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The CLAS12 Barrel Micromegas Tracker: five years and counting of data taking

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In the central detector of the CLAS12 experiment at Jefferson Lab, the Barrel Micromegas Tracker (BMT) consists of six layers of low mass cylindrical resistive Micromegas tiles. The BMT surrounds three layers of silicon strip detectors to form the Central Vertex Tracker. The Micromegas tiles sit in a 5 T solenoid magnetic field, with the drift electric field orthogonal to the magnetic field, and they are operating at luminosities up to 1035cm-2s-1 in fixed target e-p collisions. The BMT has been installed in 2017, successfully taking data with a 11GeV electron beam impinging on targets of several kind, such as liquid hydrogen and deuterium, nuclear targets up to Tin and longitudinal polarized targets. A review of the BMT performance during the data taking, such as efficiency, resolution, and longevity in the CLAS12 challenging environment, will be presented.

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