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Status and Prospect of Telescope Array (TA) Experiment

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Abstract content

The Telescope Array (TA) is a hybrid experiment of an air shower array and fluorescence telescopes installed in Utah, USA. It aims at drawing a conclusion on the (non-)existence of the GZK cutoff reported controversially by the AGASA and HiRes experiments. An anisotropy of the UHECR arrival directions will be studied in the northern hemisphere where the galactic disturbances are small. The use of plastic scintillator is advantageous for the determination of the air shower energy independent of the hadronic interaction model and the primary composition of the shower. Various calibration and monitoring methods have been developed for the accurate determination of the air fluorescence energy scale. It has a total acceptance more than 10 times larger than that of AGASA and is expected to start taking data in spring 2007. The status of the experiment is reported and prospects for physics are given.

If this papers is presented for a collaboration, please specify the collaboration

Telescope Array (TA) Experiment

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 4 (HE part 1), pages 417-420

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