



rMPP meeting MD1 & MD2

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MD1 and MD2

- Summary of the comments given by Jorg, Markus, Daniel and Jan on the procedures for the MD blocks #1 and #2
- All procedures at [\\cern.ch\dfs\Users\u\uythoven\Public\LHC_MD_Procedures\2017](https://cern.ch/dfs/Users/u/uythoven/Public/LHC_MD_Procedures/2017)
- This is the .xls file sent to the MD requesters last Sunday

Block	Requester	Author	Comments	Environment	IFMC notes	Comment	Comment	Comment	Comment
2226	2226	18	18	18	18	18	18	18	18
2242	2242	18	18	18	18	18	18	18	18
2248	2248	18	18	18	18	18	18	18	18
2250	2250	18	18	18	18	18	18	18	18
2251	2251	18	18	18	18	18	18	18	18
2252	2252	18	18	18	18	18	18	18	18
2253	2253	18	18	18	18	18	18	18	18
2254	2254	18	18	18	18	18	18	18	18
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2266	2266	18	18	18	18	18	18	18	18
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2296	2296	18	18	18	18	18	18	18	18
2297	2297	18	18	18	18	18	18	18	18
2298	2298	18	18	18	18	18	18	18	18
2299	2299	18	18	18	18	18	18	18	18
2300	2300	18	18	18	18	18	18	18	18

MD#1 1/2

- MD#2036 UFO with wire scanner: **Class C**
 - Flying the wire while making individual bunch displacements with the ADT. 10 nominal bunches at injection and flat top.
- MD#2042 RF persistent injection oscillations: **Class B**
 - Usual RF MD, possibly lengthy preparation in the injectors. Max 144 b train.
- MD#2155 Impact of ADT on beam quality: **Class B**
 - 4 bunches with intensities up to $2e11$, collisions at top energy. **Clarify request of separation, 2 beam sigma total or per beam?** Some steps not clearly defined ('if time permits'), **optimistic planning**.
- MD#2177 Crystal collimation: **Class B-C, but presented before, so not today**
 - 25 pilots, relaxed SBF
 - Potential addition: linear collimator scan with a collimator not located in IR7, in order to see if we control with the required accuracy the dynamics of the channeled halo particle.

MD#1 2/2

- MD#2193 TCPSM – collimator impedance: **Class C**
 - 2 nominal bunches, change of collimation settings, masking collimator positions
 - Should one invert step 8 and 9 in sequence (first close TCPs before moving out secondary's?)
- MD#2269 ATS – non flat: **Class B**
 - 1 pilot per beam only, standard optics commissioning
- MD#2201 and #2202 Long range and Wire collimator: **Class C**
 - Emittance blow-up protocol not defined. Should check interlocks of wire at the start. Very optimistic.
 - Trains of 48. **With TCT at 6 sigma, should move TCSP6 in closer; risk of dumping with TCTs at 6 sigma. Point 6 of procedure too vague. Bumps to be defined in detail with amplitudes**

MD#2 1/2

- MD#1828 Non working beam dump: **Class C**
 - Test at injection only. No changes of machine protection settings. Needs OP training afterwards ...
 - Risk of beam dump due to long running sums RS12.
- MD#2065 and #2066 Emittance exchange with linear coupling: **Class B but proposed to limit to 12 bunches → presentation**
 - ... as the MD can potentially be lossy
 - **Wire also only 10 b @ 6.5 TeV !?**
 - 2065 emittance exchange with one nominal per beam
- MD#2154 PPLP fast ramp: **Class B**
 - New ramp, pilots only, collimators coarse settings
- MD#2158 B4 correction and feed down: **Class B**
 - Pilots – like commissioning

MD#2 2/2

- Beta* reach, aperture @ 30 cm: Class B
 - Long discussion, does not fit anymore in present commissioning.
 - Collimators to go to standard coarse settings
 - If more than pilots needed → needed for asynchronous dump test ? → Class C ?
- MD#2183 Calibration of diamond BLMs at TCDS: **Class C**
 - What is the difference relative to last year (besides sign of bump ;-)
- MD#2197 BTF: Class C – but done before
 - Reduced crossing angles, TCTs to follow etc.

Spare MDs

- MD#2050 RF controlled emittance blow-up: Class B
- MD#2157 Beam Quality preservation: Class B
- MD#2162 Dynamic aperture at 6.5 TeV: Class B-C
- MD#2179 Off-momentum halo at injection
- MD#2190 Q''Stabilisation during injection