

APR09-2009-001161

Abstract for an Invited Paper
for the APR09 Meeting of
the American Physical Society

The Fermi Gamma-ray Space Telescope: The First Eight Months

PETER MICHELSON, Stanford University

The *Fermi* Gamma-ray Space Telescope was launched by NASA on June 11, 2008. The Large Area Telescope (LAT) instrument measures cosmic gamma-ray radiation in the energy range 20 MeV to >300 GeV, with supporting measurements by the Gamma-ray Burst Monitor (GBM) for gamma-ray bursts from 8 keV to 30 MeV. The LAT, with a large improvement in sensitivity, large field-of-view, and much finer angular resolution compared to previous high-energy telescopes, observes 20% of the sky at any instant and covers the entire sky every 3 hours. *Fermi* is providing an important window on a wide variety of high-energy phenomena, including pulsars, black holes and active galactic nuclei; gamma-ray bursts; the origin of cosmic rays and supernova remnants; and searches for hypothetical new phenomena such as supersymmetric dark-matter annihilations and exotic relics from the Big Bang. This talk will describe results obtained during the first eight months of the first year sky-survey phase of the *Fermi* mission.