Understanding Charged Particle Backgrounds for GLAST LIND-
SEY 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 col-
lapses 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 phenommena. Al-
though 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 alloted downlink bandwidth,
and so understanding these backgrounds may allow us to improve both the back-
ground rejection and gamma-ray purity of the resulting data. This analysis describes
a technique for identifying backgrounds in the GLAST data sample, based on Ar-
tificial 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.

Lindsey Perry
Ohio State University

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