

BCM Calibration (~1 hour)
Dave Mack updated 2/1/20

Instructions to Hall C shift crew:

0. Give the MCC operator a copy of this procedure.
1. Fast Raster on (to protect stuff)
2. Target out
3. Ask the MCC operator to show they can stably reach the maximum desired current.

Losing a 3He target cell would be bad.

Target out during the BCM calibration.

Check operational restrictions for Hall C. At the time of writing, the slow ramp of 1 muA/sec was always required, and Max Juice for Target Out was 45 muA.

We're only interested in scalers. Check that the Unser and BCM scalers are counting on one of the xscalers screen . When the MCC calls to tell you they are ready,

4. Start a run labelled "BCM calibration". (If there are two single-arm daqs, then start one run on the SHMS daq, and one run on the HMS daq.)
5. Make sure the daqs keep running during the procedure until the operator calls to say it is complete. You can watch the progress on a strip chart.

Instructions to the MCC operator:

I can't honestly call this procedure "non-invasive" anymore since Hall D is sharing the Hall C slit.

- Do each of the following currents, plateauing for ~90 seconds each. (45 seconds is enough if you get a trip. If there's a trip too near the start of beam-on interval, then restart the clock.)
- Approximate currents are usually fine. But for the 2.5 muA point try for +/-0.5 muA.
- The zeroes are as important as the beam on periods. *Close the slit for these.* (Sorry, Hall D!)

In units of muA: 0, 42-ish, 0, 30, 0, 10, 0, 5, 0, 2.5, 0,

Then repeat: 42-ish, 0, 30, 0, 10, 0, 5, 0, 2.5, 0,

One last time*: 42-ish, 0, 30, 0, 10, 0, 5, 0, 2.5, 0,

Let Hall C know when you're done. Thanks!