

All-Sky Monitoring of Variable Sources with Fermi GBM

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Using the Gamma ray Burst Monitor (GBM) on Fermi, we monitor the transient hard X-ray/soft gamma ray sky. The twelve GBM NaI detectors span 8 keV to 1 MeV, while the two BGO detectors span 150 keV to 40 MeV. We use the Earth occultation technique to monitor a number of sources, including X-ray binaries, AGN, and solar flaring activity. Our monitoring reveals predictable and unpredictable phenomena such as transient outbursts and state changes. With GBM we also track the pulsed flux and spin frequency of accretion powered pulsars using epoch-folding techniques. Searches for quasi-periodic oscillations and X-ray bursts are also possible with GBM all-sky monitoring. Highlights from the Earth Occultation and Pulsar projects will be presented including our recent surprising discovery of variations in the total flux from the Crab. Inclusion of an all-sky monitor is crucial for a successful future X-ray timing mission.