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Quarkonium production in Pb+Pb collisions with ATLAS

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The experimentally observed dissociation and regeneration of bound quarkonium states in heavy-ion collisions provide a powerful tool to probe the dynamics of the hot, dense plasma. These measurements are sensitive to the effects of color screening, color recombination, and possibly to other, new phenomena affecting dynamics of heavy quarks in the QCD medium. In the large-statistics Run 2 lead-lead collision data, these phenomena can be probed with unprecedented precision. In this talk, the new ATLAS results on bottomonium nuclear modification factor and excited-to-ground state ratio using 2018 Pb+Pb data and 2017 pp data both at 5.02 TeV will be presented as a function of transverse momentum and event centrality. Additionally, new measurements on the correlation of the J/ψ and jet production will be presented, which may help understanding the mechanism of the suppression of J/ψ measured at high transverse momenta of few tens of GeV.

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