

Overview of The Inaugural Space Health Impacts for the NASA Experience (SHINE) Training Program – Virtual Space Radiation Curriculum

Sigrid Reinsch¹, Janice A. Zawaski², S. Robin Elgart³,

¹ Space Biosciences Division, National Aeronautical and Space Administration (NASA) Ames Research Center, CA 94035 USA

² National Aeronautical and Space Administration (NASA) Johnson Space Center, TX 77058 USA

³ University of Houston, TX 77204 USA

The Space Radiation Element of the NASA Human Research Program initiated a virtual, annual space radiation curriculum. The **Space Health Impacts for the NASA Experience (SHINE)** space radiation didactic curriculum aims to educate participants not only in the scientific aspects of space radiation but also in the agency's risk management strategies. SHINE combines weekly seminars by speakers from NASA, other government agencies, academia, and industry, with networking sessions designed to foster collaboration between participants and interactions with NASA scientists and HRP funded investigators. The inaugural course ran weekly from February 2023 to August 2023 and was comprised of lectures, less formal coffee hours and office hours. The SHINE topics ranged from space environments to health effects and countermeasure to granting opportunities. Participants developed beam time proposals for real, proposed, or potential experiments at the NASA Space Radiation Laboratory (NSRL) at the Brookhaven National Laboratory. For the 2023 course, a total of 59 applications were received from which 25 participants were selected. Selected participants were citizens from 8 countries and comprised 5 graduate students, 4 postdocs, 11 scientists and 5 professors/medical doctors. Participants had a wide range of expertise including molecular and cellular biology, microbiology, botany, physiology, engineering, physics, aerospace medicine, planetary science, biostatistics, and modeling. The second annual SHINE training program is scheduled from February to August 2024. In addition, a separate SHINE space radiation practicum session, to allow participants to gain hands-on radiation experience, will be held Fall 2024 at the NSRL.