Contribution ID: 32

Type: not specified

Next Generation Ionizing Radiation Characterization From Aviation Altitude To Deep Space

Monday 23 April 2018 11:30 (30 minutes)

Human access to space is expanding in a new realm of deep space exploration, space tourism and the society' s increasing reliance on rapid and reliable aviation. Particle radiation poses significant hazards for astronauts, satellites, aviators and passengers and affects planetary bodies. Increasing galactic cosmic ray fluxes near successive solar minima highlight the increasing radiation hazard.

NASA held a Space Radiation Workshop in early November, 2017, with the stated purpose of exploring ways to enable data-rich characterization, forecasting and monitoring of space radiation environments relevant to NASA science, aviation, and deep space exploration. The discussions about galactic cosmic rays, solar particle events, and solar event prediction are all highly relevant to the sustained deep space operations and flights, as well as useful closer to home on aviation and

space tourism very much in support of the new space policy directive.

The workshop set out to combine participation from traditional NASA technology, science and engineering communities with participants from non-NASA organizations with relevant technologies not previously applied to space mission applications in the hope of spurring some cross-discipline pollination.

The main goal was to create a multi-disciplinary (within NASA the goal was multi-directorate, multi-center), approach with academia and industry to start a dialogue within the domain of radiation characterization. So, there was consideration for radiation in multiple contexts (aviation, deep space, LEO, etc.) and from multiple angles of specialization such as computational, sensor development, and avionics.

In this talk, I will summarize the findings of the NASA Ames Research Center Radiation Workshop.

Author: Dr GUHATHAKURTA, Madhulika (NASA Ames Research Center)
Presenter: Dr GUHATHAKURTA, Madhulika (NASA Ames Research Center)
Session Classification: Monday Morning