



Contribution ID : 902

Type : Oral

## Radio emission of air showers in electric fields

*Monday, 9 July 2007 11:10 (0:12)*

### Abstract content

The radio emission from cosmic ray air showers consists in large part of geosynchrotron radiation. Since the radiation mechanism is based on particle acceleration, atmospheric electric fields may play an important role. LOPES results show that electric fields under fair weather conditions do not alter the radio emission considerably, but during thunderstorms strongly amplified pulses are measured. The electric field influence on the shower development and radio emission is simulated with a modified version of CORSIKA and with REAS2, respectively. We present results from both data analysis and simulation.

### If this paper 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. 4 (HE part 1), pages 161-164

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**Session Classification :** HE 1.2.B

**Track Classification :** HE.1.2.B