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Feasibility studies of charmonia measurements at the ALICE experiment at LHC

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The ALICE collaboration is committed towards strongly interacting matter studies in proton-proton and heavy ion collisions at LHC, one of the characteristic observables of which are systematic measurements of quarkonia production with the future experiment of ALICE 3. Fast simulations for ALICE 3 showed that studies of charmonia states 1S ($J/\psi \to e^+e^-$) and 1P ($\chi_{cJ} \to J/\psi\gamma$ using a high-resolution electromagnetic calorimeter are attainable. Charmonia reconstruction via e^+e^- decay mode relies on electron identification using a tracking system and an electromagnetic calorimeter. In the current report we demonstrate performance of electron identification procedure on data of the ALICE experiment collected during LHC Run 3 with pp collisions at $\sqrt{s} = 13.6$ TeV.

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