

SHOWER LONGITUDINAL DEVELOPMENT STUDY WITH CORSIKA

HiRes Collaboration

.

The HiRes air fluorescence experiment directly observes the Nitrogen fluorescence light of air shower cascades in the earth's atmosphere and is therefore a unique tool to directly study the development of air showers and compare it to various models. In this paper, we fit the average shower profile and compare the quality of fit for a Gaussian function in shower age as well as the standard Gaisser-Hillas function and discuss how to average shower profiles in terms of age for alignment. To determine the chi square for profile fitting in the simulation, we propose the proper error of weighted shower profiles due to the thinning algorithm.