

SANE Short Term Run Plan –Fri. 2/20 day/eve – Sat. 2/21 owl/day

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

Fri. 2/20 eve to Sat. 2/21 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.

FIRST:

New insert has been loaded. Magnet will be ramped up about 6:00 AM. It should be ready for NMR signals by 8:00. Target expert on call will be at hand to prepare target for data taking.

TE's will be done today only if beam goes off for pass change.

Once the target is ready for beam, start by centering the beam on the target (*see below*)

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 hlog entry **175618 (20 mm dia.)** spiral: 1.37 V; circles 1 & 2: 1.28 V
- **fast raster 1 x 1 mm**
beam at **x = -1.0, y = -0.66 mm on BPM 3H00A;**
x = -1.5, y = -0.3 mm on BPM 3H00B
- 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 **3.1 GeV/c, 15.4 °, electrons**, W = 2.2, Q2 = 1.3 GeV².

- Check target and beam centering with cross hairs target. *Ask for 60 nA with the beam at the positions indicated above.* 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.

- Make sure all detectors are on, LED's off and retracted, prescale factors and trigger type correct, etc. before starting
- 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 can use some beam. 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

1. Target experts will conduct the anneal.
2. Put the C target in beam to help boiling off He in the nose. Ask for **100 nA**. **IMPORTANT:** Take a ½ h long run *AFTER the nose is empty. Watch the HMS or BigCal rates: the nose will be empty when the rates stop changing after dropping, start a new run then.*
3. Target experts will finish the anneal. *Target expert may access the Hall to open the by-pass valve to cool the nose quickly.*
4. Once the anneal is complete and there is LHe in the nose, take a ½ h run with the EMPTY (a.k.a. cross hairs) target(*enter Cross Hairs + He in run sheet*), and another ½ h run on C+He, both at **100 nA**.