

Abstract Submitted  
for the 4CF06 Meeting of  
The American Physical Society

**Surveying the TeV Sky with Milagro** GARY WALKER, Los Alamos National Laboratory, MILAGRO COLLABORATION — A wide field of view, high duty factor TeV gamma-ray observatory is essential for studying TeV astrophysical sources, because most of these sources are either highly variable or are extended. Milagro is such a TeV detector and has performed the deepest survey of the Northern hemisphere sky. In addition to detecting the Crab Nebula and Mrk 421, which are known TeV sources, Milagro has made the first detection of diffuse TeV emission from the Galactic plane. In addition, Milagro has discovered a new, extended source in the Galactic plane that is coincident with an EGRET unidentified source. Based on the success of Milagro, a second generation water Cherenkov gamma-ray observatory is planned which will give an increase in sensitivity of more than an order of magnitude.

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Date submitted: 08 Sep 2006

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