ICRC2015

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

Contribution ID: **1022** Type: **Oral contribution**

Telescope Array extension: TAx4

Wednesday 5 August 2015 11:15 (15 minutes)

The Telescope Array (TA), located in Utah, USA, observes highest energy cosmic rays using Surface Detectors (SDs) and Fluorescence Detectors (FDs). The SD array consists of 507 scintillation detectors on a 1.2-km square grid covering 700 kmˆ2. The FD sets located at three sites look over the surface array. Using the first 6-year data collected by the surface detectors, we found a cluster of cosmic rays with energies above 57 EeV that we call the hotspot. With enhanced statistics, we expect to observe the structure of that hotspot, other excess spots, point sources and the correlation with extreme phenomena in the nearby universe. Therefore, we plan to quadruple the SD array, which covers 3,000 kmˆ2, by adding 500 surface detectors with 2.1-km spacing. Two FD stations will be constructed at the new SD array. This TA extension that we call TAx4 would speed up in the detection rate to elucidate the above objectives, the measurement of energy spectrum and composition study in the highest energy region. Here we present the plan of TAx4.

Collaboration

Telescope Array

Registration number following ”ICRC2015-I/”

849

Author: Dr SAGAWA, Hiroyuki (Institute for Cosmic Ray Research, University of Tokyo)

Presenter: Dr SAGAWA, Hiroyuki (Institute for Cosmic Ray Research, University of Tokyo)

Session Classification: Parallel CR 19 Future IN

Track Classification: CR-IN