APR09-2009-000638

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

Fermi/LAT Observations of the Extragalactic Gamma-ray Sky

JAMES CHIANG

The Fermi Gamma-ray Space Telescope provides a greatly expanded view of the extragalactic gamma-ray sky. The Large Area Telescope (LAT) aboard Fermi has more than an order-of-magnitude greater sensitivity than its predecessor, EGRET, and provides complete coverage of the sky every three hours. During the first year of operations, Fermi/LAT will detect up to several thousands of blazar AGNs and will produce valuable data on the flux and spectral variability of these objects on time scales ranging from several hours to months. The LAT energy range extends from 20 MeV to $>$ 300 GeV and thus overlaps with several ground-based Cherenkov telescopes. Coordinated observations with these instruments and with observatories at lower wavebands are playing an integral role in the scientific program of Fermi. Here we present several of the most interesting results from observing campaigns on individual blazars. We also present results from studies of the blazar population as a whole, relating the properties derived from Fermi data to those found at radio, optical, X-ray and TeV energies. The blazar contribution to the unresolved extragalactic diffuse emission and studies of other sources classes, such as galaxy clusters, will be discussed.