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GLAST and the Future of High Energy Gamma-ray Astrophysics

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The Gamma-ray Large Area Space Telescope, GLAST, is a mission to measure the cosmic gamma-ray flux in the energy range 20 MeV to >300 GeV, with supporting measurements for gamma-ray bursts from 10 keV to 25 MeV. With its launch in 2007, GLAST will open a new and important window on a wide variety of high energy phenomena, including 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, Lorentz invariance violation, and exotic relics from the Big Bang. In addition to the science opportunities, this talk will include a description of the instruments and the mission status. These topics will be discussed in the context of anticipated breakthrough measurements from other gamma-ray facilities in the future.