

TeV Gamma-Ray Observations with Milagro

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In this paper I will report on the analysis of data taken with the Milagro Observatory within 10 degrees of the Galactic plane between Galactic longitude 30 and 220 degrees. Three new sources of TeV gamma rays have been discovered, all of which are coincident with sources in the EGRET GeV catalog. In addition, there are 5 locations, that warrant further study. In particular, there is a 5 standard deviation excess observed from Geminga. In addition to these sources, the diffuse emission from the Galaxy has been detected at ~ 10 TeV. The intensity of the diffuse emission is greater than that predicted by models, indicating that there may be a class of unresolved gamma-ray sources or localized sites of cosmic-ray acceleration. Finally, I will discuss our future plans for HAWC, a High Altitude Water Cherenkov observatory that will have over 10 times the sensitivity of the Milagro observatory.

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