

SUMMER 2025

# THE KOPERNIK CONSTELLATION

KOPERNIK OBSERVATORY & SCIENCE CENTER'S  
SEASONAL NEWSLETTER



There is much to share as we conclude a successful school year and Summer Camp session at Kopernik Observatory & Science Center...

## Kopernik Goes On the Road with the STEM Van

Kopernik is taking it on the road! With a generous foundation gift, Kopernik has purchased a van to bring our programs on the road to school districts near and far. Our new “KoperniVan” arrived in the late spring and since then, we have used it to travel to districts and libraries throughout the Southern Tier. What is most exciting about the “KoperniVan” is it will allow us to expand outreach to school districts too distant to travel to our Vestal campus. Instead, we will come to them! So keep your eyes open for our van on the road or in your neighborhood and give us a wave!

## Meet the Designer

Kopernik Educator & Freelance Artist, Sasha Zalesski, designed the wrap for KOSC’s STEM Van and it’s out-of-this-world! While the van will be used for a variety of STEM activities, Sasha emphasized astronomy as the theme. Sasha said, “I wanted to inspire a little bit of curiosity within people.” Well, we’re certainly inspired and we hope you will be too when you see the STEM Van on the road!

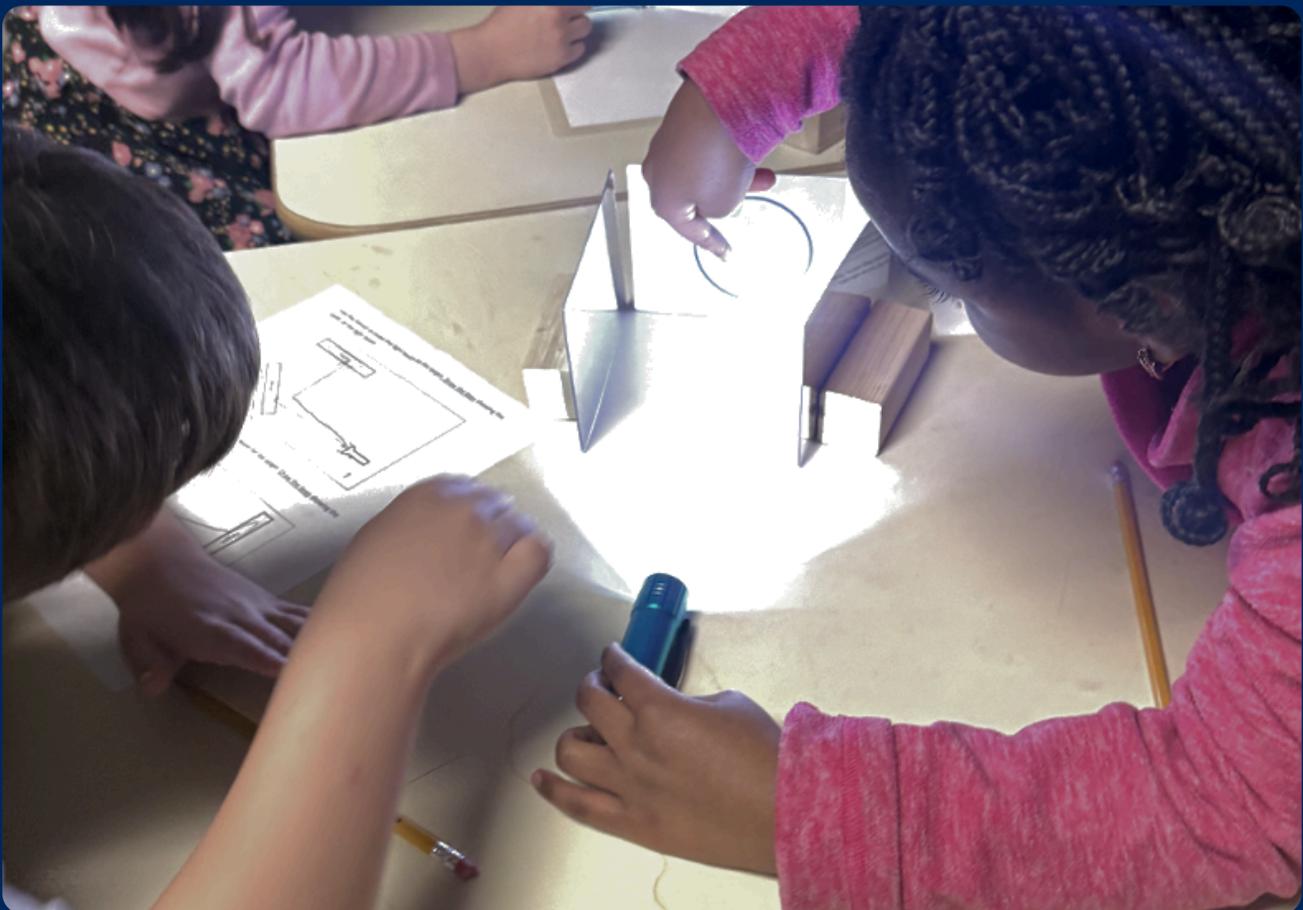


# ● We are an observatory and so much more!

During the last school year, over 3,500 students from 18 districts visited our Vestal campus! Our team of educators were incredibly busy designing and teaching a new series of school programs that extend and enrich New York State's *Next Generation Science Standards* (NGSS).

When first graders arrive, we ask them, *What is an observatory?* – the title of our first grade program. With a series of experiences, we show them what an observatory is and what astronomers do. One activity, “Telescope Petting Zoo,” is a hands-on exploration of telescopes. Students handle lenses and mirrors to “bend and bounce” light. They use telescopes to see how to make objects bigger and “topsy-turvy”. They tour the night sky in our digital planetarium and then explore our three telescope domes. They stand beside what seems to them like “giant” telescopes as the overhead dome slowly creaks and cranks open to reveal the sky. We show them images of the planets, stars, and galaxies we see through these telescopes. And if the weather is kind, they are sent off to play in the Science Park!

This first grade program, *What is an observatory?* is one example of the type of NGSS aligned experiences at each grade level that actively engage students in the practices of scientists and engineers. We have thematic experiences at each grade level designed to open students' imaginations to the possibilities of science and engineering... In this way, we are an observatory and so much more!





## Virtual Reality Becomes Real

With the generous support of a local foundation, Kopernik created a virtual reality classroom that includes a class set of VR headsets and the managing software to set them up and monitor them. Jenny Cartie, our Technology Manager, successfully piloted the VR classroom during our 2025 Summer Camp session. Using a web-based application, students created 3-D environments—incorporating elements of gaming and interactivity—and experienced these worlds in the VR headsets. Look out for more VR programming in the near future!



## RocketFest is a Blast!

It is a special thrill to see your rocket launch! This year's Rocket Fest was held on Saturday, June 7th. We began at 9:30 AM, and by the end of the day, we had launched over 150 rockets. Children of all ages launched their rockets with the help of their parents after building them at home. More advanced rockets were launched from the Kopernik field on Underwood, loaded with powerful engines to send them higher, further, and faster! Thank you to our "Rocketeers", volunteers, and staff for making RocketFest a huge success. We can't wait for next year!



## Honoring Astronaut Jim Lovell

We mourn the passing of Astronaut Jim Lovell (97) and celebrate his career in space exploration. In 1968, he was the navigator on Apollo 8—the first crewed mission aboard the Saturn V rocket. In 1970, he was commander of Apollo 13 and returned the crew back home safely after an explosion disabled the spacecraft. Pictured is Lovell (left) shaking hands with Edward L. Nezelek (right), Kopernik Observatory Committee Chairman, at Roberson Museum before Kopernik Observatory was fully constructed.

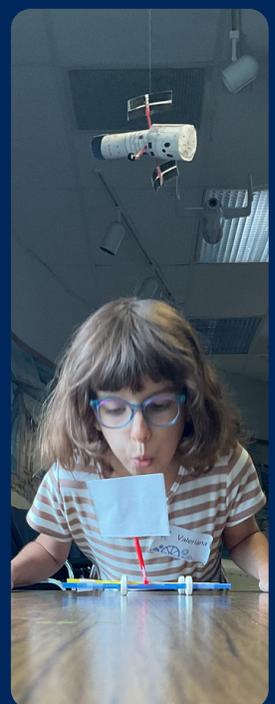
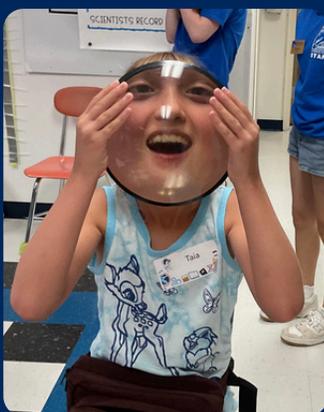


## 2025 Time Capsule Update

What does an iPhone, film canister, COVID-Test kit, KN95 mask, and a USB computer mouse have in common? During the Winter Star Party in February, these items were collected for the 2025 time capsule to be opened in 2075! These artifacts are some of the many items and documents placed in the Kopernik time capsule alongside those placed by the founding members in 1974. Included is a badge and pin from the Girl Scouts Gemini troop, placed in anticipation that members of this troop may be the ones to help open the time capsule in 2075!

# Summer Camps 2025 — Better than Ever!

This summer we conclude the 26th annual summer camp, sponsored by the Link Foundation. We provided 8 weeks of camp sessions serving more than 200 students. Campers toured the Solar System, created interactive VR worlds, modeled in CAD, discovered the beauty of patterns through art, launched a weather balloon, and so much more! We are so proud of all of our students for taking on new challenges and exploring the universe with us!



# KOPERNIKIDS



## KoperniKids Returns! STEM Classes for Ages 3–6

Our much beloved preschool program, KoperniKids, has returned and is better than ever! These monthly Saturday workshops invite preschoolers and their families to playfully explore science themes and topics that mirror the changing seasons and natural world. February's *Pajama Party* began the Winter/Spring session with an imaginative exploration of the winter theme of hibernation. In June, we concluded the Winter/Spring sessions with *Plenty of Plants*—a celebration of the arrival of summer. September brings a new slate of autumnal themed programs! Learn more below and visit [kopernik.org](http://kopernik.org) to register starting Aug. 23.

## KoperniKids - Fall 2025

Registration Opens August 23 at 10:00 am  
Classes Run from 10:30 am – 12:00 pm

### Sunshine and Shadows - Saturday, September 20

As we approach the dark days of winter, we will learn how light and shadows change throughout the year. We will learn what will make a shadow and use flashlights as a model of how the sun moves across the sky. We will have some fun and create shadow puppets.

### The Great Pumpkin - Saturday, October 11

Wear your costumes to Kopernik today and receive a free pumpkin! We will spend the morning learning all about pumpkins. We use all five senses to explore everything we can about pumpkins!

### Fall Harvest - Saturday, November 8

Fall is an exciting time of year! In fall all kinds of things are happening in nature. We will learn about changes in plants, weather, and animals. Did you know there are 115 different types of pine trees each producing their own type of cone? We will look closely at this interesting part of the tree.

# Thank You Annual Campaign Supporters!

We thank our community for their ongoing support of Kopernik's mission as "an innovative leader in interdisciplinary, lifelong learning in science, technology, engineering, and mathematics (STEM)." What sets Kopernik apart from other science centers is that we are a teaching institution. Our resource is our faculty – a team of educators dedicated to creating rigorous and exciting educational experiences. The annual fund goes directly to maintaining our faculty and administrative staff so that we can continue to expand and enrich our educational offerings – to schools, community groups, families, and friends.

Doris Ainslie  
Apalachin Lions Club  
Mr. Jeffrey & Mrs. Carol Barker  
Karen Baxendale  
Bonnie & Emil Bielecki  
Lisa Blackwell  
Donald Blake  
Ruth Blizzard  
George & Leila Bonner  
Ralph and Terri Broden  
Sharon Bryden  
Anthony & Carmen Burshnick  
Arthur & Cartha Cacciola  
Gay Canough  
Mark & Patricia Capobianco  
Patricia Cargill  
Charles Carpenter  
John Coccia  
Kenneth Coleman  
Corinee Crandell  
John Czarnecki  
Ted & Stella Czupryna  
David Daniels  
Mark & Gina Darpino  
Elizabeth Deangelis  
Bonnie Desjardins  
Thomas & Mildred DeWitt  
Michael Dwyer  
Endicott Precision  
Mary & Stephen Federowicz  
William & Eileen Fisher  
James Fountaine  
Craig Fox

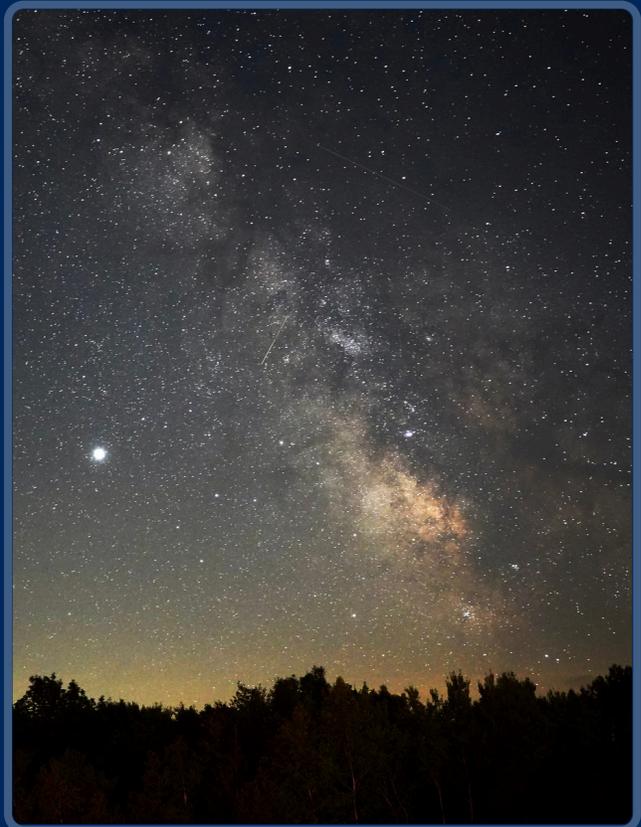
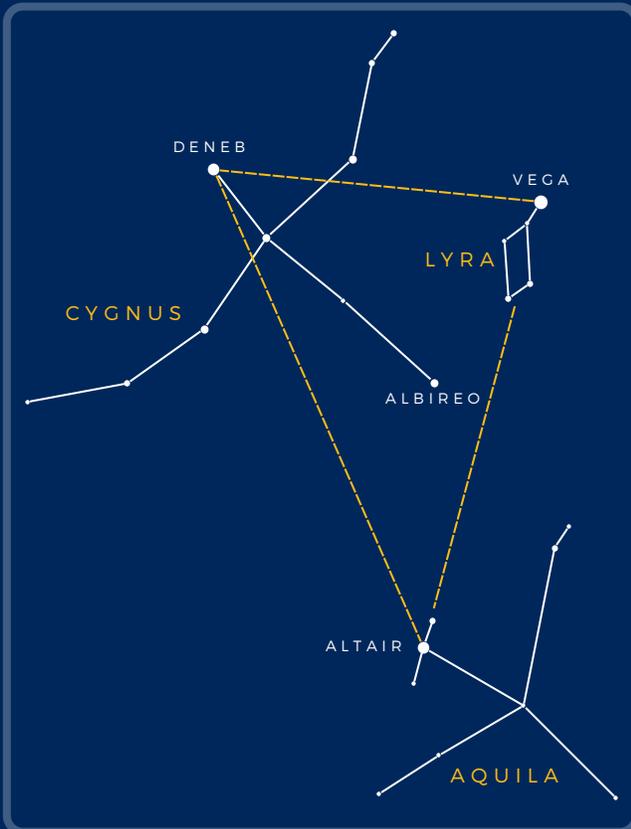
Janet Frankovsky  
Edward & Ann Fronczek  
Marek & Crazyna Gawel  
Karen Goodman  
Philip Gottlieb  
Robert Gottschall  
Nicholas Gretzinger  
Nicholas Guydosh  
Thomas Harley  
Lewis Hecht  
Jeremy Holt  
Robert Howe  
Stanley & Julia Hunter  
Zygmunt & Wieslawa Jedynak  
Nancy Kiley  
Jill & Carter King  
Porter & Joanna Kirkwood  
Peter Knuepfer  
John & Anita Kray  
Alex Krentsel  
Laura Lamash  
Drake & Georgette Lamem  
Kenneth & Laura Lattimore  
Patrick Manley  
Sandra Mayko  
William McGarrigle  
Wayne & Jane  
Russell Morrow  
Nicholas & Evelyn  
George & Kyong  
Chris Nuckols  
Thomas O'Brien  
Bruce Oldfield

Denise Petersen  
John Rosenberger  
Steven Rosman  
Patrick Scannell  
Karen Seybold  
Julian Shepherd  
Irene Siedlarczyk  
Esther Siegers  
Leann & John Spritzer  
Patricia Stacconi  
Francis Stanek  
Walter & Nancy Stefanski  
Drew Stella  
Susan Sullivan  
Summit Dental Arts  
Marianne Taylor  
David Waters  
Carol Weissmann  
Dr. Keith Werkman  
Robert Werkman  
Earl & Maryalice Westerlund  
Cynthia Westerman  
Stanley Whittingham  
James Wilcox  
Patricia A. Wrobel  
Ronald & June Zarzycki  
Robert Ziemba

# What's Up this Season?

## Stars & Constellations

The skies are seasonal! As months pass, the sky cycles due to Earth's orbit around the Sun. This brings different stars and constellations to explore! Summer brings constellations like Scorpius and Sagittarius, the Summer Triangle, the Milky Way Galaxy, and more. For guidance, Check out [stellarium.org](https://stellarium.org) to access your very own virtual sky map or come visit us at Kopernik on a Friday night and we'll be your tour guide through the stars.



## The Summer Triangle & The Milky Way

The Summer Triangle is an asterism that climbs high in the evening sky in the summer, approaching zenith. It consists of three bright stars, each from a different constellation: Deneb in Cygnus, Altair in Aquila, and Vega in Lyra. In late fall, the triangle will begin to set in the western evening sky, indicating the approach of winter. The triangle can also be used to find the Milky Way Galaxy! The constellation Cygnus is a swan where Deneb is the tail and Albireo is the head. If you imagine this swan flying through the sky, it will lead you to straight to the galactic center of the Milky Way.

The Milky Way is the galaxy the Sun resides in amongst billions of other stars. In the summer, we are treated to a view of the galactic center—the brightest part of our galaxy. Here, star clouds fill the sky, and star clusters and nebulae can be spotted throughout using telescopes or binoculars! Now is the best time to view the Milky Way in the northern hemisphere and there's no better place in the Binghamton area to view it than at Kopernik Observatory.

# What's Up this Season?

## The Solar System

### Late Summer Moon Phases



NEW MOON  
AUGUST 23



FIRST QUARTER  
AUGUST 31

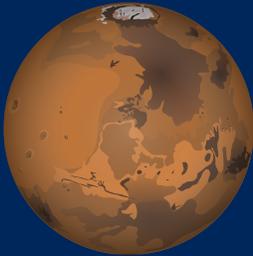


FULL MOON  
SEPTEMBER 7



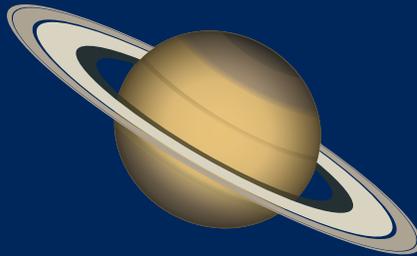
THIRD QUARTER  
SEPTEMBER 14

### Planets Visible Naked Eye This Season



MARS

EVENING:  
SETS SHORTLY  
AFTER SUNSET



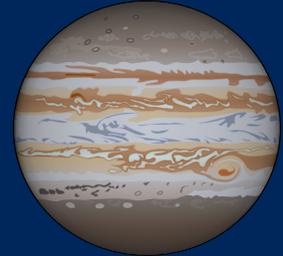
SATURN

LATE NIGHT:  
RISING EARLIER  
EACH NIGHT



VENUS

EARLY MORNING:  
VIEW BEFORE  
SUNRISE



JUPITER

EARLY MORNING:  
VIEW BEFORE  
SUNRISE

## Saturn: Transits, Opposition, & Goodbye Rings? Friday Night Program - September 19 at 8 pm

Saturn will be a major observing target for the remainder of 2025 and Kopernik's Super Planetary Refractor telescope is at the ready! Each passing day, Saturn will become more convenient to observe as it rises earlier in the night sky. Over the next few months, we will get to witness a dynamic Saturn through different events. From August 19 until October 6, Saturn's largest moon, Titan, will cast a shadow on the ringed planet every 16 days—we call this a shadow transit. On September 21, Saturn will be at opposition when it will be at its biggest and brightest in the sky. Finally, as we approach November, Saturn's rings will nearly disappear! Learn more about Saturn during our Friday Night Program on September 19.



# KOPERNIK ASTRONOMICAL SOCIETY

## ● Would you like to join the Kopernik Astronomical Society?

The Kopernik Astronomical Society's (KAS) mission is to provide the Binghamton, NY area with resources to those who are interested in astronomy, space, and science collaboration. This is accomplished by providing support for the Kopernik Observatory and Science Center through volunteerism, hosting public outreach events, education programs, and by sharing experiences and information to anyone who might have a question.

The KAS is always interested in getting new members of all levels of background and interest in Astronomy! We believe in letting members pursue their interest in Astronomy at whatever level they would like. We have members who are "theory people", "just star gazers", "shutter bugs" or "dedicated observational astronomers". Perhaps the unique thing about the KAS relative to other Astronomy clubs is our interest in supporting the educational programs at Kopernik. As such, visitors will often find KAS volunteers helping at Kopernik programs, or even running the program completely. Astronomy beginners are especially encouraged to join our ranks.

In addition to outreach, the KAS embarks on adventures for astronomical observation through field trips to dark sky parks, conferences, star parties, as well as observation sessions at Kopernik Observatory.

## ● To Learn More About the KAS

Visit [kopernikastro.org](http://kopernikastro.org).

# On the Horizon

## Friday Night Public Programs

**August – November | Doors Open at 7:30 pm | Program Starts at 8:00 pm**

The Observatory is open every Friday night, March through mid-December, regardless of sky conditions. Tune in to a STEM Talk and observe the night sky through our telescopes, if weather permits. Due to changing seasonal sunsets, the Observatory adjusts its program start times. The times above are for August–November. Some exceptions apply for special events and observing-only sessions. Visit [kopernik.org](http://kopernik.org) for program schedules and updates.

## Special Events

**Race to the Stars - September 6 | Race Starts at 6:30 pm | Requires Registration**

Kopernik's Race to the Stars 5K road race is an annual fundraiser that started in 2018. Join us for this special 5K road race through the hills surrounding the Observatory. We invite all to participate by sponsoring, donating, running, and cheering your friends and family on!

**AstroFest - October 3-4 | Event Schedule Coming Soon | Walk-in Admission**

AstroFest is an annual Star Party at Kopernik that features extraordinary speakers and night sky observing. Join the Kopernik Astronomical Society at the 43rd Annual AstroFest. Enjoy astronomy workshops, talks, exhibits, demonstrations, and solar and nighttime observing.

**Hocus Focus - October 24 & 25 | Choose from 4 Sessions | Requires Registration**

Kopernik Observatory transforms to offer spooky spectacles and extraterrestrial treats. We invite you to don your costume and trick-or-treat through our decorated classrooms and observatory. Visit each of our ghoulish educators to participate in chilling science experiments and thrilling demonstrations. Peer into the eerie mysteries of the cosmos in our Spooky Universe planetarium show. If favorable weather prevails, look through our telescopes to see the ringed, alien world—Saturn—and the ghostly galaxy, Andromeda.

**For the Latest Program Info & Updates:**

Visit [kopernik.org](http://kopernik.org).

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