



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'Olive, 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