

5th International workshop on heavy quark production in heavy-ion collisions



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Recent results on quarkonium and open bottom suppression in PbPb collisions at the LHC with CMS

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The Compact Muon Solenoid (CMS) has measured various quarkonium states via their decays into muon pairs in pp and PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. Quarkonia are especially relevant for studying the quark-gluon plasma since they are produced at early times of the collision and propagate through the medium, mapping its evolution. The most recent results on the production of prompt J/ψ , $\psi(2S)$ and the first three Y states will be presented. At high transverse momenta ($p_T > 6.5$ GeV) and midrapidity ($|y| < 1.6$), $\psi(2S)$ are found to be more suppressed in PbPb collision than J/ψ . Also the nuclear modification factors of the three Y states are found to decrease with decreasing binding energy, as expected in a sequential melting scenario. Furthermore, the nuclear modification factor of non-prompt J/ψ from b-hadron decays gives access to study the energy loss of b-quarks in the quark-gluon plasma.

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