

Abstract Submitted
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QCD Nuclear g-factor and the Spin-Statistics Theorem¹ THOMAS WARD², Techsource Inc. — Consideration of the composite three-quark nucleon spin structure and its Pauli spin-statistics follows a new QCD g-factor with implications for the magnetic dipole moments of nucleons and their form factors. The reformulation of the nucleon magnetic moments using the new QCD nucleon g-factor is shown to be in striking agreement with global polarized and unpolarized e-p scattering data using the Sachs electric and magnetic form factors, thus reconciling long standing discrepancies between measurements. Additionally, the introduction of QCD isospin symmetry breaking (ISB) strange quarks terms contained within the meson-baryon exchange currents allow the partially conserved EM axial currents to be restored as well as providing a precise measure of the strange quark probabilities of the nucleons.

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