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## Beam tracker system for the BM@N/NICA experiment

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A new beam tracker system for BM@N experiment was developed and implemented in the recent experimental run with Xe beam. The tracker consists of three double sided silicon detectors, which determine beam ion trajectory in each event. Design parameters of the system are driven by the requirements of the experiment: ability to operate in beams of light and heavy ions, to cover relatively large transverse width of the beam profile, and to measure with sufficient accuracy the beam ion position and impact angle at the target. Each detector has  $61 \times 61 \text{ mm}^2$  active area, 128 strips on each of the p+ and n+ sides ( $450 \mu\text{m}$  pitch), with orthogonal orientation of strips. The detectors are  $175 \mu\text{m}$  thick, placed in vacuum, and positioned 1 m apart from each other along the beam direction. The front-end electronics of the detectors is developed based on ASIC VATA64HDR16.2 (IDEAS, Norway) with large dynamic range ( $-20 \text{ pC} / +50 \text{ pC}$ ). The read-out electronics is placed outside of vacuum and is not subject to radiation damage. The detailed characteristics of the beam tracker detectors and front-end electronics are presented, as well as operational performance of the system in the experiment with Xe beam.

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