

The prototype of the gas system for the TOF-MPD

The Multi-Purpose Detector (MPD) being currently developed in the Laboratory of High Energy Physics of the Joint Institute for Nuclear Research will be used for studies of hot and dense nuclear matter, by detecting particles produced in heavy ion collisions. One of the most important systems of the MPD, which will be used in the identification of these particles is Time-of-Flight (ToF) detector. It has to provide time resolution better than 100ps for effective separation of charged hadrons, so detector based on the multi-gap Resistive Plate Chambers technology, filled with gas and working in the avalanche mode has been chosen to achieve this requirement. Parameters of gas environment inside of the detector chambers have major influence on its registration possibilities. That is why ensuring suitable, clean and stable gas mixture is crucial for proper functioning of the detector.

During the presentation a prototype of the gas system for Time of Flight detector will be shown.

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