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Tetraquarks $\bar{b}\bar{b}ud$, $I(J^P) = 0(1^-)$ and $\bar{b}\bar{c}ud$ with $I(J^P) = 0(0^+), 0(1^+)$ from Lattice QCD Static Potentials

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We use existing antistatic-antistatic potentials computed with two flavors of twisted mass fermions to study antiheavy-antiheavy-light-light four-quark systems in the Born-Oppenheimer approximation. We do not only compute masses of bound states, but also search for poles in the scattering amplitude above the lowest meson-meson threshold, to detect resonances and determine their parameters. We include effects due to the heavy quark spins, by considering coupled channel Schroedinger equations and using the experimentally measured mass splittings of the B and B^* meson as input. We present indications for a $\bar{b}\bar{b}ud$ tetraquark resonance with quantum numbers $I(J^P) = 0(1^-)$ close to the B^*B^* threshold. We also discuss first results for $\bar{b}\bar{c}ud$ systems with $I(J^P) = 0(0^+)$ and $I(J^P) = 0(1^+)$.

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