

# **The solar proton energy ranges that contribute to crew absorbed dose**

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To correctly estimate the absorbed dose received by crew members from solar particle events on space missions, the solar particle spectra must be known over the energy range that contributes most of the dose. In this paper we will examine the energy range over which the proton spectrum must be known to estimate 90% of the absorbed dose to crew members in various vehicles. We will determine this energy range for crews in the Space Shuttle, the Space Station and crew members in space suits for several of the largest solar particle events. This will establish a basis for deciding the energy range over which solar proton spectra must be measured to correctly estimate absorbed dose.