

Abstract Submitted  
for the APR06 Meeting of  
The American Physical Society

**Onboard filtering and science processing in GLAST** FREDERICK KUEHN, The Ohio State University, GLAST LAT COLLABORATION — Launching in 2007, the Gamma-ray Large Area Space Telescope (GLAST), will measure the spectrum of gamma-rays from 20 MeV to  $> 300$  GeV using the Large Area Telescope (LAT). As photons enter the LAT, they produce electron-positron pairs that traverse a tracker consisting of planes of silicon strip detectors and a segmented CsI calorimeter. Charged Cosmic Rays (CR's) are vetoed by an Anti-Coincidence Detector. CR backgrounds are far larger than the gamma-ray flux. Onboard, the LAT uses hardware triggers that are efficient for determining gamma-ray candidate events, along with subsequent software filters that reduce the data volume by an additional factor of  $\sim 10$  to meet the downlink requirements. Incorporated in the onboard software are algorithms for identifying transients such as Gamma Ray Bursts and flaring states of Active Galactic Nuclei. I will describe the hardware and software trigger algorithms and their impact on event selection and onboard science.

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Date submitted: 13 Jan 2006

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