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Calibration and monitoring of the air fluorescence detector for the Telescope Array experiment

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Abstract content

The air fluorescence detectors (FDs) of the Telescope Array (TA) experiment have been constructed in a desert of Utah, USA. We can measure the longitudinal developments of EASs directly with the FDs by detecting air fluorescence lights and determine the primary energies of ultra-high energy cosmic rays. In order for accurate observation and measurements of EASs, elaborate detector calibrations and monitoring systems are required. We will present the result of calibration and monitoring systems for the reflectance and curvature radius of segment mirrors, the characteristics of PMT (absolute gain, linearity, temperature dependence of gain), and the uniformity of the camera surface, etc.

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'Olive, 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 1013-1016

Primary author(s) : Dr. TOKUNO, Hisao (Institute for Cosmic Ray Research, The University of Tokyo)

Co-author(s) : AZUMA, Ryuji (Tokyo Institute of Technology); FUKUSHIMA, Masaki (ICRR, University of Tokyo); HIGASHIDE, Kazuhiro (Musashi Institute of Technology); KADOTA, Kenichi (Musashi Institute of Technology); KAKIMOTO, Fumio (Tokyo Institute of Technology); MURANO, Yoko (Tokyo Institute of Technology); OGIO, Shoichi (Osaka City University); SAKURAI, Nobuyuki (ICRR, University of Tokyo); SAGAWA, Hiroyuki (ICRR, University of Tokyo); SHIBATA, Tatsunobu (ICRR, University of Tokyo); TAKEDA, Masahiro (ICRR, University of Tokyo); TAKETA, Akimichi (ICRR, University of Tokyo); TAMEDA, Yuichiro (Tokyo Institute of Technology); TSUNESADA, Yoshiki (Tokyo Institute of Technology); SHIGE HARU, Udo (ICRR, University of Tokyo); YOSHIDA, Shigeru (Chiba University)

Presenter(s) : Dr. TOKUNO, Hisao (Institute for Cosmic Ray Research, The University of Tokyo)

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