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Time-Of-Flight Neutron Detector Prototype for BM@N Experiment

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A new Time-Of-Flight neutron detector for the BM@N experiment at JINR, Dubna is planned to be developed and produced. This detector will identify and measure the energies of neutrons produced in nucleus-nucleus collisions at energies up to 4 AGeV. Detector design utilizes small (40x40x25mm) scintillator tiles with solid-state readout, with timing resolution of up to 100-150ps. A small-scale prototype of the future detector is produced and tested.

Detector prototype's layout, design of mechanical structure and electronics, as well as the results of the cosmic ray tests are discussed.

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