Contribution ID: **1100** Type: **Parallel session talk**

Λb ⟶ Λ_cˆ* at O(1/m_cˆ2) in heavy quark expansion

Friday 19 July 2024 09:45 (15 minutes)

We systematically compute the Λb(p,sb)⟶Λc(2595)+ and Λb(p,sb)⟶Λc(2625)+ form factors within the heavy quark effective theory (HQET) framework including O(1/mˆc_2) contributions. Besides taking into account the Standard Model–like vector and axial contributions, we further determine tensor and pseudotensor form factors. Our work constitutes a step forward with respect to previous analyses allowing for a comprehensive study of the matrix element parametrization stemming from the HQET formalism. Finally, we demonstrate that the resulting form factors are in agreement well with lattice quantum chromodynamics (LQCD) determinations. We show that the newly derived 1/m_cˆ2 corrections are necessary to reconcile LQCD results with HQET computations.

Alternate track

1. Quark and Lepton Flavour Physics

I read the instructions above

Yes

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Session Classification: Quark and Lepton Flavour Physics

Track Classification: 05. Quark and Lepton Flavour Physics