FDC requirements for the commissioning run

1. Photon beam alignment in the Hall - important requirements related to FDC:

   (a) All the HV must be OFF during the initial photon beam alignment.

   (b) The low-mass area of the FDC along the beam is 26 mm diameter. The beam (7 mm spot) should be aligned good enough to be well inside this area.

   (c) Once the beam is aligned one can set -500V negative HV and start increasing the positive HV with small steps above 1900V. One should start with the outer HV sectors.

   (d) Find the HV values for which the currents do not exceed 3 μA. We need to reach 2200/-500V which may require additional beam alignment. During the beam alignment ALWAYS turn the HV OFF.

2. Data taking, if any, during first three days (pre-commissioning)

   (a) Take data with whatever trigger is available, just to test the cable connections and the electronics.

   (b) Use the one-week down time to fix the issues.

3. Studies WITHOUT magnetic field

   (a) Need at least 3M tracks for chamber alignment, or 2 beam-on-target days using 10^{-4} R.L. radiator, 50 nA electron beam, 5 mm collimator, and 2 mm plastic target attached at the end of the vacuum pipe 3 m upstream from the end of the magnet.

   (b) In addition (optionally but highly recommended) we need a cross-wire target 50 cm apart from the plastic target.

   (c) Optionally we want to do the same with another gas mixture (90/10 Ar/CO_2) if there is time for that. In this case we need three days to change the gas mixture.

4. Studies WITH magnetic field

   (a) Need at least 3M tracks (2 beam-on-target day) for studying magnetic field effects and chamber resolutions.

5. Trigger requirements

   (a) For data taking during commissioning we need trigger with:
       (FCAL AND TOF) AND BCAL
       with thresholds adjusted for MIP.

   (b) In case the other detectors don't want TOF in the trigger it can be only FCAL AND TOF.

   (c) In addition we need small (how small to be decided during run?) fraction of events reading out all the fADC125 samples (raw pulse mode).