

Abstract Submitted
for the DNP06 Meeting of
The American Physical Society

Extrapolations of Lattice Meson Form Factors¹ T. BRIAN BUNTON, FU-JIUN JIANG, BRIAN C. TIBURZI, Duke University — We use chiral perturbation theory to study the extrapolations necessary to make physical predictions from lattice QCD data for properties of pseudoscalar mesons. We focus on the quark mass, momentum, lattice spacing, and volume dependence and apply our results to simulations employing mixed actions of Ginsparg-Wilson valence quarks and staggered sea quarks. As an example, to determine charge radii at quark masses on the lattices currently used, we find that the chiral and continuum extrapolations dominate the systematic error.

¹Supported in part by Grant DE-FG02-05ER41368-0.

T. Brian Bunton
Duke University

Date submitted: 30 Jun 2006

Electronic form version 1.4