November 2014

SCHOOL OF EARTH & SPACE EXPLORATION

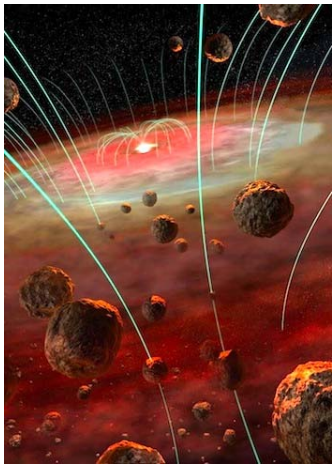
ARIZONA STATE UNIVERSITY

Don't miss the SESE Reception at the AGU!

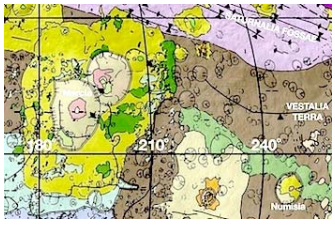
When: **Monday, December 15, 2014**
7 to 10 p.m.
Where: **Jillian's, at the Metreon**

175 Fourth Street
San Francisco, CA 94103
What: **Hors d'Oeuvres and Soft Drinks**

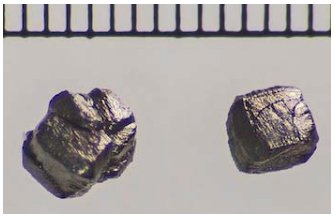
RESEARCH NEWS



The most accurate laboratory measurements yet made of magnetic fields trapped in grains within a primitive meteorite are providing important clues to how the early solar system evolved. The measurements point to shock waves traveling through the cloud of dusty gas around the newborn sun as a major factor in solar system formation. The results appear in a paper published Nov. 13 in the journal *Science*. Read more



A team of 14 scientists led by David Williams of Arizona State University's School of



Scientists have argued for half a century about the existence of a form of diamond called lonsdaleite, associated with impacts by meteorites and asteroids. A group of scientists based mostly at Arizona State University now show that what has been called lonsdaleite is in fact a structurally disordered form of ordinary diamond. Read more

For good or bad, humans have left an indelible imprint on Earth. In recognition of the impact of humans, from civilization to climate change, the Origins Project at Arizona State University will focus its 2015 activities on the "Year of the Anthropocene." Origins will also launch an exciting new series of dialogues with major

Detecting gravity waves has inspired and confounded physicists for decades. Last March a team at the BICEP2 experiment said they detected gravity waves, which theory says were produced immediately after the Big Bang. But since then concern over the measurements has set in. In the October issue of *Scientific American*, ASU Foundation Professor and cosmologist Lawrence Krauss describes the quest to detect the elusive gravitational wave and what is at stake in its detection.
Read more

Arizona State University has joined with 14 other institutions in Australia, India, New Zealand and the United States in a

Earth and Space Exploration has completed the first global geologic and tectonic map of the asteroid Vesta. The work reveals that Vesta's history has been dominated by impacts from large meteorites. Read more

public figures. “We are very excited to begin in 2015 to focus on a series of ‘themes’ that will frame the yearly programming of the Origins Project,” said Lawrence Krauss, director of the Origins Project. Read more

radio telescope project that focuses on the early universe and the birth and formation of the first galaxies. The radio telescope is the Murchison Widefield Array (MWA), located in the Shire of Murchison, Western Australia. Read more

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ALUMNI SPOTLIGHT

Bryan MacFarlane

ASU Alumnus - 2007 BSc, 2012 MSc in Geological Sciences

Bryan MacFarlane graduated from ASU with a BSc in Geological Sciences in 2007, followed by an MSc in Geological Sciences in 2012 from the School of Earth and Space Exploration.

Bryan first became interested in Earth science when he was growing up. As he describes it, “My family didn't have the ability to go on vacations across the country or abroad. Instead, we did a lot of backpacking in the state of Arizona. This early exposure to the outdoors and rocks was what first drew my interest to geology.”

His mother worked at ASU for more than 30 years in the School of Engineering, and she really motivated Bryan to get into the sciences and mathematics. When he fell in love with geology right away, she was thrilled.

Read more

EVENTS

Earth and Space Open Houses in Spring 2015

February 20, March 27, and April 24, 2015

Each Open House — always free to attend — features one or more public talks on topics relating to Earth science, planetary science, or astronomy — plus a 3D planetarium show given at two times (seating as available).

Weather permitting, telescope for sky viewing are set up outdoors from 8 to 10 p.m. In addition, there's ISTB4' s state-of-the-art Gallery of Scientific Exploration exhibits showcasing astrobiology, geology, cosmology and planetary science.

The Open Houses are sponsored by the School of Earth and Space Exploration, GeoClub, AstroDevils: ASU Astronomy Club, Icarus Rocketry, Students for the Exploration and Development of Space (SEDS), and the Center for Meteorite Studies (CMS).

For more details, see http://earthspaceopenhouse.weebly.com

3D Astronomy Shows in the Marston Exploration Theater

The Marston Exploration Theater is located on ASU's Tempe campus, in the Interdisciplinary Science and Technology Building IV. The theater employs Definiti SkySkan Planetarium technology using 4K projection systems that render Earth and Space Science themes in 3-D stereographic vision.

Shows are each Wednesday evening at 7:30 p.m. and Saturday afternoon at 1 and 3:30 p.m. Each show runs about 60 minutes.

To the Edge of the Universe and Everything in Between is a live narrated journey from Earth to the cosmic background radiation. Stops on the way include current space science news topics.

The Search: Exploring Unknown Worlds explores discoveries and current research on exoplanets (worlds beyond our Solar System). The presentation is a live 3-D exploration of known exoplanets in our neighborhood in space.

For schedules, see http://sese.asu.edu/marston

To view our events calendar, click here.

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