UNIVERSITY OF MIAMI
COLLEGE of
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Affiliation: None

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Strongly Coupled SU(2) QCD

Abstract

This talk will discuss the strongly coupled analysis of SU(2) QCD when three of the gluons develop vacuum expectation values, these expectation value will provide a Higgs like mechanism to create a mass for all the gluons and quarks. The dispersion relations for the quarks and the antisymmetrized gluons will be derived. One of the novel features of this analysis is that the color electric potentials are computed in the analysis to show through the nonlinear interactions how an electric flux envelope forms. The electric flux envelope causes all the wave functions and color electric potentials to decay on length scales greater than those of the nuclear length scale.