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## Work Effort in the LHC Injector Complex, including Linac4 connection, for the Upgrade Scenarios (30' + 10')

*Wednesday 30 October 2013 12:00 (40 minutes)*

### Abstract:

This presentation will describe the work for the Linac4 connection, PSB, PS and SPS that is required for upgrade scenario 1. It will be shown that the requirements on the hardware work needed for upgrade scenario 1 is identical to the ones of the upgrade scenario 2.

The Linac4, presently under construction, will replace the present Linac2 as injector of the CERN proton accelerator complex. The connection of the Linac and the commissioning of the transfer line and of the PS Booster H- injection will require a proton complex shut-down of several months. Possible scenarios for allowing a Pb-Pb run in LHC during this period will be described.

The various activities through the injector chain will be detailed as well as their dependencies and an estimate given for the duration of the necessary shutdowns and recommissioning periods with beam. It will be mentioned whether some decisions are still to be taken and are related to information to be obtained after LS1.

Another important aspect will be the evaluation of the risks related to the upgrade interventions and operational complexity, which concern schedule, beam characteristics as well as reliability and overall performance. It will be studied if part of the activities could be spread out over several machine stops, and as conclusion the preferred scenario will be presented.

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**Session Classification:** Session 3: PICs and Upgrade scenario 1 - Session 3B - Upgrade scenario 1