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# Summary of the 2<sup>nd</sup> FOM Meeting

Held on Tuesday 4<sup>th</sup> April 2017

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Agenda (<https://indico.cern.ch/event/626051/>)

1. *Follow-up of the last FOM*
2. *Linac2 start up status*
3. *PS shutdown activities and analysis*
4. *SPS shutdown activities and analysis*
5. *Schedule update*
6. *AOB*

## 1. Follow-up of the last FOM

**B. Mikulec** chaired the meeting.

The list of presence can be found in [Annex 0](#).

The [minutes of the 1<sup>st</sup> FOM](#) were approved.

## 2. Linac2 start up status.

**R. Scrivens** reported on the Linac2 startup ([Annex 1](#)).

All tests were completed and the beam successfully sent to the dump. The start-up was slowed down because of the unavailability of the watchdog until last Friday (as the LT.BHZ20 was not powered). Actions were taken in order to avoid repeating in the future the two “CCC hiccups” (the source arc current is now limited by the source team and the Linac2 power supply controls are now in a separate working set from the PSB ones; this was a special working set with all power supplies used for repowering after a technical stop).

Small bumps in the cavity tank temperature entail movement of the tanks that do not return to the same position. This induces an increase in the vacuum level. Some of these vacuum spikes are enough to trigger the interlock (even if the cooling water temperature changes are within normal range). The Linac operation and vacuum teams met last week and took actions that will be followed up.

The 50 MeV beam will be ready to be sent to the PSB on Monday next week.

**R. Scrivens** gave more details on the issue that occurred with the LT.BHZ20 lock-out. In previous years an isolating switch between this power converter and the magnet was locked out, allowing acquisition to be returned by the Power Converter controls to the beam interlocks and the Linac2 SIS watchdog, confirming zero current and therefore the beam dump as destination. Without these information this year, the interlocks and watchdog had to be bypassed, and the beam surveyed



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manually – reducing reliability testing. Since 31 March it was agreed to return the lock-out to the isolating switch. For 2018 it is foreseen to use a new power converter, installed in a new location. EPC are informed of all these points and in principle will power the converter controls independently to overcome these problems – in any case they will provide a solution. **B. Mikulec** asked **C. Mugnier** to confirm that the BIS for Linac4 would not suffer from the same issues when it is used post LS2.

**B. Mikulec** said that POPS should be ready in the afternoon in degraded mode and therefore the DSO test could take place for the switchyard, PS ring and TT2. **F. Pirotte** will keep the Linac2 team updated with the DSO test status.

### 3. PS shutdown activities and analysis.

**S. Mataguez** reported on the PS shutdown activities ([Annex 2](#)).

A complete report is given in the EDMS document 1771646.

Main objectives and motivations for the EYETS PS activities were:

- Preventive and corrective maintenance
- Identification of obsolete cables (de-cabling project)
- Cable installation for LIU and consolidation
- Consolidations and upgrade installations

Activity details and highlights were given.

Overall, the shutdown went pretty well and all activities are now complete.

In order to make the material access easier, a double-door entrance will be implemented at the next YETS. The straight section vacuum chamber height should be measured (**K. Hanke** will get in contact with the survey team). The TREC system is fine, but the processing of radioactive waste is still a bit slow. The concrete floor of the PS ring interior side is slowly degrading (60 years old) and a long-term solution should be discussed with SMB. A reorganisation of the 151-R is needed in order to give more space to the magnet workshop and unloading area.

**B. Mikulec** reminded that the changes on the PS machine should be updated in the layout database (to be followed-up by EN/ACE).

**D. Manglunki** acknowledged **Simon** for having organized PS visits during the EYETS that were very well received.

### 4. SPS shutdown activities and analysis.

**A. Berjillos** reported on the SPS shutdown activities on behalf of **D. Mcfarlane** ([Annex 3](#)).

Main objectives and motivations for the EYETS PS activities were:

- Preventive and corrective maintenance
- Identification and removal of obsolete cables (de-cabling project)
- Cables installation for the LIU and consolidation



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- Anticipation of LS2 LIU project activities
  - Consolidations and upgrade installations
  - Replacement of the damaged beam dump
  - Crab cavity infrastructure

The SPS EYETS was 13 weeks in total. A list of different activities was presented and details given on the critical tasks that were the replacement of the TIDVG, the decabling campaign and the crab cavity installation work.

All planned activities are now complete.

## 5. Schedule update.

**B. Mikulec** presented the injector schedule ([Annex 4](#)). The PSB will take the beam on Monday, the PS on the following week.

## 6. AOB

### Technical infrastructure status

**J. Nielsen** reported on how the major power cuts are handled ([Annex 5](#)). In case of a major power cut, TI can receive up to 5000 different alarms and treat more than 100 phone calls per hour. In order to limit the impact of the phone calls and to give a better information to CERN staff, a pre-recorded message saying “A CERN-wide power cut is on-going, if your call is urgent please hold the line, otherwise call back later”, will be activated on the TI answering machine. It should greatly help in sorting calls by priority.

On Monday afternoon at 17.50, a severe electric perturbation occurred on the 400 kV network (50% voltage drop for 40 ms). Many systems were affected (all recovered 2 hours later).

**L. Jensen** commented that it could be envisaged that a specific list of CERN staff would receive an SMS in case of a major perturbation. **J. Nielsen** will investigate this option.

### Intervention électrique sur voie redondante du système d'accès.

**D. Chapuis** presented the intervention on access system ([Annex 6](#)). In order to complete the intervention, the zones in “beam mode” will be switched to “beam off” for 10 minutes today at 14.00. The Linac2, Linac4 and people concerned by the PS DSO tests were informed.

**A. Bland** informed that an intervention related to the firewall will take place on Wednesday afternoon, but should be transparent for the users.

**D. Kuchler** will discuss with RP the possibility of accelerating the Xe beam down the Linac3 next week.



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**Next Meeting: Tuesday 11<sup>th</sup> April 2016.**

Minutes reported by [J.B. Lallement](#) on 6<sup>th</sup> April.