired ALCon '21 Virtual, and founded the League's National Young Astronomer Award in 1993. He is program chair of the Evansville Astronomical Society, past president of the Louisville Astronomical Society, and a past judge and lead judge for the International Science and Engineering Fair. He has been an amateur astronomer since age seven.

Table of Contents

From the President's Desk	
February General Meeting Call-In Details	3
Upcoming Events for February	3
Observing Activities for February	4
Occultation of Mars by the Wolf Moon	4
Star Party Report	5
Night Sky Network Monthly Article	9
Noblitt Observatory at the University of Indianapolis	
IAS Membership Report for December	
2025 Meetings and Events Calendar	16
Miscellanea	17
Bright Stars of February Skies	
Which Website Do I Use?	20
IAS Officers	20

From the President's Desk



We had a nice new start to 2025 by visiting the Carmel Planetarium, and we're lining up both in-person and virtual speakers for the rest of the year. We hope to organize another field trip this year to complement our general meetings at the Mooresville Public Library and Link Observatory.

New Year's Resolutions: This coming spring we need to mount a small expedition to observe at Burkhart Creek County Park in Morgan County, for which we have secured a key to turn off the security lighting. We can thank long-time member Mike Birch for that. This is the only one of our IAS observing sites (i.e., Burkhart Creek, Camp

Cullom, Carmel West Park, Link Observatory, McCloud Nature Park, Strawtown Koteewi) that has not been used recently and it deserves its turn in the rotation. Also, Camp Collum gets used as part of the Indiana Family Star Party (IFSP) each August, but it, too, deserves more visits beyond the IFSP. Shall we resolve that each of our six sites plays host to IAS scopes this year?

February General Meeting Call-In Details

As usual, our virtual general meeting will be <u>open to the public</u>. Please join my meeting from your computer, tablet or smartphone.

https://meet.goto.com/371255709

You can also dial in using your phone.

Access Code: 371-255-709 United States: +1 (872) 240-3212

Get the app now and be ready when your first meeting starts:

https://meet.goto.com/install

You can also join the meeting without installing any extra software by using the Google Chrome browser.

IAS NEWS

Upcoming Events for February

The following events will occur rain or shine.

IAS Program Planning/Board Meeting

Wednesday, February 19 at 7 PM, via GoToMeeting. The IAS board will get together to discuss the business of the Society. Dues-paying members are welcome to participate and provide input. Please monitor <u>our collaboration site at groups.io</u> for details.

IAS General Meeting

Saturday, February 22 at 7 PM. The IAS general meeting is scheduled to occur at the Mooresville Public Library, 220 W Harrison St, Mooresville, IN. Directions to the library can be found using a <u>Google maps lookup</u>. The public is welcome.

Those who are unable to make it to the library may also participate virtually, by means of a GoToMeeting teleconference. For details and call-in information, see the first two pages of this newsletter.

Observing Activities for February

The following events are weather-dependent and subject to last-minute cancellation. Please monitor our collaboration site for updates and do not drive out until you receive confirmation that it's a "go."

Link Activities (Members and Invited Guests) —

The IAS has deep-sky observing sessions scheduled to occur at Link Observatory on the weekend of <u>February 1</u>, again on the weekend of <u>February 14-15</u>, again on the weekend of <u>February 21-22</u> (the 22nd is immediately after our general meeting), and once more on <u>February 28</u>.

Come observe with the telescope operators using the Link 36" and/or Tanager Hill 14" scopes, or bring your own and set up on the north observing field.

Koteewi Park Activities (Members Only) — February 21

Occultation of Mars by the Wolf Moon

On Jan 13, 2025. Below average seeing and average transparency. Celestron Nexstar 9.25 with Celestron focus motor. ZWO ASI676 Camera with built-in UV/IR Filter. The 2um pixels of this camera allowed me to achieve the 5 times pixel size equals focal length guidance for planetary imaging in average seeing without having to use a barlow. SkyWatcher EQ6R Pro Mount. Captured in SharpCap and processed in AstroSurface. The scope in my backyard observatory is attached to a Beelink S12 Pro minicomputer with 16gb ram and 1tb SSD. The minicomputer allows me to run the scope over WiFi from my home office in Moon Township, PA.



Photo by Vince Laine

Page 4 February 2025

Star Party Report

SAVE the Date / Be a Volunteer

The Indiana Family Star Party 2025

July 22-27, 2025

Now is the time to think about warm summer nights. Plan to attend the Indiana Family Star Party! Once again, we will gather at Camp Cullom, near Mulberry, IN for immersion in the hobby and camaraderie of astronomy.

If you are interested in volunteering, please follow the below link to sign up.

https://tinyurl.com/IFSP2025RegVolunteer



https://tinyurl.com/IFSP2025RegVolunteer

— Sara Farkas

Upcoming Outreach Events

<u>Wednesday -Thursday March 5-6</u> — The IAS has been requested by the Indiana State Museum for us to participate in the STEAM Days. This will be on March 5^{th} and 6^{th} from 10 am - 1 pm.

— Steve Haines

For further information or to volunteer, email Steve Haines at events-coordinator@iasindy.org.

January General Meeting



On Saturday night, Jan 25th, Keith Turner and three of his Carmel High School Planetarium Club students, Jackson, Anvi, and Abigail, welcomed 33 Indiana Astronomical Society Members and their guests to the Carmel High School Planetarium. Before we started, IAS President Robert Aull thanked everyone for coming, and Keith for hosting us. He also welcomed back those interested in renewing the IAS's Light Pollution Committee. IAS Program Director Jim Smith introduced Keith Turner and then turned the evening over to Keith and his team.



We learned about the Planetarium and how it is used today:

Built-in 1970 with a Spitz Dome and a Spitz A3-P Star machine. Then after a flood in 2005 the planetarium was re-domed and now has a 9.1m Astro-Tec dome and a Chronos GoTo Space Simulator, with 16-star plates per hemisphere. In addition to the Planetarium Club, the high school offers 4 Astronomy Classes, each semester, as well as programming for all of Carmel-Clay Schools' 1st and 5th grade classes. (in the future they will add 3rd graders as well).



Keith began his presentation using Stellarium and gave us a short introduction to this free software. As he brought down the lights, we looked at the planet trail and he showed us how he found the most ideal day and time, in an ideal sky with a clear western horizon - to see the most planets from our area: February 23rd, 2025 at 7:00 pm EST. Now that the sky was very dark, we looked at Orion and the "winter oval". He pointed out the Orion Nebula, Canis Major, Sirus, M41, and some other great winter stars and deep sky objects. Several members tried to see deeper into the Orion Nebula, and the Pleiades with binoculars.

The advantage of a planetarium is the ability to view the sky from any location at any given date and time. As amateur astronomers, many of us are familiar with the northern hemisphere night sky. However, the real treat

for us on Saturday night was experiencing the southern hemisphere sky. Keith took us on a brief tour, showing us the Small and Large Magellanic Clouds and the Southern Cross in the constellation Crux.

Page 6 February 2025

He also reminded us that the stars appear upside down from how we see them in the north. Additionally, stars we see regularly, such as Polaris and the Big Dipper asterism, are not visible in the southern hemisphere.

Though cut short due to technical difficulties, we were able to view a portion of a video about Astronomy in Chile, the video explained how the mountains of Chile were a popular location for large observatories due to the unique climate with stable dry air, high-altitude, and extremely dark skies.

Overall, this was a great experience and we want to thank Keith Turner and the Carmel High School Planetarium for hosting us.



— Sara Farkas

Imaged with the Seestar S50 smart telescope 42 minutes of integration time Processed in Siril and GraXpert



Photo by Kabel Rainbolt

Page 8 February 2025

Night Sky Network Monthly Article



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

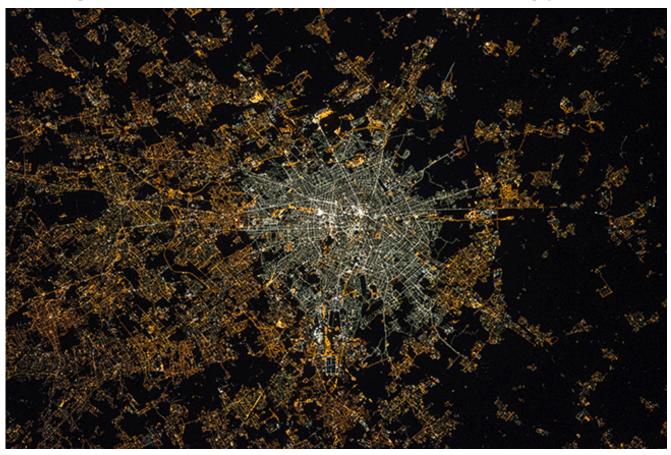
Light pollution has long troubled astronomers, who generally shy away from deep sky observing under full Moon skies. The natural light from a bright Moon floods the sky and hides views of the Milky Way, dim galaxies and nebula, and shooting stars. In recent years, human-made light pollution has dramatically 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 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 <u>dedicated resource page</u>.



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 <u>Tucson</u>, <u>Arizona</u>, 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 <u>citywide lighting conversion</u>, 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

Celestial Events for February

- **05** First Quarter Moon at 3:02 AM EST.
- 06 The 1st quarter Moon will occult the Pleiades star cluster in the early morning hours.
- 12 Full Moon, known as the Snow Moon, at 10:53 PM EST.
- **28** A thin crescent Moon will appear near Mercury in the western sky shortly after sunset, with Venus visible above them.

Best Deep-Sky Objects for February

Orion Nebula (M42) – Located in the constellation Orion, this is one of the brightest and most stunning emission nebulae visible in the winter sky. Best viewed with binoculars or a small telescope.

Andromeda Galaxy (M31) – Visible in the early evening in the constellation Andromeda, it's the closest spiral galaxy to the Milky Way.

Pleiades Star Cluster (M45) – A beautiful open cluster in Taurus. Best observed with binoculars to enjoy its blue, nebulous glow.

Beehive Cluster (M44) – Located in the constellation Cancer, this open cluster is easily visible with the naked eye under dark skies or through binoculars.

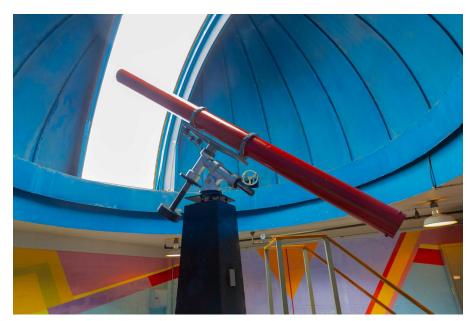
Rosette Nebula (NGC 2237) – A stunning emission nebula in Monoceros, ideal for astrophotographers or large-aperture telescopes.

Double Cluster (NGC 869 and NGC 884) – Found in the constellation Perseus, these neighboring open clusters are perfect for binoculars or wide-field telescopes.

Sirius and M41 – Sirius, the brightest star, is near M41, an open cluster in Canis Major. Look for the cluster below Sirius in the southern sky.

Eskimo Nebula (NGC 2392) – A planetary nebula in Gemini that resembles a face surrounded by a furry hood. A medium-sized telescope is recommended.

Noblitt Observatory at the University of Indianapolis



The Physics and Earth-Space Science Department at The University of Indianapolis is looking for help repairing and updating their observatory located on the roof of the Lilly Science Building. The telescope (an 8" refractor) was built by a man named Noblitt perhaps 100 years ago and donated to the university. The help they need can be viewed as three phases.

Photo by Breanna Emmett

Phase 1 is to determine what needs to be done and estimate the costs associated so the school can look for funding. We need to determine the quality of the objective lens before we go too deep into the project. The origin of the objective lens is not clear at this time. Dick Rhodes and I toured the observatory on Thursday January 23rd and inspected the telescope and mount. Some of the things we noted were: an inadequate focuser, incorrect sized tube rings (one of which appeared broken) and no secondary weights to properly balance the scope with. Dick Rhodes can provide more details about these details to anyone wanting more information. For this phase we are looking for donated parts and materials for the repairs and/or a good faith estimated of the cost to buy them so funding can be sought.

Phase 2 would be help determining the best way to approach the repairs and securing the parts and materials needed (engineering expertise needed self-taught or otherwise). This is a heavy telescope and mount so prior experience with working on a large scope would be most helpful.

Phase 3 would be working with the University to schedule the needed work to get the telescope and observatory back in service. They have a maintenance staff but would need expertise from IAS to get things done properly. The dome appears to have a leak which also must be addressed.

Anyone interested in helping with this project or who feels they may have parts or material they could donate should get in touch with Dick Rhodes (drhodes37@gmail.com or Jay Simmons (jamesmichael55@hotmail.com.

We would be glad to connect with you to get donated materials to the right people. University of Indianapolis is a small university (5,800 students) with no budget for the observatory.

Thanks for considering helping out. Keep Looking Up!

Astro Ads

Do you have or are you looking for astronomy-related materials and equipment? The IAS, as a service to its members, will publish non-commercial ads at no charge. For sale, exchange, or want ads are all accepted. Each ad runs in the newsletter for four months and may be renewed at the owner's request.

To place an ad, send an email to **editor@iasindy.org**. Be sure to notify us when the item sells.

For Sale:

Items for sale: two Losmandy style plates. A 17" with holes for a large Mak or Cassegrain scope. Previous owner drill other holes but these do not affect the plates intended use. The other plate is shorter (12") with the typical hole pattern. Your choice \$35 for pick up or \$45 shipped. Or both for \$60 pick up or \$70 shipped.

Large Gator nylon equipment bag approx. 24" wide, 15" deep and 14" tall. Unpadded but perfect for carrying a large compound scope in. \$40 pick up or \$50 shipped.

Large 50 mm straight through finder with base. Unbranded but very high quality with cross hairs. \$50 pick up or \$60 shipped.

Contact Jay Simmons with questions at enddst@gmail.com or text 317.590.6271

1979 Aliner Classic (Astronomy Camper) in good shape. 3 way refrig, gas stove top and gas water heater. Sleeps two very comfortably and four if two are small (kids?) Folds down flat for travel and light weight. I pulled it with a 4-cylinder Kia. Will fit in a standard sized garage. -a big plus for a couple of reasons.

\$3,000



And thanks for looking,

Contact: Jav Simmons enddst@gmail.com or

Text me at 317-590-6271

Public Outreach Programs

To schedule a program at the Link Observatory or at your site, please contact the following people:

<u>Public Outreach Programs</u>: To schedule a public event, contact the IAS Events Coordinator Steve Haines by sending an email to <u>events-coordinator@iasindy.org</u>.

<u>Goethe Link Observatory tour</u>: To schedule a tour of the Link Observatory, contact Link Observatory Manager Robert Aull by email at link-observatory@iasindy.org.

Equipment Loan Program

Did you know you could borrow a scope or piece of astronomy equipment from the Society and take it for a test drive? Members trying to determine what kind of equipment to buy are welcome to borrow one of the Society's scopes for a month or two and see how they like it. Dave Howard is the program coordinator and can arrange for pickup and training.

We will also consider donations of equipment appropriate for this program. The IAS is a public charity under section 501(c)(3) of the internal revenue code. We would be happy to provide acknowledgement suitable for documentation as a tax deduction.

The Equipment Loan Coordinator may be contacted at equipment@iasindy.org

IAS Membership Report for December

On 12/31/2024 the IAS had a total of 328 members.

During December there were 17 renewals and 7 new members.

Welcome to all the new and returning members:

Bill Asbury Gary Jones Allison Bair David Atkinson Fred Keller **Edward Beagle** Rick Betuker J. Bradley King Kalani Helekunihi Andrew Cook John Molt Adam Huang **Brandon Hecht** Gautam Phookan Leni Moldovan Richard Rhodes LeRay Hinchman Matthew Smiley Laura Hintz-Keller Joel Sawaski Julie & Paige Yonts John Hirt John Wilmoth George Wilson

— Victoria Musick, IAS Membership Coordinator

2025 Meetings and Events Calendar

Month	BOD Meeting	General Meeting	Pitch In/ Holiday	DSO @ Link	McCloud	West Park	Koteewi Park
	Wittening	Meeting	Party			T ul ix	I WI K
Feb	19	22 MPL		1,14,15,21,22,28		-	21
Mar	19	22 MPL		1,21,22,28,29		TBD	-
Apr	16	19 Link		18,19,25,26		-	TBD
May	14	17 Link		2,3,16,17,23,24,30,31	TBD	TBD	-
June	18	21 Link		13,14,20,21,27,28	TBD	-	TBD
July	16	19 Link		18,19,25,26	TBD	TBD	-
Aug	13	16 Link		1,2,15,16.22,23,29,30	TBD	-	TBD
Sep			20 Link	12,13,19,20,26,27	TBD	TBD	-
Oct	15	18 Link		10,11,17,18,24,25	TBD	-	TBD
Nov	12	15 MPL		7,8,14,15,21,22		- TBD	-
Dec			6 MPL	12,13,19,20,26,27			TBD

Bold entries are DSO nights with greater than optimal moon



NGC 4565, (Needle Galaxy) is thought to be an edge-on spiral galaxy approximately 38 million light years from Earth. It is located in the Coma Berenices Constellation.

New blue stars can be seen in the out skirts of the spiral arms in this image taken from my backyard patio in Brownsburg, Indiana ES 127mm, ZwoAsi533, guided, Celestron Mount, Asiair +, L-pro. 45 X 300sec. = 3.75 hours, Calibration files. Bortle 7/8 skies.

Photo by James Fox

Page 16 February 2025

Miscellanea Goethe Link Observatory

Observatory Address:

Goethe Link Observatory 8403 N. Observatory Lane Martinsville, IN 46151

Latitude: 39 degrees, 33 minutes north Longitude: 86 degrees, 24 minutes west

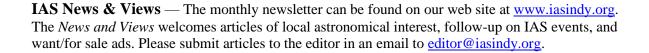
Phone: (317) 831-0668

Training programs are scheduled by the Observatory Manager as instructors are available and time permits, although other requests can override these sessions.



- There must be a trained telescope operator and at least one assistant present.
- Send an email to the Observatory Manager (<u>link-observatory@iasindy.org</u>) to confirm availability.

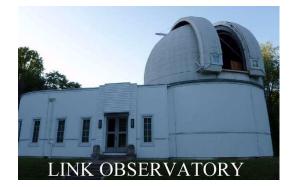
Please plan ahead! Last-minute scheduling requests may not get access.



Membership information — Please send an email to membership@iasindy.org; our membership coordinator will respond promptly. Full instructions are also available under the "Join the Society" tab on our web site, where you can submit a paperless membership form, e-pay your dues and/or make a donation. If you have recently moved or if any part of your mailing address has changed since you joined the IAS, please take a moment to update your information.

Requests for Information — You may contact our officers, Board members, and Coordinators via our website at www.iasindy.org. Place your cursor on the "Home" tab and then select "Contact us." Page down to the person you desire to contact and send an email message requesting information or a return telephone call. We will be happy to respond within a reasonable time frame.

Logo Clothing — The IAS has a supply of logo ware using Mid-Central Trophy in Kokomo, IN. Typically, T-shirts, sweatshirts, polo shirts, and caps are available. Call Linda (765-453-5494), tell her this is an order for the IAS logo ware, discuss what you want and give her the size. She can determine the cost and shipping and mail the order directly to your home. All major credit cards are accepted.



Bright Stars of February Skies

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Aldebaran Altair Betelgeuse
Capella Castor Pollux
Procyon Rigel Sirius
Spica

Answers on last page

February Calendar, 2025						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29 New Moon	30	31 Deep Sky Observing at Link Observatory	Deep Sky Observing at Link Obs.
2	3	4	5 First Quarter	6	7	8
9	10	11	12	13 Full Moon	14 Cyalentines	15
16	17	18	IAS BOD Meeting 7 PM	20 Last Quarter	21 Deep Sky Observing at Link Observatory	IAS General Meeting 7 PM D-S observing at Link
23	24	25	26	27	28 New Moon D.S.O. Link Observatory	Deep Sky Observing at Link Observatory



Integration: 3.3 hours of light frames with Optolong L-eNhance filter + 20 bias and 30 flat frames.

Telescope:ZWO FF65 (f/6, 416 mm focal length)

Camera: ASI533 MC

Tracker: Sky-Watcher Star Adventurer

GTi

Guide Scope: ZWO 30 mm f/4

Guide Camera: ASI120 MM

Photo by Arijeet Nath

Page 19 February 2025

Which Website Do I Use?

Website

Indiana Astronomical Society

https://www.iasindy.org/

Use website to

FAQ

New member application

Dues payment

Planetarium Virtual Sky Observing Information

AstroNews

ias-indy.groups.io

For members only

Members' directory

Files on:

Astronomical subjects Astrophotography Collimation Library holdings

Newsletter Archives

IAS Facebook

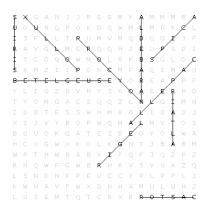
Public events

Sharing stories and photos

	IAS Officers	
President	Robert Aull president@iasindy.org	
Vice President	Sara Farkas vicepresident@iasindy.org	A
Treasurer	Victoria Musick treasurer@iasindy.org	
Secretary	Larry Cates secretary@iasindy.org	

	Members of the Board	
	Zolt Levay zolt.levay@iasindy.org	
	Laura Keller laura.keller@iasindy.org	
	Dave Collier dave.collier@iasindy.org	
	Jon Thomas jon.thomas@iasindy.org	
	Fred Keller fred.keller@iasindy.org	
	Dave Howard sara.farkas@iasindy.org	
	Ken Magar ken.magar@iasindy.org	
	IAS Coordinators	
Membership Coordinator	Victoria Musick membership@iasindy.org	
Goethe Link Observatory Manager	Robert Aull link-observatory@iasindy.org	
Public Events Coordinator	Steve Haines events-coordinator@iasindy.org	
Equipment Loan Coordinator	Dave Howard equipment@iasindy.org	

	T	
Editor IAS	John Musick	
News and	editor@iasindy.org	TOM
Views		
Astronomical	Zolt Levay	
League	astronomical-league@iasindy.org	- ACTON
Correspondent		
McCloud Star	Jon Thomas	6
Gaze	mccloud-stargaze@iasindy.org	100
Coordinator		
West Park	John Musick	
Liaison	west-park@iasindy.org	To an
Web	Wes Tobin	
Supervisor	webmaster@iasindy.org	
Social Media	Open Position – Volunteers?	
Coordinator	socialmedia@iasindy.org	
Librarian	Laura Hintz-Keller	
	librarian@iasindy.org	(3 p)
Historian	Tom Borlik	
	historian@iasindy.org	



 $\underline{\text{The IAS News and Views}} \ ^{@}\!2025 \ \text{by the Indiana Astronomical Society. Unsigned articles may be attributed to the editor.}$