Proposed tests for collimator set-up with pulsed beam, single pass

- **TI 8:**
  - finalise procedures for
    - alignment
    - centering
    - (beam size measurement)
  - require 1 collimator

- **Sector Test:**
  - demonstrate protection of LHC aperture with TCDI collimators
  - require (at least) 3 TCDI (protection level for one plane)
  - set up TDI
Setting-up: single pass

- **Alignment**
  - non-local BCTs and non-local BLMs: transmission measurement
  - could be tested with 1 jaw only

- **Centering**
  - non-local BCTs and non-local BLMs: transmission measurement
  - requires 2 jaws per collimator

- (beam size)
  - Depend on optics measurements?
  - TI 8 optics measurements were very promising

Promising results of method test for alignment during TI 8 commissioning.

Tilt variations of 300 nm had clear effect on transmitted intensity ($b_0$ to $b_3$).
Proposed Tests
TI 8 & Sector Test

- Layout...which collimator?

- Will install TCDIH300 and test during TI 8, however...

- Optimum test possibility:
  - TT40 TCS during TI 8...single jaw only!!!
  - TCDIxxxx during Sector Test
Minimum Requirements

• **TI 8:**
  - 1 X TCDI + electronics OR TCS in TT40 + electronics
  - read-out of entrance and exit jaw position
  - software: motor movement (enter position in mm from reference beam axis)
  - Logging: shot-by-shot time-stamped entrance and exit jaw positions plus BCTs and BLMs signals

• **Sector Test:**
  - 3 x TCDI + electronics
  - TDI in IR 8 + electronics
  - rest as for TI 8
Open questions...

• Test of....?????
  • interlocking
  • CSS and MCS and interlocking