P/SS Department Colloquium

RESULTS FROM A LARGER TERRESTRIAL GAMMA-RAY FLASH SAMPLE

The Terrestrial Gamma-ray Flash (TGF) detection rate of the Fermi Gamma-ray Burst Monitor (GBM) has been improved several times, from approximately 11 per year at launch to the current rate of approximately 800 per year. One large increase occurred in July 2010 when GBM began producing individual photon data from selected geographic regions, enabling a search for TGFs at high temporal resolution. The sample is larger due to both fainter and shorter TGFs. Starting in late November 2012 the data mode was extended to provide individual photon data for the entire orbit, enabling detection of TGFs in a less biased manner. Using this a subset of this extended-intensity sample we calculate the TGF fluence distribution in a model independent manner, correcting for detection efficiency, deadtime and pulse pileup. I will show one example of a TGF found in an unusual location, perhaps from an atypical storm.

Friday, November 22, 2013
OPS 140
4:00pm-5:00pm

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