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Measurement of the Ultra-High Energy Cosmic Ray Spectrum by the Telescope Array Surface Detector BENJAMIN STOKES, University of Utah, TELESCOPE ARRAY COLLABORATION — The Telescope Array experiment is the largest cosmic ray observatory in the northern hemisphere. Telescope Array consists of an array of 507 scintillation counter surface detectors (TASD) augmented by three optical fluorescence telescope observatories. In analyzing the data collected by the TASD, a novel technique is employed which consists of generating a very detailed simulation that can be directly compared against actual observations. This enables a very careful analysis with a thoroughgoing understanding of the resolution constraints in the data. This method will be described and the most recent TASD measurement of the cosmic ray energy spectrum will be presented.

Benjamin Stokes University of Utah

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