Contribution ID: **138** Type: **not specified**

Scattering phase shift determinations from a two-scalar field theory and resonance parameters from QCD scattering

Thursday, July 26, 2018 8:30 AM (20 minutes)

The two-scalar field model of Rummukainen and Gottleib is revisited, except the limit of large quartic couplings is not used and a Symanzik improved action is used. Isotropic lattices ranging from $16^3 \times 48$ to $53^3 \times 48$ are used, and the scattering phase shift is determined using a Lüscher analysis.

Results from $K\pi$ and $N\pi$ scattering will also be presented.

Primary author: Mr DARVISH, Daniel (Carnegie Mellon University)

Co-authors: Dr HANLON, Andrew (Helmholtz-Institut Mainz, JGU); Prof. MORNINGSTAR, Colin (Carnegie Mellon University); Dr FALLICA, Jacob (Department of Physics & Astronomy, University of Kentucky); Prof. BULAVA, John (Department of Mathematics and Computer Science, CP3-Origins, University of Southern Denmark); Mr BRETT, Ruairí (Carnegie Mellon University)

Presenter: Mr DARVISH, Daniel (Carnegie Mellon University)

Session Classification: Hadron Spectroscopy and Interactions

Track Classification: Hadron Spectroscopy and Interactions