

Abstract Submitted
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Swift Burst Alert Telescope (BAT) Spectral Response ANN PARSONS, NASA/Goddard Space Flight Center, SWIFT/BAT INSTRUMENT TEAM — The Burst Alert Telescope (BAT) is one of three telescopes aboard the Swift Gamma-Ray Burst Explorer that was launched on November 20, 2004. Swift's primary purpose is to identify and localize astronomical gamma-ray bursts and study their X-ray, UV and optical afterglow emission within seconds of the burst trigger. BAT provides the initial burst positions, as well as gamma-ray light curves and spectra within a 15-150 keV band. BAT is a coded aperture imaging telescope with a wide (2 sr) field of view consisting of a large coded mask located 1 m above a 5200 cm² array of 32,768 CZT detectors. A spectral response function has been developed which transforms an incident source photon spectrum into a mask-weighted counts spectrum as measured by BAT. We will present our BAT spectral model which is based on the physical properties of the CZT detectors. We will report on the results of on-orbit calibration measurements of the BAT spectral response and will compare these results to those derived from ground calibration measurements.

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