

# Revealing the puzzle of the two $D_0^*$ resonances from analysis of Lattice QCD

*Saturday, 27 June 2026 15:00 (2 hours)*

One or two  $D_0^*$  resonances with strangeness  $S = 0$ , isospin  $I = 1/2$  dynamically generated in pseudo-scalar meson octet and heavy mesons scattering are still a puzzle. In this talk, I will present that there are two  $D_0^*$  resonances generated by ChPT up to NLO. The LECs of the interaction are constrained by the energy levels simulated by LQCD in  $(S, I) = (0, 1/2)$ ,  $(1, 0)$ ,  $(-1, 0)$ , and  $(-1, 1)$  sectors. By studying the pion mass dependence of the two resonances and extrapolating to SU3 flavor symmetry point, we show that one resonance is connected to irreducible presentation **3**, and the other resonance is connected to **6**.

## Collaboration

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