

SANE Short Term Run Plan – Mon. 3/2 eve -Tue 3/3 owl (was Sat. 2/28 eve – Sun. 3/1 owl/day/eve)

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

Mon 3/2 eve to Tue. 3/3 owl. 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, 4.7 GeV beam.*
Wavetek generators preset 5: spiral = 1.16 V; circles 1 & 2 = 1.10 V
- **fast raster 1 x 1 mm**
beam at $x = -2.7$, $y = 0.06$ mm on **BPM 3H00A**;
 $x = -3.8$, $y = 0.62$ mm on **BPM 3H00B** (run 72857 in hclog entry 177929)

DATA:

HMS: should be set to central momentum to 3.585 GeV, 22.3°, protons.

- Make sure all detectors are ON, LED's off and retracted, prescale factors and trigger type correct, etc. before starting
- Ask for 65 nA. Check target and beam centering Take a short run (<10 min) and look at the slow raster ADC plot. The rim of the cup should not be visible at the edges of the raster.
- If the rim is visible on the left or right, ask MCC to move the beam by about -0.3 or $+0.3$ mm on BPM 3H00A and 3H00B, as needed. *Do NOT move the beam more than ± 0.3 mm from the settings shown above.*
- Take data with the BOTTOM target with **NEGATIVE** polarization. Watch the polarization rate of increase. Wait up to 30 min. from the start of polarizing:
- If it 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, anneal.
- 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**.

- If the polarization rises quickly but it does not get significantly above 70%, and it starts dropping as soon as beam is turned on, take data at **85 nA**. When the polarization is around 62% take data at **95 nA**. Anneal when the polarization drops below 60%.
- ~~— Take data with the TOP target with **NEGATIVE** polarization, **90 nA**, until polarization is at ~ 0.75 of its maximum value. Follow the guidelines on beam current for the **BOTTOM** target~~

ANNEAL

1. Target experts will conduct the anneal.
2. Put C target in beam to help boiling off He in the nose. Ask for 150 nA. Take a 20 min 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.