Abstract Submitted for the APR06 Meeting of The American Physical Society

GLAST and AGN Science LUIS C. REYES, University of Maryland / Nasa - GSFC, GLAST LAT COLLABORATION — The Large Area Telescope (LAT) on board GLAST (Gamma-ray Large Area Space Telescope) is an instrument under construction to study the gamma-ray sky in the energy range 20 MeV to >300 GeV with special interest in the previously unexplored region between a few GeV and a few hundred GeV. Among the high energy gamma-ray sources in the sky, the Blazar-class of AGNs are distinguished because of their brightness and very short term variability. GLAST's improved sensitivity with respect to previous missions will increase the number of known AGN gamma-ray sources from about 100 to thousands, with redshifts up to z>4. Science returns with GLAST include: examination of the blazar sequence model, test of leptonic and hadronic models for particle acceleration, physics of relativistic jets, and evolution of Blazar AGNs population with cosmic time. Special consideration will be given to the possibility of using the large size of the GLAST Blazar catalog to distinguish intrinsic spectra of AGNs from the redshift dependent effects of attenuation by the Extragalactic Background Light (EBL). A measured attenuation as a function of AGN redshift would constitute and effective and unique probe to the optical-UV EBL.

> Luis C. Reyes U of Maryland / Nasa - GSFC

Date submitted: 14 Jan 2006

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