

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Eta-Nucleon Coupling Constant with SU(3) Breaking Contributions in QCD Sum Rules¹ JANARDAN P. SINGH, Physics Department, Faculty of Science, The M. S. University of Baroda, Vadodara-390002, India, FRANK X. LEE, George Washington University — We study the η NN coupling constant using the method of QCD Sum Rules starting from the vacuum-to-eta correlation function of the interpolating fields of two nucleons. The matrix element of this correlation has been taken with respect to nucleon spinors to avoid unwanted excited states. The SU(3) breaking effects have been accounted in the form of η -mass, s-quark mass and eta decay constant. The results obtained have been compared with phenomenologically determined values of the coupling constant from literature.

¹Supported in part by U.S. Department of Energy.

Frank Lee
George Washington University

Date submitted: 23 Oct 2009

Electronic form version 1.4