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## Production of the CBM Transition Radiation Detector

The Transition Radiation Detector (TRD) is one of the detector components of the CBM experiment at FAIR, currently under construction. Multi-Wire Proportional Chambers (MWPCs) with sizes of 99 cm x 99 cm and 57 cm x 57 cm will record particle rates up to  $120 \text{ kHz cm}^{-2}$ : the MWPCs are therefore designed to provide fast signal collection times below 300 ns. They use Xenon as counting gas and will deliver electron-pion separation for the measurement of intermediate mass dielectrons via the detection of TR photons. Furthermore, the TRD is essential for the identification of hypernuclei and as intermediate tracking device.

We will address the production of TRD chambers with its QA steps such as, e.g., automatised gain homogeneity scans and thorough monitoring of the detector gas tightness (upper tolerated loss  $1 \text{ ml h}^{-1}$ ). Moreover, the detector readout with online data reduction and the performance of TRD pre-production chambers being operated at the mCBM experiment (FAIR Phase 0 programme) as tracking device will be presented.

### Category

Experiment

### Collaboration (if applicable)

CBM

**Primary authors:** KÄHLER, Philipp (Institut für Kernphysik, Universität Münster); ROETHER, Florian (Goethe University Frankfurt (DE))

**Presenter:** KÄHLER, Philipp (Institut für Kernphysik, Universität Münster)

**Track Classification:** Detectors & future experiments