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Cosmic radiation and space exploration

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We live in an interesting time of space exploration; NASA is planning to return to the moon in 2024 and a permanently crewed lunar outpost also in the pipeline. This is part of a renewed drive to land the first humans on Mars in the 2030's. Private companies, such as SpaceX, also have such plans in place. A major obstacle to long-term crewed missions outside the protective shielding provided by the Earth's magnetic field and atmosphere is, however, the potentially high level of exposure to galactic and solar cosmic rays. Here, we discuss the origin and levels of radiation at and above aviation altitudes, as well as the potential dangers that astronauts experience as a result of varying ionizing radiation levels in interplanetary space. We will discuss our current efforts in forecasting any enhanced levels of radiation produced during solar transient events, including forecasting of the related dosimetric quantities.

Apply to be
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No

Level for award
 (Hons, MSc,
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N/A

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