

LHC MD88

Scans of physics debris collimators requested by stefano

Last modified: 2015-02-19 11:08:44, modified: 1 times

Merit: A new layout has been deployed for physics debris collimators (TCLs) in IR1/5. We propose to characterize the performance by performing scans of TCL settings with beams in collision. This work can be done during nominal physics fills in stable beam, as proved by similar tests performed in 2012. The understanding of physics debris collimation is essential to establish TCL settings for the operation at higher luminosity in 2016.

MD contact person: S. Redaelli

MD procedure link: https://cds.cern.ch/record/1756432/files/Note_TCL_scans.pdf? (https://cds.cern.ch/record/1756432/files/Note_TCL_scans.pdf?)

Category: End of fill MD

Beam: Both

Participants: Collimation team

OP contact person: B. Salvachua

Description: The tests consist in measuring beam losses around IR1 and IR5 while changing the settings of TCL collimators in stable beams. Setting scans will be performed within the range of what has been validated by loss maps, without changing any critical interlock limit for the collimators concerned. The experience in 2012 proved that such tests can be carried out in stable beams without perturbing the physics data taking, as TCL collimators only affect the outgoing beams. We would like to repeat the same procedures several times during the run, ideally with different peak luminosity values. Note that these measurements can be carried out parasitically during stable beams. We request several slots of 2h.

Time required (Hours): 2

Beam energies:

- Flat top

Optics: Squeezed, in collision

Optics change: No

Orbit change: No

Collimation change: Yes

RF system change: No

Feedback change: No

What else should be changed: Nothing

Are parallel studies possible?: No

More information on parallel studies? -

MD requester is ready? Yes

Beam parameters

Bunch intensity (10^{11} ppb): 1.1

Number of bunches: Up to 2746

Transverse emittance (μm): 3.75

Bunch length: 1

MD status

Time slot assigned?: No

Assigned duration:

Status: Requested

Coordinator MD readiness:

MP classification: A

MP approval: No

rMPP approval: Yes

Need 2 extra hours for ramp down: No