



Contribution ID: 1054

Type: **Poster contribution**

## Initial results of a direct comparison between the Surface Detectors of the Pierre Auger Observatory and of the Telescope Array

*Thursday 30 July 2015 15:30 (1 hour)*

The Pierre Auger Observatory (Auger) in Mendoza, Argentina and the Telescope Array (TA) in Utah, USA aim at unraveling the origin and nature of Ultra-High Energy Cosmic Rays (UHECR). At present, there appear to be subtle differences between Auger and TA results and interpretations. Joint working groups have been established and have already reported preliminary findings. From an experimental standpoint, the Surface Detectors (SD) of both experiments makes use of different detection processes not equally sensitive to the components of the extensive air showers making it to the ground. In particular, the muonic component of the shower measured at ground level can be traced back to the primary composition, which is critical for understanding the origin of UHECRs. In order to make direct comparisons between the SD detection techniques used by Auger and TA, a two-phase approach is followed. First, one water Cherenkov detector (“Auger North” design) was deployed and operated locally at the TA Central Laser Facility. After a couple of months of operation before the summer, we expect to observe about 20 Auger SD events in coincidence with nearby TA stations. And a regular Auger station and a TA station will be added to the setup to allow for station-level comparisons. In a second phase, event-level comparisons of relatively low-energy showers with energies in the  $10^{18}$  eV range will be possible as a result of co-locating six additional Auger North stations contiguous to TA surface detector stations. In this contribution, we present the status and prospects of this joint research project, including the first Auger SD data that were recorded in coincidence with the TA SD shower triggers.

### Collaboration

– not specified –

### Registration number following ”ICRC2015-I”

855

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**Session Classification:** Poster 1 CR

**Track Classification:** CR-EX