

Single heavy baryon study via spectra and decay width

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We present a study on single heavy baryons' spectra and strong decay widths. The masses of single heavy baryons up to the D-wave are calculated within a constituent quark model, employing the three-quark and quark-diquark schemes. In this contribution, we discuss the possible assignment of the recently discovered $\Omega_c^0(3327)$, $\Lambda_b(6146)^0$, $\Lambda_b(6152)^0$, $\Xi_b(6327)^0$, and $\Xi_b(6333)^0$ as D-wave excited states in the charm and bottom sectors, respectively. Additionally, we discuss the $\Lambda_b(6070)^0$ assignment and why the presence or absence of the ρ -mode excitations in the experimental spectrum is the key to distinguishing between the quark-diquark and three-quark behaviors.

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