

Comments to BLM MPS Commissioning Procedure

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Page: 6 :

1st paragraph of 5.1: The tests that are done before each fill or during data taking are not just BLM system tests, but should be integrated into an MPS operations procedure

“BLM system tests” are listed in attached excel file and described in a separate document. In this commissioning procedure are the "tests of the BLM tests" (chapter 5) plus the test during machine check-out and with beam (chapter 7 and 8).

Link MPS recording/tracking to the BLM MTF test results.

Page: 6 :

..., please confirm that the BLM group make this test, and that it is not left to the BIS team:

“A USER_PERMIT transmission test between last CS card in the rack and the CIBUs (BLM test 332 “CS to CIBU transmission”). This test will be triggered automatically as part of the BIS system test where the A and B paths will be checked independently for maskable and unmaskable channels.”

This test is under the responsibility of BIS – to be cross-checked with Bruno Puccio.

Direct dump BLMs: For the reference voltage adjustment, how is the reference voltage determined?

BLM thresholds will have to be calibrated with beam for TCTs, MKIs,...locations where simulations are not available, but are sensitive nevertheless.

MSD, MKD, MKBH/V, MSI, MKI, TCDS, TCDQ:

- Either determine normal loss level and adding a margin?
- Or by testing with controlled beam loss and scaling for maximum acceptable beam loss. The maximum acceptable loss has to be provided by equipment owner.

Do we really want to initiate a powering failure on a warm dipole, squeezed at top energy with beam in the machine?

Yes.

If I am not mistaken some of the circuits quoted (e.g. D1) should be unmaskable in the final configuration. It will be therefore difficult to mask them:

- Powering failure of RD1.LR1 and/or RD1.LR5.
 - Powering failure of selected normal-conducting quadrupoles in IR3 and/or IR7.
 - Powering failure of separation dipoles in IR3 and/or IR7.
- “... Any FMCM or powering interlock must be masked to ensure that the BLM system will see the beam loss as first protection system. ...”