Contribution ID : **1247** Type : **Poster**

Stereo Reconstruction at HiRes

Wednesday, 4 July 2007 14:45 (0:00)

Abstract content

We describe a technique used to reconstruct the energy and Xmax of Ultra High Energy Cosmic Rays (UHECR) observed by the HiRes detector in stereoscopic mode. This technique calculates the relationship between the number of shower particles at a given depth of the shower to the signal in either angular or time bins. This relationship is calculated for a given shower segment location. The estimated number of shower particles at a given shower depth is calculated using this relationship from the observed bin signals. The observed longitudinal shower profile is then fit using a technique developed by Martin Block which judiciously removes problematic data points. Estimated Energy Resolutions of approximatley 12% or better are obtained with high efficiency for energies above 10^18.5 eV for this technique. The estimated Xmax resolution for this technique is approximately 35 g/cm^2 or better for these energies.

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

HiRes

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. 4 (HE part 1), pages 467-470

Primary author(s) : HANLON, william (university of utah)

Presenter(s) : HANLON, william (university of utah)

Session Classification : Posters 1 + Coffee

Track Classification : HE.1.4.A