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New Measurements of the Proton Double-Spin Asymmetries A_1 and A_2 In and Above the Resonance Region ROBERT FERSCH, College of William and Mary, CLAS COLLABORATION — The CLAS EG1b experiment in Hall-B at Jefferson Laboratory utilized a polarized electron beam at various (1.6, 2.5, 4.2, 5.7 GeV) energies and polarized frozen NH₃ and ND₃ targets to measure double-polarization asymmetries of inclusive electron-nucleon scattering. The proton asymmetry A_1 has been extracted from the double-spin asymmetry (at 0.15 GeV² < Q^2 < 2.0 GeV²). Newly analyzed data at 2.5 and 4.2 GeV allows a more complete integration in x of the g_1 structure function than provided by previous analysis, reducing models dependency in the calculation of Γ_1 , the first moment of g_1 . A linear regression of the asymmetries in terms of $\eta \equiv \epsilon \sqrt{Q^2}/(E - \epsilon E')$ also provides a rudimentary measurement of A_2 in the region of kinematic overlap for the varying beam energies.

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