



October 2022

Dear Friends,

Earlier this month, the School of Earth and Space Exploration celebrated the tenth anniversary of our Interdisciplinary Science Technology Building 4 (ISTB4) and the Marston Theater while honoring our special guest, Susie Marston. We are so fortunate to have such an innovative and lively space to advance research and discovery, and to encourage K-12 students to explore their futures as scientists and engineers. If you haven't visited recently, be sure to attend one of our upcoming events and see what's new at the Gallery of Scientific Exploration in the lobby and second floor of ISTB4 and watch a 3D planetarium presentation in the Marston Theater.

Our graduate students will host the [Earth and Space Open House](#) on Friday evening, November 4, with keynote speaker Regents Professor Rogier Windhorst. We welcome science enthusiasts of all ages with interactive science exhibits and stargazing with telescopes to learn about the night sky.



We hope you will celebrate Sun Devil Pride at ASU's [Homecoming and Block Party](#), in-person and outside on November 19. Be sure to stop by our school's booth at the block party to talk with students and scientists and learn about our latest research.

And our [Virtual Night Sky](#) series continues every other Wednesday where you can learn about the stars and planets you can see from your own backyard.

We hope you enjoy this newsletter featuring the latest school news, student successes, announcements and features. For more information on our research, events, students, faculty, and alumni, we've included links to social media at the end of this newsletter. Please follow us, share and retweet.

Be well and keep safe,



Meenakshi (Mini) Wadhwa
Director of the School of Earth and Space Exploration (SESE)

In the News

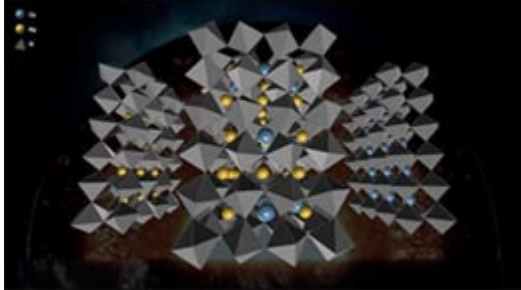
Webb images reveal interstellar discovery

ASU astronomers are sharing one of their first and most beautiful NASA James Webb Space Telescope images of a galaxy pair at a distance of about



700 million light-years away from us. "This is a rather unique opportunity to measure how much dust has been produced in this spiral galaxy, like our own, by

previous generations of stars," ASU Regents Professor Rogier Windhorst said. [Read more](#)



ASU researchers discover new mineralogy of the deep Earth

A team of scientists — including Byeongkwan Ko, former PhD student at

ASU and now a postdoctoral researcher at Michigan State University, and Dan (Sang-Heon) Shim, SESE professor and a Navrotsky Professor of Materials Research at ASU, have completed a new high-pressure experiment employing some different styles of heating to reveal an additional mineral residing in the lower mantle. [Read more](#)

ASU researchers piece together the story of planetesimal formations through magnetism



Researchers including Graduate Research Associate Sam Courville with Professors Joseph O'Rourke and Lindy Elkins-Tanton signify residual magnetic fields detected in some carbonaceous chondrite meteorites. Carbonaceous chondrites are part of the stony meteorite group. They are some of the oldest rocks known, about as old as the solar system itself. Clues within a chondrite's chemical makeup can reveal details about the origins of asteroids, planets and moons at the beginning of the solar system. [Read more](#)



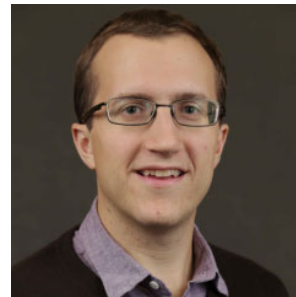
A hydrogen-rich first atmosphere for Mars inferred from clays on its surface

Mars may have been born a blue and water-covered world, long before the Earth had even finished forming. The discovery could open a window for scientists on an overlooked chapter in Martian history. In a new study with co-authors and SESE professors, Lindy Elkins-Tanton, Steve Desch and Peter Buseck, along with a team of researchers found that Mars's earliest atmosphere was much denser than today, and primarily composed of molecular hydrogen, very different from the thin, carbon dioxide atmosphere it retains today. [Read more](#)

Announcements

O'Rourke wins Scialog Award

Research Corporation for Science Advancement, the Heising-Simons Foundation, The Kavli Foundation and NASA are announcing awards totaling



\$1,045,000 to eight multidisciplinary teams of researchers from institutions across the United States and Canada in the second year of Scialog: Signatures of Life in the Universe. SESE professor Joseph O'Rourke will receive one of the 19 individual awards and will be working on models of small rocky planets that orbit red dwarf stars (aka M dwarfs). M dwarfs emit huge amounts of extreme UV radiation early in their lives, which can destroy water in planetary atmospheres.

[Read more](#)

Events



Virtual Night Sky

What's happening in the November night skies? We will explore when to catch a view of the upcoming partial lunar eclipse, watch Jupiter and Saturn moving toward Venus, and the return of winter stars!

Join the ASU Marston Exploration Theater presenters on **Wednesday, November 2 at 7 p.m.** for this FREE virtual event. And be sure to register for additional Virtual Night Sky events on **November 16 and 30.**

Open House

Join us on **Friday, November 4 from 6-9 p.m.** for Earth and Space Exploration Open House. This FREE event is organized by graduate students from the School of Earth and Space Exploration and includes a public lecture, 3D

planetarium shows, interactive science exhibits for all ages, research groups and student clubs, and stargazing with telescopes to learn about the night sky.

Keynote speaker Regents Professor Rogier Windhorst will discuss new science and results from NASA James Webb Space Telescope! **Get more details.**

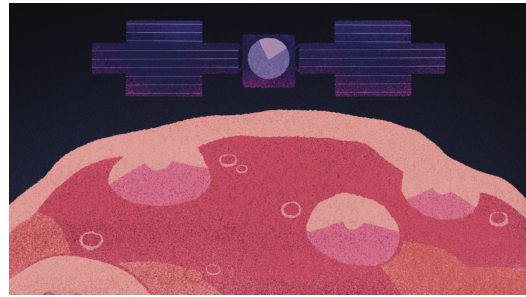


Homecoming Block Party

Visit our School of Earth and Space Exploration tent on the Tempe Campus at the Homecoming Block Party **Saturday, November 19.** Stop by to enjoy activities and meet some of our students and faculty. **Get more details on this FREE festival-type event!**

Psyche Inspired Art Exhibit

Explore "Psyche Inspired," a new art exhibit at Fletcher Library on the West campus. On display during regular library hours from now until December 9.



Get additional details on this FREE exhibit. Psyche is both the name of an asteroid orbiting the Sun between Mars and Jupiter — and the name of a NASA space mission to visit that asteroid, led by ASU.

Alumni Announcements

Alumni: Keep it current!

Join us on [LinkedIn](#) and [update your contact information](#) so you can receive the latest School and university news, exclusive career and professional development opportunities, unique ASU experiences, invitations to special events and much more!

ASU School of Earth and
Space Exploration
Arizona State University



#1 in the U.S. for innovation
ASU ahead of MIT and Stanford
— U.S. News & World Report, 8 years, 2010–2011

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