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Development of large and very thin GRPCs with new resistive coating and new gas distribution scheme

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The IPNL group has developed a new kind of GRPCs to be used in future high energy experiments. The GRPCs are very thin and large (1m2). New resistive coating products were used to ensure good homogeneity and lower pad multiplicity of these chambers to be read out by 1cm2 pads.
A new gas-distribution scheme was also developed and intended to reduce the gas consumption by improving the gas circulation in the chamber.

The results obtained in beam tests at CERN and on cosmic rays benches show that the new detectors are highly efficient and homogenous. Larger chambers can be envisaged using the same technique is presently under investigation with new electronics readout scheme

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