

7. Masses of Charmed and Bottom Tetraquarks in the Relativistic Quark Model

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Heavy tetraquark states are studied within the diquark-antidiquark picture in the framework of a simple relativistic constituent quark model. We solve the Dirac equation of two-body systems by using an appropriate Ansatz. Considering hyperfine spin-isospin interaction, we predict the masses of the scalar diquarks and of the open and hidden charmed and bottom scalar tetraquarks. Our results indicate the scalar resonances $D_0^*(2400)$ and $D_s^*(2632)$ have a sizable tetraquark amount in their wave function, while it turns out the scalar states $D_{s0}^*(2317)$ and $X(3915)$ should not be considered as being predominately diquark-antidiquark bound states.

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