

MRPC readout from one side

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We have tested the performance of a long MRPC(Multigap Resistive Plates Chamber) with a new type of readout of the signal induced by the minimum ionizing particles. The detector consists of 2 stacks of 6 gas gaps of 220 microns. The signal pick-up electrodes are 16 strips 8mm wide and 180cm long. One ends of the half of the 16 strips are connected to the ends of the other half using 8 LEMO cables of the same length. This allows the signal at both ends of one strip to be read out from only one side. The number of electronics channels needed is reduced by a factor of 2. The resolution of the average of time measured at both ends is 155ps(sigma), and the resolution of the difference in two time valures is 79ps(sigma) at 15kV.

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