

BT-7: POLARIZED BEAM CHECKLIST

For more detailed steps, see a ³He team member, qualified instrument responsible or the “Full Polarized Beam Procedure”. This checklist assumes magnet has been placed on instrument and sample is out. NOTE: for TM and FR measurements → please record run #, detector and monitor counts. List in file header: cell name, flipper on/off, cell in/out/depolarized.

CHECK BEFORE RUN

- Rear (downstream of sample) guides are in place
- Polarizer and analyzer are centered on beam

³He TRANSMISSION MEASUREMENTS

- Insure detector set at sample nuclear peak
- Take TM for (1) polarizer only, (2) analyzer only, and (3) both in together
 - Total counts ~5000
- Empty transmission:
 - Total counts ~5000
- Cells de-polarized (**ONLY AT EXPERIMENT END**): de-polarize cells using variac
 - Total counts ~5000

FLIPPING RATIO MEASUREMENTS

- Insure detector set at sample nuclear peak
- Insure polarizer and analyzer are in place
- Count w/flipper off
 - Total counts ~5000
- Count w/flipper on
 - Total counts ~5000
- Flip ³He orientation in cell (using computer cart)
- Repeat above measurements for full four cross section measurement, sample **OUT**
- Repeat both FR measurements, sample **IN**

Repeat FR and TM measurements (respectively) at experiments end