

Isospin violation in the decays of vector charmonia into $\Lambda\bar{\Sigma}^0 + \text{c.c.}$

Thursday, 17 December 2020 16:45 (25)

Assuming the isospin conservation, the electromagnetic amplitudes of the decays $\psi \rightarrow \Lambda\bar{\Sigma}^0 + \text{c.c.}$, where $\psi = J/\psi, \psi(2S)$, and of the processes $e^+e^- \rightarrow \Lambda\bar{\Sigma}^0 + \text{c.c.}$ at the ψ mass are parametrized by the same coupling. By using BESIII and BABAR data we find a substantial discrepancy between the values of the modulus of the same electromagnetic coupling extracted from the branching ratios and the cross sections. This fact suggests the presence of isospin-violating contributions, especially in the $\psi(2S)$ case.

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Session Classification : Session 6