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STUDY OF RADIATION IN MARS

Abstract

The environment conditions on Mars are very important for the design of photovoltaic systems for establishing outposts on the Martian surface. The mission is to carry out the power program and is aimed at providing ultra-light weight photovoltaic array technology for such applications as well for Lunar/Marssurface. Detailed study and information on the climate conditions on Mars at specific photovoltaic systems very important. This paper addresses the variation of solar insolation. The scientific radiation data is based on measured optical depth on the atmosphere of Mars which derived from Sun and calculate the computation based on multiple wavelengths and multiple scattering of the solar radiation. Thisdata base could be provided to scientists and astronauts for the operations. This data can be used to make estimates of photovoltaic system power area and mass for a surface power time using regenerative fuel cells for nighttime operations and storage. We also study the global and local dust systems and their characteristics Keywords: Solar Radiation, Photovoltaic Systems, Computation, Database, Operations and Storage.