

Abstract Submitted  
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**Spin Light Polarimeter at 12 GeV<sup>1</sup>** PRAJWAL MOHANMURTHY, DIPANGKAR DUTTA, Mississippi State University — We plan to develop a realistic design for a novel polarimeter which will go a long way in satisfying the requirements of the precision experiments planned for the 12GeV era at Jefferson National Accelerator Facility (JLAB). A polarimeter based on the asymmetry in the spacial distribution of the spin light component of synchrotron radiation will make for a fine addition to the existing Möller and Compton polarimeters. The spin light polarimeter consists of a set of wiggler magnet along the beam that generate synchrotron radiation. The spacial distribution of synchrotron radiation will be measured by an ionization chamber after being collimated. As a part of the design process, simulation of the effects of fringe field of the 3-pole wiggler magnet that forms the primary component of the polarimeter is underway. The fringe field was simulated using LANL Poisson Superfish mesh EM solver. The results from the simulation, the preliminary design parameters of the polarimeter and its impact will be discussed.

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