# ELENA:

# Commissioning meeting

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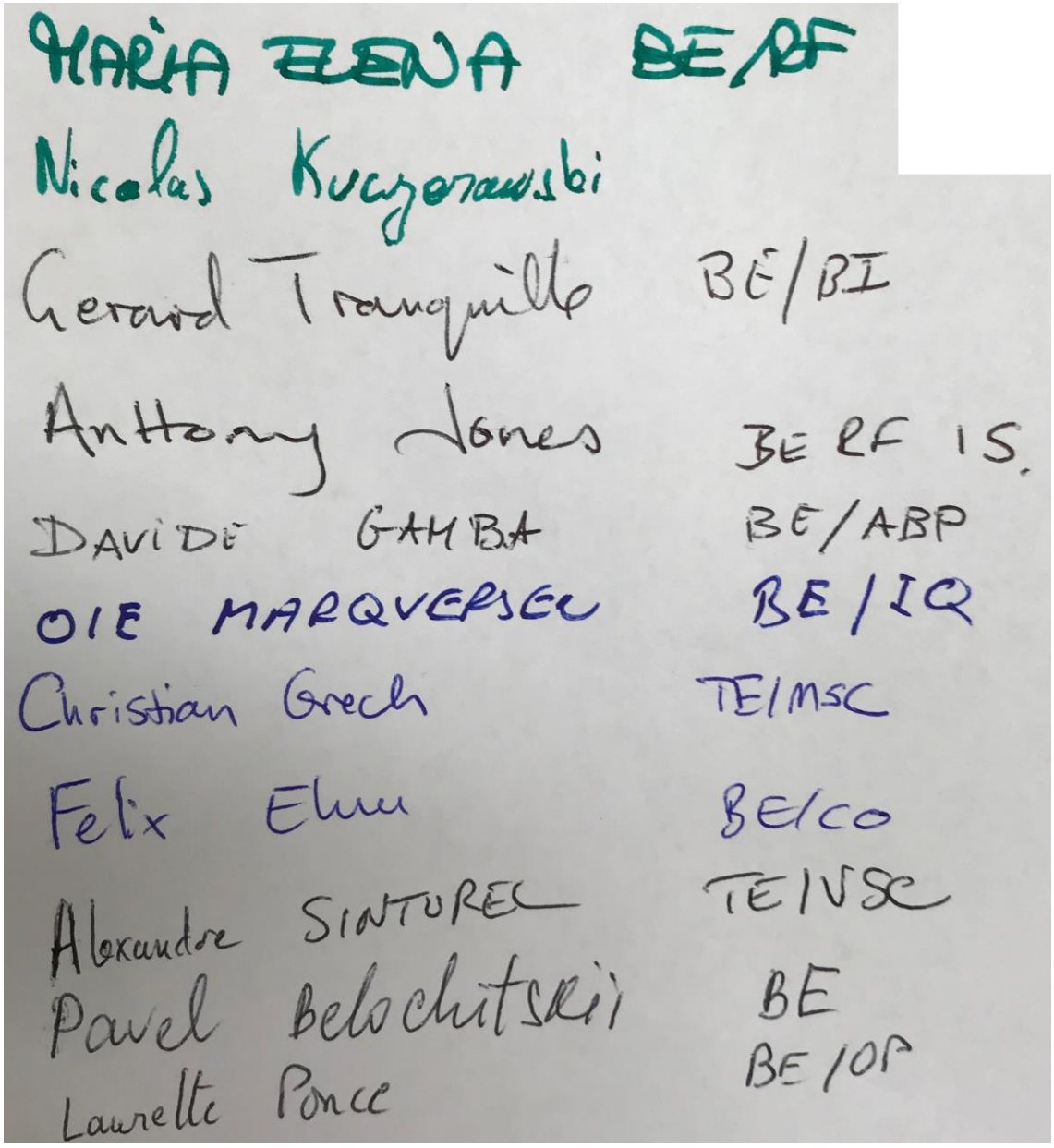
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## 1 INTRODUCTION

The minutes of the previous meeting were approved.

## 2 ORGANISATION 2018

The commissioning will restart on the 5th of April.

There will be 3 Pbar shifts per week planned from 23/4 till the 27/7.

GBar should take ions from the end of April.

ELENA Commissioning should be completed by the end of July (27th).

Afterwards, if required, Pbar commissioning could continue during Gbar Shifts.

There will be day shifts from Monday to Friday.

The Monday 10:00 briefings in ACR is maintained as well as the ECC meeting every second week.

## 3 COMMISSIONING PLAN

E-cooler commissioning will dictates the initial planning:

- Establish Pbar and Ion beams.
- Schottky analysis with FFT analyser, LPU status? (BPM based system)
- With Pbars and Ions:
    - Measure orbit (+tunes) effects with main solenoid ON (in steps)
    - Set-up compensating solenoids; orbit deformation, tunes/coupling, further optics verifications...
- Establish electron beam, can be done in parallel with circulating beam.
- Establish cooling (need pause on plateau)
- Main other activities:
    - Continue diagnostics systems setting-up: BBQ, scraper based profiles, LPU/Schottky system etc.

- GBAR extraction in April and July with ions and Gbar.
- Set-up/optimise deceleration cycle => efficiency, final emittances/lifetime
- Optics validation

## 4 ION SOURCE UPDATE

The ion source transformer is going to be replaced by a new one that has successfully passed all the HV tests at Juelich. Source operation could be resumed using 100kV instead of 85kV.

The failures experienced during the previous run were mitigated and a modified control electronic is already available.

M.E. Angoletta says that going from h=2 to h=1 would require half a day. O. Marqversen needs to be informed about which harmonic we will operate at.

She will need to check which train is sent to the RF source to have a synchronized "blob-to-bunch" injection. She might have to change as well when we go from capture at h=2 to the nominal capture at h=1 for injection from the source.

She will implement the extraction synchro loop, so that GBAR can have a stable reference. In order to implement the extarction synchro loop she should know the harmonic of the extraction reference and the harmonic for the beam. She would need to know this info for operation with the source and for Pbars operation. The synchronisation algorithm depends on these two harmonics.

Discussions with Sergio Pasinelli and with Christian Carli and with GBAR are needed sometimes in April to clarify the mechanism.

## 5 E-COOLER STATUS

The E-Cooler leak has been fixed. It has been put back in the ring last week. The correctors were also mounted to gain time.

The bakeout will be performed starting next Monday and should last more than a week. The time needed for cabling is estimated to 2 weeks.

Theoretically E-cooler could be available for the 5$^{th}$ of April as foreseen.

## 6 AOB

Last SEM on the LNE50 was shown broken after visual inspection (some gold wire has fallen). It could be replaced by one of the available SEM.

The GBAR SEM could be used to put in ELENA (GBAR is now at ambient pressure). This has to be decided very quickly.

The broken SEM has to be inspected to see if it is fixable.

Power supplies are being installed. They should be all installed before the 5$^{th}$ of April. Solenoid PS are already installed.

BPM positions have been be corrected and verified. Ole Marqversen will report on it at the next IIC.