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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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