

Álvaro de Vicente-Retortillo Rubalcaba (UCM)

Characterization of solar radiation on Mars with the Monte-Carlo method

The solar radiation that reaches the Martian surface has a strong impact on the atmospheric dynamics and climate of Mars and it has important implications for the habitability of the planet. A description of a radiative transfer model that has been developed relying on the Monte-Carlo method is provided, and some important results for the characterization of the radiative environment are shown. The results provided by the model can greatly enhance the scientific return of present and future missions to Mars, such as Mars Science Laboratory and MetNet.