

RPC Performances versus Front-End Electronics

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The performances of RPCs are strictly correlated with the FE Electronics parameters.

The prompt charge signal, picked-up on read-out electrodes, has shape and amplitude which depend on the gas mixture, on the applied electric field and on the gas gap width.

The best working point of the detector, which minimize the aging and optimize the time resolution, efficiency and rate capability, is strongly dependent on the characteristic of the FE Electronics project.

In this work we will present an overview of the correlations between the detector and FE performances. In particular a new FE design is presented with first results of its application.

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