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Abstract for an Invited Paper for the APR08 Meeting of the American Physical Society

Long-Distance Nucleon Structure: Theoretical Overview 1 T. WILLIAM DONNELLY, MIT

The electroweak form factors of the nucleon will be discussed, including the electromagnetic form factors extracted from parity-conserving electron scattering from the proton and from light nuclei, the axial-vector form factor from weak interaction studies and the strangeness form factors which can play a role in parity-violating electron scattering. The focus will be placed on what can be learned about the long-distance structure of the nucleon. Several issues of interpretation will also be discussed: higher-order electroweak contributions, problems of interpretation in coordinate space and uncertainties which arise in the case of the neutron where inevitably nuclear structure problems arise.

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