

SANE Short Term Run Plan – Sun. 3/8 eve – Mon. 3/9 owl/day

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

Sun. 3/8 eve to Mon. 3/9 owl/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 : **85 to 105 nA**

- check that the **SR is ON** and configured for *20 mm diameter, 5.9 GeV beam.*
Wavetek generators Preset 6: spiral = 1.6 V; circles 1 & 2 = 1.50 V
- **fast raster 1 x 1 mm**
beam at **x = 0.5, y = -1.0 mm on BPM 3H00A;**
x = 0.0 y = 0.6 mm on BPM 3H00B (run 72912, hclog entry 178349)

DATA:

HMS: should be set to central momentum 3.1 GeV, 15.4°, electrons.

Make sure all detectors are ON, LED's off and retracted, prescale factors and trigger type correct, etc. before starting

- Check centering of the beam on the target by looking at the slow raster y vs x ADC plot, adjust the encoder values until the horizontal cross hairs arms are centered. Watch for the target cup rims showing as bright areas on the raster ADC plot. If needed, adjust the beam center by asking MCC to steer the beam left or right. It should not be necessary to steer the beam more than 0.3 mm in either direction.
- Take data with TOP target **POSITIVE** polarization.
- If the polarization rises *above 60% in ≤ 30 min*, ask for **90 nA**, take ~1 h long runs. If the polarization continues to increase with beam, ask for **100 nA**, but reduce the current back to **90 nA** once the *maximum* polarization is attained. When the polarization is around 62% take data at **105 nA**. Continue with 1 h runs until the polarization is at ~ 0.75 of its maximum value or 60%, **whichever is higher**. Move to the BOTTOM target.
- If the polarization takes *more than 30 min to get to 50%*, it can/will improve with beam. Ask for **105 nA** and start taking data.
 - If the polarization increases with beam continue at 105 nA for up to one hour after the polarization starts dropping, then *take data at 90 nA* until the polarization drops below 60%.
 - If the polarization does not increase after 2 h of beam, move to the BOTTOM target.

- If the polarization rises quickly but it does not get significantly above 70%, and it starts dropping as soon as beam is turned on, it may have been underannealed. Take data at **85 nA** . When the polarization is around 62% take data at **95 nA**. Move to the BOTTOM target when the polarization drops below 60%.

Take data with BOTTOM target **POSITIVE** polarization.

- Follow the guidelines for the TOP target . Anneal when the polarization is at the low limits indicated on the guidelines.

ANNEAL

1. Target experts will conduct the anneal.
2. Put C target in beam to help boiling off He in the nose. Ask for 120 nA. Take a 1/2 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 the run then.*
3. Target experts will finish the anneal.