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Lattice QCD study of excited hadron resonances

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The spectrum of excited hadron resonances in QCD is studied using Monte Carlo path integration techniques formulated on a large $32^3 \times 256$ anisotropic space-time lattice. A large number of probe interpolating operators are used, and calculation
of temporal correlations is accomplished using a stochastic method of treating the low-lying modes of quark propagation that exploits Laplacian Heaviside quark-field smearing. An effective Hamiltonian is used to interpret the finite-volume energies and determine the
masses and widths of the resonances. Changes to the spectrum upon introducing a variety of tetraquark operators is investigated.

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