Abstract Submitted for the SES10 Meeting of The American Physical Society

Ground-Based Observations of Terrestrial Gamma-Ray Flashes¹ R.A. RINGUETTE, N. CANNADY, G.L. CASE, M.L. CHERRY, D. GRANGER, J. ISBERT, M. STEWART, Dept. of Physics & Astronomy, Louisiana State University, Baton Rouge, LA 70803 — First seen from space by the BATSE gamma ray telescope in the 1990s, Terrestrial Gamma ray Flashes (TGFs) consist of extremely fast bursts of high energy (up to 40 MeV) gamma rays correlated with intense lightning from thunderstorms. Spacecraft experiments are sensitive to very large events, but ground-based detectors closer to the thunderstorms may provide data on the intensity spectrum of smaller events. Four detectors consisting of NaI scintillators viewed by photomultipliers have been placed on rooftops at LSU's Baton Rouge campus to monitor TGFs. The setup and design of the ground-based experiment will be discussed.

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