

**Talk title:** Wild and Wonderful Cryo-Geology in the Solar System

**Date:** Sept. 16 (Thursday) from 7-8pm ET

**Weblink:** <https://www.youtube.com/watch?v=Zy97FOri0ho>

**Abstract:** We'll explore the marvelous geologic wonders of the outer solar system by deep diving into how ice behaves to make mountains, glaciers, and volcanoes! We'll also look at the efforts of ice research in thermodynamic and chemical models and laboratory experiments, and what all we still need to do to understand how ice forms these geologic structures!

**Bio:**

Caitlin Ahrens' research involves remote sensing of icy surfaces and volatile interactions, including permanently shadowed craters at the lunar poles, focusing on the composition, phases, and thermodynamics of ices. Dr. Ahrens' specific expertise focuses on modeling of thermal phases of ices, and applications to geomorphological/geophysical data on icy surfaces, including the compositions and rheology of cryovolcanism. Dr. Ahrens also works on a number of planetary volcanism projects, including lava flow morphology, caldera formation, and rheology, on Mars, Ceres, and Pluto. Dr. Ahrens is currently applying LRO Diviner data with a myriad of other remote sensing data to investigate the volatiles at the lunar surface. Dr. Ahrens received her B.S. in Physics/Astrophysics and Geology from West Virginia University in 2015, and a Ph.D. in Space and Planetary Science at the University of Arkansas in 2020. Dr. Ahrens is currently a NASA Postdoctoral Program Fellow at the Goddard Space Flight Center.

