

Probing the hot QCD matter via quarkonia at the next-generation heavy-ion experiment at LHC

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Quarkonia represent one of the most valuable probes of the deconfined quark-gluon hot medium since the very first experimental studies with ultrarelativistic heavy-ion collisions. A significant step forward in characterizing the QCD matter via systematic studies of quarkonia production will be performed by the next-generation heavy-ion experiment ALICE 3 [1], a successor of the ongoing ALICE experiment at the Large Hadron Collider. The new advanced detector of ALICE 3 will allow for exploring production of S- and P-state quarkonia at high statistics at low and moderate transverse momenta range. Performance of the ALICE 3 for quarkonia measurements and requirements for the detectors will be discussed in the talk.

1. ALICE Collaboration, Letter of intent for ALICE 3: A next-generation heavy-ion experiment at the LHC. CERN-LHCC-2022-009, LHCC-I-038

The speaker is a student or young scientist

No

Section

1. Intermediate and high energies, heavy ion collisions

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