

# LHC Beam Operation Committee

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Notes from the meeting held on 26th June 2012

## Participants

### 1. Technical Stop #2 2012 (Julie Coupard)

J. Coupard summarized the interventions planned during Technical Stop (TS) #2. Maintenance of several lifts is foreseen, which limits temporarily the accessibility of certain sectors. During the first days of the TS, the patrol in Pt. 2 and Pt. 8 was lost due doors which were forced open. The helium in the inner triplet magnets in IR2, IR5 and IR8 was emptied because of a scheduled survey. The cryo maintain is expected to be back for all sectors on Thursday, 28<sup>th</sup> June evening. The TS will finish with the last patrol at about 18:00 on Friday, 29<sup>th</sup> June.

The complete planning and a list with all scheduled interventions are available [here](#).

#### *Discussion:*

J. Wenninger asked if an intervention is foreseen for the octupole circuit ROF.A56B1, which are currently limited to 200A. M. Pojer answered that a switch will be replaced for this (and other) circuits and that they can be operated at nominal current (550A) after the TS.

M. Pojer informed that due to a trip of a main dipole circuit, they were unable to measure the dump-resister voltage of the corresponding energy extraction system. **Amendment:** The test was successfully done on Thursday, 28<sup>th</sup> June.

### 2. BE-CO work for the TS#2 (Pierre Charrue)

P. Charrue informed that BE-CO is now documenting all their work before and during the technical stops on a [homepage](#). Many machines will be restarted and updated during the TS.

P. Charrue also informed about a leap second which will be introduced at 01:59:59 on Sunday 1<sup>st</sup> July (local time). This implies a resynchronization of the CERN timing systems.

#### *Discussion:*

J. Wenninger informed that the OFSU software will be updated during the TS.

### 3. [Restart after TS#2 \(Jorg Wenninger\)](#)

J. Wenninger informed about special tests to be done after the TS and the ALICE polarity reversal. He presented a preliminary planning and the foreseen intensity ramp up.

The attenuators for the interlock BPMs in IR6 will be changed to have a lower intensity threshold of about  $2E10p$  on all channels. A scraping test to verify the changes and a bump test to verify the correct behavior of the logic will be done. Depending on the readings with 50ns beam, alignment checks with the TCSGs in IR6 have to be done.

J. Wenninger informed that during the introduction of the leap second on Sunday, 1<sup>st</sup> July 01:59:59 (local time) all CERN accelerators will be stopped to adjust the timing systems.

A test of the SMP-MTP cross-checker is foreseen. A timing expert can inject an erroneous energy event in the transmitted data to test the detection of the failure.

A roman pot alignment campaign for low beta operation could probably be done early during the restart, but is still to be confirmed.

J. Wenninger informed that an ALICE polarity change is requested. This implies a flip of the external crossing angle in IR2, and thus a re-alignment and validation of the IR2 injection protection collimators and vertical IR2 TCTs throughout the full cycle. After the ALICE polarity change in 2011, an associated change of coupling and orbit was observed. This is generally easy to correct, but in order to correct the orbit changes during the squeeze, a high bandwidth orbit feedback cycle may be needed. The full time estimate for the polarity change is 2-2.5 days (in 2011: 2.5 days). **Amendment:** At the LMC on 27<sup>th</sup> June it was finally decided to postpone the ALICE polarity change, the new date has not been fixed.

For the intensity ramp up, steps of 84b, 480b, 840b, 1380b with at least 2 hours of stable beams per step are foreseen. The fills with at least 840b are considered as luminosity production fills.

#### **Discussion:**

G. Papotti asked if 12 non-colliding bunches could be added to the 840 bunches fill. It was agreed that this is no problem.

#### **Upcoming meetings:**

**Tuesday, 3<sup>rd</sup> July 2012 15:30 in 871-1-011: LSWG**

**Tuesday, 10<sup>th</sup> July 2012 15:30 in 871-1-011: LBOC**