

CsI Hodoscopic Calorimeter for the GLAST Mission

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We report on the development of a CsI(Tl) hodoscopic calorimeter for the Gamma-ray Large Area Space Telescope (GLAST). The GLAST mission is part of NASA's strategic plan with a scheduled new start in the year 2002. The GLAST instrument observes gamma rays in the 10 MeV to 300 GeV energy range and is comprised of an e^+e^- pair conversion telescope and supporting calorimeter. Our team, lead by Stanford University, is developing a tracker of silicon strip detectors and CsI crystal calorimeter as part of a GLAST technology development program supported by NASA and DOE. The calorimeter is segmented in a hodoscopic arrangement and instrumented to provide both good spectroscopy and moderate positioning (for shower tracking). We present here the design requirements for the calorimeter and results of the technology development program, including simulations and performance testing of a prototype calorimeter in accelerator beams at SLAC, MSU, and CERN.