

**August 2021**

Dear Friends,

Welcome to the Fall Semester 2021! In this month's newsletter we welcome our returning students as well as our first year and transfer students to the ASU community! We are so looking forward to our students continuing their academic journey of education and research at the School of Earth and Space Exploration.

We also welcome two new faculty members this semester. Assistant Professor **Darryl Reano** is a geologist and geoscience educator whose work has focused on creating introductory geoscience educational materials that are place-based and culturally relevant for Indigenous students. His work has involved the use of Indigenous Research Frameworks, which bring a sociohistorical

perspective to creating more holistic approaches to teaching and learning that are also equitable and inclusive.

Assistant Professor [Jiwei Li](#) brings with him great expertise in remote sensing applications of the physics of light interaction with water to understand surface process, and to address ecological and conservation questions. His research involves the exploration of interactions between human and natural systems, especially at the land-ocean interface. We are delighted to have Professor Reano and Professor Li join our faculty and I hope you all will have a chance to meet them in the near future.

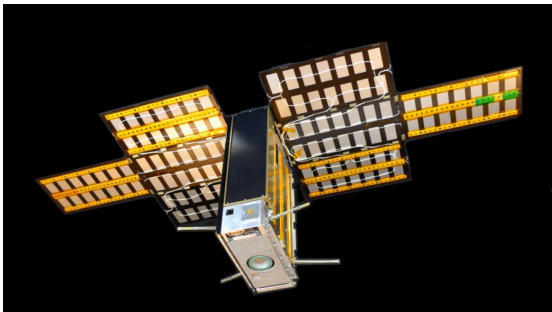
We hope you enjoy this newsletter featuring the latest school news, student successes, announcements and features. For more information on our research, events, students, faculty, and alumni, we've included links to social media at the end of this newsletter. Please follow us, share and retweet.

Be well and keep safe,



Meenakshi (Mini) Wadhwa

## In the News



### **ASU-led LunaH-Map spacecraft safely delivered to NASA's Kennedy Space Center**

Principal Investigator Craig Hardgrove and the LunaH-Map team celebrated a milestone last month by delivering the

spacecraft successfully to NASA's Kennedy Space Center. Launch is expected later this year on NASA's SLS Artemis-I rocket. [Read more](#)

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## ASU scientists use commercial satellite data to determine water flow in Southwestern rivers



NASA has funded an ASU project, led by Enrique Vivoni, to use commercial

CubeSat data to determine the presence of water in arid and semiarid rivers in California and Arizona. The study will provide data and assessments that can assist Southwestern states in their efforts to manage water resources, impose regulations on pollution and maintain water quality in rivers. [Read more](#)

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## Alaskan coast 8.2 magnitude earthquake recorded by ASU seismometer

The 8.2 magnitude earthquake that struck off Alaska's coast on July 28 was

the strongest earthquake in the area since 1964. Seismometers all over the world recorded this quake, including one located on the ASU Tempe campus. The data on the quake is displayed on the ASU website [earthquake.asu.edu](http://earthquake.asu.edu) managed by John West and Ed Garner. [Read more](#)

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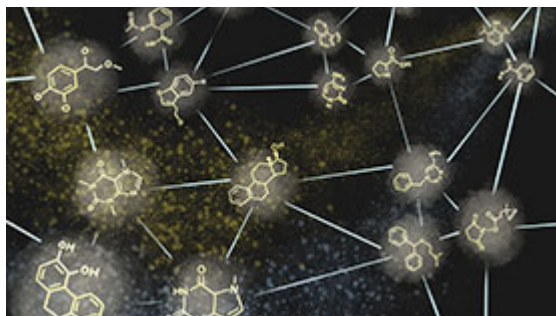
## Scientists observe gas re-accretion in dying galaxies for the first time



A new study with lead author and postdoc William Cramer, suggests that previously displaced gases can re-

accrete onto galaxies, potentially slowing down the process of galaxy death caused by ram pressure stripping and creating unique structures more resistant to its effects. [Read more](#)

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## Scientists develop new molecular tool to detect alien life

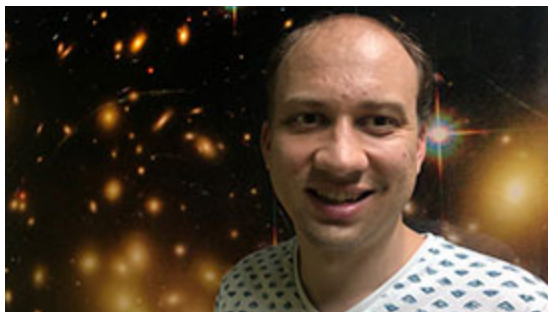
In a paper recently published in Nature Communications, with co-author Sara Walker, a team of scientists describes a universal approach to life detection including a system that could easily be flown on a space probe to find life in our solar system. [Read more](#)

## Announcements

### Awards and Accolades



Congratulations to Regents Professor Sumner Starrfield who was recently elected to the Steering Committee of the International Astrophysical Union Division G: Stars and Stellar Physics!



Congratulations postdoc Tim Carleton who was recently approved for not *one* but *two* Hubble Space Telescope Archival projects which mean more images from Hubble!



### Lucy mission update

Congratulations to the Lucy Mission and the ASU L'TES instrument team on the successful arrival of the spacecraft at NASA's Kennedy Space Center in Florida. Preparations have begun for an October 16 launch to the Trojan asteroids.



## Announcements

**NASA funds hopper to explore lunar craters** NASA has awarded a \$41.6M contract to Intuitive Machines to develop, fly, and operate a deployable lunar "hopper lander" on the Moon. Mark Robinson is the mission's science lead.

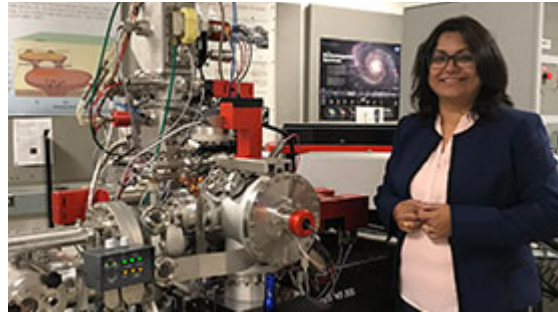
**Team awarded NSF grant to teach virtual explorers about permafrost, Arctic climate change** Ariel Anbar and Chris Mead with other scientists from NAU, UofA, and UC Boulder have been awarded almost \$2 million from the NSF.

**ASU part of international team to study links between climate, geology, human evolution** ASU researchers, including David Feary, are part of an interdisciplinary global team to receive \$1.2M Keck Foundation award for innovative research.

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## Lab of the month

In the Center for Isotope Analysis, the primary scientific instrument is the **NanoScale Secondary ion Mass Spectrometer (NanoSIMS)**. Used to determine the chemical or isotopic makeup of geological and



extraterrestrial samples, the primary advantage of the NanoSIMS over other analytical tools is its ability to deliver high spatial resolution even on areas smaller than 1 micron. **Watch this video** for a behind the scenes look inside the NanoSIMS lab.

## Events



## Virtual Night Sky

Join the ASU Marston Exploration Theater presenters on **Wednesday September 8 and 22, 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 [September 8](#) and [September 22](#).

## Save the date: Open House

The Fall 2021 Open House will take place on Friday, October 22, 6–8 p.m. This FREE public outreach and virtual event is organized by graduate students from the School of Earth and Space Exploration at ASU and is open to guests of all ages. More details coming soon!

## 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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