

Nucleon Spin Structure Functions in the Resonance Region and the Duality

DONG Yu-Bing and FENG Qing-Guo

Institute of High Energy Physics, The Chinese Academy of Sciences, Beijing 100039, China
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Abstract: We discuss the nucleon spin structure function g_1 and the difference between the proton and neutron targets $g_1^p - g_1^n$, based on quark model calculation. Quark-hadron duality for the nucleon spin structure function is also analyzed. Effects of the $\Delta(1232)$ and Roper $P_{11}(1440)$ resonances on the spin structure function and on the difference $g_1^p - g_1^n$ are mentioned. The results of different models for the Roper resonance are also addressed.

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Key words: constituent quark model, quark-hadron duality, nucleon spin structure function, Roper resonance

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