



Physics Colloquium

Thursday, 14 November 2019 | 17:00 – 18:00, Seminar Room, 3rd floor

Exploration missions and Radiation

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ABSTRACT

The radiation environment encountered in space differs in nature from that on Earth, consisting mostly of highly energetic ions from protons up to iron, resulting in radiation levels far exceeding the ones present on Earth for occupational radiation workers. Since the beginning of the space era the radiation exposure during space missions has been monitored with various passive and active radiation instruments. Even though passive detectors are well understood and capable of providing accurate cumulative dose measurements, they do not provide the time-resolved data needed for long-term Exploration Missions (i.e., Lunar, Mars). Thus, NASA investigated several real-time instruments for personal and area radiation monitoring, culminating with the transition from the passive to the active Radiation Environment Monitors.