

rMPP meeting on ion MDs 2023 approval

The meeting took place on Wednesday, **October 11th, 2023, 15.00h-16.00h**, via zoom.

Participants:

R. Bruce, Z. Charifouline, M. D'Andrea, Y. Dutheil, C. Hernalsteens, C. Lannoy, D. M. Louro Alves, J. Jowett, S. Kostoglou, S. Morales, F. Moortgat, N. Mounet, S. Redaelli, M. Solfaroli Camillocci, G. Sterbini, J. Uythoven, G. Trad, J. Wenninger, C. Wiesner, D. Wollmann, C. Zamantzas

The slides of all presentations can be found on [Indico](#). The MD procedures can be found on [ASM](#).

1 Introduction

J. Uythoven welcomed the participants. He explained that, prior to the meeting, rMPP members had reviewed the MD procedures and selected two MDs to be presented in more detail. Furthermore, comments to two additional MDs will be given and discussed.

2 rMPP comments on MDs

The initial comments and questions can be found [here](#). The following remarks and clarifications were given in the meeting:

- MD10766 (Crystal collimation performance with ions) and MD9263 (Schottky-based chromaticity measurements)
 - C. Wiesner commented that using expressions as “safe beams” or “safe limit” can be misleading and should be avoided because $3e11$ charges at top energy can already lead to damage of machine components. However, using the BEAM_SETUP equation of the Setup Beam Flag allows to mask certain interlocks if the beam intensity is below $3e11$ charges. Therefore, expressions as “setup beam” or “below the setup beam flag” can be used instead.
 - J. Uythoven added that the damage potential is even higher for ion beams with the same number of charges.
- MD9263 (Schottky-based chromaticity measurements)
 - N. Mounet confirmed that no interlocks will be masked for the MD and that this is now clarified in the MD procedure.
 - N. Mounet asked if doubling the octupole current with respect to the originally foreseen value changes the machine-protection considerations. J. Wenninger replied that there is in principle no restriction for changing the octupole current. D. Wollmann agreed and added that nevertheless the foreseen values should be stated clearly in the MD procedure.

The MDs were approved understanding that the comments and modifications above will be included in the procedures.

3 MD10724: BFPP quench test (J. Jowett, P. Hermes, R. Bruce)

- J. Jowett clarified that the desired magnet for the quench test is the MB.B11R1.B1. Z. Charifouline confirmed that there are no known non-conformities in this magnet, and that there are no special constraints for quenching this magnet from MP3.
- Z. Charifouline commented that the status of the corresponding QPS crates should be verified before the MD to ensure the correct sending of the PM. D. Wollmann and M. Solfaroli Camillocci agreed and stressed that the crates should be verified shortly before the MD, while the QPS team should be pre-warned beforehand.
- **It was decided that loss maps need to be performed with the reversed BFPP bump polarity for the configuration that will be used for the MD.** These measurements are also required as input to adapt the BLM thresholds. Therefore, the validation fill must be performed well before the MD to allow the calculation and implementation of the BLM thresholds.
- After the meeting, Y. Dutheil requested that **an ASD test should be performed with the reversed BFPP bump polarity for the configuration that will be used for the MD. The request was approved offline.**
- R. Bruce commented that in principle the MD could be performed as an End-of-Fill MD. J. Jowett replied that with the presently reached beam parameters the intensity might be too low. D. Wollmann remarked that the BLM thresholds need to be changed before the MD. If physics operation continued after the MD, the BLM thresholds changes would then need to be reverted. S. Morales confirmed that the expected quench recovery time (>8h) would be sufficient to revert the changes.

The MD was approved understanding that the above-mentioned validation will be performed.

4 MD10703: Ions BB limit varying the crossing angles (G. Sterbini, R. Bruce)

- G. Sterbini confirmed that only the jaw positions of the TCTs will be changed but not the gap distance.
- **It was decided that loss maps need to be performed in the configuration with the smallest foreseen crossing angles in all IPs.**
- It was stressed that **the validation fill has to be performed with the same ALICE polarity as the actual MD.**
- It was decided that an ASD test is not considered mandatory for the validation but could be beneficial to perform.

The MD was approved understanding that the above-mentioned validation will be performed.

J. Uythoven thanked all speakers and participants and closed the meeting.