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Improved CREAM Data Acquisition System with USB 2.0 Interface

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Abstract content

The CREAM (Cosmic Ray Energetics And Mass) data acquisition (CDAQ) system showed excellent stability and robustness during the 2004/05 and 2005/06 Antarctic campaigns. The CREAM-III Calorimeter, scheduled to be launched in December 2007, was calibrated at a CERN test beam in October 2006. During the beam test, the CDAQ software, running on a non-flight Beam Test Computer (BTC) system, collected calorimeter calibration events. To allow better data collecting efficiency, the PC/104 interface employed previously was replaced with a high-speed USB 2.0 interface. The design, implementation and performance improvement of the CDAQ system in the new beam test setup is discussed. The data acquisition system performance is evaluated with several interface configurations by comparing their event data transfer speed. A preliminary result shows that the newly employed USB 2.0 data acquisition system performs better than the PC/104 interface.

If this papers is presented for a collaboration, please specify the 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. 2 (OG part 1), pages 401-404

Primary author(s) : Mr. YOO, Joonhyuk (Dept. of Electrical and Computer Engineering and IPST, University of Maryland, College Park, MD 20742, USA)

Co-author(s) : Dr. AHN, H. S. (Inst. for Phys. Sci. and Tech., University of Maryland, College Park, MD 20742, USA); Dr. ZINN, S. Y. (Inst. for Phys. Sci. and Tech., University of Maryland, College Park, MD 20742, USA); Dr. GANEL, O. (Inst. for Phys. Sci. and Tech., University of Maryland, College Park, MD 20742, USA); Ms. HAN, J. H. (Inst. for Phys. Sci. and Tech., University of Maryland, College Park, MD 20742, USA); Dr. LEE, M. H. (Inst. for Phys. Sci. and Tech., University of Maryland, College Park, MD 20742, USA); Mr. LUTZ, L. (Inst. for Phys. Sci. and Tech., University of Maryland, College Park, MD 20742, USA); Dr. MALININ, A. (Inst. for Phys. Sci. and Tech., University of

Maryland, College Park, MD 20742, USA); Prof. SEO, Eun-Suk (Dept. of Physics and IPST, University of Maryland, College Park, MD 20742, USA); Mr. WALPOLE, P. (Inst. for Phys. Sci. and Tech., University of Maryland, College Park, MD 20742, USA); Mr. YOON, Y. S. (Dept. of Physics and IPST, University of Maryland, College Park, MD 20742, USA)

Presenter(s) : Prof. SEO, Eun-Suk (Dept. of Physics and IPST, University of Maryland, College Park, MD 20742, USA)

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