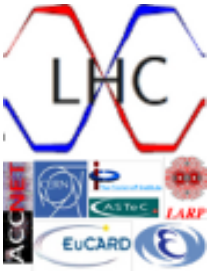

Contribution ID: **17** Type: **not specified**

Upgrade optics with crab cavities

Wednesday 15 December 2010 10:30 (20 minutes)

Review of the main LHC optics constraints. New flexible upgrade optics and its beta*reach. Possible LHC baseline layout wtih crab cavities. Choice of beta*'s and crossing angle with local crab cavities. Optics consistency check and chromatic correction scheme. Potential crab cavity locations and the crab voltage required. Longitudinal space constraints. Transverse mechanical aperture requirements together with expected closed orbit excursion. Possible effects on dynamic aperture, synchro-betatron resonances and long-range beam beam, with associated nonlinear field tolerances.

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