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Goldstone Scattering with a Light Composite Scalar

Thursday, 29 July 2021 14:00 (15 minutes)

In this talk, we present a lattice study of the scattering of pseudo-Goldstone Bosons in $SU(3)$ gauge theory with $N_f = 8$ light Dirac fermions, a theory which lies close to the boundary of the conformal window. The scattering phase shift is measured in the s-wave, maximal isospin channel for different values of the scattering momentum, as well as for different values of the underlying fermion mass. A light singlet scalar in the spectrum has been reported in earlier studies, and its effect on the scattering of pseudo-Goldstones is examined by comparing the lattice measurements to a dilaton EFT.

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