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Poster
To prepare for the human exploration of Mars, we need to understand how the solar and galactic radiation interacts with the planet. Exposure to space radiation remains one of the major concerns for human space exploration.

As Mars' atmosphere is relatively thin (compared to Earth's), high-energy particles such as galactic cosmic radiation (GCRs) or solar energetic particles (SEPs), emitted from the Sun, can propagate all the way to the Martian surface, thereby creating a radiation field that can be harmful to human explorers. Therefore, to assess potential health hazards to future astronauts exploring Mars, analyzing in-situ measurements of the Martian surface radiation environment are necessary.

Here, we present long-term measurements conducted by the Mars Science Laboratory / Radiation Assessment Detector (MSL/RAD) aboard NASA's Curiosity rover in Gale crater on Mars. We present radiation dose rate measurements spanning more than one solar cycle, and additionally focus on evaluation of the radiation shielding effect provided by natural terrain, such as cliff sides and hills, on the Martian surface.
Poster session day
Thursday, April 30, 2026
Poster location
43
Meeting homepage
2026 Space Weather Workshop
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