

XXV DAE-BRNS High Energy Physics Symposium 2022



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S-wave charm and bottom baryons in HQET

Tuesday 13 December 2022 14:00 (1 hour)

The HQET Lagrangian containing the non-perturbative parameters ($\bar{\Lambda}$, λ_1 , and λ_2) are studied for S-wave singly heavy baryons. The mass formulae are used to estimate these parameters for $n = 1$ singly heavy charm and bottom baryons. The symmetry of these parameters is used to calculate the masses of radially excited heavy baryons. Also, the ratio of the $\frac{1}{m_1}$ order mass terms with the $\frac{1}{m_Q}$ order mass terms are varied with the heavy quark mass. This study can be expanded for orbitally excited states also.

Session

Quark and Lepton Flavour Physics

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Session Classification: Poster - 2