

Abstract Submitted
for the OSF07 Meeting of
The American Physical Society

GLAST Gamma-Ray Identification using a Neural Network LINDSEY PERRY, Ohio State University, GLAST COLLABORATION — Gamma Ray Bursts (GRBs), are the brightest events in our universe and last anywhere between milliseconds to a few minutes. GRBs are thought to occur when a giant star collapses into a black hole, or when two neutron stars collide. The Gamma-Ray Large Area Space Telescope (GLAST) is a satellite mission which will detect gamma ray photons which come from GRBs as well as other astrophysical phenomena. Although GLAST is designed to detect gamma rays, approximately 90 percent of the events which are downlinked are background events such as protons, electrons, and positrons. A major limitation of GLAST is the limited allotted downlink bandwidth, and so understanding these backgrounds may allow us to improve both the background rejection and gamma-ray purity of the resulting data. This analysis describes a technique for identifying backgrounds in the GLAST data sample, based on Artificial Neural Networks. Understanding the particle composition will help in the identification of true Gamma-rays, therefore impacting all science done with GLAST. GLAST is managed by NASA in partnership with the Department of Energy, and is scheduled to launch in early 2008.

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Date submitted: 01 Oct 2007

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