

APR14-2014-000165

Abstract for an Invited Paper
for the APR14 Meeting of
the American Physical Society

QCD Modeling of Hadron Physics¹

PETER TANDY, Kent State University

The quest for an understanding of how non-perturbative QCD explains hadronic physics is particularly difficult in the light quark sector and it draws upon experiment, lattice gauge theory and continuum modeling of QCD dynamics. In this talk I will summarize some valuable insights that have been obtained from recent new developments in continuum QCD-modeling of light quark hadrons. Some discussion of the high Q^2 behavior of elastic and transition electromagnetic form factors will be included. New calculations of the pion distribution amplitude and elastic form factor combine to clarify a long standing puzzle about the transition domain where a perturbative elastic scattering mechanism takes over. Other meson distribution amplitudes and parton distribution functions may be discussed.

¹Supported in part by the National Science Foundation Grant PHY-1206187