Contribution ID: **23**   Type: **Talks**

Isobar relativistic nucleus-nucleus collisions: what can we learn?

Monday 26 January 2026 12:35 (35 minutes)

Relativistic Heavy-Ion collisions (RHICs) not only bring us the opportunity to study strongly interacting matter under extreme temperatures and densities, but also these can be a powerful tool to probe subtle nuclear structure differences, like neutron skin or nuclear deformations.

In this talk, firstly I'll focus on hybrid model simulation of RHICs, where different phases or stages of the reaction are simulated with different (physically most suitable!) theoretical approaches. In our group we use **SMASH+vHLLE+SMASH** (hadronic cascade + viscous hydrodynamics + hadronic cascade) combination of modules.

Secondly, I'll explain how RHICs can be used as a tool to study nuclear structure employing isobar collisions. Finally, I will compare the preliminary results of our group with experimental data from Ru+Ru (Ruthenium-96) and Zr+Zr (Zirconium-96) collisions measured at RHIC@BNL.

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