Coordinate Space Distributions of Antiquark Flavor Asymmetries in the Proton ◇

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We examine the space-time properties of the distributions of $(\bar{d}-\bar{u})$ and $\bar{d}/\bar{u}$ in the proton. The difference of the antiquark distributions shows the expected peak at the approximate pion Compton wavelength and is supportive of the thesis that the meson cloud of the nucleon is at the origin of the asymmetry of $(\bar{d}-\bar{u})$, with the pion cloud playing a dominant role.

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Effective Field Theory with Two and Three Nucleons ◇

H. Grießhammer

Progress in the Effective Field Theory of two and three nucleon systems is sketched, concentrating on the low energy vision in which pions are integrated out as explicit degrees of freedom. Examples given are calculations of deuteron Compton scattering, three body forces and the triton, and *nd* partial waves.

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Hadronic Excitations and Chiral Symmetry in Nuclear Systems ◇

W. Weise

This presentation discusses recent developments in our understanding of low-mass quark-antiquark excitations, both of the condensed QCD vacuum and in a nuclear medium. We focus primarily on two selected topics: the thermodynamics of the chiral condensate and in-medium s-wave interactions of pions with emphasis on the recently observed deeply bound pionic atom states, and on pion electroproduction in nuclei.

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Nucleon Compton Scattering in Chiral Effective Field Theories ◇

T. Hemmert

Chiral effective field theories have a long history studying the process of Compton scattering on the nucleon. In this contribution I want to focus on the new developments that have occurred since the last Chiral Dynamics conference in Mainz 1997. Moreover, in view of the limited time, I will focus exclusively on the spin-dependent sector, where most of the recent work has been done.

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