Preprint Series in Particles and Cosmos Physics

nº IPARCOS-UCM-24-021

IPARCOS

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f_0(1370) and f_0(980) controversies from dispersive data analyses

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March 2024

Plaza de las Ciencias, 1 28040 Madrid, Spain

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Abstract

We report on our recent works on dispersive analyses of pion-pion into pion pion or and kaon-antikaon scattering data and their use to address two controversial aspects of the f_0(1370) and f_0(980)$scalar mesons. First, to show with model-independent techniques that the f_0(1370) pole does indeed appear in meson-meson scattering data, although there is tension between its values in the pion-pion and kaon-antikaon channels. Second, the proper interpretation of the f_0(980) pole residue, which would otherwise lead to branching ratios larger than one. We have also provided simple $pion-pion to pion-pion data parameterizations that implement both features together with other resonances while respecting various dispersive constraints.

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