Experiments at the Small Block House in bldg. 912 planned for the near future

1. Polarized SRF gun tests (1.3 GHz)
   a. Test of the gun cavity without photocathode (cavity acceptance test, all systems check-out).
   b. Test of the SRF gun with photocathode (beam test).

2. Large grain SRF gun cavity tests (704 MHz).
   a. Cavity test without cathode insert (cavity acceptance, all system check-out, 20 W RF amplifier should be adequate).
   b. Cavity test with niobium cathode insert (test with up to 150 W RF power, evaluation/processing multipacting).
   c. Cavity test with copper insert (evaluation/processing of multipacting with 50 kW RF transmitter used in pulsed mode, up to 150 W average power).

3. 112 MHz SRF gun tests
   a. SRF gun tests with different photocathodes, RF power required <150 W.

Notes:
- X-rays will be produced during all SRF tests by field-emission electrons.
- Items 1 & 2 are planned for this FY, item 3 – for FY2012.