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Towards a high-precision description of the ρ and K^* resonances

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We present preliminary results for the $\rho(770)$ and $K^*(892)$ resonances using the Lüscher method. This work employs distillation on an RBC-UKQCD $N_f = 2 + 1$ domain-wall fermion lattice with a physical pion mass. We consider irreducible representations with only leading P -wave contributions and extract the associated low-lying energy levels. These are used to parametrise the scattering phase shifts. We study systematic errors resulting from the choice of fit ranges through a model-averaging technique.

Topical area

Hadronic and Nuclear Spectrum and Interactions

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