Minutes SBS Meeting March 28, 2012


1. John Annand discusses GEn/GMn by recoil polarimetry
   a. See link for his slide
   b. Proposal to be resubmitted in April for PAC 39
   c. Shows kinematic settings, count rates, and expected duration of measurements
      i. 2.5%-10% statistical errors
      ii. 3% systematic errors
   d. Configuration:
      i. BigBite for the electron arm
      ii. HCal with SBS dipole for the other arm
   e. Robin asks for specific magnet position information
2. Seamus Riordan gives presentation on measurement of the Electric Form Factor of the Neutron with SBS
   a. See link for his slides
      i. Reviews GEn I
      ii. Gives Physics details and motivations
      iii. Polarized $^3$He target
         1. Nuclear corrections
         2. FSI contributions
         3. Two photon effects
   iv. Previous measurements at JLab
   v. Experimental setup
      1. BigBite
      2. Neutron arm
      3. Polarized $^3$He target
   vi. Discusses various backgrounds and problems
   vii. Sample error bars at 4 proposed kinematics ($Q^2 = 1.5, 3.7, 6.8, & 10.2 \text{ GeV}^2$)
   viii. Schematic of the setup with details
   ix. Summary error budget
   x. Instrument requirements
   xi. $Q^2 = 10 \text{ GeV}^2$, 10-20% accuracy
   b. Concerns expressed by attendees re inelastic background
      i. Various suggestions made:
         1. Use $H_2$ target e.g. to study
         2. Good to have empirical data
   c. Bogdan suggests return in 1-2 months to discuss progress on preparations
   d. Robin needs distances of magnets from the target at different angles. Bogdan says Al Gavalya already has it all. Check with Al.