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PARTICLES TRAJECTORIES FINDING IN THE VERTEX DETECTOR OF THE CBM EXPERIMENT

Particles trajectories search in the vertex detector is a basis of collision reconstruction of the CBM experiment (GSI, Germany). The requirements for a modern experiment with fixed target are very high, specifically: up to 10^7 collisions per second, up to 1000 charged particles in the detector, inhomogeneous magnetic field, about 85 % additional fake combinatorial measurements in the detector, full on-line event reconstruction. Cellular automaton method is used to reconstruct charged particles trajectories. Description of the algorithm and results of tests are presented.

Keywords: CBM, heavy ions, cellular automaton, search of tracks.