



Steward Observatory Newsletter

October News



Steward Observatory Professor Brenda Frye & Her Students Discover a Lensed Supernova & Confirm the Hubble Tension

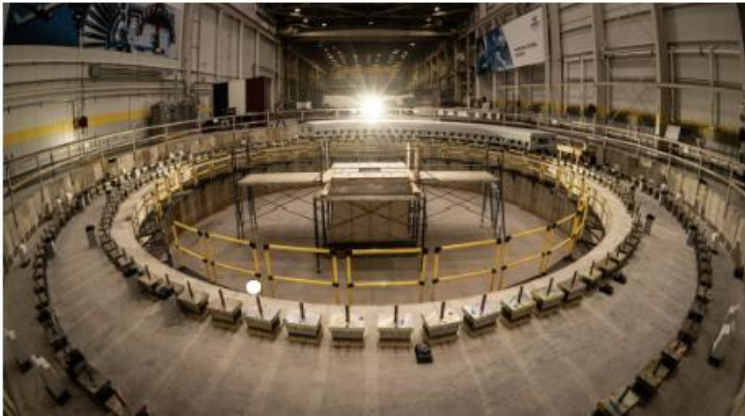
NASA features research from Steward Observatory Associate Astronomy Professor [Brenda Frye](#) that looks at one of the most distant supernovas ever to be seen: SN H0pe. The supernova, discovered with the James Webb Space Telescope, has been hailed as [“the supernova that could save the Universe.”](#) Brenda’s studies use gravitational lensing to interrogate the Hubble Constant: the rate at which the Universe is expanding. Especially remarkable in this series of six papers is the involvement of undergraduate student researchers from the Department of Astronomy. [Learn more](#)



Terahertz Intensity Mapper flies high: explore the launch in photos!

What if you could have the performance of a space telescope, at a fraction of the cost? That is the driving force behind the Terahertz Intensity Mapper (TIM), a NASA-sponsored mission to launch a balloon-borne far-infrared telescope into the stratosphere above Antarctica.

UArizona members Dr. Ian Lowe, Dr. Dan Marrone, Evan Mayer. PC: Susie Zukosky (UIUC) had to wait through nine launch attempts! [Learn more](#)



Giant Magellan Telescope Mount Fabrication Begins

Manufacturing and assembly of the largest telescope mount ever built in the United States has begun: the 39-meter tall precision moving structure will be built in partnership with Ingersoll Machine Tools and OHB Digital connect over the next six years. When complete, the mount will be shipped to the [Giant Magellan Telescope – GMTO Corp.](#) site in Chile for reassembly. The GMT, equipped with enormous mirrors built at Steward Observatory's [Richard F. Caris Mirror Lab](#), will have 50 million times the light gathering power of the human eye. [Learn more](#)



Giant Magellan Telescope Launches Universo Expansivo Program to Enhance Accessibility in Astronomy Education

The Giant Magellan Telescope today announced the launch of *Universo Expansivo*, a new education program designed to increase accessibility in astronomy education, particularly for students with vision loss, through tactile astronomy kits and accompanying lesson plans. Materials for *Universo Expansivo* were developed in collaboration with Parque Explora in Colombia and Red Aprender in Chile, and is supported by the U.S. Embassy in Chile and its

network of 14 [“American Spaces.”](#) [Learn More](#)



Teresa Lappin retires after nearly 30 years of innovation at Steward Observatory

Teresa Lappin retires after nearly 30 years at Steward Observatory. Teresa has been responsible for many aspects of image sensor processing for the [Imaging Technology Laboratory](#) (ITL) and is a world class expert in the deposition of thin films and the cleaning of semiconductor surfaces.

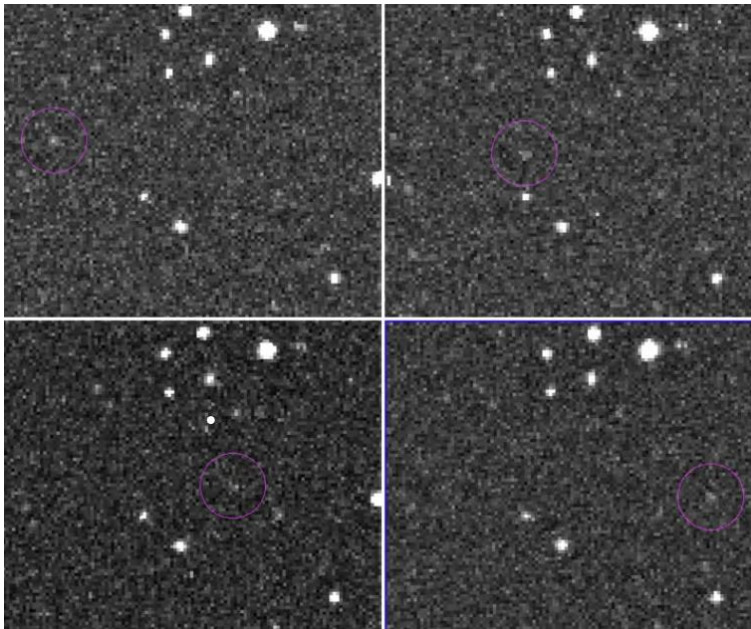
“My bit of wisdom,” says Lappin, “is that we be reminded that we are the living force called Steward Observatory, and that we recognize the work we do and the discoveries we make depends on the important relationships we have with others.”

[Learn more](#)



Steward PhD alum captures the most detailed infrared map ever of our Milky Way

A team of astronomers, led by Steward Observatory PhD alumnus Dante Minniti, have published a gigantic infrared map of the Milky Way containing more than 1.5 billion objects — the most detailed one ever made. Using the European Southern Observatory’s VISTA telescope, the team monitored the central regions of our Galaxy over more than 13 years. At 500 terabytes of data, this is the largest observational project ever carried out with an ESO telescope. [Learn more](#)



The Catalina Sky Survey—supported by Steward Observatory’s Mountain Operations—detects the ninth asteroid ever to be spotted prior to impact

Asteroid 2024 RW1 was discovered early in the morning on September 4, marking the ninth time in history that humans have detected an approaching space rock before its impact.

[Jacqueline Fazekas](#), a research technologist at the NASA-funded [Catalina Sky Survey](#), first spotted asteroid 2024 RW1 hurtling toward Earth early this morning. The news was announced by the Catalina Sky Survey [on X](#) less than nine hours before impact. [Learn more](#)

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A New Way to Follow Steward Observatory

This month, Steward Observatory steps into a new social media presence, thanks to the efforts of Graduate Student Council member Vikram Manikantan and a dedicated team of staff and faculty members. Be sure to [follow our new Instagram account](#) to stay up to speed on our history, our current research, and spotlights on our students, staff and faculty. We’re also still on [Facebook](#) and [X/Twitter](#)—following these accounts is a great way to get a sprinkling of news and astronomy nuggets throughout the month, and to stay involved in our community!



Public Evening Lecture Series

Fall Semester 2024

We look forward to you joining us this semester to learn more about the exciting science taking place in Astronomy!

Monday, October 7

An Introduction to Space Law

Prof. Andrew Woods

Monday, October 21

Paradoxes & Conundrums of Relativity

Dr. Vasileios Paschalidis, Steward Observatory

Monday, November 4

Discovering the Most Distant Supernovae Thus Far with JWST

Christa DeCoursey, Steward Observatory

Monday, November 18

Jupiter's Insanely Volcanically Active Moon Io

Dr. Alfred McEwen, Regents Professor, Lunar & Planetary Lab

Monday, November 25

¿Cuántos Soles Hay?

(This lecture will be given in Spanish.)

Dr. Rafael Bertolotto, Steward Observatory

Monday, December 2

Born in the Spotlight: the Mysterious Proplyds

Dr. Dominika Itrich, Steward Observatory

Location: Steward Observatory Lecture Hall N210

Doors open at 7:00 pm and Lectures begin at 7:30 pm MST

Nearest parking 2nd Street or Cherry Ave Garage

Telescope viewing follows at 8:30 PM - Weather Permitting

Watch via **ZOOM** link <https://arizona.zoom.us/j/4470189357>

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### **Podcasts of Previous Public Evening Lectures**

September 23

[\*JWST: The First Two Years of discoveries from the Dawn of Time\*](#)

Dr. Kevin Hainline, steward Observatory

September 13

[\*Striking Gold in the Universe\*](#)

Dr. Wen-Fai Fong, Northwestern University

2024 Aaronson Prize Awardee

**If you miss a lecture -- [view the video here](#)**

[Astronomy Colloquia](#)

### **Space Drafts: Astronomy Lectures**

The events listed above are off campus astronomy activities we want you to be aware of and enjoy, if interested. These events are not part of the Department of Astronomy or Steward Observatory public outreach. [Learn more](#)

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### **Public Mirror Lab Tours**

**Tickets are now available through March, 2025**

This 90-minute tour provides a unique opportunity to learn how we produce the largest (8.4 meters / 27ft) and most advanced telescope mirrors in the world. We hope to see you soon! [More information](#)

### **Mt Lemmon SkyNights StarGazing Program.**

#### **Tickets are on sale through December, 2024**

SkyNights is a 5 hour astronomy program on the summit of Mt. Lemmon. Your experience begins with a scenic drive up this Sky Island mountain which is a unique trip by its self. This will be followed by spectacular sunset phenomenon and then on to stargazing using the Shulman 32" and Phillips 24" telescopes which are the largest public viewing telescopes in southern Arizona. No prior astronomical knowledge is required—just bring your enthusiasm and prepare to be amazed! This is a fun program for curious minds aged 7 and up. Come discover the wonders of the Universe with us!

[More information](#)

### **Friends of Steward Observatory**



[Your donation](#) provides astronomy students the chance to grow their skills, experience discovery and build the confidence necessary to take on the challenging problems of the future. These opportunities are priceless, but providing them requires funding.

Our students are extremely grateful for your investment in Astronomy. To a student, every dollar is important. Your donation goes directly to help support our innovative students in the form of scholarships and summer research project needs. Students are working on cutting-edge research to enhance our knowledge and understanding of the universe.

These students are the next-generation of scientists who will be making the great discoveries in the future. Student success builds our world-class astronomy program that continues to stand out from our peers and expands Arizona's research horizons.

**Your donation is tax deductible!**

**Supporting the next-generation of science and discovery is the best reward.**

[Learn more](#)



THE UNIVERSITY OF ARIZONA  
COLLEGE OF SCIENCE

# Astronomy & Steward Observatory



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