SANE Short Term Run Plan – Sun. 3/15 owl/day/eve

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

Sun. 3/15 owl/day/eve. 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.

HMS: it has been set HMS to new kinematics.

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 = 0.0** (+/- 0.1)**, y = 1. mm on BPM 3H00A;**
  x = -1.0 (+/-0.1)**, y = 1. mm on BPM 3H00B**

DATA:

HMS: check that it is set at 3.2 GeV, 20.2°, electrons.

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

- Put the Bottom target in the beam. Ask MCC for 70 nA and check centering of the beam on the target by looking at the slow raster y vs x ADC plot. Watch for the target cup rims showing as bright areas on the raster ADC plot.

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

- If the polarization rises *above 60% in ≤ 30 min*, wait until it is **at least 75% or 45 min, whichever comes first,** and then 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 TOP target.

- If the polarization takes *more than 30 min to get to 50%*, it might 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 TOP 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 down to around 62% take data at **95 nA**. Move to the TOP target when the polarization drops below 60%.

- Take data with TOP target **NEGATIVE** polarization.
- Follow the guidelines for the BOTTOM 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 data while the nose is emptying (C+He). *Turn the beam off when the nose is empty, to start anneal.*

3. Target experts will finish the anneal.