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Quarkonia production at LHCb

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Studies of quarkonia production in the forward region provide important tests of NRQCD. The LHCb experiment has collected a dataset corresponding to an integrated luminosity of about 3 fb-l in proton-proton collisions at sqrt(s)= 2.76, 7 and 8 TeV. We present studies of the production and polarisation of the J/psi, psi(2S) and chi_c charmonium states as well as those of Upsilon and chi_b bottomonia. Absolute and relative production cross-sections are presented and compared to the most recent theoretical predictions when available.

The latest years have seen a resurrection of interest in searches for exotic states motivated by tantalising observations by Belle and CDF. Using the data collected at pp collisions at 7 and 8 TeV by the LHCb experiment we present studies of the X(3872) properties including its decay rate to Psi(2S)gamma, as well as studies of putative states such as the Z(4430)+.

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