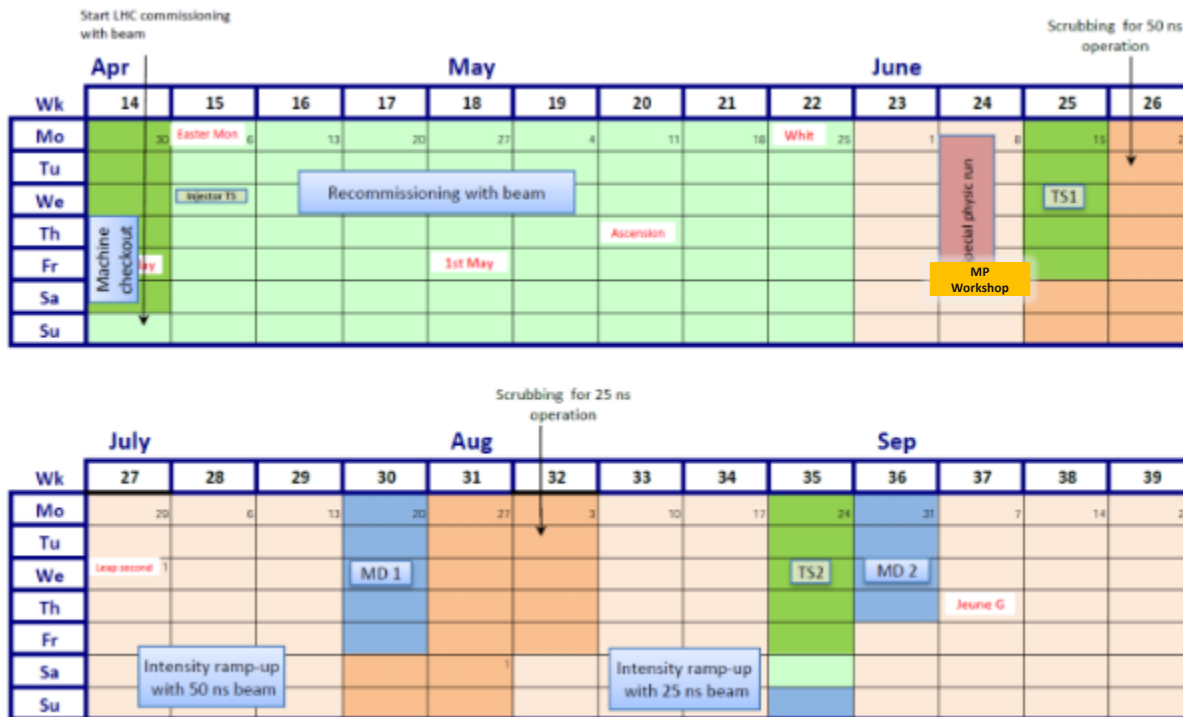




Internal workshop on Machine protection system readiness for MJ beams (post LS1)

Operation in 2015 Q2/Q3



- Beam commissioning (mostly) finished, Started 2015 operation with special physics run
- Up to TS#1: < 4.5MJ
- 50ns scrubbing: < 12 MJ
- 50ns ramp-up: < 180MJ
- 25ns scrubbing: < 26 MJ
- 25ns ramp-up: ->340MJ

Courtesy M.Lamont @LMC

Objectives of Workshop

- 1 day workshop @ CERN to review and discuss the readiness of vital MP and related equipment systems for high intensity operation.
 - Are the systems operating with nominal parameters?
 - Are there any non-conformities?
 - Any weakness that has been observed so far?
 - New failure modes after LS1 modifications?
 - Were all the commissioning steps performed, and what is still missing?
 - What is the operational experience from the first two months of operation?
 - Diagnostic Data for PM and Logging all available?
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Program 1/2

MPP Workshop

Friday, 12 June 2015 from 08:30 to 17:30 (Europe/Zurich)

CERN (864-1-D02)

Description Internal workshop on Machine protection system readiness for MJ beams (post LS1).

Friday, 12 June 2015

- | | |
|---------------|--|
| 09:00 - 09:10 | Introduction to the review 10' |
| 09:10 - 09:30 | Collimation system 20'
Speaker: Belen Maria Salvachua Ferrando (CERN) |
| 09:40 - 09:55 | Status of Powering Interlocks 15'
Speaker: Ivan Romera Ramirez (CERN) |
| 10:05 - 10:25 | Beam Interlock System + Safe Machine Parameter System 20'
Speaker: Stephane Gabourin (CERN) |

Collimation and Interlocks

10:35 - 11:00 Coffee Break

- | | |
|---------------|---|
| 11:00 - 11:20 | Beam Dumping System 20'
Speaker: Jan Uythoven (CERN) |
| 11:30 - 11:50 | Injection System 20'
Speaker: Chiara Bracco (CERN) |
| 12:00 - 12:20 | Beam loss monitoring 20'
Speaker: Bernd Dehning (CERN) |

Injection and Dump System + BLMs

12:30 - 14:00 Lunch Break

<https://indico.cern.ch/event/397348/>

Program 2/2

14:00 - 14:20 Beam position monitors (BPMS) +BSRA 20'
Speaker: Thibaut Lefevre (CERN)

14:30 - 14:45 BCT for protection 15'
Speaker: Lars Soby (CERN)

14:55 - 15:05 RF 10'
Speaker: Philippe Baudrenghien (CERN)

15:05 - 15:20 ADT + AG cleaning 15'
Speaker: Wolfgang Hofle (CERN)

Beam Instrumentation + RF/ADT

15:30 - 15:45 Coffee Break

15:45 - 16:05 Software interlock system + Real time FB 20'
Speaker: Laurette Ponce (CERN)

16:15 - 16:30 Post Mortem System 15'
Speaker: Vera Chetvertkova (CERN)

16:40 - 17:00 Experience from operation 2015 20'
Speaker: Jorg Wenninger (CERN)

Operational aspects and Post Mortem

17:10 - 17:30 Summary 20'

<https://indico.cern.ch/event/397348/>

Conclusions

- Machine Protection will play an important role in the next weeks and months to safely ramp up LHC operation to nominal performance with 25ns @ 6.5TeV
- Wish you an open and constructive workshop to assess MPS readiness and identify any outstanding issues and bottlenecks which need to be addressed ahead/during the next weeks