

Leptonic decay of $\phi(1020)$ meson measured with the STAR experiment

Hadronic resonances can play a pivotal role in providing experimental evidence for partial chiral symmetry restoration in the deconfined quark-gluon phase produced at RHIC and the LHC. Their lifetimes, which are comparable to the lifetime of the fireball, make them a valuable tool to study medium modifications to the resonant state due to the chiral phase transition signatures of mass shifts and/or width broadenings. This can be done via the leptonic decay of resonances, however hadronic regeneration of resonances feeds into this signature as well.

We will present the measurement of $\phi(1020)$ at mid-rapidity in p+p collisions and the preliminary results of the resonance signal in Au+Au collisions at 200 GeV using the STAR upgrade Time of Flight detector for electron identification.

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