Paper ID: 59648
oral
student

33rd IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)
The future of space exploration and innovation (2)

Author: Dr. Jaden Hastings
University of Melbourne, Australia

Mrs. Erin Bonilla
United States
Dr. Sian Proctor
United States
Ms. Maraia Hoffman
United States
Ms. Adriana Blachowicz
University of Southern California, United States
Ms. Makiah Eustice
The Mars Society, United States

THE SENSORIA 6 - BRACE FOR IMPACT!

Abstract

With the return the inaugural crew of the SENSORIA Program from its Mars simulation at the HI-SEAS habitat on Mauna Loa in Hawai'i emerged a new endeavor that opens up the space sector to a more diverse cohort of potential stakeholders. SENSORIA M1 was the first all-female mission at HI-SEAS and the first Mars simulation to be backed by private venture capital with future missions already in development. In this presentation, the crew of SENSORIA M1 present highlights of the research completed on this mission—from a novel crew cohesion training program, to following the evolution of microflora between the habitat and crew, to field testing equipment, developing gestural languages for use on extravehicular activity, and even considering how to ritualise death when repatriation is not an option.

Throughout its work in the most extreme environments on Earth, SENSORIA Program aims to address existing gaps in our ability to open up space and expeditionary research to all. This includes placing women in leadership and operating female-majority crews preferentially and offering opportunities for professional development and advanced field research to emerging scientists from historically disadvantaged communities.

The experience of the crew of this inaugural mission offers insight into the value of developing a new model for crew selection, how to foster crew cohesion in commercial missions, and how to offer a broader group of stakeholders access to field research in extreme and analog space environments. Through our presentation, the crew presents a refreshing and inspiring call to the next generation of space explorers.