THE ARGO-YBJ DAQ SYSTEM

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The ARGO-YBJ experiment at the Yangbaijing Laboratory (Tibet, P.R. China, 4300 m a.s.l.) has been designed in order to study the cosmic rays, mainly cosmic gamma-radiation, at an energy threshold of $\sim$ 100 GeV, by means of the detection of small size air showers. A high trigger rate of several kHz is expected. The ARGO-YBJ DAQ is based on a high speed event driven architecture previously developed for high energy physics experiments on colliders.
In this paper we describe the hardware and software strategies which allow the ARGO DAQ to benefit from the flexible architecture of in-system reconfigurable FPGAs.