

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
New Worlds - Non-Traditional Space Education and Outreach (7)

Author: Ms. Yvette Marie Gonzalez
Moon Village Association (MVA), United States, yvette.ggs@gmail.com

Dr. Jason Reimuller
Integrated Spaceflight Services, United States, jason.reimuller@integratedspaceflight.com

Dr. Shawna Pandya
University of Alberta, Canada, pandya@ualberta.ca

Dr. Aaron H. Persad
Massachusetts Institute of Technology (MIT), United States, aaron.persad@utoronto.ca

Dr. Yajaira Sierra-Sastre
United States, yarisiera@gmail.com

THE POSSUM 13: HONORING THE MERCURY 13, FEMALE POSSUM SCIENTIST-ASTRONAUT
CANDIDATE AMBASSADORS CREATE STEM OPPORTUNITY AND REPRESENTATION FOR
YOUNG STUDENTS

Abstract

The Polar Suborbital Science in the Upper Mesosphere (PoSSUM) program is a 501(C)(3) Astronautics Research and Education Program studying our upper atmosphere and its role in our changing global climate. Representing citizen-scientists from 41 different countries, PoSSUM conducts citizen-science research in aeronomy and bioastronautics - fields to be enabled by the introduction of commercial space vehicles - in partnership with the National Research Council of Canada, the Canadian Space Agency, the Canadian Air Force, Embry-Riddle, and various research and education institutions. In March 2019, PoSSUM launched a new initiative entitled PoSSUM 13 to honor of the legacy of the Mercury 13. The PoSSUM 13 is a talented group of thirteen female Scientist-Astronaut Candidates who serve as global ambassadors in increasing opportunity and representation for students - especially young women - who have a passion for space science and exploration. Through a combination of educational outreach initiatives and mentorship, the PoSSUM 13 serve as ambassadors to citizen science. This year ushers in the first PoSSUM 13 student, micro-gravity science competition where students compete for a payload experiment aboard the annual PoSSUM microgravity campaign hosted by the National Research Council in Ottawa, Canada. The final selected experiment enables a female-led student team to connect with ambassadors as mentors while testing the performance of their science on a multi-parabola flight. This presentation will share how citizen scientists reach marginalized and underrepresented communities of students through education, and lessons learned on making unique opportunities to contribute to space exploration possible.