

Lifetimes of heavy baryons

Tuesday, 11 April 2023 15:14 (22 minutes)

We present our predictions for lifetimes, lifetime ratios and semileptonic decay widths of single-charm (bottom) and double-charm baryons within the Heavy Quark Expansion (HQE) framework, including all known corrections. In contrast to earlier findings, our results accommodate the experimentally-favoured hierarchy of the singly charmed baryons. In the double-charm sector, we find a good agreement with the experimental value for the lifetime of Ξ_{cc}^{++} , and give predictions for the remaining two unmeasured lifetime ratios. Furthermore, we find an excellent agreement between the data and the experiment for the case of single-bottom baryons.

Primary author: NIŠANDŽIĆ, Ivan (Ruđer Bošković Institute)

Presenter: NIŠANDŽIĆ, Ivan (Ruđer Bošković Institute)

Session Classification: Flavor, SM

Track Classification: Flavour