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Recent Spin Structure Function Measurements from CLAS at Jefferson Laboratory

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The polarized electron accelerator at Jefferson Laboratory (JLab) in Newport News, Virginia, USA yields a robust program for the study of the spin physics of the nucleon. The CLAS detector and longitudinally polarized target in Hall-B at JLab were employed in multiple measurements of spin-structure functions for the proton and neutron in the resonance and DIS regions at beam energies of up to 6 GeV. Recently published results from the EG1 experiment present extensive measurements of the g_1 and g_2 structure functions for the proton over a wide kinematic range ($0.05 < Q^2 < 5$ GeV^2 and $1.08 < W < 3$ GeV). These data, together with data from the related EG4 and EG1-DVCS experiments in Hall-B, help constrain global models of structure functions, virtual photon asymmetries, and parton helicity distributions, and provide more precise values of higher-twist matrix elements in the framework of the Operator Product Expansion.

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