

MPP meeting 13 November 2009

Agenda:

Original agenda:

- Commissioning status (round table)
- SMP energy errors
- BLM response for ultra-fast signals (ns scales)
- BCM commissioning strategy with beam

Final agenda:

- Startup configuration (Jorg)
- BLM settings for start-up (Bernd)
- TDI issues (Jorg)
- SMPLHC Energy (Ben)
- External review of BIS (Ben)

Present:

Walter Venturini, Siegfried Wenig (ATLAS), Richard Jacobsson (LHCb), Nicola Bacchetta, Bernd Dehning, Andrzej Siemko, Daniella Macina, Antonio Di Mauro (ALICE), Ralph Assmann, Lars Jensen, Etienne Carlier, Bruno Puccio, Ben Todd, Mario Deile, Tobias Baer, Barbara Holzer, Markus Zerlauth, Christoph Kurfuerst, Aurelien Marsili, Mariusz Sapinski, Annika Nordt, Wolfgang Bartmann, Mike Lamont, Chris Zamantzas, Richard Hall-Wilton (CMS), Jorg Wenninger, Mike Koratzinos

Minutes:

Startup configuration (Jorg)

Jorg showed a few slides on the roadmap to startup. The startup interlock configuration will be defined Monday afternoon and will be entered in EDMS. The MPS tracking page will be used to track changes. Jorg then defined the rules of how to change the configuration. All changes should be documented and the philosophy is that if a signal is broken it should be taken out of the chain and not masked. Safe beam flag is not ready yet. Slide 4 shows the relevant systems in some detail: what is relevant is that whatever is in yellow is still missing. Experimental inputs final checkout can possibly be done next Monday.

Stable beams preparation with beam: Need systematic aperture measurements for all IPs and both beams. It could possibly be done a week after starting.

BLM settings for start-up (Bernd)

Bernd reported on the initial BLM settings for the start-up. First problem shown by Bernd was the signal of the TCT monitor was over threshold during dump of beam on TDI. (In his plot green is threshold and purple signal). This needs to be understood. It would be possible to increase the threshold.

Pulse response: Some signals after a single bunch impact decrease to zero. This is due to the fact that the signals come from a capacitor which becomes discharged. This blinds detectors. This is worth some attention and we should schedule some tests. There is a proposed solution should solve the problem.

BLM response: ICs (ionization chambers) all well. SEM signal is small. Some SEMs are presumably affected by a vacuum leak.

Startup procedure: BLM channels successively will be moved from the maskable to the unmaskable signal chain. Jorg pointed out the risk to forget BLMs in the maskable mode. Within a few days we should move as many as possible signals to the unmaskable mode.

TDI issues (Jorg)

Jorg reported on the follow-up of the LHCb beam dump: TDI setup and centering proceeded with no problems at Alice but it triggered dumps in LHCb. BCM response to TDI shots was about 1000nA in Alice but 10000nA in LHCb. The two detectors are identical so the difference of a factor of 10 can only be due to position. This needs to be understood. To be followed up.

Safe Machine Parameters (SMP) – LHC energy. (Ben)

Ben described issues stemming from one of the SMP parameters – LHC energy. Problem is that several times a day the LHC energy defaults to its highest value (fail-safe mode). This is not yet understood and the problem is currently being debugged. If no progress by the middle of next week, experts should meet again to decide on actions to take.

External review of the Beam Interlock System (Ben)

Ben reported on the external review of the BIS by a company (Critical Systems Lab) well placed to review it. The company did a very thorough job over many weeks and produced a series of recommendations. These are summarized in the summary table with names next to actions on those recommendations. There will be a presentation of the conclusions of the review in LMC of Wednesday 18 November. There was some discussion as to when we should implement the recommendations by.