



ID de Contribution: 52

Type: **oral presentation**

Observables from the modelization of EASs radio emission

jeudi 1 juillet 2010 18:10 (20 minutes)

We present here results of two complementary approaches of the modelization of EAS radio emission: an analytical model using extremely simplified shower geometry and a full Monte Carlo simulation. Both are based on the general expression of an accelerated relativistic charge and assumes a refractive index fixed to unity. The main characteristics of the obtained electric field is discussed (among which its topology, its polarization and the importance of the arrival direction). A comparison between the results of these two approaches is presented, as well as a preliminary confrontation with other models and experimental measurements.

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Classification de Session: Air shower radio signal theory and simulations