

TARGET OPERATION

- 7) Plan for irradiation of new target material
 - Cool down at UVA in August to select existing and possible newly NIST-irradiated material for run: we need a minimum of 4 cup loads that polarize to > 85% in the lab in < 1 hr.
 - Plan to use up to a shift and a half of beam at 1000 nA midway during commissioning to irradiate, followed by an anneal and TE to measure polarization with some accuracy after irradiation. A 12 h irradiation at 1000 nA would deliver a very uniform dose of $\sim 2.7 \times 10^{17}$ electrons/3.6 cm² raster area (this might be too a high dose for cold irradiation).
 - If this approach works, assuming we don't have enough material to begin with, we could use the calibrations at 1 μ A to irradiate more material. The run plan includes 120 h of 1 μ A calibration beam, so we could irradiate two full inserts to $\sim 10^{17}$ /cm².

