

Operational Beams for the LHC

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The variety of beams, needed to set-up in the injectors as requested in the LHC, are reviewed, in terms of priority but also performance expectations and reach during 2015. This includes the single bunch beams for machine commissioning and measurements (pilot, probe, Indiv) but also the standard physics beams with 50 ns and 25 ns bunch spacing and their high brightness variants using the Bunch Compression Merging and Splitting (BCMS) scheme. The required parameters and target performance of special beams like the doublet for electron cloud enhancement and the more exotic 8b+4e beam, compatible with some post-scrubbing scenarios are also described. The progress and plans for the LHC ion production beams during 2014-2015 are detailed. Highlights on the current progress of the setting up of the various beams are finally presented with special emphasis on potential performance issues across the proton and ion injector chain.

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Session Classification: Session 2 - Injector Status and Beams for LHC, Dry Runs, Sector Tests with Beam