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## Measurement of the $\Lambda(b)$ polarization and angular parameters in $\Lambda(b) \rightarrow J/\psi \Lambda$ decays from pp collisions at root s=7 and 8 TeV

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### Abstract


An analysis of the bottom baryon decay  $\Lambda(b) \rightarrow J/\psi(-\rightarrow \mu(+)\mu(-))\Lambda(b) \rightarrow p \pi(-)$  is performed to measure the  $\Lambda(b)$  polarization and three angular parameters in data from pp collisions at root s = 7 and 8 TeV, collected by the CMS experiment at the Large Hadron Collider. The  $\Lambda(b)$  polarization is measured to be  $0.00 \pm 0.06(\text{stat}) \pm 0.06(\text{syst})$  and the parity-violating asymmetry parameter is determined to be  $0.14 \pm 0.14(\text{stat}) \pm 0.10(\text{syst})$ . The measurements are compared to various theoretical predictions, including those from perturbative quantum chromodynamics.

### Keywords


















KeyWords Plus: WEAK DECAYS; BARYONS

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