ICRC2015

ICRC
The Astroparticle Physics Conference
34th International Cosmic Ray Conference
July 30 - August 6, 2015
The Hague, The Netherlands

Contribution ID: **1346** Type: **Oral contribution**

Fluoresence Detection of Cosmic Ray Air Showers Between 10^{16.5} eV and 10^{18.5} eV with the Telescope Array Low Energy Extension (TALE)

Monday 3 August 2015 14:15 (15 minutes)

Authors: Z. Zundel, for the Telescope Array Collaboration

Abstract:
The TA Collaboration has completed construction of a low-energy extension to its Middle Drum telescope station. Ten new telescopes were added observing 31-59 degrees in elevation above the original telescopes. A graded array of scintillators with spacing 400-600-1200m is being installed in in the space in front of the telescope station. With these upgrades, the physics threshold will be lowered below $10^{16.5}$ eV. The TA Low Energy Extension(TALE) will explore the regime corresponding to the LHC center-of-mass energy. This is also where the transition from galactic to extra-galactic cosmic ray flux is suspected to occur. A brief overview of the physics will be presented as well as a report on the progress toward measuring the cosmic ray spectrum between $10^{16.5}$ eV and $10^{18.5}$ eV.

Collaboration

Telescope Array

Registration number following "ICRC2015-I/"

1001

Primary author: Mr ZUNDEL, Zachary (University of Utah)

Presenter: Mr ZUNDEL, Zachary (University of Utah)

Session Classification: Parallel CR13 EX EAS

Track Classification: CR-EX