

Spacer configuration optimization for RPCs based on COMSOL Multiphysics simulation

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The uniformity of the gas flow in the chamber and the deformation of the electrode plates are critical to the performance of RPC (Resistance Plate Chamber). In this talk, a new design of RPC with “shifted” spacer configuration and less spacer number is come up. The different behaviors of the gas flow field, electrode’s deformation and electric field between RPCs with new spacer configuration and classical aligned configuration are studied through COMSOL Multiphysics which is a simulation platform based on finite element method. And the performance of the prototypes based on these two design have been tested.

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