



Date: 05/10/2017

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ATTENDEES LIST:

A. BOUVARD	EN-EA-EC
S. FUNET	EN+ME-HH
J. FERNANDEL	EN-ME-HH
E. GRENIER-BOLEY	EN-STI-TCD-
Sven De Man	EN-STI-TCD
Mathias Haase	BE-RF-IS
T. Friesen	EP-UAD (ALPHA)
A. SINTUREL	TE-VSC-BVO
G. TRANQUILLE	BE-BI-EA
S. ULMER	EP-UAD (RACE ADS)
C. Carli	BE-ABP
G. DUMONT	ABE-RP
A. KOEHMAINEN	EN-MMG
F. Ehm	BE-CO
Q. Bouirek	EN-EA
R. Louwersse	BE-RF
T. Eriksson	BE-OP
R. Lefort	BE-OP
N. ROGET	EN-CV



1 MANDATE

The mandate was signed by F. Bordry.

“The AD Facility Technical Coordinator is in charge of coordinating the infrastructure and service related activities required for maintenance, consolidation and upgrades of the AD facility, with the goal of securing its operation with high availability and reliability, while respecting all safety requirements.

The AD facility includes the AD hall (buildings 193 and 393), the AD machine, the ELENA machine, the transfer lines, the AD experimental areas and the target area (buildings 195, 196, 232, 235 and 93). “

The responsibility matrix is on Indico. F. Butin adds that it is open to discussion if needed.

2 ORGANIZATION OF NEXT YETS

Aymeric Bouvard presents the YETS Planning.

The official dates are from the 18/12/17 to 16/3/2018 (end of HW tests).

The AD machine will be left open. The access could be closed if needed for safety concern.

3 Magnets (BHS52, QDN55, QFN56) will be removed from the ring: therefore the shielding will be opened for handling operations then closed again. Most of the blocks will be stored in the AD and in the 183 bdg. The QFW52 quadrupole will be removed to ease the handling.

The access from 393 → 193 will be closed while the shielding is open (stair will be removed).

Part of the septum SME1305 will be removed. A significant number of maintenance tasks are planned :



- BI
 - General maintenance of the E.Cooler.
- Kickers:
 - General maintenance + Test
- CV:
 - Removal of ventilation modules (BHS52)
 - Maintenance of demineralized water
 - Water maintenance
- RP:
 - Source Test:
 - PMIA604
 - PAXA604
 - PAXT113
- EL:
 - AUG Test
- VSC
 - Disconnection and reconnection: BHS52, QDN55, QFN56, SM
 - Works and Maintenance:
 - Sector 1A
 - Sector 1B
 - Sector 2A
 - Sector 2B
 - Sector 3
 - Sector 4
 - DE Experimental Lines
 - Bakeout Sector 1 (BHS52, QDN55, QFN56, SME5305/07)
 - Bakeout Sector 2A (SHV1305)
- SU
 - Alignment: BHS52, QDN55, QFN56, SME5305/07
- STI
 - Replacement of the scraper SHV1305 (sector2)

The intervention on the scraper that has been added lately requires the opening of the shielding (located on the visit area).

All the elements removed will require alignment after re-installation.

Planning-wise, there is a conflict between VSC, CV and OP (bake-out planned during demi water shut-down). A solution should be found to delivered the machine for the hardware test in time. A possible solution would be do shift the HW test by 15 days, which may have an impact on the start of the physics run.

A. Bouvard asks N. Roget to see if the CV work can be done earlier (Week 7). He also asks T. Eriksson to fix a deadline for the beginning of the HW tests.

F. Butin reminds that all the persons that have to work on ELENA during YETS should send a short description with planned dates to A. Bouvard so that the works can be crossed-checked for possible interferences.

3 LS2 CONSOLIDATION ACTIVITIES IN LS2

Most of the AD components date from 1985 (more than 30 years old). After the approval of the ELENA project, a consolidation plan has been established to maintain AD till 2035.

Concerned items are: Target area, magnets, power converters, beam cooling, control system, instrumentation, beam transfer equipment, RF, vacuum, infrastructure etc.

The Target area work package includes:

- B196 (T.A. ventilation, target/horn cooling, RAMSES), new building to replace temporary shielding block structure.
- New target design; air cooled instead of water cooled



- Manufacturing of new Magnetic Horns
- Re-design of target/Horn trolleys
- New ventilation system
- Magnet re-design and spares
- Instrumentation, services, safety systems, infrastructure,...

There is a detail planning kept by EN-STI. Details can be found in EDMS# 1548086, 1537538, 1548296.

AD bending magnets shimming start to disintegrate. A re-shimming campaign is on-going. BHN are reconditioned at a pace of 1 or 2 units per year. The complete renovation should be reached during LS2 (10 units remaining).

12 of the Pulsed Power converters for the injection line magnets must be replaced. The horn pulser's mercury switches will be replaced.

C02 cavity will be replaced by a new Finemet cavity to be installed in sector 01, including new DSP-based low-level system. (EDMS# 1552197)

Some tests are foreseen to use refurbished triode for the C10.

Some consolidations could be done on the Stochastic Cooling: amplifier upgrade and Pickup tanks renovation. Both topic are still TBC.

The vacuum consolidation program will be completed during LS2 in parallel with the activities related to the AD equipment intervention (i.e. magnet removal).

A new cryo distribution to the experiments is foreseen (EDMS#1562701) and the cooling station will be renewed (EDMS#1548299).

The installation of a new electron cooler in sector 29 during second half of LS2 is still TBC.

S. De Man indicates that a beam stopper could be removed as it is not useful anymore. The details remain to be studied and an ECR to be issued.

A full planning for these activities will have to be developed in the coming months.

4 ELENA TRANSER LINES INSTALLATION

F. Butin reminds that it is a big task :

It implies to remove all the magnetic transfer lines plus the corresponding supports and services, to re-organize part of the shielding walls, to re-route cable trays and water pipes and to install the electrostatic transfer lines and services. Last step would be to commission new transfer lines.

The used strategy follow the following steps :

1. Disconnect cables/pipes from equipment
2. Remove Equipment accessible with crane



3. Remove Supports accessible with crane
4. Remove Cables
5. Remove remaining equipment
6. Remove remaining supports
7. Infrastructure works (shielding, piping)
8. Survey Marking
9. Floor drilling
10. Install mechanical supports
11. Install new cables (signal, AC, optical fibres)
12. Install Equipment (Electrostatic + vacuum + SEM)
13. Survey /Align Equipment
14. Connect equipment
15. Vacuum connections
16. Pump and bake-out

The master schedule shows 13 months of intense activities for ELENA that have to be performed in parallel with the AD machine consolidation and, potentially, the relocation of AEGIS.

G. Dumont reminds that we will have to respect the CADRA for all the parts that have to be disposed. We may also need to build a temporary buffer area to store large elements.

C. Carli would like to have a confirmation from EN/EL of the feasibility of the project in terms of resources. F. Butin says that the AC cabling was confirmed to be OK but there are still some issues to pull the control cables.

S. Fumey reminds the importance of considering the co-activities. Usually handling is not compatible with other activities.

5 AOB

There will be another technical Stop the 23/10 (34h). Impacts must be sent ASAP.