



# Collimation with $\beta^*=1.0\text{m}$

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on behalf of the MD team

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# Method and goal of MD



- $\beta^*=1.0\text{m}$  seems possible if we use tight collimator settings and smaller crossing angle (see Mini-Chamonix presentation)
- Less time lost if we do intensity ramp-up after technical stop with new settings
- Method:
  - 1 nominal bunch per beam
  - ramp, new ramp functions make collimators end up at tight settings (TCP at 4 nominal  $\sigma$ )
  - squeeze to  $\beta^*=1.0\text{m}$ , half crossing angle= $100\mu\text{rad}$
  - Find collisions
  - Realign TCTs
  - Do betatron and possibly off-momentum loss maps
- Goal:
  - Qualify cleaning with tight collimator settings. If loss maps OK, these settings can be used during physics runs from the cleaning point of view



# Preparation and status



- Necessary preparation for the MD:
  - Commission optics and crossing angle (OP)
  - Corrections (OP,  $\beta$ -beat team)
- Prepare new collimator ramp functions and thresholds (collimation team and OP) **Under way, will be finished by time of MD**
- End-of-fill study with tight collimator settings **Not done, but not strictly necessary. But if this fails, we can't use MD settings in operation**
- Comments?

**listed as operational development in previous meeting, not done yet, since no machine time available. How do we proceed? When can this be scheduled?**