

Machine Advisory Committee

At the MAC meeting last week, presentation by JW on the MPS commissioning and status.

- It was received well, only smaller questions at end.
- Waiting for the MAC summary...
- Available in my public and on the MPP web pages.

Specifications

It is time to review the specifications !

- **PIC and FMCM** : new versions checked by JW, ready for approval procedure.
- **Injection** : revised, will be ready before Xmas.

Beam Quality Interlocks @ SPS

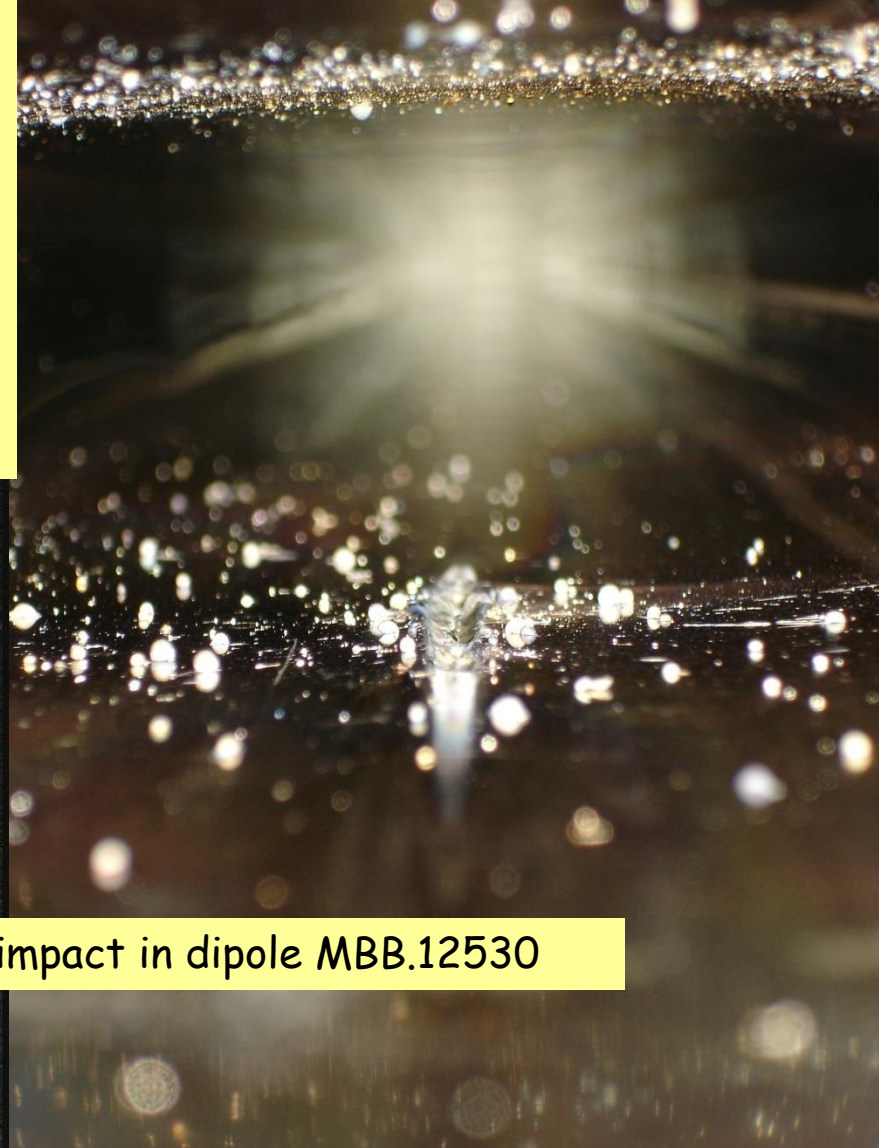
- A meeting on the RF Beam Quality Monitor (BQM) took place on 02.12.2008.
 - Main outcome:
 - In 2009 the RF BQM will be connected to the SPS Ring BIS.
 - It will therefore dump the beam (and not inhibit/permit extraction) when the quality is not good.
 - The main reason for this decision are timing aspects :
 - The system is not (yet) able to measure continuously in RT
 - By connecting it to the extraction interlock system the permit must be given ~20 ms before extraction.
 - The RF group wanted to take the decision as late as possible : ~ ms before extraction) → only possible (presently) by dumping beam directly in the SPS.
- No new CIBFs (and no new fibers) needed for 2009. The situation will be reviewed at the 'end' of 2009.

CNGS Incident 27th June 2008

- Following a rare but critical timing problem, a 400 GeV CNGS beam of 3×10^{13} p was lost in the SPS ring (2 MJ).
- A dipole vacuum chamber was ripped open and the magnet had to be replaced.
- The analysis of the incident showed very distributed losses, difficult to catch with BLMs (also time response of BLMs too slow).
- >> The beam was lost in the V plane, where there is no beam position interlock.



Beam impact in dipole MBB.12530



Beam Position Interlock @ SPS

- ❑ The SPS ring has a turn-by-turn beam position interlock system in the horizontal plane at +/-30 mm, but not in the vertical plane. This system is very efficient and triggers frequently on RF problems, mis-injection....
 - ❑ The system is a purely analog system and BI does not want to make the same system for the V plane.
 - ❑ In a meeting last month it was decided (BI + JW + BP):
 - The new position interlock for the extracted beam will be connected to the extraction interlock systems (see last MPP). This system should replace the existing system (slow + build on top of orbit system) in 2009/2010.
 - The new position interlock system (in LSS6) will be adapted to be able to interlock the position of the SPS beam on a turn-by-turn basis in the V plane and provide the same protection as the old H plane system. It will be connected to the SPS ring BIS.
 - Eventually the new system should be extended to the H plane and possibly to relocated (timescale 2010).
- One additional CIBU for the V plane t-by-t position interlock

Experiments

Should we invite the experiments to the MPP :

- on a regular basis ?
- only when we need them ?