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# Construction of multi-gap resistive plate chambers at the detectors lab of the National University of Mexico

*Thursday 22 February 2018 11:00 (20 minutes)*

In this work we report on the construction and performance (efficiency) of a multi-gap resistive plate chamber (MRPC) consisting of a stack of 6 parallel thin glass plates (thickness of 400 $\mu$m). We followed the construction procedure of the chambers which were designed for the ALICE Time-Of-Flight detector [1]. Spacers (fishing line) between the resistive plates define a series of gas gaps of size 260 $\mu$m. A high voltage (between 9 and 15 kV) is applied to the electrodes which are placed on the outer surfaces of the outermost resistive plates. The device is placed inside a hermetic box which is filled with a gas mixture of 5% SF6 and 95% freon. The detector is tested using atmospheric muons. A coincidence with two scintillation horoscopes is required for measuring the MRPC efficiency. The results are presented as well as the further plans of this project.

[1] A. Akindinov et al., "Construction and test of the MRPC detectors for TOF in ALICE", Nucl. Inst. Meth. A602 (2009) 658-664.

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