

The LHCb state $P\Lambda_{\{\psi s\}}$ (4338) as a triangle singularity

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We present a model for the $J/\psi \Lambda$ spectrum in $B^- \rightarrow J/\psi \Lambda \bar{p}$ decays, including the $P\Lambda_{\{\psi s\}}$ (4338) baryon recently observed by the LHCb collaboration. We assume production via triangle diagrams which couple to the final state via non-perturbative interactions which are constrained by heavy-quark and SU3-flavor symmetry. The bulk of the distribution is described by a triangle diagram with a color-favored electroweak vertex, while the sharp $P\Lambda$ (4338) enhancement is due to the ψ/s triangle singularity in another diagram featuring a $1/2^-$ baryon consistent with $\Sigma_c(2800)$.

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