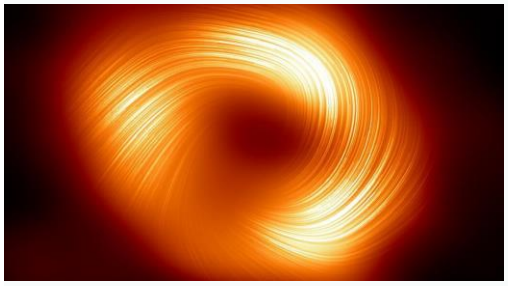
Steward Observatory Newsletter

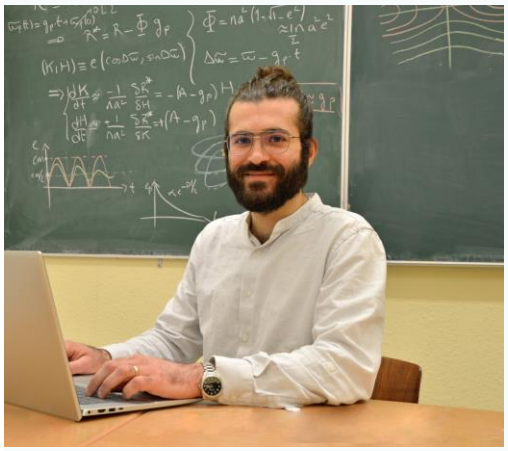
April News



Astronomers capture magnetic fields twirling around black hole

A new image from the Event Horizon Telescope collaboration, which includes researchers and telescopes of the University of Arizona, has uncovered strong and organized magnetic fields spiraling from the edge of the supermassive black hole Sagittarius A*, or Sgr A*.

Boris Georgiev, an EHT postdoctoral researcher at UArizona's Steward Observatory and co-author on the study, said: "The consistency of magnetic field structures around Sgr A* and M87* suggests that the processes by which black holes feed and eject jets into their surroundings may be universal, despite their vast differences in size and mass." Learn more



Welcome! Dr. Antranik Sefilian as a 2024 *51 Pegasi b* Fellow

Congratulations to Dr. **Antranik Sefilian,** who will be joining Steward Observatory as a 2024 ***51 Pegasi b Fellow***, mentored by Department of Astronomy Associate Professor **Kaitlin Kratter**. During his time at Steward Observatory, Sefilian will be decoding the gravitational interplay between planets, and the remnants of their formation, to illuminate the dynamics that sculpt planetary systems. “We are really excited to host Dr. Sefilian here in Arizona, as he will bring together multiple research groups,” Kratter says. “His theoretical work on debris-disks links those of us who study disk dynamics with our colleagues at the forefront of observational science with JWST. Learn more

Still as Bright: An Illuminating History of the Moon, from Antiquity to Tomorrow

“An award-winning author takes a close and fascinating look at our cosmic neighbor. Writing with a clear, poetic voice, Cokinos shows how the story of the Moon is also a story of humanity.” —Kirkus Reviews, starred

Author Christopher Cokinos, will be our guest lecturer on Monday, April 15 at 7:30 pm in N210 for our Public Evening Lecture series, either in-person or via Zoom

Books will be available for purchase in the Steward lobby before and after the lecture.

Press Release

University of Arizona delivers Big Game-level bucks to Tucson’s economy

Jannuzi says the [astronomy and space science] program brings in between $110 to 150 million annually in just grants from agencies like NASA, the Department of Energy and the National Science Foundation and business partnerships with companies like Intel, Lockheed Martin and Raytheon. “And then when you add the economic impact we have from hiring a bunch of people who then go out and buy things, go to the restaurants and just participate in the economy, the consulting firms estimate our economic impact at $560 million a year.” Learn more

Interview: Exploring space with balloon-borne telescopes

AZPM: Arizona Science interview with Steward Observatory astronomy professor Chris Walker.

The best way to observe the universe is with a telescope above the Earth’s atmosphere, and the least expensive way to get there is using a stratospheric balloon.

Listen here

In the Spotlight

Congratulations Logan!

As she prepares to graduate with her PhD, **Logan Pearce** reflects on her previous career in middle school education, and discusses her plans for her upcoming postdoc fellowship at the University of Michigan. Read more below!

What brought you to Steward Observatory?

I always wanted to pursue both astronomy and a career in the Navy. Following my Navy career, I taught middle school science for 6 years. In getting kids excited about space, it reminded me how excited I was about space, and that I had the opportunity to make a career out of it. I returned for a second undergrad at the University of Texas where I did research in exoplanet direct imaging. Steward Observatory has a large exoplanet direct imaging group doing exciting research, and I knew I would like living in Tucson, so it was the best place for me to continue building my career. Learn more

A Steward Postdoc Tells Cosmic Stories for Kids

This fall, **Dr. Jaclyn Champagne**, our JASPER postdoc researcher at Steward Observatory, wrote a compelling piece for *The Conversation* about the environments where colossal black holes form (**Powerful black holes might grow up in bustling galactic neighborhoods**). The story was so popular that *Astronomy Magazine* **re-published it**, and The Conversation asked Dr. Champagne if she might be able to write a story for children about her research area. The result: a kid-friendly article that explores why some black holes are bigger than others. **Read it here**, and be sure to share it with the curious young readers in your life!

James Webb Space Telescope News

Steward Observatory Astronomers Shine in the Newest Observation Time Allocations from JWST

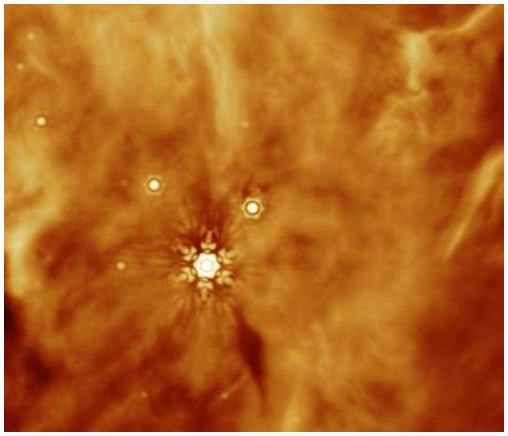
In the highly competitive application process for Cycle 3 observation time on the James Webb Space Telescope (JWST), only one proposal is accepted for every nine proposals submitted. Astronomers from Steward Observatory received news earlier this month that our research teams have collectively been awarded 424 primary hours of observation time, and 720 parallel hours (in which one instrument aboard the telescope can be used to collect data while other science is being conducted with the other instruments). In total, these hours represent an impressive 8% of the total prime time and 70% of the parallel

time awarded.

Among the accepted proposals is a program led by Steward Observatory's graduate student Maria Pudoka—an enormous achievement for a grad student in the face of high competition. Learn more

Webb telescope takes its first images of forming planetary systems

A team led by **Jarron Leisenring** at the UArizona Steward Observatory has obtained the deepest look yet into such planetary nurseries. Learn more

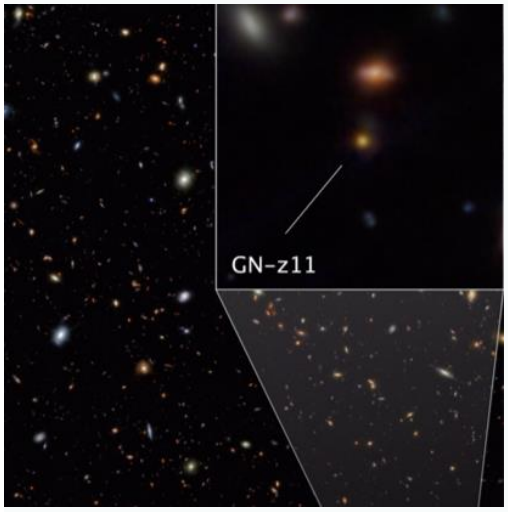


Cheers! NASA's Webb Finds Ethanol, Other Icy Ingredients for Worlds

What do margaritas, vinegar, and ant stings have in common? They contain chemical ingredients that NASA's James Webb Space Telescope has identified surrounding two young protostars known as IRAS 2A and IRAS 23385. Although planets are not yet forming around those stars, these and other molecules detected there by Webb represent key ingredients for making potentially habitable worlds. Learn more

Peering Into the Tendrils of NGC 604 with NASA's Webb

The formation of stars and the chaotic environments they inhabit is one of the most well-studied, but also mystery-shrouded, areas of cosmic investigation. The intricacies of these processes are now being unveiled like never before by NASA's James Webb Space Telescope. Learn more



Webb Unlocks Secrets of One of the Most Distant Galaxies Ever Seen

The enigmatic galaxy GN-z11 is one of the youngest ever observed.

Delivering on its promise to transform our understanding of the early universe, the James Webb Space Telescope is probing galaxies near the dawn of time. One of these is the exceptionally luminous galaxy GN-z11, which existed when the universe was just a tiny fraction of its current age. One of the youngest and most distant galaxies ever observed, it is also one of the most enigmatic. Why is it so bright? Webb appears to have found the answer. Learn more

*JWST's Near-Camera, or NIRCam, which was designed by a team led by **Marcia Rieke**, a Regents Professor in the UArizona Steward Observatory. The Mid-Infrared Camera (MIRI) was built in partnership with ESA, NASA, JPL and the University o Arizona, with Lead Scientist George Rieke, Regents' Professor, Steward Observatory and the University of Arizona.*

Public Evening Lecture Series

Spring 2024

- **Monday, April 1**
  - **Lecture moved to April 29**
- **Monday, April 15**
  - *Still as Bright an Illuminating History of the Moon from Antiquity to Tomorrow*
  - Dr. Christopher Cokinos, Dept of English, University of Arizona
  - Book-signing after the lecture
- **Monday, April 29**
- *Galactic Symphony: The Harmonic Evolution of Our Milky Way Galaxy*
  Dr. Kathryne Daniel, 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

In-Person or watch via **ZOOM** link https://arizona.zoom.us/j/4470189357

If you miss a lecture -- view the podcast below:

Mar. 25, 2024 - Dr. András Gaspar, Steward Observatory
40 Years of Debris Disks

Mar. 11, 2024 - Dr. Jeffrey Bennett, University of Colorado
Pathway to a Post-Global Warming Future

Mar. 4, 2024 - Dr. J. Roger Angel, Regents Professor, Steward Observatory
50 Years at Steward: Optics for Astronomy and Now to Reverse Climate Change

Feb. 19, 2024 - Dr. Marcia Rieke, Elizabeth Roemer Chair, Steward Observatory
JWST: Two Years of Operations are Changing Astronomy

Feb. 5, 2024 - Dr. Sean Linden, Steward Observatory
A Cosmic Odyssey: The Epic Journey of the Milky Way Galaxy

Jan. 22, 2024 - Dr. Christopher Walker & Abram Young, Steward Observatory

What's Up with GUSTO?

More information
Astronomy Colloquia

Other Astronomy Events

- Space Drafts: Astronomy Lectures - learn more

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.

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Friends of Steward Observatory

Our 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.

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.

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Your donation is tax deductible!

Thank you for your support.

Learn more

Additional Astronomy giving options

THE UNIVERSITY OF ARIZONA
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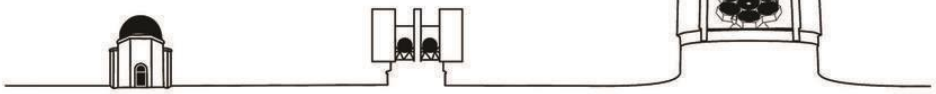

CELEBRATING 100 years OF DISCOVERY

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For more information or questions contact:
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