Contribution ID : **181** Type : **Poster**

The LOFAR air shower front evolution library

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

Abstract content

The LOFAR radio telescope, under construction in the Netherlands, will be a powerful instrument to measure extensive air showers through their radio signal. In order to fully understand the properties of these signals, we are building a library of CORSIKA simulations of showers at 10ˆ16–10ˆ20.5 eV on the LOFAR BlueGene supercomputer. This library contains histogrammed data on the particle energy and spatial and angular distributions throughout the course of the air showers. The REAS2 code is used to calculate geosynchrotron radio emission from these simulations. We present parametrisations of various characteristics of the particle distributions and radio signal from showers in this library.

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 577-580

Primary author(s) : Mr. LAFEBRE, Sven (Dept. of Astrophysics, IMAPP, Radboud University)

Co-author(s) : Dr. HUEGE, Tim (Forschungszentrum Karlsruhe, Institut fuer Kernphysik); Prof. FALCKE, Heino (Dept. of Astrophysics, IMAPP, Radboud University); Prof. KUIJPERS, Jan (Dept. of Astrophysics, IMAPP, Radboud University)

Presenter(s) : Mr. LAFEBRE, Sven (Dept. of Astrophysics, IMAPP, Radboud University)

Session Classification : Posters 2 + Coffee

Track Classification : HE.1.6