The Lead Radius Experiment “PREX” is scheduled to run from March 11 through May 24, 2010. The experiment uses the Hall A base equipment, as well as specialized equipment for parity experiments. Specifically, the experiment will use the following items.

Older, Established Equipment

- The standard Hall A beamline, as described in the Hall A OSP.
- The two High-Resolution Spectrometers (HRS) as described in the Hall A OSP.
- The Standard HRS detector packages, also described in the Hall A OSP.
- The Hall A luminosity monitor, installed on the beamline after the target. This detector has been frequently used since installation in 2004. No TOSP is required.
- In the scattering chamber we will sometimes use a water cell target. This target is used for optics calibrations. It was previously used in Hall A (in 2004 and 2005) and no TOSP is required.

New or Upgraded Equipment

- The new cryogenically-cooled Lead/Diamond target. Trained target operators (TO) are required for each shift. The TO is trained on safety-related issues. The training is the same training that is taken for the normal cryogenic target, but actually the operation is much simpler. The TO needs to watch the temperature on the return line. If this ever rises above 50K, the TO should request beam off to avoid melting the target, and call the Run Coordinator (RC). The only possible adjustment is on the JT valve, which normally does not need any adjustment. If the target melts, the TO should stop beam and call the
RC. To judge if the target has melted, the TO should run spot++ to observe the profile; detailed instructions will be posted in the counting room.

- The new Septum Magnets, located between the target and the HRS, have an OSP for their operation.
- The Hall A Compton Polarimeter has been upgraded. It is described in an updated OSP.
- The Hall A Möller Polarimeter has been upgraded. It is described in an updated OSP.
- In each HRS, a Quartz Cerenkov Detector will be installed to integrate scattered electrons in each helicity period. This is the University of Massachusetts and Smith College electron detector. There are no safety issues related to this (hence no TOSP), but instructions for operation will be provided in the counting room.
- New GEM Detectors will be deployed in the focal plane. These are tracking detectors being developed by the University of Virginia and the INFN. There are no safety issues related to this (hence no TOSP), but instructions for operation will be provided in the counting room.