

Abstract Submitted
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Exotic Charm Mesons X(3872) and Z(4430) with Multi-Hadronic Components MAKOTO TAKIZAWA, Showa Pharmaceutical University, SACHIKO TAKEUCHI, Japan College of Social Work — In order to understand the structure of the X(3872), we have studied the effects of the $c\bar{c}$ core state coupling to the multi-hadronic states such as $D^0\overline{D^{0*}}$, $\rho J/\psi$ etc. We have calculated the transition strength $S(E)$ using the Green's function approach with the simple solvable interactions. We have also studied the $S(E)$ in the case of no $c\bar{c}$ core state, namely, the $D^0\overline{D^{0*}}$ molecule. Since the calculated shapes of the transition strengths are different from each other, we shall be able to determine the degree of the mixing of the $c\bar{c}$ state in the X(3872) from the shape of the energy spectrum. We shall also study the structure of the Z(4430) in the similar approach, namely, the tetraquark core state coupling to the $D^*(2010)D_1(2420)$, $\pi\psi'$, etc. in the Green's function approach.

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