



**ELENA:  
Commissioning Meeting**

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**1 INTRODUCTION**

The minutes of the previous meeting were approved.

**2 ADUC FEEDBACK**

C. Carli reports that the ADUC meeting was held on 30<sup>th</sup> of October. Two talks were about the SEM profile monitors that should be available for the transfer lines commissioning, 1 talk concerned AD operation issues, 1 talk departed on ELENA commissioning results and 1 talk gave the outline of ELENA transfer lines installation schedule. After the meeting, S. Ulmer, as spokesperson, indicated in his minutes that all the experiments have agreed on the installation of the transfer lines. No formal statement is expected from CERN Management as the installation of the transfer lines during LS2 is the baseline after the re-scheduling agreed in 2016, and there are no showstoppers blocking the dismantling of the actual transfer lines.

**3 MECHANICAL INTERFACE WITH EXPERIMENTS**

Damien Brethoux presents the mechanical interfaces with the experiments.

ATRAP1: EN/EA responsibility stops at the vacuum gate valve. It seems that there are existing interferences with existing components. F. Butin reminds that the volume of the SEM electronic must be integrated to the 3D model ASAP, more info is expected from BE-BI.

AEGIS limit of responsibility is also the gate valve. There is a clear uncertainty about the AEGIS apparatus position. It has to be checked. F. Butin will discuss with the surveyor on how to fix this question once for all. SEM interferences with the structure above the beam line must be checked. A solution consisting in having the SEM in horizontal position (rotated 90°) and leaving the SEM in the “in beam” position seems acceptable but M. Hori reminds that the SEM must be easily accessible prior to bakeout to remove the electronic board, and if the SEM is rotated, special arrangement should be taken to reinforce the supporting rods..

ALPHA limit of responsibility is also the gate valve. There is a difference in position creating a gap. Some ALPHA feedback has been required (through an ECR) but no news so far. A. Sinturel reminds that he will keep some margin on the last section of vacuum chamber to accommodate possible errors.

ASACUSA limit of responsibility is also the gate valve. EN/EA has no information on the ASACUSA setup so it is under ASACUSA responsibility to adapt to the line.

GBAR limit of responsibility is the sector gate valve, which is well known.

Survey shall measure the position of key elements inside every experiments to be able to locate the experimental setups into the Catia model. M. Fraser explains that this information has been required from the Experiments 3 years ago.



#### **4 SEM SCHEDULE WRT GLOBAL INSTALLATION PLANNING**

M. Hori will deliver 9 complete SEM systems at the end Nov 2018 (including coated rods), then 3 new units will be delivered every 6 weeks at CERN.

BE-BI will need 1 week to fully assemble and test a complete setup. A continuous dedication of BE-BI for SEM's assembly will be needed from Nov 2018 till January 2020.

Three weeks for vacuum acceptance test + transport + installation of 3 complete setups is required: part dedication of TE-VSC is expected for this !

Due to bakeout constraints all the SEM should ideally be received and installed before the end of 2019. According to the planned delivery schedule, 9 SEM's won't be available by the end of 2019. Impacted lines will be LNE05 and 06 (ASACUSA). Blank flanges will be installed on vacuum sector 6 and 5 to bake-out the sector 0 and 1 nevertheless.

Missing SEM's will be installed when available, but the bake-out will be possible only after the cable pulling campaign. It will impact the start of commissioning of LNE05-06 line only.

This schedule is based on a few assumptions, among which that no serious problem is encountered and that the delivery timing is kept. All deviations will have further impacts on the start of commissioning date. All efforts shall be done to speed up the delivery.

#### **Next two weeks work will focus on various aspects:**

-the cleaning of the ATRAP belongings nearby the S/Cooling. This include the removal of the workshop wall and the electric switchboard (no power then).

-Marking of all the cables to be removed will be done by all the specialists.

-Decabling team will start on 26<sup>th</sup> Nov

-All the "central Part" elements should be removed during these 2 weeks.

-RFQD racks and power supplies will be removed. ASACUSA's Faraday cage will also be dismantled.

-The AD Shielding will be opened on 29<sup>th</sup> November to extract the QFN04 magnet.

#### **5 VACUUM SYSTEM PRODUCTION**

A. Sinturel says that the supports for vacuum chambers are stored at CERN.

Vacuum chambers production is now stopped (due to the e-Welder issue) but it is not an issue so far.

Acceptance tests have been completed for ZQNA, fasts deflectors and static deflectors. SEM grids will start to be tested early 2019.

The sectors layout drawings are being prepared and an EDMS Specification for the LNE chambers is being written.

There is a follow up meeting with the main workshop every week. The Acceptance tests will start on March 2019.