

FPGA-based readout for double-sided silicon strip detectors

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This work presents an FPGA-based readout system for double-sided silicon strip sensors based on the APV25 Frontend-Chip. The system consists of an ADC-card and a digital readout board containing an FPGA. Data extraction algorithms implemented in the FPGA allow baseline and pedestal correction, hit detection and event-building. These algorithms provide an efficient data reduction tool and high readout rates.

Details of the system, the algorithms applied and performance will be discussed using data collected in various tests experiments.

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