



Contribution ID : 969

Type : **Poster**

## Calculation of radio emission from high energy air showers

*Friday, 6 July 2007 14:45 (0:00)*

### Abstract content

For a long time radio emission accompanying extensive air showers (EAS) is considered as an alternative to traditional methods of high energy cosmic ray detection ( $> 10^{17}$  eV). In this paper, results of simulations of radio signals from air showers with energy greater than  $10^{17}$  eV are reported. The simulations are based on a track-by-track radio emission calculation using the EGSnc Monte Carlo shower code. The lateral distribution of the predicted radio emission pattern is compatible with the recent LOPES-10 experimental data at distances  $< 300$  m. Perspectives of extending the EAS radio emission calculation to ultra-high energy (up to  $10^{20}$  eV) are also discussed.

**If this papers is presented for a collaboration, please specify the 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 633-636

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**Session Classification :** Posters 2 + Coffee

**Track Classification :** HE.1.6