

GEn beam pipe change

Turn off the lasers in the laser room, remove the keys and lock them in the lock out box with a Hall A admin lock.

Sweep Hall

Verify that there is a leak by checking target convectron gage. It should read 0 mTorr, if not there is a leak or the vacuum is bad for another reason. If the vacuum is 999 or is going up there is a leak.

Call Industrial hygiene (patty's group at 7039,7882, or 7863) and let them know you need to change a Be window and that you will be ready in about 30 min.

With Radcon present, hit a laser crash button and open the upstream target access panel. Apply gloves, hearing protection, safety glasses and a face shield. With Radcon to read the meter measure the radiation at the entrance window at whole body (12 inches) and on contact. Measure the radiation at the exit window at whole body (12 inches) and on contact. After Radcon has their readings and gives you the clearance

Call MCC and have them close the Hall A beam line valves. After this is done, flip all of the switches to closed and turn the key to maintenance.

While you're at the racks turn off the girder turbo and the cold cathode gage.

Close the automatic valve at the backing pump.

Remove the tape from around the beam pipe.

Disconnect the conflate flange holding the window section of the beam pipe, leaving the top bolt loosely in place until I.H. get there.

After donning the PPE provided by I.H. remove the top bolt from the beam pipe, remove the beam pipe from the target chamber, and put the Be window in a plastic bag. Seal the bag with tape and repeat on the other end.

Store beam line on Radcon to be surveyed shelf

Using the V notch inside the chamber as a support install the new beam pipe at the conflate flange. Be sure to maintain the alignment of the beam pipe as closely as possible. After the conflate is tight, don gloves, hearing protection, safety glasses and a face shield, and check the position of the window flange with respect to the V notch. The beam tube should lay freely in the V notch without pulling the notch to either side or pushing down with excessive force. Adjustments should be made at the beam line support on the downstream end of the girder.

Bleed up the girder beam line with N₂.

Force open the all metal beam line valve by moving the air line from the SS fitting to the brass fitting. Open the automatic valve at the backing pump and allow the beam line to pump down to below 1 Torr then turn on the turbo pump.

Let the beam line pump down to 0 mTorr and then flip the switch that controls the all metal valve to open. (this is the one located to the far right of the panel in the vacuum rack).

Move the air supply to the all metal valve back to the SS fitting and verify that the valve is open.

Re-tape the opening around the beam pipe on the target enclosure

Verify that the target camera is positioned correctly and that the light is on.

Install the access panel on the upstream end of the target enclosure and tap so as to be light tight for lasers.

Twist and reset the laser crash button.

Let beam line pump until it has reached the mid -5 range, then return beam line valve control to MCC

Remove laser keys from lock box and re-power lasers. Check with counting house to make sure that they have laser control.

Make write up in Halog.