

Recent Observations with the Telescope Array

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The Telescope Array (TA) is an observatory for the study of the highest energy cosmic rays (HECR). Located in Utah, U.S.A., TA consists of a surface scintillator array and a set of nitrogen fluorescence detectors which jointly allow hybrid reconstruction of cosmic ray induced extensive air showers. In this talk we will describe the cosmic ray energy spectrum as measured by TA over five orders of magnitude, several anisotropy results including the Ursa Major hotspot, and the latest composition inferences from the distribution of air shower maximum. We will describe a recently funded project to increase the experiment's aperture by a factor of four. Also, Telescope Array has a rich program of affiliated experiments which we will describe, including efforts to measure the radar cross-section of HECR and to study the production of high-energy particles by lightning within the Earth's atmosphere.

Summary

Author: BELZ, John (University of Utah)

Presenter: BELZ, John (University of Utah)

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