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## Vorticity in heavy-ion collisions

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We study the event-by-event generation of flow vorticity in RHIC Au + Au collisions and LHC Pb + Pb collisions by using the HIJING model. Different definitions of the vorticity field and velocity field are considered. A variety of properties of the vorticity are explored, including the impact parameter dependence, the collision energy dependence, the spatial distribution, the event-by-event fluctuation of the magnitude and azimuthal direction, and the time evolution. We also discuss the possible physical implications of the vorticity.

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