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# Terrestrial Gamma-ray Flashes (TGFs) Observed with the Fermi-Gamma-ray Burst Monitor: The First Hundred TGFs

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The Gamma-ray Burst Monitor (GBM) on the Fermi Gamma-ray Space Telescope Observatory (Fermi) is now detecting ~2.1 TGFs per week. At this rate, nearly a hundred TGFs will have been detected by the time of this Meeting. This rate has increased by a factor of ~8 since new flight software was uploaded to the spacecraft in November 2009 in order to increase the sensitivity of GBM to TGFs. The high time resolution (2μs) allows temporal features to be resolved so that some insight may be gained on the origin and transport of the gamma-ray photons through the atmosphere. The absolute time of the TGFs, known to several microseconds, also allows accurate correlations of TGFs with lightning networks and other lightning-related phenomena. The thick bismuth germanate (BGO) scintillation detectors of the GBM system have observed photon energies from TGFs at energies above 40 MeV. New results on the some temporal aspects of TGFs will be presented.

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