Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Large Q2 Electrodisintegration of the Deuteron in Virtual Nucleon Approximation[1] MISAK SARGSIAN, Florida International University — Two-body break up of the deuteron is studied at high Q^2 kinematics, with main motivation to probe the deuteron at small internucleon distances. Such studies are associated with the probing of high momentum component of the deuteron wave function. For this, two main theoretical issues have been addressed such as electromagnetic interaction of virtual photon with the bound nucleon and the strong interaction of produced baryons at the final state of the break-up reaction. Within virtual nucleon approximation we developed a new prescription to account for the bound nucleon effects in electromagnetic interaction. The final state interaction at high Q^2 kinematics is calculated within generalized eikonal approximation (GEA). We studied the uncertainties involved in the calculation and performed comparisons with the first experimental data on deuteron electrodisintegration at large Q^2. We demonstrate that the experimental data confirm GEA's early prediction that the rescattering is maximal at $\sim 70^0$ of recoil nucleon production with respect to the momentum of virtual photon. Comparisons also show that the forward recoil nucleon angles are best suited for studies of the electromagnetic interaction of bound nucleons and the high momentum structure of the deuteron.

[1]Supported by the U.S. DOE Grant DE-FG02-01ER41172.

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Date submitted: 23 Oct 2009 Electronic form version 1.4