

Low-energy pion-nucleon scattering and the Delta resonance in lattice QCD

Wednesday, June 12, 2019 2:30 PM (30 minutes)

We report on our investigation of low-energy pion-nucleon scattering from lattice QCD with Wilson-type fermions.

Our focus is on the isospin $I = 3/2$ channel, which couples to the Delta resonance.

We discuss our calculations aiming at the extraction of the Delta resonance mass, width and effective coupling at pion mass

250 MeV and the physical point, using the Lüscher finite-volume method to extract the phase shift $\delta_{J=3/2, l=1}$.

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