



# Minutes of the LIU-PSB Ad-Hoc Meeting 5 on 23<sup>rd</sup> September 2019



*Agenda (<https://indico.cern.ch/event/849979/>)*

## *1. Alignment BT-BTM-BTP*

Present: F. Antoniou, M. Atanasov, C. Bracco, G.P. Di Giovanni, T. Dobers, K. Hanke, M. Hourican, B. Mikulec, F. Pedrosa, J. Somoza, P. Valentin, W. Weterings.

Excused: W. Bartmann, D. Hay, A. Huschauer, D. Missiaen, A. Newborough.

## **1. Alignment BT-BTM-BTP**

**Reason for the meeting:** Following the recent issues with the alignment of the L4T, LT, LTB lines, a meeting was called to discuss the upcoming smoothing campaign of the PSB extraction line. In the new updated LS2 schedule, approved last week, 2 weeks have been allocated for **the smoothing of BT-BTM-BTP, week 47-48 (mid-end November 2019)**. The goal of the meeting is to:

- Anticipate possible issues with the smoothing of the PSB extraction line.
- Go over the current (mis-)alignment of the PSB extraction lines.
- Identify the list of elements that will need to be re-aligned and how to align them.
- Possible need for additional measurements by EN-SMM and estimated time to perform them.

**P. Valentin** and **T. Dobers** confirmed that **all the equipment installed in the BT-BTM-BTP lines will be re-aligned**, so the target is to align the lines at nominal position. On the other hand, it is crucial to measure the level of the PSB extraction and PS injection, in order to avoid mis-alignments between the exit of the PSB and entrance of the PS, respectively. EN-SMM requested **1 day to perform leveling measurements**. This is particularly difficult for the PS injection, as part of the wall should be dismantled and the access in the switchyard is currently not possible due to the IST of the power converters and magnets in preparation of the upcoming LBE run.

A discussion followed to work out a possible solution. It was agreed that:

- **F. Pedrosa** will contact the transport team (**J.L. Grenard**) to see if they could remove manually the blocks needed to have a survey line between PSB and the PS. **Information from Fernando after the meeting: "I just received the confirmation from Jean-Louis that the concrete blocks between the PS and the PSB have been removed. The survey should now be possible."**
- **T. Dobers** and **P. Valentin** will plan for a measurement campaign for **Wednesday 25<sup>th</sup> September 2019 accessing from the switchyard**. **Action: EN-SMM to perform leveling measurements between the PSB and the PS.**

**M. Hourican** asked what will be done if the level of the PS injection and PSB extraction will be incompatible. **T. Dobers** replied that both machines will serve as a reference and the general practice is to align the elements on a line connecting the two machines. **G.P. Di Giovanni** asked EN-SMM to share the results of the leveling measurements with the other groups as soon as it is available. A follow-up meeting may be needed to decide the alignment strategy, which will be



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agreed based on the outcome of the measurements. **Action: EN-SMM to inform TE-ABT, EN-ACE and BE-OP about the outcome of leveling measurements. Based on the results, the alignment of the various elements will be discussed.**

**F. Pedrosa** pointed out that the alignment of the BTP line will not be possible in November 2019, because of the LBE run. This activity has to be rescheduled for 2020. **T. Dobers** and **P. Valentin** commented that once the leveling measurements are done and the alignment strategy agreed upon, there is no fundamental issue with aligning the BT and BTM lines in 2019 and post-pone the smoothing of the BTP line in 2020. **F. Pedrosa** will discuss with **D. Hay** on how to best integrate this work in the schedule and he would prefer to integrate this activity in the PS LS2 Master Schedule.

**J. Somoza** said that TE-VSC is willing to support this effort as much as possible, but he also warned that in 2020 TE-VSC will be less and less in favor of disconnecting elements because of the expected workload, combined with the machines that will restart and the consequent vacuum preparatory work which will have to be done. The smoothing of the BTP line in 2020 should not be an issue, but the remarks holds for other activities, e.g. in the PSB rings.

**G.P. Di Giovanni** thanked all participants for attending the meeting, having clarified the requests and worked out a solution to allow leveling measurements in BTP-PS. A possible follow-up meeting may be called, depending on the outcome of the leveling measurements.

Minutes by [G.P. Di Giovanni](#)