

Abstract Submitted
for the DNP19 Meeting of
The American Physical Society

Scattering in a Finite, Minkowski 1+1D Lattice ALEXANDRU STURZU, New College of Florida, RAUL BRICENO, Thomas Jefferson National Accelerator Facility, Department of Physics; Old Dominion University, MAXWELL HANSEN, Theoretical Physics Department; CERN — There has been recent developments to allow lattice calculations in Minkowski space-time in order to determine real-time observables. These still require the use of finite volumes, where scattering observables may not be accessed directly. Furthermore, it is not obvious how one can recover infinite-volume scattering amplitudes from finite-volume Minkowski observables. To address this issue, we introduce a physical quantity that can be accessed from finite-volume Minkowski correlates and smoothly recovers the two-particle amplitude in the infinite volume limit. We test the convergence of this idea by considering a strongly interacting 1+1D toy model.

Alexandru Sturzu
New College of Florida

Date submitted: 22 Jul 2019

Electronic form version 1.4