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Recent Quarkonia Studies from the PHENIX Experiment

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Quarkonia breaking in nucleus-nucleus collisions is a powerful tool to probe density and temperature of the medium created in heavy ion collisions. Forward rapidity measurements in $p(d)+\text{Au}$ collisions are essential to understand how quarkonia states are affected by initial state effects, formation time, and local particle multiplicity. Earlier measurements in Au+Au collisions showed a stronger suppression of forward J/ψ s compared to mid-rapidity results, indicating the possibility of a smaller contribution of regenerated quarkonia states at forward rapidity.

This presentation will report on the latest quarkonia studies performed by the PHENIX collaboration in the rapidity range $1.2 < |y| < 2.2$, including (i) the nucleus size dependence of the J/ψ nuclear modification factor in $p+\text{Au}$, $p+\text{Al}$ and ${}^3\text{He}+\text{Au}$ collisions; (ii) the status of recent analyses of Υ states in $p+p$, $p+\text{Au}$, and in the large statistics 2014 Au+Au data set, the largest data set obtained by PHENIX.

Content type

Experiment

Collaboration

PHENIX

Centralised submission by Collaboration

Presenter name already specified

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