

The KLOE-2 Inner Tracker: detector commissioning and operation

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The KLOE-2 experiment started its data taking campaign in November 2014 with an upgraded tracking system including an Inner Tracker built with the cylindrical GEM technology, to operate together with the Drift Chamber improving the apparatus tracking performance. The Inner Tracker is composed of four cylindrical triple-GEM, each provided with an X-V strips-pads stereo readout and equipped with the GASTONE ASIC developed inside the KLOE-2 collaboration. Although GEM detectors are already used in high energy physics experiment, this device is considered a frontier detector due to its cylindrical geometry: KLOE-2 is the first experiment to use this novel solution. The results of the detector commissioning, detection efficiency evaluation, calibration studies and alignment, both with dedicated cosmic-ray muon and Bhabha scattering events, will be reported as well as detector operation with collisions.

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