

SMCAS General Meeting and Special Presentation on Oct 2, 2015

Polar Trek to Mars

Dr. Pascal Lee, Planetary Scientist, SETI Institute

Friday, Oct 2, 2015 , [College of San Mateo, Building 36](#)
SMCAS General meeting at 7:00 p.m. ISC Room, room 110
Presentation at 8:00 p.m. [Planetarium](#)
Free and open to the public, free parking.



Pressurized rovers are airtight all-terrain motorhomes in which future planetary explorers will live, work, sleep, and drive during multiple-day excursions far away from their home base. Although pressurized rovers are commonly featured in science-fiction lore and technical studies on paper, there is still very little practical experience with the use of such vehicles in terrestrial field exploration.

Since 2003, the NASA Haughton-Mars Project (HMP) has been leading a series of field simulations of planetary pressurized rover traverses on Devon Island, High Arctic, a bleak and barren polar analog often described as Mars On Earth. Rover traverses at HMP are also set in a true exploration environment in which dangers, while not as unforgiving as on Mars, are nevertheless real and relevant. This talk summarizes the HMP's experience with simulated pressurized rover treks to date, and lessons learned for planning future road trips on the Moon or Mars. Here, the expedition crew encountered conditions and challenges analogous in basic ways to those awaiting future pressurized rover crews on Mars: hostile environment, dust storm-like blizzards, uncertain route, treacherous terrain, equipment failure, tight crew quarters, limited resources, remoteness, and isolation. .



Dr Pascal Lee is a Planetary Scientist at the SETI Institute. He is also Chairman of the Mars Institute, and Director of the NASA Haughton-Mars Project at NASA Ames Research Center in Mountain View, California. Pascal Lee is internationally recognized for his efforts to advance the human exploration of Mars, in particular via its moons Phobos and Deimos. He has led, or participated in, the development of several new mission concepts to explore Mars and its moons, of new spacesuit technologies for Moon and Mars exploration, and of pressurized vehicles for future human planetary exploration. He is author or co-author off over 100 scientific papers, and his first book, [Mission: Mars](#), won the 2015 Prize for Excellence in Children's Science Books from the American Association for the Advancement of Science (copies for signing will be available).