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The Central Laser Facility at the Telescope Array

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Abstract content

Atmospheric monitoring is indispensable to calibrate the reconstruction of extensive air shower that observed by air fluorescence telescope. The Telescope Array (TA) experiment is using an air fluorescence technique along with a shower array system to observe the ultra-high energy cosmic ray. And we adopted two laser systems measuring the atmospheric transmittance to calibrate the Fluorescence Detector (FD) of TA. One is a LIDAR system which will be reported other-where in this conference and another is a Central Laser Facility (CLF). The CLF located near the middle of three FD stations is equipped with a UV (355nm) laser and optical components that direct a calibrated pulsed beam into the sky. The scattering light from this beam observed by FDs becomes a good calibration source of total attenuation caused by atmosphere between CLF and FDs. We will describe the TA-CLF system along with some measurements briefly.

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

the telescope array collaboration

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. 5 (HE part 2), pages 1021-1024

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