

Study of Neutron Resonances by Low Energy Neutron Tagging (LENT)

Abstract

We propose to measure neutron resonance electroproduction spectra in the intermediate Q^2 range $1 < Q^2 < 4$ (GeV/c)² and to measure F_2^{en} at $x = 0.65$ and $Q^2 = 5$. For these measurements, a tagged neutron detector facility is proposed. The facility will consist of a neutron tagging detector to measure low energy recoiling protons originating in a 1 cm diameter 4 cm long deuterium target. Such a facility could serve as a general purpose tool for the study of neutron structure.