

Abstract Submitted  
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**Theoretical Investigation of  $A_{TL'}$  in Electron Scattering from the Deuteron**<sup>1</sup> SABINE JESCHONNEK, The Ohio State University at Lima — Currently, several data sets on  $D(e, e'p)n$  reactions, taken at Jefferson Lab, are analyzed. A solid theoretical description is necessary in order to understand these data and extract all possible information, both on the reaction mechanism and the nuclear ground state. In order to gain a full understanding of this important reaction, we need to consider several observables: cross section, response functions, and asymmetries. Final state interactions and relativistic treatment of the current operator are very important at the relevant high energies. The asymmetry  $A_{TL'}$ , which is non-zero only for out-of-plane kinematics, has been measured in Jefferson Lab's Hall B. This observable is very interesting because it is highly sensitive not just to central final state interactions, but also to spin-orbit final state interactions. I will briefly discuss the employed theoretical model, and focus on the sensitivity of the results to the various final state interactions and wave functions.

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