Minutes of the MPPr 25th February 2011

Present: B.Dehning, M.Lamont, M.Zerlauth, R.Schmidt, J.Wenninger, J.Uythoven, M.Ferro-Luzzi

General issues

- The participants, representing the main machine protection system, operation and the experiments are as follows:
  - Andrzej Siemko – Magnet System and GL of MPE (Machine Protection and Electrical Integrity)
  - Bernd Dehning – Beam Loss Monitors and other instrumentation (check with Rhodri)
  - Brennan Goddard – Beam Dumping System and Injection Systems
  - Jan Uythoven - Beam Dumping System and Injection Systems
  - Jorg Wenninger – MPPr Co-Chair, Operation LHC section leader, MPP chair and MP expert
  - Markus Zerlauth – Interlocks Systems and MPP chair
  - Massimiliano Ferro-Luzzi – Physics Coordinator and representing the LHC users
  - Mike Lamont – GL of accelerator operation and LMC co-chair
  - Ralph Wolfgang Assmann – collimation and MD studies
  - Rudiger Schmidt – MPPr Chair, MP expert
- Jorg and Rudiger will exchange roles: Rudiger becomes chair and Jorg co-chair. For the medium and longer term it is suggested to involve other colleagues that have intimate knowledge of the machine protection systems, e.g. one LHC coordinator or a (former) EiC.
- Steve and the LHC coordinators should be informed under cc, they are welcome to attend any of the meetings.
- There is no motivation for another "rrMPP". Ruediger and Joerg (as chair and co-chair) together with Mike (as LMC co-chair) will discuss with Steve, if needed, the rMPP proposals before LMC.
- The minutes and documents related to intensity increase will be stored in EDMS, with the possibility of approvals via the EDMS tools. Markus and Rudiger will get this organised. However, this must not delay progress if the approval takes too long (e.g. stepping up intensity).
- In general, the Machine Protection Panel (MPP) or possibly other working groups will coordinate the scientific work on questions related to machine protection and prepare the decisions. The role of the MPPr is to develop proposals for management, e.g. for intensity limits, intensity steps, etc.
- It is suggested to reserve Tuesday morning 9:00 as slot for meetings (to be finished by 10:00 when other meetings start).

Start-up 2011

- How do we define that the required tests related to machine protection were performed before injecting or accelerating unsafe beam? The existing WEB forms should be filled out, and the MPPr will discuss the readiness for high intensity operation in a future meeting (possibly 8th March).
- Commissioning with the objective to go into physics with up to, say, 200 bunches is planned from now until the start of the 1st technical stop on 28 March. After the technical stop, a period of 5 days is foreseen for a run with collisions at 1.38 TeV. A scrubbing run of about 10 days will follow. A continuous physics run after the scrubbing run is planned until 4th May, followed by an MD and a 2nd technical stop in 2011.

Intensity ramp-up before the technical stop

- The baseline is to start physics operation with 25 b, and then starting to increase the number of bunches after the operational procedures are in place and well established.
- As for the 2010 run, the intensity increase is planned to be performed in steps, 50 b, 100 b, 150 b to 200 b.
- The reasons for these steps are the large number of modifications to equipment and protection systems during the Xmas shutdown, the new bunch spacing of 75 ns, the beta squeeze to 1.5 m and many related changes of the controls software.
- In general, three fills per step, in total 20h are planned (might be re-discussed after some more operational experience).
- Could we skip one step, in particular the step with 150b, if there are no signs of e-clouds when operating with 100b and not other issues? Could we reduce the number of fills per step or the total length of 20h if everything runs smooth? To be discussed.
- It might be of interest to modify the filling pattern and intentionally inject longer SPS batches to trigger possible problems (e-clouds) already before the technical stop.

AOB

- The documentation of changes to machine protection systems in technical stop was discussed. The minimum is to have an (EXCEL) table with the changes, possibly stored in EDMS or a Machine Protection Share-Point site (tbd). A tracking system as being prepared by the technical monitoring could be envisaged (see P.Sollander).
- Jorg added that rMPP should also screen and finally approve any foreseen MD runs (from the machine protection perspective).