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Study of Energy Measurement of Cosmic Ray Nuclei with LHAASO

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The Large High Altitude Air Shower Observatory(LHAASO) is a hybrid extensive air shower(EAS) array with an area of about 1km2 at an altitude of 4410 m a.s.l. in Sichuan province, China. It contains three sub-detectors: 1 km2 array (LHAASO-KM2A) composed of electromagnetic particle (ED) and muon detectors (MD); water Cherenkov detector array(LHAASO-WCDA) and 18 wide field-of-view air Cherenkov telescopes(LHAASO-WFCTA). One of the main scientific goals is measuring the individual energy spectra of cosmic rays from ~30TeV to a couple of EeV. Up to now, the whole WCDA, ¾ of KM2A, 16 telescopes have been in operation. In this paper, the energy reconstruction method and result of cosmic ray nuclei based on KM2A and WFCTA simulated events will be shown, the reconstructed energy difference between KM2A and WFCTA is also compared between data and MC.

Keywords

LHAASO; Nuclei; Energy reconstruction

Collaboration

Lhaaso

other Collaboration

Subcategory

Experimental Methods & Instrumentation

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