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A novel method for evaluating hadronic correlation functions in Lattice QCD spectroscopy.

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We describe a new method for evaluating hadronic correlation functions, which combines Laplacian Heaviside (Laph) quark-field smearing with a stochastic estimator. The algorithm utilizes noise dilution in a new way to reduce the variance in euclidean-time correlators. This approach to correlator evaluation facilitates precision studies of the hadron spectrum, including flavor-singlet mesons and multi-particle states, on realistic lattice volumes.

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talk

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