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The Large Scale Anisotropy of TeV Cosmic-Rays as Observed with Milagro BRIAN KOLTERMAN, New York University, Milagro Collaboration — The Milagro observatory is a water Cherenkov detector located in the Jemez mountains outside of Los Alamos, New Mexico. With a high duty cycle and large field-of-view, Milagro has high sensitivity for measuring the large scale cosmic-ray anisotropy at TeV energies. We present a two-dimensional map of the sidereal anisotropy generated by a harmonic analysis of the data collected over a seven year period consisting of more than 160 billion events. We observe an anisotropy with a magnitude on the order of 0.1% for cosmic rays with a median energy of 3 TeV. The dominant feature is a deficit region of mean depth (-2.5 ± 0.046 stat. ± 0.19 syst.)×10⁻³ in the direction of the Galactic North Pole with a range in declination of -10 to 45 degrees and 150 to 225 degrees in right ascension. We also present evidence of an increase in the magnitude of this deficit region over time as well as a weakening of the signal for energies above 20 TeV.

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