

MEMORANDUM (for 25 September meeting discussion)

“Status of LS3 planning studies as concerning EN-EL activities”

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At the C&S Review 2019, a planning for an LS3 of 48 months duration (\rightarrow with possibility to bring it down to 36 months) was presented.

CERN Management asked the Project to go on with the studies but targeting an LS3 duration of 30 months (to be compliant with the “Baseline” LS3 duration as reported in all CERN/LHC General Long Term Planning).

Since then, intense activities on LS3 Planning studies are ongoing driven by HL-WP15 “Integration&(De-) installation”. Next milestone is a planned presentation at the next “TCC-Day” planned for end of October/beginning of November 2020. We expect to have there all HL WPL + GL + DH to validate the planning studies assumption and the tightly linked boundary conditions and consequences concerning technical aspects and resources estimations.

Important reduction on activities duration and opening for parallelization with other activities (e.g. on cabling) where possible mainly due to careful and aggressive analyses of the de-installation and installation activities done with different WPs (e.g. increasing the parallel teams working on magnet dismounting (WP3) and optimizing parallelism between IP sides, we were able to pass from a total WP3 installation time of 42w down to 25w)

As concerning EN-EL main activities, that are primarily:

- a) DE-installation of all cables linked to OBSOLETE LHC equipment
- b) DE-installation of general services cables and cable trays impacted by the vertical cores opening (or need anyway to be modified),
- c) RE-installation of general services (and cable trays)
- d) RE-installation of all new cables linked to the NEW HL-LHC equipment,

in the last months advancements were done together with EN-EL teams (DD0, EPM and FC sections) by more detailed analyses of the sub-activities and tasks for the above mentioned four main activities; now we start to have a more detailed and with finer granularity vision of LS3 activities for EN-EL. At the moment, optimizing the co-habitation with other activities, we were able to save 4w (from 16w to 12w) on De-cabling of some critical areas (cores).

What remain as the biggest open question and biggest impacting aspect on the overall LS3 planning duration is the structure itself of the future cabling activities. The main request of CERN Management (LS3 duration of ~30 months), seems only feasible if DE- and RE-installation activities will be based on more aggressive approaches (e.g. 2 shift/day in specific phases where EN-EL will be alone in the LHC Tunnel).

A possible agreement and pre-validation of this new approach for EN-EL activities, is the (urgent) question that we would need to discuss at the meeting of the 25 September.

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M.Modena, for HL-LHC WP15