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New method for atmospheric calibration at the Pierre Auger Observatory using FRAM, a robotic astronomical telescope

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Abstract content

FRAM - F/(Ph)otometric Robotic Atmospheric Monitor is the latest addition to the atmospheric monitoring instruments of the Pierre Auger Observatory. An optical telescope equipped with CCD camera and photometer, it automatically observes a set of selected standard stars and a calibrated terrestrial source. Primarily, the wavelength dependence of the attenuation is derived and the comparison between its vertical values (for stars) and horizontal values (for the terrestrial source) is made. Further, the integral vertical aerosol optical depth can be obtained. A secondary program of the instrument, the detection of optical counterparts of gamma-ray bursts, has already proven successful. The hardware setup, software system, data taking procedures, and first analysis results are described in this paper.

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

The Pierre Auger 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. 4 (HE part 1), pages 347-350

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