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Trigger electronics for BM@N setup in 2017

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The BM@N facility is a fixed target experiment based on heavy ion beams of the Nuclotron-M accelerator. The aim of the BM@N is to study nucleus –nucleus collisions at energies up to 4.5 GeV per nucleon. Our group is responsible to develop triggers system for this experiment.

The described trigger system has been developed at LHEP/JINR for trigger generation in the BM@N experiments. The trigger and start detectors fast signals of MCP-PMTs and SiPMs are used as input signals for the trigger processing.

The trigger system consist of detectors with fast front-end electronics (FEE), power supplies for detectors and FEE and a level 0 trigger processor unit (Trigger L0 unit, T0U). The T0U is used to generate a BM@N zero level trigger and a TOF detector precise start. T0U generates trigger signal based on the beam line, the target area and the barrel detector signals.

This report presents a concept, characteristics and a performance of the trigger system during the B@MN last runs.

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