

<b>X12C SAFETY CHECKLIST</b>			BROOKHAVEN NATIONAL LABORATORY NATIONAL SYNCHROTRON LIGHT SOURCE
<b>Rev: C</b>	<b>Effective: 5/24/2010</b>	<b>Page 1 of 1</b>	Number: LS-SCL-0027
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1. Valid Padlock Index and log, no padlocks open.

### ***UPSTREAM OF X12A HUTCH***

2. Bremsstrahlung shield (BS #1) in place and banded.  
 3. Exclusion Zone (EZ #1) at the slit tank is in place as per photo.  
 4. Bremsstrahlung shield (BS # 2) in place and banded as per photo.  
 5. Vacuum Bellows #2 (downstream of the slit tank behind X12B Slit tank) is wrapped in lead.  
 6. Water cooled Beryllium window #2 wrapped in lead.  
 7. Two monochromator viewports have leaded glass secured.  
 8. Vacuum Bellows #3 downstream of the monochromator is wrapped in lead.  
 9. Exclusion Zone (EZ #2) (aluminum screen) upstream of the mirror tank is in place and secured.  
 10. Scintillation counter is in place, and view ports are covered with lead as per photo.  
 11. Exclusion Zone (EZ #3) (aluminum screen) is in place and secured; bellows #4 is wrapped in lead and secured beneath.  
 12. Bremsstrahlung shield (BS # 3) and Photon shutter lead in place and banded.

### ***INSIDE X12A HUTCH***

13. Exclusion Zone (EZ #4) foam padding, from upstream wall to lead shielded bellows, in place.

### ***DOWNSTREAM OF X12A HUTCH***

14. Exclusion Zone (EZ # 5) (aluminum screen) is in place and secure.  
 15. Bremsstrahlung shield (BS # 4) in place and banded. Leaded glass on cross down stream of BS #4

### ***DOWNSTREAM OF X12C HUTCH***

16. Bremsstrahlung shield (BS # 5) (viewed between X12B and C hatches) is in place and banded.

## **USER SYSTEM CHECKS**

### **AT THE X12C USER STATION ELECTRONICS RACK**

- A. Pressure at P1 is less than  $4.0 \times 10^{-9}$  torr.  
 B. Pressure at P2 thru P5 is less than  $9.9 \times 10^{-8}$  torr.  
 C. Valves V1, V2, and V3 indicate a green (open) status.  
 D. Water flow for Proteus #1-6 indicates a green (ok) status.

OPCO / Beamline Staff.: \_\_\_\_\_ Date: \_\_\_\_\_