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Quarkonium production in pp and p-Pb collisions with ALICE at the LHC

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Quarkonium production at LHC energies proceeds mainly via gluon fusion on relatively short timescales. The measurement of quarkonium cross sections and kinematical distributions in pp collisions allows one to test available production models. The measurement of such observables in p-Pb collisions provides access to the nuclear modifications of parton distribution functions and to other so-called cold nuclear matter effects. For both colliding systems, the study of quarkonium production as a function of the charged-particle multiplicity provides information on the interplay between the hard and soft sector of QCD.

The inclusive production of charmonium and bottomonium is measured by ALICE down to zero transverse momentum in the forward rapidity region ($2.5 < y < 4.0$). Charmonium production is also measured down to zero transverse momentum at mid-rapidity ($|y| < 0.9$), where the non-prompt contribution from beauty-hadron decays can be separated.

The ALICE results on quarkonia in pp and p-Pb collisions will be presented for a wide range of centre-of-mass energies, and compared to theoretical models.

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