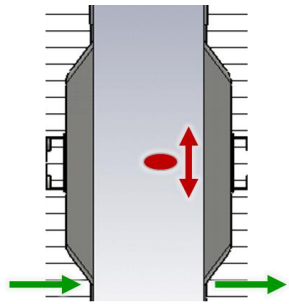


# MD 2733: Beam size measurements using quadrupolar BPM based on DOROS and collimator BPM

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

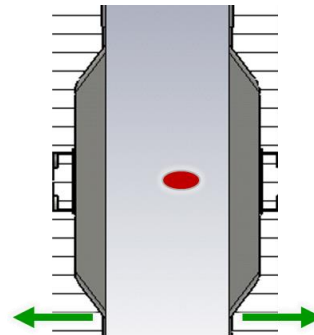
By A. Sounas, M. Gasior, T. Lefevre, M. Wendt, S. Redaelli and ..

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



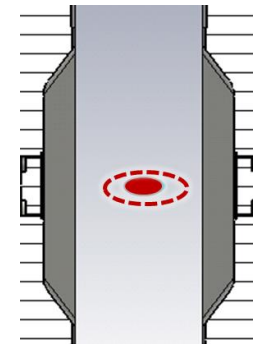
## Position Scans (bumps/coll. offset scans)

- Centering Beam
- BPM characterization



## Aperture Scans

- Abs. Beam Size measurement



## Blow-up / Ramp

- Rel. Beam Size measurement (no need for aperture scan, IP1 Q7 BPMs can be used)



# 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

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**

