School of Earth and Space Exploration
Arizona State University

April 2022

Dear Friends,

It is hard to believe spring is upon us and in just a few short weeks we'll be celebrating our 2022 graduates! To join in the ASU commencement ceremonies, convocation, and share in the excitement on social media (#ASUgrad), I encourage everyone to visit the **ASU graduation website**.

You are also invited to join in a special event on May 15, hosted in collaboration with the **Lowell Observatory** and the **Chilean Astronomy Society (SOCHIAS)** to celebrate the upcoming lunar eclipse. Be sure to save the date for this night sky observing event and check out our **events webpage** for more information.

I am also delighted to share that our school's graduate programs in the Earth sciences have ranked **among the top programs in the country** by U.S. News & World Report for 2023, reflecting our strong commitment to the quality of our graduate education.

I hope you enjoy this newsletter featuring our research news, announcements, and events. For more information, we have included links to social media at the end of this newsletter.

Be well and keep safe,

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

In the News

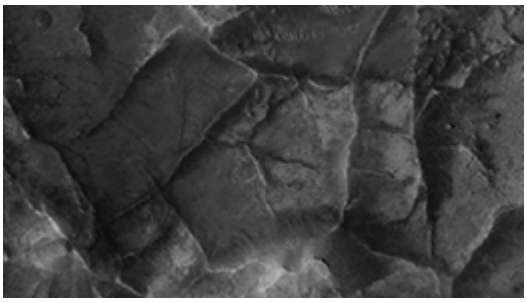
ASU-led online portal advances digital learning in earth and space sciences

ASU's ETX Center has announced the launch of "Infiniscope" 2.0, the next generation of a NASA-funded online platform, which is transforming learning across K–16 in the earth and space sciences. This project, created by experts at SESE and NASA's Science Mission Directorate, provides inquiry-driven, AI-tutored activities designed around NASA-derived simulations and virtual field trips. It also provides a technology platform that enables educators to collaborate, create and customize their own digital

learning activities in ways that are informed by what research shows is most effective. **Read more**

Record broken: Hubble Space Telescope spots farthest star ever seen

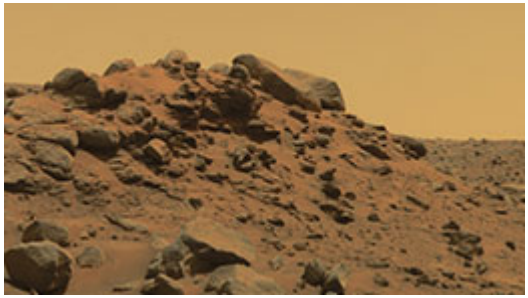
NASA's Hubble Space Telescope has established an extraordinary new benchmark: detecting the light of a star that existed within the first billion years after the universe's birth in the Big Bang — the farthest individual star ever seen to date. The star, nicknamed Earendel by astronomers from the Old English word meaning “morning light,” is so far away that its light has taken 12.9 billion years to reach Earth. The paper describing the discovery of the newly detected star, which has been published in the journal Nature includes SESE co-authors Rogier Windhorst and Francis Timmes. **Watch a video and read more**



Citizen scientists help map ridge networks on Mars

A team of scientists, led by SESE’s Aditya Khuller and Laura Kerber of JPL, set out to learn more about the unusual ridge networks on Mars by mapping a large area on the Red Planet with the help of thousands of citizen scientists. Their findings, which have been recently published in Icarus, show that the ridges may hold fossilized records of ancient groundwater flowing through them. **Read more**

Enigmatic rocks on Mars show evidence of a violent origin



Analyzing data from several Mars missions, a team of researchers led by SESE's Steve Ruff has determined that enigmatic olivine-rich bedrock in Gusev crater and in and around Jezero crater, may be a type of rock called “ignimbrite,” which is both igneous and sedimentary and forms as the result of cataclysmic explosive eruptions from immense volcanic calderas. **Read more**

Scientists study microorganisms on Earth to gain insight into life on other planets

A team of scientists from ASU and members of the Group Exploring Organic Processes in Geochemistry led by Everett Shock, traveled to Oman, on the Persian Gulf to investigate a geological process called “serpentinization,” which supplies hydrogen gas to microorganisms that oxidize it for energy. Gaining an understanding of this process may lead to a better understanding of life on other planets and the development of space exploration instruments that can detect life on ocean worlds. **Read more**

Announcements

US News ranks School of Earth and Space Exploration No. 12 for earth science grad program

The School of Earth and Space Exploration has been ranked No. 12 by U.S. News & World Report for its 2023 rankings of America's graduate schools for earth sciences. For the earth sciences specialties, the school ranked No. 3 for geochemistry and No. 5 for both geology and environmental sciences.
Read more

ASU Assistant Professor Daniel Jacobs selected for prestigious NSF CAREER award

The NSF CAREER program is a foundation-wide activity that offers awards in support of early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department. Jacobs, who is an interdisciplinary scientist across the areas of astrophysics, cosmology, experimental physics and aerospace engineering, was selected for this prestigious award to support a five-year program of research and development by his group of students and postdoctoral scholars.
Read more

Astrophysics major awarded Goldwater Scholarship for excellent in STEM research

ASU has announced four outstanding undergraduates have been selected as 2022 Goldwater Scholars including SESE astrophysics major Claire Blaske. The Goldwater Scholarship is the most prestigious award in the United States for undergraduate researchers in the natural sciences, engineering and mathematics. **Read more**

Events

Virtual Night Sky

Join the ASU Marston Exploration Theater presenters on **Wednesday, May 4 and 18 at 7 p.m.** for a live planetarium presentation. Learn about the planets and stars visible in the night sky from your own backyard and the latest events in space exploration!

Register in advance for these FREE Zoom webinars **May 4** and **May 18**.

2022 Total Lunar Eclipse

Join ASU's School of Earth and Space Exploration in viewing the 2022 Total Lunar Eclipse virtually with our partners at Lowell Observatory and Sociedad Chilena de Astronomía!

Starting at 7:00pm PDT on Sunday, May 15, we will be streaming the eclipse using various telescopes. Watch eclipse-themed presentations from members of Marston Theater team and enjoy live views of the eclipse as it approaches totality in the night sky! **Register for this FREE virtual event**.

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, 5 years, 2016–2021