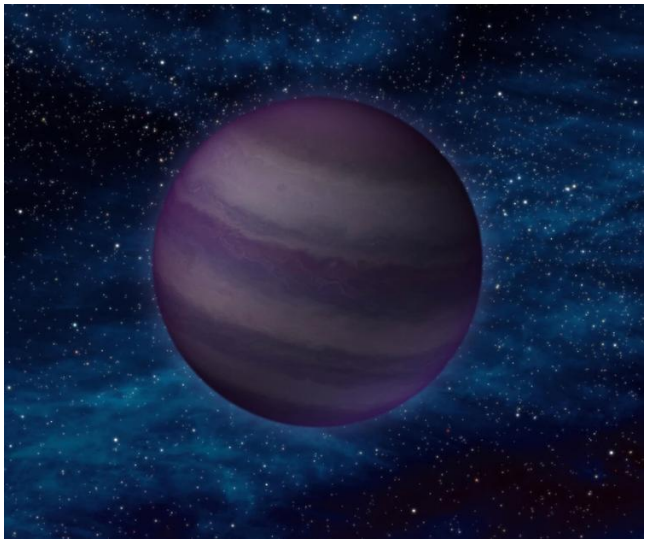
THE UNIVERSITY OF ARIZONA
COLLEGE OF SCIENCE
Astronomy & Steward Observatory

November Newsletter



Artist's concept of a brown dwarf. Brown dwarfs begin their lives like stars but they never accumulate enough mass to fuse atoms steadily at their cores and ignite with starlight. NASA/JPL-Caltech

Discovery marks the first detection of variable water clouds outside of our solar system

Using the James Webb Space Telescope, **Brittany Miles**, assistant astronomer at University of Arizona Steward Observatory, led a team that spent 11 hours staring at WISE 0855, the coldest known brown dwarf, collecting a spectrum of its light every 15 minutes. The result is the most detailed time-series portrait ever taken of this frigid world – and the first direct confirmation that water clouds on another body are changing thickness over time, just like weather on Earth.

Learn more

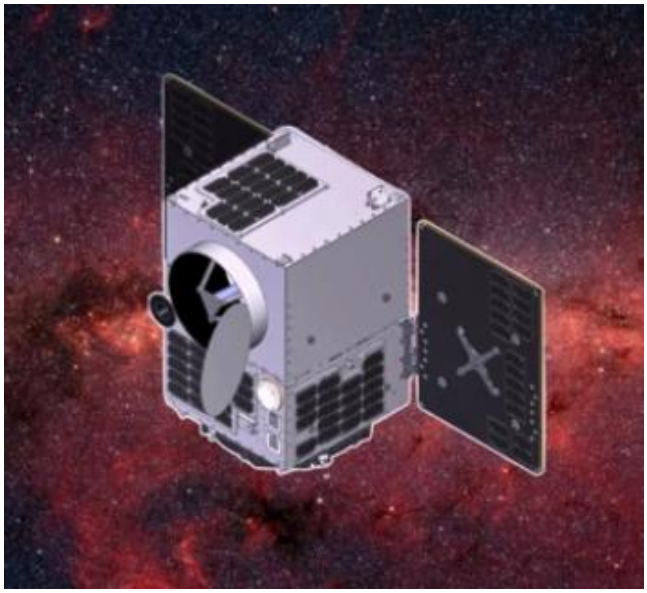


University of Arizona researcher Kate Alexander.

AZPM Arizona Science: Exploring the universe with radio astronomy

Radio astronomers search the sky for sources sending out invisible light, including black holes and exploding stars. University of Arizona researcher Kate Alexander investigates locations known to emit radio light, and links her findings with other types of light on the electromagnetic spectrum.

Arizona Science Episode



Made of thick clouds of dust, the iconic Horsehead Nebula is part of a vast molecular cloud complex in the Orion constellation some 1,500 light-years away. Embedded

Stories from star dust: U of A-led mission will study light from distant stars

"PUFFINS will change how we understand the dust between stars," said Ramya Anche, an assistant research professor at Steward Observatory who serves as the mission's principal investigator. "Understanding these tiny grains is essential to building a complete picture of how interstellar dust forms, evolves over time and ultimately ends up incorporated into new stars and planets."

within these clouds are sharp points of light, young stars forming out of swirling aggregations of gas and the dust itself. NASA/ESA/Hubble Heritage Team

Learn more



Artist's visualization of an early galaxy and its surrounding gaseous environment. The orange structures represent metal-enriched gas being expelled from the galaxy, illustrating how young galaxies began dispersing heavy elements into their surroundings within the universe's first 500 million years. The visualization is based on publicly available FIRE-2 cosmological simulation data and is not a direct telescope image. Yongda Zhu, Steward Observatory

JWST finds early galaxies were already seeding the universe with heavy elements

According to a study published by astronomers at the University of Arizona in Nature Astronomy, this picture likely is not correct. Instead, galaxies were already seeding the cosmos with heavy elements, such as oxygen and carbon, much earlier than astronomers expected.

Learn more

Steward Observatory Public Evening

Fall 2026 Lecture Series

Celebrating over 100+ years of astronomy lectures and telescope viewing to the public!

Location: 933 N. Cherry Ave., Room N210

Doors Open: 7:00 pm

Lecture Begins: 7:30 pm

Map: Here

Telescope viewing available to the public after the lecture depending on weather

Monday November 2	*The Nancy Grace Roman Space Telescope, NASA's next Astrophysics Flagship Telescope - Launch and Science* Dr. Tim Eifler, Steward Observatory
Monday November 16	*Saturn's Rings: Ancient Icon or Cosmic Nepo Baby?* Dr. Zarah Brown
Monday December 7	*Stories from Stardust: The PUFFINS Mission* Dr. Ramya Anche, Steward Observatory

[Watch Monday Lecture Live On Zoom]

[Previous Public Evening Lecture Videos]

Friends of Steward Observatory

Your generosity fuels discoveries across the universe and inspires the next generation of astronomers to explore, innovate, and lead the way toward tomorrow's breakthroughs!

🍂 **A Season of Discovery and Gratitude**

As November arrives and the beauty of autumn settles across Tucson, it's a wonderful time to reflect on the curiosity, inspiration, and discoveries that bring our University of Arizona astronomy community together. At Steward Observatory, a new generation of students is embracing opportunities to explore the universe, pursue their passions, and help shape the future of astronomy.

🍂 **Your generosity makes these opportunities possible.**

Your support strengthens and grows our astronomy community by opening doors for students, advancing groundbreaking research, and providing access to experiences and resources that inspire discovery. Every contribution helps cultivate future astronomers, support innovative ideas, and ensure that Steward Observatory continues its legacy of exploration and excellence.

Together, we are building a stronger astronomy community and investing in the people and discoveries that will shape our understanding of the universe for generations to come.

Thank you for being an essential part of our journey of discovery!

[Learn more]

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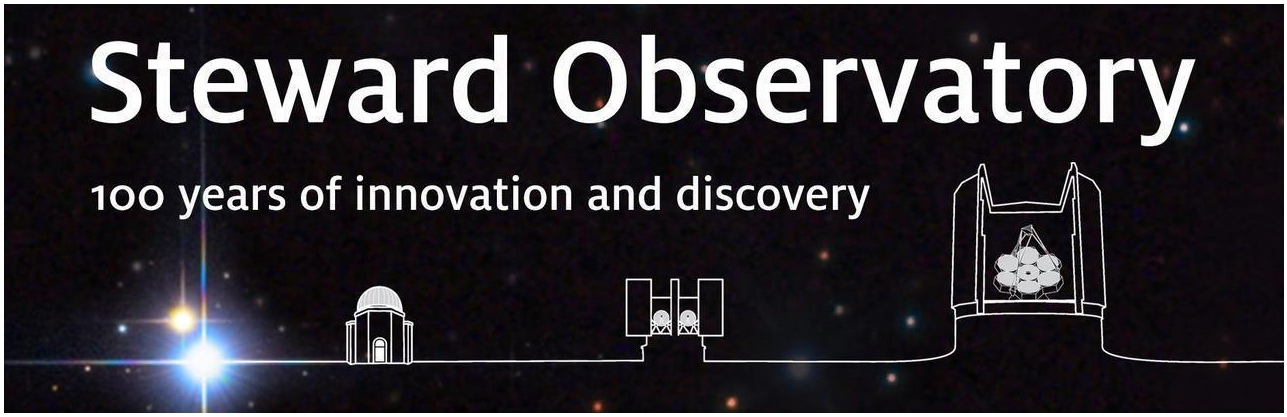
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For more information or questions

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