原子核物理评论 2009 26 (Suppl): 39-43 ISSN: 1007-4627 CN: 62-1131/O4

Proceedings of the 3rd China-Japan-Korea Hardron and Nuclear Physics 2008 Symposium

Z+(4430) and Analogous Heavy Flavor States

DING Gui-jun

(Department of Modern Physics, University of Science and Technology of China, Hefei 230026, China)

收稿日期 修回日期 网络版发布日期 接受日期

摘要 We have studied Z+(4430)as a D*D1 molecule from the quark model, state mixing effect is considered by solving the coupled channel Schr dinger equation numerically. More precise measurements of Z+(4430)mass and width, partial wave analysis are helpful to understand its structure. If it lies below the D*D1 threshold, molecule interpretation with JP=1- is favored, and JP=0- can not be ruled out. Otherwise Z+(4430)may be a virtual state with JP=2-. The analogous heavy flavor mesons Z+bb and Z++bc are considered as well, and the masses predicted in our model are in agreement with the predictions from the potential model and QCD sum rule.

关键词 nonrelativistic quark model hadronic molecule coupled channel analysis

分类号

DOI:

通讯作者:
DING Gui-jun dinggj@ustc.edu.cn
作者个人主页: DING Gui-jun