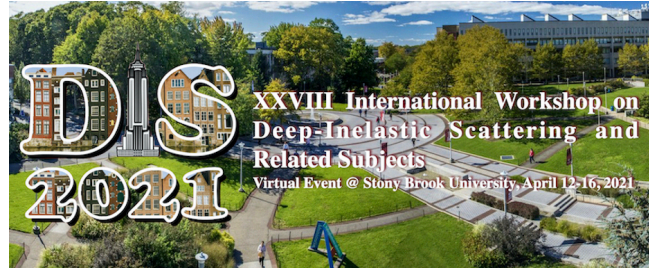


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J/ψ production in jets in p+p collisions at $\sqrt{s} = 500$ GeV by STAR

Tuesday, 13 April 2021 09:43 (18 minutes)

The suppression of J/ψ production caused by the color-screening effect in heavy-ion collisions is considered as an evidence of the creation of quark-gluon plasma. To interpret the observed suppression in heavy-ion collisions, a good understanding of its production mechanism in p+p collisions is needed. However, the production of J/ψ in hadronic collisions remains not fully understood and requires further studies. Recently, J/ψ production in jets was proposed as a useful observable to help explore the J/ψ production mechanism, and to differentiate various J/ψ production models.

In this talk, we will present the measurement of the fraction of charged jet transverse momentum (p_T) carried by the J/ψ meson, $z(J/\psi) \equiv p_T(J/\psi)/p_T(jet)$, at mid-pseudorapidity ($|\eta| < 1$) with kinematic cuts of $p_T(J/\psi) > 5$ GeV/c and $p_T(jet) > 10$ GeV/c in p+p collisions at $\sqrt{s} = 500$ GeV by the STAR experiment. The comparison to model calculations and similar measurements carried out at the LHC will be presented, and its physics implications will be discussed.

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