

SANE Short Term Run Plan –Fri. 2/13 day/eve – Sat. 2/14 owl/day

RUN PLAN (SAVE previous run plans in the Run Plans binder)

Fri. 2/13 eve to Sat. 2/14 day. Opportunistic accesses: when switching targets, during anneals (check with the target experts) or to delay or move up anneal times to avoid annealing between midnight and 6:00 AM. Keep < 30 min. long if possible.

BEAM (for production runs):

Current : **95 nA**

- **check that the SR is ON** and configured with *New Settings for 5.9 GeV Beam* as explained in hclog entry **175618 (20 mm dia.)** spiral: 1.37 V; circles 1 & 2: 1.28 V
- **fast raster 1 x 1 mm**
beam at **x = -0.0, y = -0.66 mm on BPM 3H00A;**
x = -0.5, y = -0.3 mm on BPM 3H00B (per hclog 175661)
- Enter all required variables in the on-line Run Sheets, including the target polarization at the beginning and end of each run

DATA:

HMS: should be set at central momentum to 4.17 GeV/c, 22°, protons for *ep* elastics.

- Check target and beam centering with cross hairs target. Take a short run (<10 min) and look at the slow raster ADC plot. The cross hairs should look reasonably centered (within 1 mm) in the vertical and horizontal, and the rim of the cup should not be visible at the edges of the raster.
- If there is a significant (>1.5 mm = 0.060 encoder units) mismatch in the vertical direction between the encoder setting and the cross hairs plot, or the rim of the target cup is clearly visible at the top or bottom of the raster plot, adjust the target position by a small amount (≤ 1.5 mm).
- If the cross hairs look off center in the horizontal, or the rim is visible on the left or right, ask MCC to move the beam by -0.5 or $+0.5$ mm on BPM 3H00B. *Do NOT move the beam more than ± 0.5 mm from the settings shown above.* Moving the beam to a more negative *x* position is the more likely option.
- Take data with the BOTTOM target with POSITIVE polarization. Watch the

- polarization rate of increase. Wait up to 30 min. from the start of polarizing:
- If it takes (or took) *more than 30 min to get to 50%*, it probably is over annealed. Ask for **110 nA** and start taking data, continue for up to 4 h total time.
 - If the polarization rises *above 60% in ≤ 30 min*, ask for **95 nA**, take ~1 h long runs. Continue with 1 h runs until the polarization is at ~ 0.75 of its maximum value.
 - Take data with the TOP target with POSITIVE polarization, **95 nA**, until polarization is at ~ 0.75 of its maximum value.

ANNEAL

Target experts will conduct the anneal. It will be done in part in parallel with the Moller calibration (put empty target in beam to boil LHe off). Anneal will be completed after Moller is done.

- A Moller calibration will start along with the anneal. Put empty target in beam to do the Moller measurement
- Before asking for beam **turn OFF the slow raster** using the module labeled SR SWITCH in rack 3HC014 (middle left side) in the electronics room. Tell MCC that the SR is off, they need to know for their FSD limits.
- Keep the beam current **below 200 nA**
- after the Moller **remember to turn the SR back ON!** Tell MCC the SR is back on