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Type: **Talk**

## Vorticity in Heavy-Ion Collisions at NICA Energies

*Tuesday, 31 August 2021 12:00 (30 minutes)*

Within the transport model PHSD we analyze properties of the medium created at different stages of heavy-ions collision at NICA energies.

Nucleons of colliding nuclei are separated in participants and spectators, and the transition initial angular momentum to the fireball of participants is investigated.

Criteria for the selection of events with the highest internal angular momentum for various energies and colliding nuclei are proposed.

Fluidization of particle ensembles generated in the PHSD code following the Landau-Lifshitz definition is discussed. Properties of the created fluid, e.g. temperature, density, and velocity distributions are analyzed.

The vorticity of the fluid is investigated. It is demonstrated that in the collisions two vortex rings with opposite vorticities at forward and backward rapidities. Properties of the rings and their evolution are investigated.

### Is this abstract from experiment?

No

### Name of experiment and experimental site

N/A

### Is the speaker for that presentation defined?

Yes

### Details

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### Internet talk

Yes

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