Qualification of New Companies for the Production of Resistive Plate Chambers

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- Resistive plate chambers (RPCs) with subnanosecond time resolution and mm spatial resolution are cost-effective charged particle detectors for the instrumentation of large areas.
- 1000 Thin-gap RPCs will be installed in the phase-II upgrade of the ATLAS muon spectrometer and experiments searching for long-lived charged particles like ANUBIS plan to use RPCs.
- Huge demand for RPC for future experiments and tight mechanical constraints require new production capacities in industry and industry-style quality assurance.
- The production procedure for thin-gap RPCs was optimized at MPI for Physics and is currently transferred to 4 companies in Germany.

Optimized spacer design

New assembly and gluing template

Successful functional test





