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## Towards a high-precision description of the $\rho$ and $K^*$ resonances

*Tuesday 12 September 2023 16:00 (30 minutes)*

We present preliminary results for the  $K^*(892)$  and  $\rho(770)$  resonances extracted from lattice QCD data using Lüscher's finite-volume formalism. We review the theory and techniques involved in our computation of correlation functions and extraction of energy levels from an RBC-UKQCD  $N_f = 2 + 1$  domain-wall fermion lattice with a physical pion mass. We consider lattice irreducible representations with only leading  $P$ -wave contributions and use the corresponding finite-volume spectra to constrain the  $K\pi$  and  $\pi\pi$  scattering amplitudes. We study systematic errors resulting from the choice of fit ranges through a model-averaging technique.

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