



**March 2021**

Dear Friends,

Thank you for your generous response and support on Sun Devil Giving Day 2021. This was a record year and your gift will make it possible for the School of Earth and Space Exploration to support our most deserving students, and to advance our research and education mission. Your generosity will change lives and ensure a brighter future for our students and our community.

On the events side, I hope you can join us for our Spring 2021 **New Discoveries Lecture** featuring Associate Professor [Heather Throop](#) and Assistant Research Professor [Jnaneshwar Das](#) on April 22. Be sure to [register](#) for this educational and informative talk that integrates engineering and ecosystem science to explore our changing Earth.

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

**events** where you can learn about stars and planets you can see from your backyard as well as the latest in space exploration.

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 have 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

## In the News

### ASU scientists determine origin of strange interstellar object

The first interstellar object from beyond our solar system was discovered in 2017 via the Pan-STARRS astronomical observatory in Hawaii. It was named 'Oumuamua, meaning "scout" or "messenger" in Hawaiian. The object was like a comet, but with features that were just odd enough to defy classification. School astrophysicists Steve Desch and Alan Jackson set out to explain the odd features of 'Oumuamua and have determined that it is likely a piece of a Pluto-like planet from another solar system. [Read about their findings and watch the video.](#)



### Deep-sea exploration breakthrough to guide future space exploration missions

Professor Everett Shock and former ASU Postdoctoral Scholar Vincent Milesi worked with teams onboard the Ocean Exploration Trust's (OET) Exploration Vessel Nautilus to use deep-sea exploration on Earth as an analog for hydrothermal systems on other ocean worlds. In so doing, they designed and tested a new concept of operations

that could help change the paradigm of planetary exploration. [Read more](#)

## Emirates Mars Mission infrared spectrometer provides Hope orbiter's first temperature map of the red planet

The Emirates Mars Mission, the first interplanetary exploration undertaken by an Arab nation, reached Mars' orbit on Feb. 9, 2021. Now, some of the first images from the spacecraft's instruments are available, including planetwide infrared images from the Emirates Mars Infrared Spectrometer (EMIRS) led by Professor Phil Christensen. [Read more](#)



## Engineering marvel: Sixth mirror cast for Giant Magellan Telescope

The Giant Magellan Telescope has announced fabrication of the sixth of seven of the world's largest monolithic telescope mirrors. These mirrors will allow astronomers to see farther into the universe with more detail than any other optical telescope before. The GMT project is the work of a distinguished international consortium of 12 leading universities and science institutions, including ASU. [Read more](#)

## Announcements

### Chambliss Astronomy Achievement Student Awards

Congratulations to graduate students **Morgan Chidester**, **Ebraheem Farag**, and undergraduate student **Delondrae Carter** on receiving Honorable Mentions from the Chambliss Astronomy Achievement Student Award competition held at the recent virtual 237th AAS meeting.





## Trembath-Reichert honored with international emerging leader award

Congratulations to Assistant Professor **Elizabeth Trembath-Reichert** honored as a SiYuan-Ocean Emerging Leader by the International Center for Deep Life Investigation for her fundamental contributions based on single-cell analysis of microbial metabolic activity in seafloor sediment and crustal fluids using SIP-NanoSIMS and molecular ecological techniques.

## NASA Lucy in Space contest

Middle and High School Teachers and Students—this is a great opportunity to be part of the NASA Lucy Mission! Submit your creative art and write an essay about human exploration and discovery. First prize is an invitation to the mission launch in October and virtual visits to your school by world-class scientists, including Donald Johanson and NASA scientist Hal Levison. Contest deadline extended to April 16, 2021. [View contest rules and how to submit.](#)



## Mastcam-Z team welcomes 3D imaging experts

The ASU-led Mastcam-Z team on NASA's Mars 2020 Perseverance rover recently announced two new team members, stereoscopic imaging experts Brian May and Claudia Manzoni of the London Stereoscopic Company. May, who earned a Ph.D. in astrophysics from Imperial College London in 2007, is perhaps best known for his earlier career work as the lead guitarist for the rock band Queen. Their first blog in a series about stereoscopic images has recently debuted on the Mastcam-Z website. [Read the blog.](#)

## Lab of the month

In Associate Professor Dan Shim's [High Pressure Diamond-anvil Lab](#), researchers seek to understand the inner workings of planets by studying planetary materials (hydrogen, water, silicates, oxides, hydroxides, carbides, hydrides, and metal alloys) at a wide range of pressures and temperatures. One technique uses the diamond-anvil cell, where a tiny spec of a mineral is placed between two diamond anvils that are squeezed together to mimic the temperature and pressure inside the core of a planetary interior. [Watch this video](#) to discover research activities and a peek inside the lab facility.



## Events

### Virtual Night Sky

Join the ASU Marston Exploration Theater presenters on **Wednesday April 7 and 21, 2021 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 [April 7](#) and [April 21](#).



### New Discoveries Lecture Series

Join us on Earth Day **Thursday, April 22 at 7 p.m.** for the Spring 2021 New Discoveries lecture featuring the exciting scientific work of Associate Professor Heather Throop and Assistant Research Professor Jnaneshwar Das. Learn how interdisciplinary research is merging engineering and ecosystem science to explore critical questions about the future of desert ecosystems on our changing Earth. [Register in advance for this FREE webinar.](#)

## 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!



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