

Electromagnetic Form Factors of Hadrons in Quantum Field Theories ^{*}

C.A. Dominguez ^{**}

Centre for Theoretical Physics & Astrophysics, University of Cape Town,
Rondebosch 7700, South Africa

ABSTRACT

QCD sum rules, as well as the Dual Resonance Model inspired realization of QCD in the limit of an infinite number of colours (Dual QCD_∞), are used to determine the pion and nucleon electromagnetic form factors in the space-like region. Also, Dual QCD_∞ is used to obtain the $\Sigma(1236)$ electromagnetic form factor in the space-like region. The renormalizable quantum field theory model of Kroll-Lee-Zumino, which provides the correct justification for Vector Meson Dominance, is used at the next to leading order to obtain a parameter-free prediction for the pion form factor in both the space-like and the time like region.

^{*}: This talk draws on work done in collaboration with H. Castillo, J.I. Jottar, M. Loewe, R. Röntsch, and B. Willers.

^{**}: Work supported in part by the National Research Foundation (South Africa).