

# Structure of doubly charm exotic state $T_{cc}$ from lattice QCD

*Wednesday, 3 July 2024 09:30 (30 minutes)*

It has recently been understood that the emergence of left-hand cuts from long-range interactions creates significant complications in extracting infinite-volume observables from lattice QCD finite-volume spectra:

- (i) the famous Lüscher method fails below the left-hand cut and
- (ii) the effective range expansion used to extract the low energy parameters has a very limited domain of validity.

We will introduce an alternative approach based on chiral EFT which overcomes both difficulties due to the explicit inclusion of long range forces. Recent application of this approach to extract the properties of the  $T_{cc}$  state at larger than physical pion masses will be discussed.

**Primary author:** BARU, Vadim (Ruhr University Bochum)

**Presenter:** BARU, Vadim (Ruhr University Bochum)

**Session Classification:** Talks