

Experimental Safety Assessment Document (ESAD)
for Hall A Experiment E99-115
May 14, 2004

The HAPPEX Hydrogen experiment is scheduled to run from June 19 through July 25, 2004. The experiment uses the Hall A base equipment, as well as specialized equipment for parity experiments. Specifically, the experiment will use:

- The standard Hall A beamline, as described in the Hall A OSP.
- The standard Hall A Compton Polarimeter, as described in the Hall A OSP.
- The hydrogen cryotarget using the 20cm cell. Trained target operators are required for each shift. The target operators are trained on safety related issues.
- The two High-Resolution Spectrometers (HRS) in the 6 degrees configuration with septum magnets, as described in the Hall A OSP
- The Standard HRS detector packages, also described in the Hall A OSP.
- In each HRS, a total-absorption brass-quartz Cerenkov detector will be installed to integrate scattered electrons in each helicity period. This is the Saclay electron detector. There are no safety issues related to this (hence no TOSP), but instructions for operation will be provided in the counting room.
- In each HRS, a small quartz detector mounted on an X-Y scanning table will be deployed to periodically measure Q^2 at high rates. The quartz detector is an integrating Cerenkov detector attached to a PMT. This is the Q^2 profile scanner built by the University of Massachusetts. As for the previous bullet, no TOSP was required.
- A new luminosity monitor has been installed near the beamline. It is a set of 10 quartz blocks attached via air light guides to PMTs. No TOSP was required.