THE DISTRIBUTED RPC READ-OUT SYSTEM FOR THE ARGO-YBJ EXPERIMENT

G. Marsella (1), R. Assiro (1), F. Cesaroni (1,2), P. Creti (1), M. Panareo (1,2), C. Pinto (2), A. Surdo (1) and The ARGO coll. (*)

(1) INFN sez. di Lecce, (2) Universita degli Studi di Lecce, (*) see the ARGO coll. list.

marsella@le.infn.it

ARGO-YBJ is a full coverage layer of Resistive Plate Counters (RPCS) covering an area of about 5.800 m^2 to be installed at the Yanbaijing Laboratory (Tibet, China) at 4.300 m a.s.l. The DAQ system is based on a Central Station which receives the detector information from distributed readout electronics (Local Station). Each Local Station reads out and digitizes the space and time information from 120 pick-up pads of 12 RPCs and gives out the pad multiplicity for trigger purposes. On trigger occurrence, each Local Station sends the collected data to the Central Station. Both the detector and the electronics allow 1 ns accuracy in time measurements. In this work a detailed description of the Local Station and its preformance are presented.