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An average longitudinal profile of UHECR air showers measured by HiRes experiment

Abstract content

In this paper, the average EAS longitudinal development profile is measured using HiRes stereoscopic data. Event by event the shower longitudinal curve is obtained. The shower maximum is found out using a local fitting. After normalizing by shower maximum size and age an average longitudinal profile is obtained. Several functions are tested in fitting this average profile. The Gaisser-Hillas and Gaussian-in-Age functions are found to describe the average behavior well. In addition, energy and Xmax dependences of the average profile are discussed.

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

HiRes Collaboration

Summary

Reference

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