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Triple-GEM detectors for the KEDR tagging system

The KEDR tagging system (TS) is designed to study two photon interactions at the VEPP-4m collider. In order to reject the background from single Bremsstrahlung (SBS) at the colliding beam at higher energies (above 4GeV at CM) and improve the resolution of the TS the upgrade of the present system is being performed. Each station will be equipped with the triple-GEM detector that can provide measurements of track position in two dimensions and improve spatial resolution in the orbit plane to better than 0.1 mm. The system consists of 8 stations and thus 8 triple-GEM detectors are needed with the dimensions from $12.8 \times 10 \text{ cm}^2$ to $25.6 \times 10 \text{ cm}^2$. The 2D position sensitivity is provided by the specially designed 2-layer readout plane. At present all the detectors are mounted and tested with Sr 90 β -source. Three detectors are installed and operating at VEPP-4m. The measurements of main detector parameters with the source and cosmic rays and the first results of the beam measurements will be presented.

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