Contribution ID : **722** Type : **Poster**

A Harmonic Analysis of the Large Scale Cosmic Ray Anisotropy

Monday, 9 July 2007 14:45 (0:00)

Abstract content

Here we present the results of a harmonic analysis of the large scale cosmic ray anisotropy as observed by the Milagro observatory. 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 is an excellent instrument for measuring this anisotropy with high sensitivity at TeV energies. We show a two-dimensional map of the sidereal anisotropy generated by the fitting of three harmonics to separate declination bands taken from a six year data sample consisting of 150 billion events, the largest such data set in existence. We observe an anisotropy with a magnitude around 0.1% for cosmic rays with a median energy of 3.1 TeV. The dominant feature is a deficit region 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 results from an examination of the time evolution and the energy dependence of the anisotropy signal.

If this papers is presented for a collaboration, please specify the collaboration

Milagro

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 1 (SH), pages 617-620

Primary author(s) : Mr. KOLTERMAN, Brian (New York University)

Presenter(s) : Mr. KOLTERMAN, Brian (New York University)

Session Classification : Posters 3 + Coffee

Track Classification : SH.3.4