



PHYSICS COLLOQUIUM

Speaker: Dr. Brett Denevi, John Hopkins University Applied Physics Laboratory,

Exploring the Geology of the Moon with Artemis IV and V

Friday, September 18, 2026 1:30 pm, PSB 160/161

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Meeting ID: 972 7170 4305 Passcode: 430

Abstract: Artemis IV and V will be the first landed missions of the Artemis program, and will provide opportunities for astronauts to conduct geologic field work near the Moon's south pole. The crew will explore the ancient highlands and search for rare rock fragments that originated deep within the Moon to test models of how the Moon and other planets formed and evolved, sample impact-melted rocks to reveal how collisions shaped the history of the Earth-Moon system, and collect vacuum sealed samples to determine the composition of volatiles that may be present near the Moon's south pole. This presentation will describe the current status of science planning for the mission, including the objectives that will guide the Artemis crews, the investigations the crew will perform to meet those objectives, how real-time science operations will be supported during the mission, and our path toward maximizing the science of the first landed Artemis missions.

BIO: Dr. Brett Denevi is a planetary geologist at the Johns Hopkins University Applied Physics Laboratory. She is the Principal Investigator for the first Artemis Geology Team, and is a member of the science teams for cameras on two lunar orbiters (the Lunar Reconnaissance Orbiter Camera on LRO and ShadowCam on the Korean Pathfinder Lunar Orbiter), as well as two upcoming robotic landers (Lunar Vertex and Lunar-VISE). Previously, Denevi was the Deputy Instrument Scientist for the Mercury Dual Imaging System on the MESSENGER mission and a Participating Scientist on the Dawn mission to asteroid Vesta. Denevi served as the Vice Chair for the Panel on Mercury and the Moon and as a member of the Steering Group for the most recent Planetary Science and Astrobiology Decadal Survey, and as the Science Chair for the Lunar Exploration and Analysis Group. She is the recipient of a NASA Early Career Fellowship, the NASA/SSERVI Coradini Mid-Career Award, eight NASA Group Achievement Awards, and asteroid 9026 Denevi was named in her honor.