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Focal Plane Instrumentation of VERITAS array

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Abstract content

VERITAS is a new atmospheric Cherenkov imaging telescope array to detect very high energy gamma rays above 100 GeV. The array is located in southern Arizona, USA, at an altitude of 1270m above sea level. The array currently consists of four 12 m telescopes, structurally resembling the Davis-Cotton design of the Whipple 10 m telescope. The VERITAS focal plane instruments are equipped with high-resolution (499 pixels) fast photo-multiplier-tube (PMT) cameras covering a 3.5 degree field of view with 0.148 degree pixel separation. Light concentrators reduce the dead-space between PMTs to 25% and shield the PMTs from ambient light. The PMTs are connected to high-speed pre-amplifiers improving the signal to noise ratio and allow single photoelectron measurements in situ at operating voltage. Current monitor circuits in the focus box provide real-time monitoring of the anode currents for each pixel and ambient conditions of the focus box. A charge injection system installed in the focus box allows daytime testing of the trigger and data acquisition system by injecting pulses of variable amplitude and length into pre-amplifier stage. A detailed description of the VERITAS focal plane instruments will be given in this presentation.

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

VERITAS

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. 3 (OG part 2), pages 1437-1440

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