

The ionizing radiation environment on the Moon

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The ionizing radiation environment on the moon that contributes to the radiation hazard for astronauts consists of galactic cosmic rays, solar energetic particles and albedo particles from the lunar surface. We will present calculations of the absorbed dose and the dose equivalent to various organs in this environment during quiet times and during large solar particle events. We will evaluate the contribution of solar particles other than protons and the contributions of the various forms of albedo. We will use the results to determine which particle fluxes must be known in order to estimate the radiation hazard.