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Calibration of the EAS Radio Pulse Height

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Abstract content

LOPES is one the pioneering experiments for the measurement of radio emission from air showers with digital radio receivers. It is set up at the site of the KASCADE-Grande air shower array and takes data in conjunction with it. This gives us the unique possibility to combine LOPES and KASCADE-Grande data.

In its second phase LOPES has been extended to 30 antennas, which increases the detection rate of well reconstructed events. Also a new, absolute calibration of the radio antennas is now available. By correlating the measured radio pulse height with air shower parameters measured by KASCADE-Grande, we have derived a formula that describes the radio pulse height as a function of air shower geometry and primary particle energy. Thus allowing us to estimate the cosmic ray energy from radio data.

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

LOPES

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 83-86

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