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Dispersive determination of low energy pi K interactions

The determination of low energy πK scattering has been subject to debate during many years. The precise and robust extraction of these processes is relevant for both experimentalist and phenomenologists. In particular, the low energy expansion of the partial waves offers rich information for chiral perturbation theory practitioners and can be compared to modern lattice QCD calculations. Furthermore, the long debated $\kappa/K_0^*(700)$ resonance lives in the vecinity of the $I = 1/2\,\pi K$ scalar threshold. In this talk we present a dispersive, model-independent determination of these low energy interactions, including the low energy expansion parameters, and compare them to previous determinations. We first use a large set of dispersion relations as constrains on combined fits to $\pi K \to \pi K$ and $\pi\pi \to K\bar{K}$ data. Then we implement different sum rules to extract these low energy parameters, producing a final set of data driven dispersive results.

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