Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Energy Spectrum and Composition of Ultra High Energy Cosmic Ray Showers Using Hybrid Analysis from Telescope Array CHARLES JUI, MONICA ALLEN, TAREQ ABU-ZAYYAD, BENJAMIN STOKES, DMITRI IVANOV, University of Utah, TELESCOPE ARRAY COLLABORATION — The Telescope Array (TA) consists of 38 fluorescence telescopes spread over three detector sites. The three sites at located the periphery of a surface array of 507 scintillation counters, covering 700 square km, with a spacing of 1.2 km. TA is designed to study the energy spectrum, composition, and arrival direction anisotropy of ultrahigh energy cosmic rays (UHECR). A unique feature of TA is that one of three fluorescence detector (FD) sites, Middle Drum (MD), is instrumented with 14 refurbished telescopes from the High Resolution Fly's Eye (HiRes) experiment. This commonality provides TA with a direct link back to the HiRes experiment and data. Using the scintillator detector data in conjunction with the MD data improves the geometrical reconstruction and hence provides a more accurate reconstruction of the energy of the primary particle and shower profile. The Middle Drum hybrid spectrum composition results will be presented.

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Date submitted: 11 Jan 2013 Electronic form version 1.4