MD 2733: Beam size measurements using quadrupolar BPM based on DOROS and collimator BPM

- **Beam Energy & Intensity:** One bunch during full cycle
- **Beam conditions:** ADT for blow-up
- **Estimated time:** 4h

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**Goal:** Test the possibility to measure beam size using collimator BPM (as quadrupolar pick-up) using two collimators (H and V)

- **Position Scans** (bumps/coll. offset scans)
  - Centering Beam
  - BPM characterization
- **Apperture Scans**
  - Abs. Beam Size measurement
- **Blow-up / Ramp**
  - Rel. Beam Size measurement (no need for aperture scan, IP1 Q7 BPMs can be used)
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1.1 Inject 1 nominal bunch
1.2 Beam bumps (H/V planes) at collimator points (Centering Beam)
1.3 Collimator aperture scan (Abs. Beam Size measurement)
1.4 Blow-up beam emittance using ADT (Rel. Beam Size measurement)
1.5 Collimator aperture scan (Abs. Beam Size measurement)

2.1 Re-inject a fresh bunch
2.2 Beam bumps (H/V planes) at collimator point (Centering Beam)
2.3 Collimator aperture scan (Abs. Beam Size measurement)
2.4 Ramp (Rel. Beam Size measurement)
2.5 Collimator aperture scan (Abs. Beam Size measurement)
2.6 Perform Coll. Position Scans (BPM characterization)

*WS & BSRT measurements in 1.3-1.5 & 2.3-2.5 for cross-check*