Abstract Submitted for the APR08 Meeting of The American Physical Society

Milagro Observation of a Localized Excess of ~ 10 TeV Cosmic Rays BRENDA DINGUS, Los Alamos National Lab, MILAGRO COLLABORATION — A analysis of Milagro data shows two regions in the Northern Sky of excess cosmic rays on an angular scale of $\sim 10^\circ$ with greater than 12σ significance. Diagnostics show that both regions are inconsistent with gamma-ray emission at a confidence level of $> 11\sigma$. One of the regions has a different energy spectrum than the cosmic-ray background at a confidence level of 4.6σ , and it is consistent with a hard spectrum with an exponential cutoff, with the most significant excess at ~ 10 TeV. This is difficult to explain since a 10 TeV proton in a 1 μ G field has a gyroradius of 0.01 pc.

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Date submitted: 11 Jan 2008 Electronic form version 1.4