

XXV International Baldin Seminar on High Energy Physics Problems  
"Relativistic Nuclear Physics and Quantum Chromodynamics"



XXV International Baldin Seminar  
on High Energy Physics Problems  
*Relativistic Nuclear Physics & Quantum Chromodynamics*

September 18 - 23, 2023, Dubna, Russia

Contribution ID: 52

Type: **not specified**

## Elliptic flow fluctuations at NICA energy range

*Thursday, 21 September 2023 09:40 (20 minutes)*

The main purpose of the MPD experiment at NICA collider is to explore the QCD phase diagram of strongly interacting matter produced in nucleus-nucleus collisions at  $\sqrt{s_{NN}} = 4 - 11$  GeV. The anisotropic flow of produced particles is one of the important observables sensitive to the transport properties of such matter. The relative elliptic flow fluctuations are of intense interest since they can be used as a probe for the initial conditions using the ratio of cumulants  $v_2\{4\}/v_2\{2\}$ .

In this work, we study the magnitude of elliptic flow fluctuations characterized by the ratio of cumulants  $v_2\{4\}/v_2\{2\}$  using the state-of-the-art models of heavy-ion collisions at  $\sqrt{s_{NN}} = 5 - 7$  GeV.

**Primary authors:** DEMANOV, Alexander; PARFENOV, Peter (MEPhI, Moscow); TARANENKO, Arkadiy (VBLHEP JINR)

**Presenter:** DEMANOV, Alexander

**Session Classification:** Parallel: Relativistic heavy ion collisions