

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

*Thursday, 8 June 2023 15:30 (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.

**Primary authors:** DAI, Lianrong; MOLINA, Raquel; OSET, Eulogio

**Presenter:** DAI, Lianrong

**Session Classification:** Exotic hadrons and candidates

**Track Classification:** Exotic hadrons and candidates