



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

Primary author(s) : Prof. KALMYKOV, N. N. (Scobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Leninskie Gory 1, 119992, Russia); Mr. KONSTANTINOV, A. A. (Scobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Leninskie Gory 1, 119992, Russia)

Co-author(s) : Dr. ENGEL, Ralph (Forschungszentrum Karlsruhe, Karlsruhe Institute of Technology, 76021 Karlsruhe)

Presenter(s) : Dr. ENGEL, Ralph (Forschungszentrum Karlsruhe, Karlsruhe Institute of Technology, 76021 Karlsruhe)

Session Classification : Posters 2 + Coffee

Track Classification : HE.1.6