ICRC2015

ICRC
The Astroparticle Physics Conference
34th International Cosmic Ray Conference
July 30 - August 6, 2015
The Hague, The Netherlands

Contribution ID: **1012** Type: **Poster contribution**

Studies on Time Profiles of EAS Particles Observed with the Telescope Array Surface Detectors

Tuesday 4 August 2015 16:00 (1 hour)

The arrival time distributions of extensive air shower (EAS) secondary particles have been studied in an energy region, E > 10^18eV with the data collected by the Telescope Array scintillator detector array. We present the average shapes of time profiles in ranges of primary particle energy, zenith angle, and core distance. This is a phenomenological study of extensive air shower longitudinal structures in the ultra high energy regime. In addition, "rise time"parameters from the time profiles are used to evaluate the stage of EAS development. In this report, the characteristics of time profiles of EAS in the energy region of 10^18.4eV –10^19.4eV are studied in both the data and simulation.

Collaboration

– not specified –

Registration number following "ICRC2015-I/"

0837

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Session Classification: Poster 3 CR

Track Classification: CR-EX