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Drift Chamber Tracking and Calibration for CLAS12 MD LATIFUL KABIR, Mississippi State Univ, CLAS12 COLLABORATION — The drift chamber (DC) is one of the essential detectors of the CLAS12 spectrometer to perform high resolution and high accuracy nuclear physics experiments. The DC has been upgraded to meet the luminosity requirement of 10^{35} $cm^{-2}s^{-1}$ and was tuned to the fully operational mode at the beginning of 2018. It is designed to measure trajectories and momenta of the charged particle emerging from the target to a spatial resolution of $\sim$ 250 - 350 μm. It uses the time-based tracking in addition to the hit-based tracking to achieve this resolution. However, the time-based tracking requires the evaluation of the time-to-distance functional form which requires to be well calibrated to improve the DC performance and hence the quality of experimental data. I will briefly talk about the DC tracking and then give details of the DC calibration to achieve the desired resolution.

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