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The Neutron Structure Function¹

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Knowledge of the neutron structure function is important for testing models of the nucleon, for a complete understanding of deep inelastic scattering (DIS) from nuclei, and for high energy experiments. As there exist no free neutron targets, neutron structure functions have been determined from deep inelastic scattering from the deuteron. Unfortunately, the short-range part of the deuteron wave function becomes important in extracting the neutron structure function at very high Bjorken x . New methods have been devised for Jefferson Lab experiments to mitigate this problem. The BONUS experiment involves tagging spectator neutrons in the deuteron, while the MARATHON experiment minimizes nuclear structure effects by a comparison of DIS from ^3H and ^3He . A summary of the status and future plans will be presented.

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