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Realistic simulation of the MPD Time Projection Chamber with Garfield

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The detailed simulation of electron drifting in the MPD TPC was made with CERN Garfield toolkit for the simulation of gas particle detectors. For electron transporting were used the 10% Ar + 90% CH₄ gas mixture with impact of corresponding magnetic and electric fields from MPD TPC Technical Design Report (rev. 07). Ionization processes were investigated in the wire planes area near Read-Out Chambers of the TPC. The Read-Out Chambers were modeled with different gaps to gate grid and some values of gate voltage.

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