

Contribution ID: 703

Type: Poster

## Arrival time distributions of air shower particles measured by LHAASO-KM2A

The arrival time distributions of air shower particles provide critical insights into the development of extensive air showers and the properties of primary cosmic rays. This study analyses the temporal characteristics of secondary particles detected by the KM2A detectors of the Large High Altitude Air Shower Observatory (LHAASO). We propose a novel parameterized function to describe the temporal profiles of secondary electromagnetic and muon components, significantly improving the modeling accuracy of the shape and thickness of the shower disk. These findings could be used to enhance the accuracy of angular reconstruction and the ability ofmass discrimination of cosmic rays.

## Collaboration(s)

LHAASO Collaboration

**Authors:** ZHANG, Xiaopeng (Institute of High Energy Physics, CAS); Dr LIU, Jia (Institute of High Energy Physiscs, CAS)

Presenter: ZHANG, Xiaopeng (Institute of High Energy Physics, CAS)

Session Classification: PO-1

Track Classification: Cosmic-Ray Indirect