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Cathode strip chambers for the outer tracker of the BM@N experiment

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Baryonic Matter at Nuclotron (BM@N) is a fixed target experiment at the NICA accelerator complex (JINR) aiming at studies of nuclear matter in relativistic heavy ion collisions. The outer tracking system for the BM@N heavy ion beam program is based on Cathode Strip Chambers. The outer tracker will be installed downstream the analyzing magnet to precise parameters of tracks, obtained in central tracking system and to find corresponding hits in time-of-flight systems. The full configuration of the CSC tracking system will include four CSC of the size 1129×1065 mm^2 and two CSC of the size 2190×1453 mm^2. First Nuclotron beam test of the 1129×1065 mm^2 CSC was performed in beams of C, Ar and Kr ions in March 2018: the chamber was installed in front of time-of-flight detectors to check its performance as outer tracker for heavy ions. The structure of the BM@N CSC detectors and the results of the study of their characteristics are presented. The full configuration of the CSC tracking system is shortly reviewed.

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