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Constraints imposed by partial wave amplitudes in the decays of J=1,2 mesons

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We study the two body decay of mesons using the covariant helicity formalism. We find that to explain the ratio of partial wave amplitudes of the decay processes, the Lagrangian must include operators with dimension>4. We estimate the coupling constants in the cases of $1^{++}\longrightarrow 1^{--}0^{-}$, $1^{+-}\longrightarrow 1^{--}0^{-}$, $2^{-+}\longrightarrow 2^{++}0^{-}$, and $2^{-+}\longrightarrow 1^{--}0^{-}$ decays by fitting the ratio of the derived partial wave amplitudes and the partial decay widths to the available data. We estimate the ratios of the partial waves for the like decays where data are not available.

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