



# AIAA HERA Technical Symposium Lunch Panel

Seating starts 11:30 AM Intros 11:45 AM Panel starts 12:00 NOON



An external view of the Human Exploration Research Analog (HERA) habitat showing the various modules. (Credit NASA-JSC website HERA)

The Human Exploration Research Analog (HERA), formerly known as the Deep Space Habitat, was transferred from the JSC Engineering Directorate to HRP in FY2013. This unique modular three-story habitat was designed and created through a series of university competitions and was previously used in the Desert Research and Technology Studies in the Arizona desert. The HERA will provide a high-fidelity research venue for scientists to use in addressing risks and gaps associated with human performance during spaceflight. Historically, the habitat was used for exploration engineering systems demonstrations. In its new role, the HERA will serve as an analog for simulation of isolation, confinement, and remote conditions of mission exploration scenarios. Studies suitable for this analog may include behavioral health and performance assessments, communication and autonomy studies, human factors evaluations, and exploration medical capabilities assessments and operations.

[(Credit NASA-JSC website HERA) (<http://www.nasa.gov/exploration/humanresearch/analogs/hera.html#.VVzO8PIVikq>)]



Beatriz "BeBe" Kelly-Serrato is the Technical Space Operations Chair for the AIAA. She received her BS in Geological Sciences from Lamar University and worked for the aerospace program for over 15 years as a contractor for several aerospace companies supporting NASA-JSC. After leaving JSC five years ago she continued to support the AIAA and other non-profits including Mars Astronautics Space Technologies MAST, she is the Managing Director and a co-founder of the spacefaring organization. She trained and received her certification in Life and Executive Coaching. She participates and offers professional speaking, branding, product development, career counseling, and executive coaching in leadership for action team learning to empower clients to be their best in their professions. At the heart of everything she does are her core values, which are responsibility, respect, integrity, compassion, and civility. Her present purpose is to facilitate the panel in presenting their project, views, impressions, and ideas. Today is about these five remarkable clients, we are excited to hear their accounts of the HERA project and crew experiences. BeBe is honored to serve as their facilitator and coach.



Jason Schneiderman is currently the Portfolio Scientist for the Behavioral medicine research portfolio within within the NASA Behavioral Health and Performance Research Element at the Johnson Space Center. He received his BS in Psychology from Stony Brook University and his PhD in Cognitive and Behavioral Neuroscience from Mount Sinai School of Medicine. His research has focused on brain imaging in people at risk and those with a range of psychiatric and neurological disorders including schizophrenia, PTSD, and traumatic head injury. At NASA his current work focuses on maintaining and promoting cognitive and behavioral health; as well as the prevention, detection, and treatment of psychiatric disorders in the context of high-stress, isolated, confined and extreme environments. Jason is paring as Co-Moderator for the panel today providing a big picture view of the HERA Project.



William "Brandon" Vessey is currently the Portfolio Scientist for the Team Risk research portfolio within the NASA Behavioral Health and Performance Research Element at the Johnson Space Center. He received his BA and MS in Psychology and PhD in Industrial and Organizational Psychology with a minor in Quantitative Psychology from the University of Oklahoma. His primary research interests fall into the broad categories of teams, leadership, and creativity with specific focus on teamwork over long durations, team leadership, and collective leadership. His current work at NASA focuses on investigation of how teams function in both the current and future spaceflight contexts, specifically how teams can remain cohesive over very long durations in isolated and confined environments.



Ethan Good is a flight controller in training with JSC's Visiting Vehicle Officer group, supporting ISS cargo flight operations and commercial crew vehicle development. He is a graduate (BS and MS) of Aerospace Engineering from the University of Kansas. He completed four deployments in Antarctica, including three years (summer and winter) at Amundsen-Scott South Pole station supporting scientific research and leading the station's fire brigade. Recently, he served as commander for the second two-week HERA mission at JSC. He is also a member of AIAA.



Ricky Jedrey is an aerospace engineer in the Aeroscience and Flight Mechanics Division at Johnson Space Center. He was a mission specialist on HERA Campaign Two, Mission One. This was the first mission lasting fourteen days. Ricky received his B.S. and M.S. in Aerospace Engineering at The Ohio State University, specializing in orbital mechanics. Ricky began his career at NASA as a co-op student, and worked with the Avionic Systems Division, and the former Flight Dynamics Division. Currently, within the Aeroscience and Flight Mechanics Division, Ricky works on trajectory and mission designs for the upcoming Exploration Missions One and Two, as well as advanced mission concepts to destinations such as the Moon and Mars.



Captain Linda Roehrborn is a member of the Texas Air National Guard and is currently in the 22nd year of her military career. She has deployed in support of Operations *Desert Storm*, *Enduring Freedom* and *New Dawn*. Linda earned an A.S. in Electronics System Technology from the Community College of the Air Force, a B.S. in Biology from Arizona State University and a M.S. in Oceanography from Texas A&M. Linda is co-founder and STEM Director of Mars Astronautics Science Technologies, a non profit spacefaring organization in Houston, TX. Also a member of the AIAA Houston Chapter. In her spare time, she works for the Galveston Bay Foundation as a environmental education instructor to help restore the wetlands in and around Galveston Bay, with junior and senior high students. She enjoys spending time with her family and dog, Sophie. She dreams of one day working full time at NASA, either in Mission Control or in the Astronaut Corp.