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Hybrid detection of Cosmic Rays with ENDA-64

The Electron-Thermal Neutron Detector Array (ENDA) is located at Haizishan, Daocheng, Sichuan Province, China, at an altitude of 4410 meters. The scientific goal of ENDA is to measure the composition-resolved energy spectrum of cosmic rays, particularly in the knee region, through joint observations with LHAASO. Currently, 64 detectors, so called ENDA-64, have been deployed at the LHAASO site and have been operational for over a year. This report presents the current status and results of ENDA-64, including the detector's operational performance, measurements of secondary particle distributions and event reconstruction. Efforts have been made to explore the potential for cosmic ray energy determination and composition separation by combining ENDA's neutron and electron detection with LHAASO-KM2A's electron and muon detection. This report also outlines ongoing work and anticipated directions for further studies with ENDA and its collaboration with LHAASO.

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