Preface

These are the proceedings of the first Tensor Spin Observables Workshop that was held in March 2014 at the Thomas Jefferson National Accelerator Facility in Newport News, Virginia. The conference was convened to study the physics that can be done with the recently approved E12-13-011 polarized target. A tensor polarized target holds the potential of initiating a new generation of tensor spin physics at Jefferson Lab. Experiments which utilize tensor polarized targets can help clarify how nuclear properties arise from partonic degrees of freedom, provide unique insight into short-range correlations and quark angular momentum, and also help pin down the polarization of the quark sea with a future Electron Ion Collider.

This three day workshop was focused on tensor spin observables and the associated tensor target development. The workshop goals were to stimulate progress in the theoretical treatment of polarized spin-1 systems, foster the development of new proposals, and to reach a consensus on the optimal polarized target configuration for the tensor spin program. The workshop was sponsored by the University of New Hampshire, the Jefferson Science Associates, Florida International University, and Jefferson Lab. It was organized by Karl Slifer (chair), Patricia Solvignon, and Elena Long of the University of New Hampshire, Douglas Higinbotham and Christopher Keith of Jefferson Lab, and Misak Sargsian of the Florida International University. These proceedings represent the effort put forth by the community to begin exploring the possibilities that a high-luminosity, high-tensor polarized solid target can offer.

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