DNP13-2013-020235

Abstract for an Invited Paper for the DNP13 Meeting of the American Physical Society

## Using Polarized Beams to Investigate the Spin of the Proton STEPHEN TRENTALANGE, University of California, Los Angeles

The spin of the proton has been investigated with polarized beams and targets for decades and has led to our current picture of the kinematic and partonic structure of the proton's spin. Historically, this picture has relied heavily on data from Deep Inelastic Scattering of polarized leptons and is still mainly influenced by this framework. Over the past decade, operation of the RHIC/AGS has vastly increased the amount of data from collisions of polarized proton beams. Much theoretical and experimental work has been done to understand such probes as pions, jets, and Z/Ws especially with the STAR, PHENIX, BRAHMS, AnDY and pp2pp detectors. I will present an overview of the capabilities of the RHIC complex and demonstrate how measurements from many experiments are complementing and expanding our understanding of the proton spin.