

Excited charm baryons

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in collaboration with

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We discuss **diquark mass spectrum in excited charm (bottom) baryons**. The diquark is defined as the “brown muck” with a conserved total spin and a parity j^p , i.e. everything other than the heavy quark, in the heavy hadron [1,2]. Based on the results from the constituent quark model [3] and experiments, we show the diquark mass spectrum. To investigate the higher excited charm (bottom) baryons, which are unknown in experiments yet, is important to understand the diquarks with several new j^p systematically, in addition to the known “good diquark (0^+)” and “bad diquark (1^-)”.

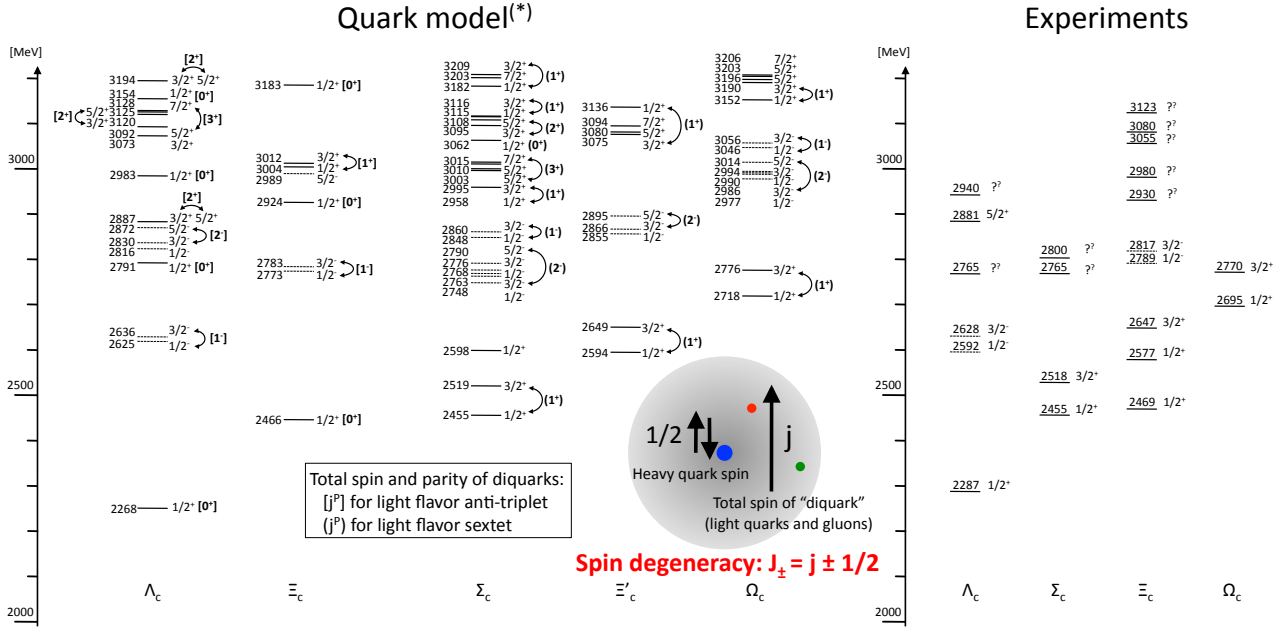
Refs. [1] S. Yasui, K. Sudoh, A. Hosaka, Y. Yamaguchi, S. Ohkoda, T. Hyodo, Phys. Lett. B727, 185 (2013).

[2] Y. Yamaguchi, S. Ohkoda, A. Hosaka, T. Hyodo, S. Yasui, to appear.

[3] M. Robets, M. Pervin, Int. J. Mod. Phys. A23, 2817 (2008).

Charm (cqq)

(^{*}) We use the mass values and the multiplet assignments from the quark model calculation ($N \leq 2$) in Ref. [3].



Bottom (bqq)

