



Plenary RRB

November 2019

Minutes of the 49th Plenary Session of the LHC Resources Review Boards CERN, Geneva, 28th October 2019

Documents and slides of all presentations can be found on the RRB Indico pages, accessible via the LHC-RRB home page <http://cern.ch/committees/LHCRRB>

The minutes of the last Plenary Session CERN-RRB-2019-060 were approved.

CERN Status and News. E. Elsen, Director for Research and Computing

E. Elsen presented the composition of the Scrutiny Group and the Computing Scrutiny Group for 2019-2020.

There were no questions following this presentation.

Accelerator Status during LS2. F. Bordry, Director for Accelerators and Technology

Summary:

- The LHC Injectors Upgrade is progressing well:
 - SPS, PS; PSB and Linac4 activities on going
- The LHC dipole quench protection project (DISMAC) status:
 - Cleaning and consolidation complete in > 4 sectors
 - Insulation places and inserts installed in > 3 sectors
- Cryo-magnet consolidation and replacement in LHC ahead of schedule
- HL-LHC civil engineering status:
 - Point 1 overall excavation ~67%
 - Point 2 overall excavation ~60%
- HL-LHC 11 T magnets
 - First out of four 5.5m magnets qualified for installation in the LHC tunnel during LS2
 - Others in production for installation in 2020
- HL-LHC inner triplet quadrupoles
 - Tested on short models
 - 1st and 2nd long models under construction
- HL-LHC 1st equipment installed in LHC tunnel
 - TANB at point 8
- HL-LHC equipment for LS2
 - New injection protection absorber
- The LIU, LHC maintenance and upgrade (including HL-LHC) are keeping up with the LS2 schedule.

There were no questions arising from this presentation.

Status of LHC Experiments, including Phase II upgrades. E. Elsen, Director for Research and Computing

Summary:

- Physics data evaluation continuing successfully
- Long Shutdown 2 has proceeded well so far:
 - ATLAS: NSW: progress in understanding Micromega production; installation of one wheel likely in LS2
 - CMS: Biggest concern is over timely completion of preparatory work for LS3
 - LHCb: UT installation remains on critical path
 - ALICE: CRU electronics have to be ordered and delivered in time to allow for critical tests of the TPC
- Run 3 scheduling meeting with the machine and experiments on 27 November 2019
- Phase II Upgrade has now started in earnest. Progress scrutinised by the P2UGs.
- The two collaborations are mounting a $\sim 1/4$ bnCHF upgrade effort each that has to be ready when the machine is
- Success relies on the all partners honouring their commitments

Remarks following this presentation:

Although the ATLAS management took the right decision to stop the FTK project, A. Zoccoli remarked that Italy and INFN made a large investment in this project and that the end result was unfortunate. He and E. Elsen thank all the people, in particular the young people that worked on this project since 2013. They pointed in particular to the technology achievements in the context of these projects

M&O Resources Scrutiny Group Report. H. Sandaker, Chairperson SG

H. Sandaker presented her report. For more details see the individual experiment meetings.

There were no questions arising from this presentation.

Computing Resources Scrutiny Group Report. P. Sinervo, Chairperson CRSG

P. Sinervo presented his report.

Questions arising from this presentation:

Replying to C. Jamieson concerning the definition of a flat budget, P. Sinervo explained that a flat budget means that there is no increase in the budget from year to year. Within this flat budget the hardware is replaced about every 5 years. This replacement increases the capacity by 20%/yr although there are indications that nowadays this number is more like 10-15%.

Report from the Scientific Computing Forum. E. Elsen, Chairperson SCF

Summary:

- Heterogeneous platforms are necessary to meet the HL-LHC computing challenges;
- Coding languages and paradigms will have to change;
- The HEP community is aware and reacting;
- Considerable savings can be achieved by software improvements on the system side, which requires positions to be allocated to the task.

There were no questions arising from this presentation.

Summary. E. Elsen

There being no further business, the Chairperson closed the meeting.

The proposed dates for the next RRB are 27-29 April 2020.

Reported by: E. van Herwijnen