

Measurement of $J/\psi \rightarrow e^+e^-$ Production in Pb-Pb Collisions at $\sqrt{s} = 2.76$ TeV with ALICE at the LHC

The investigation of the properties of strongly interacting matter under extreme conditions is the aim of the LHC heavy ion program. Quarkonia states such as the J/ψ will provide insights into the earliest and hottest stages of heavy ion collisions where the formation of a Quark-Gluon Plasma (QGP) is expected.

Measuring these bound states of heavy quarks via their dileptonic decay modes is one of the goals of the ALICE experiment. We will present the current status of the challenging J/ψ analysis in the electronic decay channel at $\sqrt{s} = 2.76$ TeV in Pb-Pb collisions. Invariant mass spectra as well as first estimates of J/ψ yields are obtained using the tracking and particle identification capabilities of the Inner Tracking System (ITS), the Time Projection Chamber (TPC) and the Time of Flight (TOF).

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Track Classification: Heavy flavor and quarkonia production