

The LHC RF: Operation 2010 and Plans for 2011

Tuesday 7 December 2010 17:25 (20 minutes)

We will first briefly present the intended RF operation, as of the original Design Report. We will then review the operation 2010: From the first collisions of single bunch pilot to the emittance blow-up required for nominal single-bunch intensity. RF noise will be briefly mentioned and results of bunch lengthening during physics will be presented. The difficulties to fill the machine given the intolerance of the BLMs to radiation created by capture loss will be reminded. There will be a brief summary of klystron and cavity faults. The second part will address operation 2011. The planned improvements will be presented (longitudinal damper, tools to ease energy matching, upgrade of the RF measurements). Finally the cavity impedance issue will be revisited with emphasis on the stability with RF feedback and the scenario of a klystron trip will be studied.

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Session Classification: Session 1: LHC beam operation: review of 2010 and settings the scene for 2011