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Type : **Poster**

A shape of charged particle lateral distribution in the energy region 10^{15} - 10^{19} eV by registration data at the Yakutsk EAS Array

Abstract content

Experimental data obtained at the Yakutsk array after its modernization in 1993 are analyzed. To describe the lateral distribution function of charged particles, a function suggested by Lagutin et al. was used. The dependence of the mean square radius of function $R(m.s.)$, characterizing the shape of LDF, on the shower energy and maximum depth of EAS development has been determined. It is shown that the selected one-parameter function describes satisfactorily experimental data in the energy range of 10^{15} - 10^{19} eV obtained at the Yakutsk array. This conclusion does not contradict the hypothesis by Lagutin et al. for the invariance of LDF of charged particles in the wide energy interval. The possibility to use the parameter $R(m.s.)$ to estimate the cosmic ray composition is discussed.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

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