

Experimental Safety Assessment Document (ESAD)

for Hall A Experiment E12-09-019, GMn,

(draft) June 12, 2017

The experiment, GMn, is expected to be the first experiment running with new equipment developed for the Super BigBite Spectrometer (SBS). The equipment used for GMn does not involve unique or unusual dangers or safety considerations. There will be cryogenic Hydrogen targets, high current magnet power supplies, high voltage to detectors and massive pieces which must be moved with care.

The experiment will use the following standard equipment:

- The standard Hall A beamline, as described in the Hall A Operations Manual
- Standard cryo-targets containing LH2 and LD2 (as well as a solid target ladder)
- The standard Hall A scattering chamber

In addition, the experiment will use the following new equipment and procedures (or equipment and procedures for which the previous OSP has expired):

- The Hadron Calorimeter, HCal-J, for which a draft [OSP](#) has been prepared
- The Coordinate Detector hodoscope, CDet, for which a draft [OSP](#) has been prepared
- BigBite Instrumentation:
 - Gas Ring Imaging Cherenkov, GRINCH, for which a draft [OSP](#) has been prepared.
 - GEMs, for which a draft [OSP](#) has been prepared.
 - BigBite Timing Hodoscope, for which a draft [OSP](#) has been prepared.
- BigBite Rotation, for which a draft [OSP](#) has been prepared.
- The BigBite magnet and power supply, for which a draft [OSP](#) has been prepared.
- The Super BigBite Spectrometer magnet (48D48) and power supply, for which an OSP is being prepared.
- Movement of the Super BigBite Spectrometer magnet (48D48) for which an OSP is being prepared.