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Challenges for RPCs and resistive micropattern detectors in the next few years

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Nowadays RPCs are in a booming phase: they are successfully used in many experiments, including LHC; there are ambitious plans to use them in several upgrade detectors and in some new experiments as well as in various applications. The aim of this paper is to highlight the main challenges which the RPC community may face in the next few years and which were addressed in talks presented at this conference. Examples could be: new and difficult requirements from experiments (and their upgrades) and applications, optimization and improvements of the existing traditional detector designs, improvement of their characteristics (timing /rate performance, aging, dark current and so on), implementation of new more sensitive electronics, investigation of new materials, development of large- area detectors. We will also review the fast and very promising developments of another type of resistive electrode gaseous detector -micropattern detectors having at least one of their electrodes made of resistive materials. These innovative detectors combine in one design the best features of RPC (spark protection) and micropattern detectors (high granularity-high position resolution).

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