

Flow vorticity in Peripheral heavy ion collisions

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The vorticity development is studied in the reaction plane of peripheral relativistic heavy ion reactions, at high energies as well as the energies just above the threshold of transition to QGP. We use an initial state which can generate substantial angular momentum as our hydro input. The earlier predicted rotation effect and KHI can lead to significant initial vorticity and circulation. In low viscosity QGP this vorticity remains still significant at the time of freeze out of the system, although it is damped by to the explosive expansion. The dissipation also decreases the vorticity and circulation. In the reaction plane the vorticity arises from the initial angular momentum, and it is stronger than in the transverse plane where vorticity is caused by random fluctuations only.

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