

should not be used for science analysis. It should be noted that the entire 'Launch' phase of PEPSSI data is classified as a BTI. While not actually a BTI, the period between 2007 day 144 and day 178 should be treated with caution as well. The PEPSSI Rate Box tables were changed on day 144 and calibration and analysis of this period is still preliminary.

See the SOC Instrument ICD, originally archived with this volume, and McNutt et al. (2008) [MCNUTTETAL2008A] for details.

Measured Parameters

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Particle energy information, measured by the SSD, is combined with TOF information to identify the particle's composition. Each particle's direction is determined by the particular 25 degrees sector in which it is detected. Event classification electronics determine incident mass and energy, with 12 channels of energy resolution.

A typical measurement includes 8-point spectra for protons and electrons and reduced resolution energy spectra for heavier ions for all six look directions.

In calibration, the rate, in counts/s, of each energy and/or TOF bin is converted to flux i.e. differential intensity ($1/\text{cm}^2\text{-sr-s-keV}$).

Calibration

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The calibration quantities in the current version are now physically meaningful for the B channels. They might still change in the course of calibration efforts of the team.

The R channels nominally measure electrons and the calibration quantities assume this. This is applicable in the Jupiter environment. At all other times, the R channel count rates were found to be dominated by penetrating particles consistent with cosmic rays. Therefore electron fluxes cannot be provided for this period.

The L channels do not distinguish ion species. Attempts to deconvolve their response are ongoing. We currently do not provide detection efficiencies for the L channels and only correct for their time dependent efficiency. The PEPSSI sectors of the L channels that nominally distinguish different look directions show electronic cross talk that makes it difficult to determine the true intensity distribution as a function of direction *between*. Comparisons *and should remain* different sectors are therefore not meaningful, independent if count rates or the provided formal fluxes are used.

Brief summaries of the flux and PHA calibrations are given here. See McNutt et al. (2008) [MCNUTTETAL2008A] and the SOC Instrument Interface Control Document (distributed with this archive) for details.

Flux Calibration
