

Can we describe heavy baryons in terms of a pion mean field?

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Viewing a heavy baryon as a system consisting of the $N_c - 1$ light quarks that induce the pion mean field, and a heavy quark as a static color source under the influence of this mean field, we derive a number of model independent relations and calculate the heavy baryon masses using as an input light baryon properties. The results are in remarkable agreement with the experimental data. In addition, the mass of the Ω_b^* baryon is estimated. A possibility of applying the same scheme to the doubly heavy $\{q_1 q_2 QQ\}$ tetraquarks is also discussed.

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