

Reaction of T_{cc} states of D^*D^* and $D_s^*D^*$ molecular nature

Thursday, June 8, 2023 3:30 PM (30 minutes)

We extend the theoretical framework used to describe the T_{cc} state as a molecular state of D^*D and make predictions for the D^*D^* and $D_s^*D^*$ systems, finding that they lead to bound states only in the $J^P = 1^+$ channel. Using input needed to describe the T_{cc} state, basically one parameter to regularize the loops of the Bethe-Salpeter equation, we find bound states with bindings of the order of the MeV and similar widths for D^*D^* system, while the $D_s^*D^*$ system develops a strong cusp around threshold.

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