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Looking for strong parity violation in the proton structure

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We present a study of strong parity-violating contributions that can be included in inclusive Deep Inelastic Scattering (DIS) off an unpolarized proton target. We show that a non vanishing parity-violating structure function arise even in the case of pure photon exchange, in contrast with standard results. The size of the additional strong parity-violating term is estimated by fitting available experimental data on electron and positron beam-spin asymmetries, obtaining an improvement in the agreement with respect to Standard Model results.

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