

Abstract Submitted  
for the APR21 Meeting of  
The American Physical Society

**Solutions to Three-Body Integral Equations** MD HABIB E ISLAM,

Department of Physics, Old Dominion University, Norfolk, Virginia 23529, USA, ANDREW W. JACKURA , RAÚL A. BRICEÑO, Thomas Jefferson National Accelerator Facility, 12000 Jefferson Avenue, Newport News, Virginia 23606, USA, SEBASTIAN M. DAWID, Physics Department, Indiana University, Bloomington, Indiana 47405, USA, CONNOR MCCARTY, Matthew Fontaine Maury High School, Norfolk, Virginia 23517, USA — Understanding three body dynamics is important in modern hadron spectroscopy since many resonances strongly decay into three particles. Lattice QCD can provide a systematic way to study such systems, which connects short-distance interactions to scattering amplitudes through a set of integral equations. In this talk, we present a study of numerical solutions for these integral equations in a case where two of the particles form a bound state. We show a method for extrapolating the discrete approximation of these equations to their continuum limit. This study completes the toolset to determine three body interactions from lattice QCD.

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Date submitted: 08 Jan 2021

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