

MPP meeting 24 April 2009

Agenda:

- Interlock requirements for the triplet alignment system (R> Redaelli)
- BLM specification comments (E. B. Holzer).
- Time estimates for MPS tests with beam (J. Wenninger)

Present:

Nicola Bacchetta (CMS), Bernd Dehning, Daniela Macina, Siegfried Wenig (Atlas), Robert Appleby, Barbara Holzer, Mariusz Sapinski, Annika Nordt, Alick Macpherson, Jan Uythoven, Bruno Puccio, Juan Blanco, Benjamin Todd, Laurette Ponce, Rudiger Schmidt, Stefano Redaelli, Jorg Wenninger

Minutes:

Interlock requirements for the triplet alignment system (S. Redaelli)

S. Redaelli presented triplet alignment system installed on all triplet magnets in IR1, IR2, IR5 and IR8. The system provides alignment measurements based on a Hydrostatic Leveling System (HLS) and on a Wire Positioning System (WPS). The WPS is operated at constant tension to avoid possible systematic effects. Remotely controlled motors provide the possibility to reposition the triplet magnets from the CCC. The range of the movements is ± 2 mm for each axis, one motor step is around 1 micrometer.

The question was raised why the movement of the triplets is not interlocked via the BIS. J. Wenninger and S. Redaelli answered that this was not considered critical for the moment, in particular because the motor will not be locked off during regular operation.

To question on the alignment of the triplets with respect to the TAS (which does not move) J.P. Quesnel answered that the triplets are of course aligned with respect to the machine and that the experiments are aligned with respect to the triplets. The TAS alignment tolerances are 0.3 mm. J.P. Quesnel also mentioned a possible problem with radiation in UJ56 where some of the system electronics is installed and that could affect the motors. A re-location of the racks is under study by the appropriate bodies.

G. Arduini wondered about the settings persistency of the motors in case of power cut. This may have to be tested. It is however noted that the measurement systems will not be affected (except for the fast that no data is available during the power cut).

BLM specification interlocks (E. B. Holzer):

E.B. Holzer presented a list of points that were raised during the approval of the BLM MPS specifications. All her proposals / answers were accepted. For the point concerning BLM thresholds for BLMs installed on special elements like MKIs, MKDs, MSDs, roman pots etc it was agreed that the people responsible for those devices will provide threshold values to be set for the startup with beam. Those thresholds will have to be refined with beam experience or beam tests. J. Uythoven made the point that the threshold on some of those devices may not correspond to 'damage' level but could in fact be much lower. They may be set based on the 'normal loss levels' including a margin of some %.

Time estimates for MPS tests with beams (J. Wenninger):

J. Wenninger presented first rough estimates for the amount of time required for the MPS tests with beams. For the LBDS system the time estimate is ~120 hours per system, but 30 hours could be safe on the total of 240 hours if the dump checks during the ramp are performed for both beams at the same time. Obviously this estimate does not take into account the fact the some tests could fail, for example if the settings of MKD and MSD have to be fine tuned in the ramp. The time estimate for all the remaining tests is ~140 hours. This estimate does not include the LHC experiments nor the collimation system.

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S. Wenig asked if it was possible to have a 'statement' by the MPP on the protection of the LHC experiments. The information is in available, but distributed over a number of documents. J. Wenninger agreed to produce a summary document in the coming month.