

Description of a 4-channel FPGA-controlled ADC-based DAQ system for general purpose PMT signals

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Abstract content

We describe a general purpose data acquisition system for PMT signals. Hardware-wise it consists of a 4-channel ADC daughter board, an FPGA motherboard, a GPS receiver and an atmospheric pressure sensor. The four ADC channels simultaneously sample PMT input signals with a sampling rate of 100MS/s. We have evaluated the noise of our system obtaining less than -48.6dB. This DAQ system includes a firmware suitable for pulse processing in cosmic rays applications. In particular, we describe in detail the way in which this system can be used during the commissioning and early operation phases of the High Altitude Water Cherenkov Observatory (HAWC) currently under construction at Sierra Negra in Mexico.

Summary

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