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# Operation of LOPES-30 for Polarization Measurements of the Radio Emission of Cosmic Ray Air Showers

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## Abstract content

The LOPES-30 experiment, located with the air shower experiment KASCADE-Grande at Forschungszentrum Karlsruhe, Germany, is an array of 30 dipole antennas set-up to investigate the pulsed radio emission from cosmic ray air showers in the Earth's atmosphere. After one year of measurements of the East-West polarization by all 30 antennas, recently, the LOPES-30 set-up was reconfigured to perform dual-polarization measurements. Half of the antennas have been configured for measurements of the North-South polarization direction. Only by measuring at the same time both, the E-W and N-S polarization components of the radio emission, the geosynchrotron effect as the dominant emission mechanism in air showers can be verified. The status of the measurements, including the absolute calibration of the antennas, the monitoring of the environmental conditions and a preliminary analysis of the dual-polarized events are reported.

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

LOPES collaboration

## 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. 5 (HE part 2), pages 1093-1096

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