The η' as Topological Charge Density ◇

B. Borasoy

We compare two different frameworks which have been proposed to include the η' in chiral perturbation theory. The equivalence of these two approaches is shown both for the purely mesonic case and in the presence of the ground state baryon octet. The relation between the different sets of parameters in both Lagrangians is clarified.

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g_1 at Low x and Low Q^2 with Polarized HERA ◇

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We discuss the potential of Polarized HERA to investigate the transition region between polarized photoproduction and deep inelastic scattering — varying Q^2 between 0.1 and 1 GeV^2.

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Gluons and the η'-Nucleon Coupling Constant ◇

S. D. Bass

We derive the effective chiral Lagrangian for low-energy η'-nucleon and η'-nucleon interactions and show that gluonic degrees of freedom, via the axial $U_A(l)$ anomaly, induce a contact term in the $pp \to pp\eta$ and $pp \to pp\eta'$ reactions. We then discuss the consequences for the extraction of $g_{\eta' NN}$ from experimental data.

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Gluon Topology and the Spin Structure of the Constituent Quark ◇

S. D. Bass

Gluon topology makes a potentially important contribution to the spin of the constituent quark.

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Higher Partial Waves in an Effective Field Theory Approach to nd Scattering

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The phase shifts for the higher partial waves ($l \geq 1$ in the spin quartet and doublet channel of nd scattering at centre-of-mass energies up to 15 MeV are presented at next-to-leading and next-to-leading order in an effective field theory in which pions are integrated out. As available, the results agree with both phase shift analyses and potential model calculations.