

Modelling the Effects of Solar Flares on Integral

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INTEGRAL (International Gamma-Ray Astrophysics Laboratory), due to be launched in October 2001, is dedicated to fine imaging and high resolution spectroscopy at gamma-ray energies. Solar flares emit large numbers of energetic charged particles which affect the instruments on board Integral. The INTEGRAL Mass Model (TIMM) has been used to study the effects both during solar flare activity and afterwards. An emphasis has been placed upon the radioactivity induced within the spacecraft and the instruments. The evolution of background spectra and counting rates for each of the instruments (SPI, IBIS and JEMX) are presented. These are analysed to build up an understanding of how quickly the background noise returns to its original level. A sensitivity analysis will determine how quickly the instruments recover.