



Contribution ID: 182

Type: **Contributed talk**

Flow phenomena at high nuclear densities with HADES

Thursday, 11 July 2024 15:00 (20 minutes)

The study of strongly interacting matter under extreme conditions is one of the most important topics in the exploration of Quantum Chromodynamics (QCD).

In this talk, we highlight new measurements by HADES, the *High-Acceptance Dielectron Spectrometer* located at the SIS18 at GSI in Darmstadt, which is currently the only experimental setup with the unique ability to measure rare and penetrating probes at the high- μ_B frontier of the QCD phase diagram.

We discuss recent high statistics results on collective flow phenomena in Au+Au and Ag+Ag collisions. Moreover, flow coefficients v_n up to the 6th order are investigated for the first time in this energy regime. Their combined information allows to construct for the first time a full 3D picture of the angular particle emission in momentum space. The multi-differential analysis in different centrality classes over a large region of phase space will be shown and various scaling properties will be discussed.

The data provide essential constraints for theoretical transport models utilised in the determination of the properties of dense baryonic matter, such as its *viscosity* and *equation-of-state* (EOS).

Supported by the Helmholtz Forschungsakademie HFHF and the BMBF grant 05P21RFFC3.

session

G. Heavy Ion Physics

Primary author: KARDAN, Behruz (Goethe-University Frankfurt (IKF))

Presenter: KARDAN, Behruz (Goethe-University Frankfurt (IKF))

Session Classification: G. Heavy Ion Physics