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Heliospheric Physics with IceTop

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Abstract content

IceTop is an air shower array now under construction at the South Pole. It is the surface component of IceCube, an observatory primarily focused on cosmic neutrinos. When completed, IceTop will have approximately 500 square meters of collecting area in the form of 160 separate ice Cherenkov detectors. These detectors are sensitive to electrons, photons, muons and neutrons. With the high altitude and low geomagnetic cutoff at the South Pole, IceTop promises to have unprecedented statistical precision, coupled with spectral sensitivity that can be used to observe solar energetic particles and transient phenomena in the flux of galactic cosmic rays. We discuss the potential of IceCube to contribute to heliospheric physics in general, and present a preliminary analysis of a large Forbush decrease that occurred on 11 September 2005 and was observed by the initial eight deployed IceTop detectors.

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

IceCube

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 339-342

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