

粒子与场

D and D_s in mass loaded flux tube

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摘要

Heavy-light hadrons are studied in a mass loaded flux tube model. The study indicates that the dynamics of mesons and baryons containing a c quark is described well by the mass loaded flux tube. The hypothesis of good diquark-antiquark degeneracy is found reasonable in heavy-light quark systems. The spectrum of charmed (D) and charmed strange (D_s) mesons is systematically computed. D and D_s in 1D multiplets are predicted to have lower masses in comparison with other theoretical predictions. The predicted masses of the $1^-(1^3D_1)$ and the $3^-(1^3D_3)$ D_s agree well with those of recently observed $D_{s1}(2700)^\pm$ and $D_{sJ}(2860)$, respectively.

关键词

[flux tube model](#), [diquark](#), [charmed mesons](#), [charmed strange mesons](#)

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