The Tagged Deep Inelastic Scattering experiment at JLab

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July 4, 2022

The Tagged Deep Inelastic Scattering (TDIS) experiment at Hall A at the Jefferson Laboratory is an ambitious experiment making use of a new state-of-the-art multiple time projection chamber in conjunction with the new Super Bigbite Spectrometer (SBS) to study the internal structure of hadrons. The experiment was originally designed to measure the structure functions (SFs) of pions through the Sullivan process (electron scattering off the nucleon meson cloud), making use of the tagging technique (measuring one or more of the recoil nucleons in coincidence with the scattered electron). Two run groups has been added to the original proposal, the measurement of the kaon SF, for the first time ever, and a comprehensive measurement of the neutron SFs in the valence and resonance regions, neutron magnetic form factor and Deuterium EMC effect.

This talk will present the motivation and the present status of the experiment.