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Fermi Observations of Gamma-Ray Bursts

CHARLES MEEGAN, USRA

The Fermi Observatory is advancing knowledge of gamma-ray bursts by making pioneering observations at high energies. The Large Area Telescope (LAT) has unprecedented sensitivity for observations above about 20 MeV. The Gamma-Ray Burst Monitor (GBM) extends the energy range for GRBs from the LAT threshold down to about 8 keV. Both instruments have on-board software to detect and localize GRBs. The Observatory has the capability to autonomously reorient to maintain pointing at a GRB to search for extended high-energy emission. GBM has a trigger flux threshold of ∼0.7 photons/cm2/s and has detected over 100 GRBs in the first five months of operation. Several of these bursts have also been detected by the LAT. The high-energy observations provide new information on spectral variability and constraints on the Lorentz factor of the GRB fireball.