APR15-2015-001059

Abstract for an Invited Paper for the APR15 Meeting of the American Physical Society

Recent Results of the Telescope Array Experiment¹

DMITRI IVANOV, University of Utah

The Telescope Array (TA) is the largest cosmic ray experiment in the northern hemisphere and covers 10 PeV to 100 EeV range. TA is a hybrid detector that uses air fluorescence detectors combined with a ground array. TA consists of 507 plastic scintillation counters on a 1.2km square grid, overlooked by 3 fluorescence detector stations, and measures cosmic rays above 1 EeV. TA has collected 6.5 years of data. Results from the TA low energy extension (TALE), which sees cosmic rays down to 10 PeV, will also be shown. This contribution will consist of three parts. First, we will present the cosmic ray energy spectrum measured over 4 decades in energy. Next, we will discuss the latest results of the measurements of cosmic ray mass composition by the TA fluorescence detectors. Finally, we will show the latest results of the TA anisotropy measurements at the highest energies, where we have seen a concentration of events, called the "hotspot," centered in the Ursa Major.

¹For the Telescope Array Collaboration