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### **Investigating a doubly bottomed tetraquark with lattice QCD**

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Tetraquarks, states composed of four valence quarks, have been predicted to exist in quantum chromodynamics (QCD) since its inception. Using lattice QCD, a regularization of QCD on a finite-volume space-time grid, we investigate the spectrum of the doubly bottom four-quark system with isospin 0 and  $J^P = 1^+$ . We construct a correlation matrix of local four-quark and non-local two-meson interpolating fields and determine the finite volume spectrum from its euclidean time evolution. A chiral extrapolation performed on five different gauge ensembles results in a  $\bar{b}bud$  tetraquark mass of  $(10476 \pm 24 \pm 10)$  MeV.