College of Natural Sciences & Mathematics
UNIVERSITY OF DENVER

Physics & Astronomy Colloquium

November 13, 4:00pm, Olin 105

Dr. Alessondra Springmann

Postdoctoral Researcher
Southwest Research Institute in Boulder, CO

Radar Love: The Scientific and Cultural Legacies of Arecibo Observatory's Planetary Radar System

Asteroids do concern me, Admiral: short of sending spacecraft to an asteroid, the best way to learn about asteroids is to zap them with radar. Arecibo Observatory in Puerto Rico was home to the world's largest single-dish radio telescope and the most powerful planetary radar system for asteroid studies. The 305-meter diameter facility dedicated hundreds of hours a year to improving our knowledge of near-Earth asteroids and comets with planetary radar. Radar observations reveal a wide variety of asteroids shapes, surface features, and sizes, as well as asteroid moons. Important not only for robotic solar system exploration of asteroids, radar-derived asteroid shape models help us plan for potential asteroid hazard mitigation and future human exploration of asteroids. I will show recent results from the Arecibo planetary radar system and discuss its human and scientific legacies.

Bio

Alessondra Springmann, better known as Sondy, is a PhD planetary scientist working as a postdoctoral researcher at the Southwest Research Institute in Boulder, CO. She is part of Project ESPRESSO, preparing experiments for zero-gravity flights to improve future characterization of asteroid surfaces. She has a doctorate from the Lunar & Planetary Laboratory at the University of Arizona in planetary sciences, focusing on characterizing asteroids and comets using laboratory and observational techniques.