

The Keck Institute for Space Studies
presents the following webinar:

Lunar Trailblazer

*A Caltech-led
Pioneering Small Satellite for
Lunar Water and Lunar Geology*

Professor Bethany Ehlmann
Caltech / Jet Propulsion Laboratory

Monday, August 10, 2020
5:00 P.M.

Lunar Trailblazer, selected in June 2019 as one of NASA's first planetary science small satellite missions, is designed to produce the best maps of water on the Moon. Led by Caltech and managed by JPL, a Lockheed Martin smallsat will carry the JPL High-resolution Volatiles and Minerals Moon Mapper (HVM3) shortwave infrared imaging spectrometer and the UK-contributed, University of Oxford/STFC RAL Space-built thermal infrared multispectral imager to 100-km lunar polar orbit. These instruments will collect data to simultaneously measure composition, temperature, and thermophysical properties of the Moon's surface.

Lunar Trailblazer will detect and map water on the lunar surface at key targets to:

- determine its form (OH, H₂O or ice), abundance, and local distribution as a function of latitude, soil maturity, and lithology;
- assess possible time-variation in lunar water on sunlit surfaces; and
- use terrain-scattered light to determine the form and abundance of exposed water in permanently shadowed regions.

Trailblazer will provide maps of future candidate landing sites for robotic and human exploration. In addition to advancing space science, Lunar Trailblazer also pioneers a collaboration between Caltech and Pasadena City College to train students to perform mission team roles in design, build, and operations.

(trailblazer.caltech.edu, @LunarTrailblazr)

Registration is required at kiss.caltech.edu

