What is run group C?

- Longitudinally polarized proton (NH$_3$) and deuteron (ND$_3$)
- Approved Experiments: E12-06-109 (“EG12”; rating: A, 25d p, 45d d, 10d aux); E12-06-119(b) (p DVCS, A, 120d); E12-07-107 ($\pi$ SIDIS, A-, 103d), E12-09-007(b) (PDFs from K, A-, 80d); E12-09-009 (K SIDIS, B+, 103d); PR12-15-004 (n DVCS, C2, 65d d)
- Runtime so far: 120 days NH$_3$ (RG Ca) + 65 days on ND$_3$ (RG Cb)
- PAC44 considering additional 68 days on ND3 (RG M=Cb+; 50d no FT + 10d w/ FT + 8d aux)
- Presently on the schedule: 60d RG Ca, 35d RG Cb 2019-20
POLARIZED TARGET
STATUS I

Insulating Vacuum Can (Thin scattering nose piece not shown)

Heat Shield (this will extend to the end of the target, not shown)

1 K Pumping Space Aluminum (Filled with low pressure 1K He)

Pumping Space G10 or CFRP

Separator Exhaust Heat exchanger for Heat Shields
1K Heat Exchanger and Run Valve

Separator / 4K Pot
POLARIZED TARGET STATUS II

Re-entrant Beam Line w/ window
~1 mbar He gas
Ø1.19 in / 30.3 mm

Target Material
Ø0.16 in / 4.0 mm

Target Separation
0.79 in / 20.0 mm

Target Length
1.11 in / 28.1 mm

OVC
Ø3.00 in / 76.2 mm

NMR Coil & Magnet Carrier
Ø2.36 in / 60.0 mm

Target Cup
Ø0.64 in / 16.3 mm

Pumping Tube
~1 mbar He gas
Ø2.38 in / 60.3 mm
TO DO LIST – NEED RESPONSIBLE PEOPLE:

- Raster system (speed, shape, amplitude/range, position of magnets, driver, readout/calibration)
- Møller polarimeter system (readiness; optimize running, accuracy)
- rest of beam line (BMs, harps, lumi, steering)
- Møller shield (with and without FT; integrate with rastering)
- Downstream: FC acceptance?
- Solenoid field map
- full implementation of polarized target into GEMC
- Full background simulation
- Full simulation of rates, acceptances, resolution, vertex-reconstruction (-> dilution), including backgrounds, systematic errors (e.g., beam-helicity tracking efficiency due to DSA in Møller scattering)
- Geometry, integration, design drawings, readiness review, CALCOM