DAQ System Software for CMS RPS Chambers Test

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Abstract

A test set-up for measuring of efficiency, working voltage, noise and time response of Resistive Plates Chambers using cosmic muons has been build in the INRNE.

We have developed software for DAQ serving this set-up. We are using embedded processor to communicate directly with front-end chips of the chambers. This processor transfered the information to PC via serial communication for future storage and analysis. The software running on PC is currently based on LabVIEW package. We have considered also possibility for developing C/C++ based software for serial communication and using ROOT for GUI (Graphical User Interface) and Data Analysis.