

Study of $J/\psi(\psi') \rightarrow Y\bar{Y}$ Decays in Quark Model

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Abstract: Exclusive decays $J/\psi(\psi') \rightarrow Y\bar{Y}$ ($Y=\Lambda, \Sigma^0, \Xi^-$) are studied in the quark model by combining the structure of hyperons in the transition. The branching ratios are evaluated contrastively by adopting different hyperon wavefunctions, SU(6) basis, and uds basis, which account for SU(3)_f breaking, and the results show that the different description of quark mass breaking plays an important role in the evaluation of the decay width for processes $J/\psi(\psi') \rightarrow Y\bar{Y}$.

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