ARENA 2014



Contribution ID: 37

Type: not specified

A Station For The Detection Of Ultra High Energy Cosmic Ray Induced Extensive Air Showers At The Telescope Array Radar (TARA)

Wednesday, 11 June 2014 17:35 (20 minutes)

The detection of high – energy cosmic rays is currently limited by the rarity of the most interesting rays striking Earth. We describe the development of an observatory based on a remote sensing technique known as bi-static radar, that aims to achieve remote coverage over large portions of the Earth's surface. The radar project's receiver and transmitter stations have already been functional for several months, in conjunction with North America's largest cosmic ray observatory (The Telescope Array) in radio quiet western Utah, giving insight into the detect-ability of air shower radar echoes. This has given impetus for further upgrades, including additional autonomously powered remote receiver stations. We describe the current status of the Telescope Array RAdar (TARA) project and the development of these remote stations.

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Track Classification: Weds PM II - Lunar