

SIMULATION OF THE SOLAR PROTON DOSE OBSERVED DURING THE STS-28 FLIGHT

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We present comparisons of the radiation dose measured on the space shuttle during the 12-13 August 1989 solar proton event with the dose computed from solar particles predicted to be allowed through the magnetosphere to the space shuttle position. We have developed a dynamic cutoff rigidity model indexed by integer values of the Kp magnetic index to specify the vertical cutoff rigidities derived from employing the Tsyganenko magnetospheric model. We find a one-to-one correspondence between the portion of the orbit predicted to be subjected to solar protons and the portion of the orbit where solar particle dose measurements were obtained.