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Towards quark mass dependence of Tcc

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I will present how the DD*scattering amplitude and the pole positions in Tcc channel vary with the charm and the light-quark masses. This will be based on our lattice results for five charm quark masses and results by other groups for various light-quark mass. Effective Field Theory for DD* interaction mediated by pions implies attraction at short range and a slight repulsion at long range mediated by one-pion exchange for mpi > mD*-mD. The pion exchange manifests as a left-hand cut in the partial wave projected scattering amplitude, which is accounted for in our analysis. Tcc pole transitions between a resonance, virtual and bound state as charm and light quark masses are varied.

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