

Summary

The Water Cherenkov Detector Array (WCDA) of LHAASO are designed to work in combination for measuring the energy spectra of the cosmic ray species over a very wide energy range from a few TeV to 10 PeV. The energy calibration can be achieved with a proven technique of measuring the westward shift of Moon shadow cast by galactic cosmic rays due to the geomagnetic field. This deflection angle is inversely proportional to the cosmic ray rigidity. The precise measurement of the shifts by WCDA allows us to calibrate its energy scale for energies as high as 35 TeV. In this work, we demonstrate the feasibility of the method using the data collected from May 2019 to January 2020 by WCDA-1, the first of the three water Cherenkov ponds, already commissioned at the LHAASO site.