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C-A OPERATIONS PROCEDURES MANUAL

12.48 TR-4 55 Degree Line Scattering Foil Loading

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Hand Processed Changes

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Approved: \_\_\_\_\_ *Signature on File* \_\_\_\_\_  
Collider-Accelerator Department Chairman Date

C. Carlson

## 12.48 TR-4 55 Degree Line Scattering Foil Loading

### 1. Purpose

The purpose of this procedure is to define the sequence of activities required to load scattering foils into the diagnostic chamber in the 55 degree line.

### 2. Responsibilities

It is the responsibility of the person or persons executing this procedure to observe all safety rules.

### 3. Prerequisites

3.1 Tandem Operator training

### 4. Precautions

None

### 5. Procedure

Checklist (when indicated by “\_\_\_”, initial step upon completion)

- 5.1 \_\_\_ Shut image gate valve.
- 5.2 \_\_\_ Shut hand valve in front of diagnostic chamber in 55 degree line.
- 5.3 \_\_\_ Shut wall valve in TR-4 in 55 degree line.
- 5.4 \_\_\_ Vent line very slowly using nitrogen. This needs to be done carefully to protect remaining usable foils.
- 5.5 \_\_\_ When line has reached atmospheric pressure, remove the foil holder from the diagnostic chamber.
- 5.6 \_\_\_ Carefully remove foils that are to be replaced.
- 5.7 \_\_\_ Load new foils into the foil holder.
- 5.8 \_\_\_ Carefully replace the foil holder in the diagnostic chamber.
- 5.9 \_\_\_ Very slowly, pump out the diagnostic chamber and section of beam line.
  - 5.9.1 \_\_\_ Start with the pump valve off.
  - 5.9.2 \_\_\_ Slowly open the pumping valve until the pump pressure spoils a

little (250 - 300 microns).

- 5.9.3 \_\_\_\_\_ Let the pump work until the pressure is again as low as possible.
- 5.9.4 \_\_\_\_\_ Crack the valve some more and again bring the pressure up to the 250 - 300 micron range.
- 5.9.5 \_\_\_\_\_ Repeat steps 5.9.2 to 5.9.4 until the beam line pressure is as low as possible with the pump valve wide open.
- 5.10 \_\_\_\_\_ While pumping is being done update the card containing the list of foils on the beam line and the corresponding card in the control room.
- 5.11 \_\_\_\_\_ After pumping is completed, close the hand valve on pumping port and then open the hand valve to the switcher.
- 5.12 \_\_\_\_\_ Let switcher pump on box and recover.
- 5.13 \_\_\_\_\_ Finally open wall valve in TR-4.

**6. Documentation**

None

**7. References**

None

**8. Attachments**

None