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Doubly charm tetraquark and its quark mass dependence

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The doubly charm tetraquark with exotic quark composition $cc\bar{u}\bar{d}$ is the longest-lived exotic hadron discovered in the experiment. Our lattice simulation establishes a virtual bound state pole in DD* scattering at $m_\pi \simeq 280$ MeV, which is likely related to this state. We discuss the expected dependence of this hadron on the light and heavy quark masses, and compare it to the lattice results.

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