



October 2020

A message from our Director

Dear Friends,

As we welcome the cooler fall weather here in Tempe, we're also celebrating many exciting achievements at the School of Earth and Space Exploration this month.

First, congratulations to the [LunaH-Map](#) mission team for the successful

launch of its Miniature Neutron Spectrometer (Mini-NS) integrated into the Hawaii Space Flight Laboratory's NEUTRON-1 3U CubeSat and the arrival of the spacecraft at the International Space Station. It will soon be deployed to measure low energy neutron flux in low Earth orbit.

Also, congratulations to the OSIRIS-REx mission team for a successful, history-making Touch-And-Go sample collection on October 20. The ASU-built instrument on this spacecraft, the OSIRIS-REx Thermal Emission Spectrometer ([OTES](#)), was essential for the site selection for sample collection for the mission. We hope to share more updates soon and we're looking forward to the sample return in 2023.

Down here on Earth, we will be hosting our annual [Earth and Space Exploration Day](#) on Saturday, October 24, from 10 a.m. to 1 p.m. While the event will be held virtually this year, we have a dynamic line-up of virtual demonstrations, talks with scientists, and science activities for all ages. I encourage everyone to register for this event and to invite your friends and families to join us.

I am also looking forward to kicking off this year's [New Discoveries Lecture Series](#) with our first speaker, faculty member and geobiologist Elizabeth Trembath-Reichert on November 12. Her lecture, "Life in Rocks" will take us to the depths of the oceans to explore the limits of life on Earth.

And be sure to join us every other Wednesday for our [Virtual Night Sky](#) planetarium events.

Please enjoy all the updates and announcements featured in this newsletter and as always, you can stay connected with all our research, events, and exciting news on Facebook, Twitter, Instagram, and YouTube.

Be well and keep safe,



Earth and Space Exploration Day 2020: Saturday October 24

Join us for the 2020 Earth and Space Exploration Day on Saturday October 24 from 10 a.m. to 1 p.m. This free virtual event features science related activities, science talks, demonstrations, and exhibits for students, families, educators, and anyone interested in Earth and space. [Register to attend](#) and [check out the full schedule of events](#).



Virtual Night Sky: Wednesday October 28

Join the ASU Marston Exploration presenters on **Wednesday October 28 @ 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 this FREE Zoom webinar!

New Discoveries Lecture: Thursday November 12

Join us for the fall semester's New Discoveries Lecture Series featuring geobiologist Elizabeth Trembath-Reichert for her lecture "Life in Rocks" Thursday November 12 @ 7 p.m. AZ time. [Register in advance for this FREE Zoom webinar!](#)

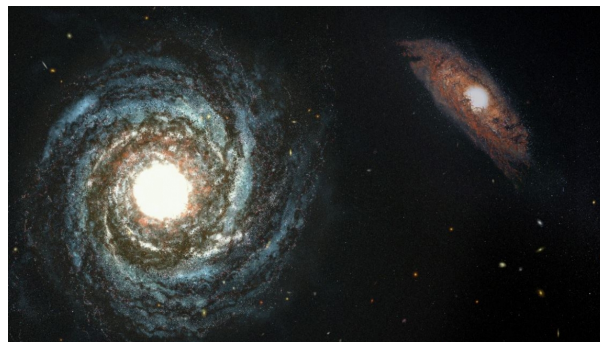


In the News



One of the world's driest deserts is the focus of a new study on our changing climate

In an effort to understand what controls the release of carbon dioxide from soils in deserts, Associate Professor Heather Throop and a team of university students from Namibia conducted field work in the Namib Desert, one of the world's driest regions that stretches more than 1,200 miles along the Atlantic coasts of Angola, Namibia and South Africa. [Read More](#)



Simulations show NASA's James Webb Space Telescope will be able to uncover hidden galaxies

A team of astronomers including Rogier Windhorst, Seth Cohen, Rolf Jansen, Jenna Robinson, Evan Scannapieco and Brent Smith and former graduate student Mira Mechtley, former Hubble Fellow Linhua Jiang and former undergraduate student Victoria Jones used the near-infrared capabilities of NASA's Hubble Space Telescope to study known quasars during the first billion years in hopes of spotting the surrounding glow of their host galaxies, without significant detections. This suggests that dust within the galaxies is obscuring the light of their stars and that NASA's James Webb Space Telescope, set to launch in 2021, will be able to peer through the dust and uncover the hidden galaxies. [Read More](#)



How rain can move mountains

Scientists have long thought that rainfall has a dramatic effect on the evolution of mountainous landscapes, but the reasons for how and why have been elusive. This seemingly logical concept has never been quantitatively demonstrated until now, thanks to a new technique (developed by a team of scientists including Kelin Whipple, Arjun Heimsath and Kip Hodges) which captures precisely how even the mightiest of mountain ranges – the Himalaya – bend to the will of raindrops.

[Read More](#)



Ultraviolet shines light on origins of the solar system

In the search to discover the origins of our solar system, James Lyons and a team of international researchers have compared the composition of the sun to the composition of the most ancient materials that formed in our solar system: refractory inclusions in unmetamorphosed meteorites. By analyzing the oxygen isotopes of these refractory inclusions, the research team determined that the differences in composition between the sun, planets, and other solar system materials were inherited from the protosolar molecular cloud that existed even before the solar system. [Read More](#)

Announcements

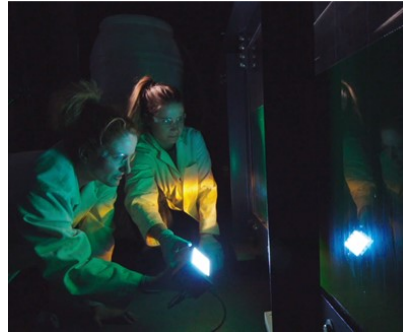


Ramon Arrowsmith honored by AGU

Congratulations to School of Earth and Space Exploration professor Ramon Arrowsmith, recipient of the [American Geophysical Union's 2020 Paul Silver Award](#) for *Outstanding Scientific Service*.

Lab of the Month

In this inaugural feature, we are visiting volcanologist Amanda Clarke's Experimental Volcanology Lab, which integrates field observations, numerical models, and laboratory experiments of volcanic processes and serves as a center of collaboration and education. [Watch this video](#) as student researchers simulate the flow of lava using wax and recreate volcanic jets and plumes to simulate ash clouds spreading in the atmosphere.



ASU geological sciences student succeeds remotely during pandemic, with help from donors

The Student Emergency Fund was created to assist ASU students financially in response to the COVID-19 crisis. Read about Paityn Schlosser, a geological sciences major who is grateful to continue her studies, and about the donors who support this fund. [Read More](#)

Alumni Announcements

Alumni: Keep it current!

Join us on [LinkedIn](#) and [update your contact info](#) 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!

#1 in the U.S. for innovation
ASU ahead of Stanford and MIT
— U.S. News & World Report, 8 years, 2016–2020

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ASU School of Earth and Space Exploration
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