

Measurement of an excited charmonium state in PHENIX experiment at RHIC

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Measuring the feed down of ψ' to J/ψ production is one of the main ingredients to obtain information on J/ψ prompt production as well as to understand its anomalous suppression observed in AA collisions at RHIC.

The PHENIX Collaboration has studied charmonium production in $p+p$ collisions at RHIC using the sample collected during the 2006 data taking period through its decays into the dielectron channel at mid rapidity. This high statistics data set allows us to study the ψ' to J/ψ ratio at RHIC energies.