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Hadroproduction of Charmonium Excited States and Bottomonium at $\sqrt{s_{NN}} = 200\text{GeV}$ Measured by PHENIX Detector CESAR L. SILVA, Iowa State University, PHENIX COLLABORATION — During the last few years RHIC has demonstrated sizable medium effects on the inclusive J/ψ yields in heavy ion collisions. Feed-down contributions, mainly from excited charmonium states χ_C and ψ' , should be considered when comparing the measured production and medium modification factors with theoretical models. Relative production between different charmonium states can also provide insights about the production mechanisms, different hadronic absorption or breakup cross sections and sequential charmonium dissociation in sQGP. Bottomonium measurements can probe the same physics involved in charmonium, but with more reliable theoretical production calculations, no important coalescence at RHIC energies and a presumed higher dissociation temperature. In this presentation we will show recent measurements of χ_c , ψ' in $p+p$ collisions, $\Upsilon(1S,2S,3S)$ in $p+p$ and Au+Au collisions, the progress towards these similar measurements in $d+\text{Au}$ collisions as well as expected advances using upcoming detector upgrades in PHENIX.

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