



Contribution ID: 78

The Astroparticle Physics Conference 34th International Cosmic Ray Conference July 30 - August 6, 2015 The Hague, The Netherlands

Type: Poster contribution

DigiCam - Fully Digital Compact Read-out and Trigger Electronics for the SST-1M Telescope proposed for the Cherenkov Telescope Array

Saturday 1 August 2015 15:30 (1 hour)

The SST-1M is one of three prototype small-sized telescope designs proposed for the Cherenkov Telescope Array, and is built by a consortium of Polish and Swiss institutions. The SST-1M will operate with DigiCam - an innovative, compact camera with fully digital read-out and trigger electronics. A high level of integration will be achieved by massively deploying state-of-the-art multigigabit transmission channels, beginning from the ADC flash converters, through the internal data and trigger signals transmission over backplanes and cables, to the camera's server link. Such an approach makes it possible to design the camera to fit the size and weight requirements of the SST-1M exactly, and provide low power consumption, high reliability and long lifetime. The structure of the digital electronics will be presented, along with main physical building blocks and the internal architecture of FPGA functional subsystems.

Collaboration

CTA

Registration number following "ICRC2015-I/"

98

Authors: ZIETARA, K. (Astronomical Observatory, Jagiellonian University, ul. Orla 171, 30-244 Krakow, Poland); RAJDA, P. J. (AGH University of Science and Technology, al. Mickiewicza 30, 30-059 Kraków, Poland)

Co-authors: MARSZALEK, A. (Astronomical Observatory, Jagiellonian University, ul. Orla 171, 30-244 Kraków, Poland); IDZKOWSKI, B. (Astronomical Observatory, Jagiellonian University, ul. Orla 171, 30-244 Kraków, Poland); DELLA VOLPE, D. (DPNC - Université de Genève, 24 Quai Ernest Ansermet, Genève, Switzerland); SCHIOPPA, E.J. (DPNC - Université de Genève, 24 Quai Ernest Ansermet, Genève, Switzerland); HELLER, M. (DPNC - Université de Genève, 24 Quai Ernest Ansermet, Genève, Switzerland); OSTROWSKI, M. (Astronomical Observatory, Jagiellonian University, ul. Orla 171, 30-244 Kraków, Poland); STODULSKA, M. (Astronomical Observatory, Jagiellonian University, ul. Orla 171, 30-244 Kraków, Poland); WIECEK, M. (AGH University of Science and Technology, al. Mickiewicza 30, 30-059 Kraków, Poland); PRUCHNIEWICZ, R. (DPNC - Université de Genève, 24 Quai Ernest Ansermet, Genève, Switzerland); MONTARULI, T. (DPNC - Université de Genève, 24 Quai Ernest Ansermet, Genève, Switzerland); BIL-NIK, W. (AGH University of Science and Technology, al. Mickiewicza 30, 30-059 Kraków, Poland)

Presenter: OSTROWSKI, M. (Astronomical Observatory, Jagiellonian University, ul. Orla 171, 30-244 Kraków, Poland)

Session Classification: Poster 2 GA

Track Classification: GA-IN