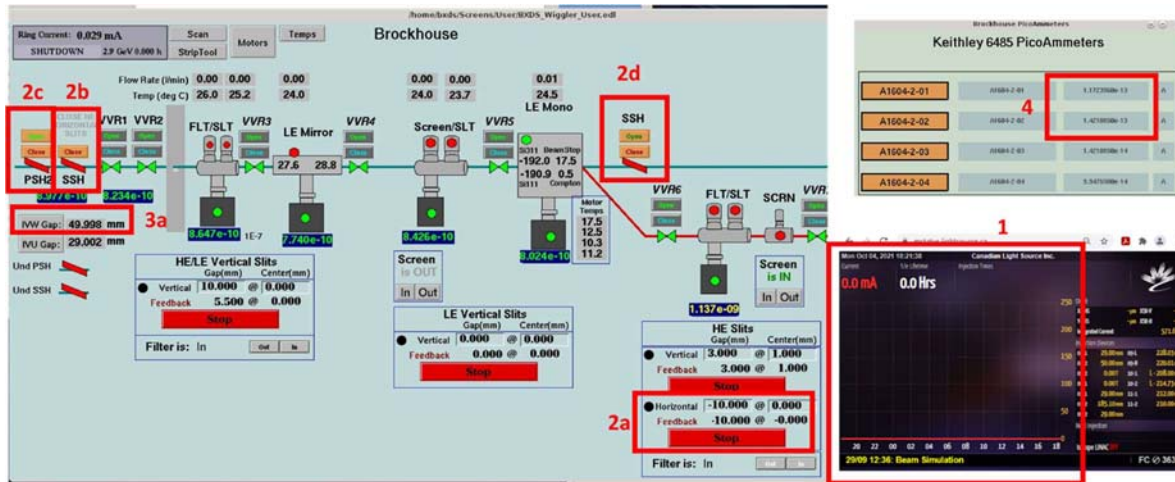


2.8 Recovering from a beam trip

Hey where'd my beam go?



1. Is beam available at CLS?

Check the beamline status screen (machine.lightsource.ca).

- If the screen is RED, there is no beam available, sorry!
- If the screen is YELLOW, and the ring current is 220 mA, then beam should be available for users. The status message at the bottom of the screen should say "Beam available".

There is often a delay of several minutes from the moment where the ring current recovers to 220 mA, to the point where the operator allows users to open shutters and play with insertion device gaps.

2. Are all the shutters open?

When the beam trips, the operators will typically close our front end shutters for the recovery process. They usually do not re-open them when beam is back. This must be done by users or staff.

2a – Check the SSH button. If you see a message above the SSH button that says "Close HE horizontal slits", then you must first close the horizontal slits behind the HE mono (these normally close automatically if the beam trips). Click on the box shown above (2a), type -20 in the gap box (even if it already says -20, you need to retype it), and hit enter. Only do this step if the message "close HE horizontal slits" appears above the SSH button. The gap feedback value should start changing... it takes a while for these slits to fully close.

2b – Open the SSH shutter by clicking the OPEN button. If it is GREEN it is open.

2c – Then open the PSH2 shutter by clicking the OPEN button. If it is GREEN it is open.

If you click OPEN but these two shutters do not open, then check to see if POE1 has been searched and locked up. The floor coordinator can help with this.

2d – Open the SOE-1 hutch shutter by clicking the OPEN button. If it is GREEN it is open. The shutter will only open if the hutch has been searched and locked up.

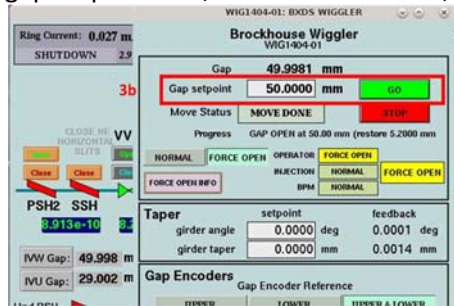
3. Is the wiggler gap closed to 5.2 mm?

2. The Huber Endstation and Sub-systems

When the beam trips, the operators will open our wiggler gap to 50 mm for the recovery process. They usually close the gap back to our normal operating value of 5.2 mm after recovery, but not always.

3a – Check if the gap is 5.2 mm. If it is, go to step 4.

3b – If the gap is not 5.2 mm, click on the “IVW Gap” box. The “Brockhouse Wiggler” window will pop up, as shown below. Click on the gap setpoint box, enter the value 5.2, then click the GO button.



If you are able to open the SSH and PSH2, but the gap will not close to 5.2 mm after a few attempts, wait a few minutes, try again, then call the operator. Sometimes they forget to hand over control of the gap.

4. Is there beam in the hutch?

Check the ion chamber readings for A1604-2-01 and A1604-2-02. Both of these ion chambers typically read in the 10^{-6} A range when beam is on.