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Kaon flow in Au+Au collisions at 1.23AGeV measured with HADES

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We present results on the anisotropic transverse flow of kaons (K^+, K^0_S and K^-) in Au+Au collisions at $\sqrt{s_{\rm NN}} = 2.42\,\rm GeV$ measured with HADES. It was proposed already in the mid-nineties that kaon flow close to its production threshold might be a good probe for the kaon-nucleon potential and, consequently, for the nuclear equation-of-state (PRL 74 (1995) 235). The presented analysis was performed on more than 2 billion events of the 40% most central collisions which opened the possibility to analyze kaon flow differentially as a function of transverse momentum, rapidity and centrality, even in this low energy regime. The measurements are compared to microscopic transport model predictions and to other data at similar collision energies. Implications on the properties of compressed nuclear matter will be discussed.

Primary author: CHLAD, Lukáš (Nuclear Physics Institute of the CAS)

Presenter: CHLAD, Lukáš (Nuclear Physics Institute of the CAS)

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