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CBM performance for the measurement of strange hyperons' anisotropic flow in Au+Au collisions at FAIR SIS-100 energies

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The main goal of the CBM experiment is to study highly compressed baryonic matter produced in collisions of heavy ions. The SIS-100 accelerator at FAIR will enable investigation of the QCD matter at temperatures up to about 120 MeV and net baryon densities 5-6 times the normal nuclear density. Hyperons produced during the dense phase of a heavy-ion collision provide information about the equation of state of the QCD matter. The measurement of (multi)strange hyperons' anisotropic flow is important for understanding the dynamics and evolution of the QCD matter created in the collision. We will present the status of performance studies for strange hyperons anisotropic flow measurement for the CBM experiment at FAIR. Strange hyperons decay within the CBM detector volume and are reconstructed via their decay topology. The Particle-Finder Simple package, which provides an interface to the Kalman Filter Particle mathematics, is used to reconstruct decay kinematics and to optimize criteria for strange hyperons candidates selection. Anisotropic flow of strange hyperons is studied as a function of rapidity, transverse momentum and collision centrality. The effects due to non-uniformity of the CBM detector response in t

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