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D^0 production in U+U collisions at $\sqrt{s_{NN}} = 193$ GeV at the STAR experiment

The relativistic heavy-ion collisions at RHIC in Brookhaven National Laboratory allow to produce a hot and dense nuclear matter - the Quark-Gluon Plasma (QGP). During the initial phase of the collision, enough energy is released from the hard scattering to produce the heavy quarks such as charm and bottom. The measurement of the production of mesons containing heavy quarks, such as D^0 , in heavy ion collision is important to understand the properties of QGP. Due to their large mass, heavy quarks do interact differently with QGP than light quarks. The STAR experiment previously measured the production of charm mesons via hadronic channels in p+p, d+Au and Au+Au collisions. Heavy quarks were observed to be strongly suppressed in Au+Au at high pT. As U+U collision should produce even higher energy density, new information on heavy quark energy loss could be acquired.

In this poster, the status of D^0 measurement in U+U collisions at $\sqrt{s_{NN}} = 193$ GeV via hadronic decay channel $D^0 \rightarrow \pi^+ + K^-$ performed by STAR experiment is presented.

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