Plenary talk

Exploring the light-quark interaction

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摘要

Two basic motivations for an upgraded JLab facility are the needs: to determine the essential nature of light-quark confinement and dynamical chiral symmetry breaking (DCSB); and to understand nucleon structure and spectroscopy in terms of QCD's elementary degrees of freedom. During the next ten years a programme of experiment and theory will be conducted that can address these questions. We present a Dyson-Schwinger equation perspective on this effort with numerous illustrations, amongst them: an interpretation of string-breaking; a symmetry-preserving truncation for mesons; the nucleon's strangeness σ-term; and the neutron's charge distribution.

关键词　Bethe-Salpeter equations, bound-states, confinement, dynamical chiral symmetry breaking, Dyson-Schwinger equations, Faddeev equation, nucleon electromagnetic form factors

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