

Abstract Submitted  
for the APR21 Meeting of  
The American Physical Society

**Validation of the Lüscher Method on the Lattice**<sup>1</sup> FRANK LEE,  
ANDREI ALEXANDRU, RUAIR BRETT, George Washington Univ — The Lüscher method for two-particle scattering is a critical tool for connecting finite-volume spectrum with infinite-volume scattering phaseshifts. We investigate the efficacy of the method in a simple quantum mechanical model. The quantization condition is numerically examined, including the effects of higher partial waves. Various setups used in practice are explored: cubic and elongated lattices, moving frames, and systems with integer and half-integer spin.

<sup>1</sup>Supported in part by the U.S. Department of Energy grant DE-FG02-95ER40907

Frank Lee  
George Washington Univ

Date submitted: 11 Jan 2021

Electronic form version 1.4