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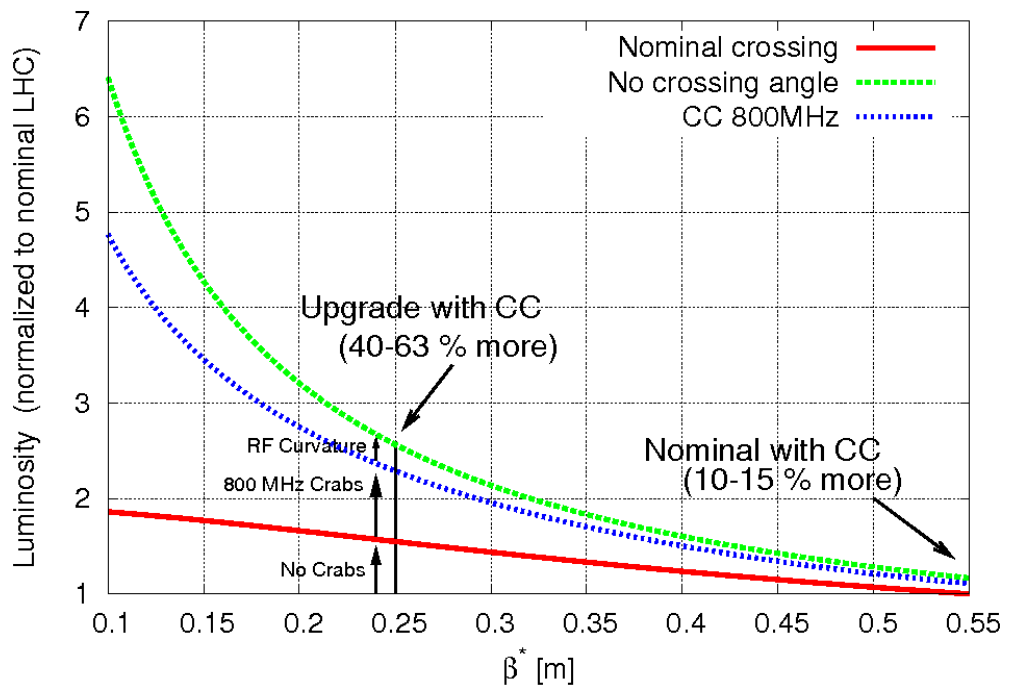
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LHC Crab Cavities

A small angle (~0.5mrad) crab scheme at the LHC is foreseen as one of the most effective tools for reaching the proposed increase in the luminosity of a factor of 3-10 via an IR upgrade. Crab cavities recover the geometric luminosity loss from the finite crossing angle which steeply increases to unacceptable levels as the IP beta function is reduced below its nominal value. The crab compensation scheme is anticipated to be implemented as:

- Baseline: A local scheme near the IP using compact cavities and consequently the closed orbit outside the IR region is unaffected.
- Alternative: A global scheme with elliptical cavities placed far from the IP (IR4 region) with the right phase advance and consequently resulting in a z-dependent closed orbit for the bunches.

FAQ
RF Design & Requirements: Cavity, Couplers & Components
Optics with Crab Cavities: Global & Local
Collimation & Aperture
Tracking Studies Synchro-Betatron Resonances, DA, etc..
Integration into the LHC
Workshops, Meetings & Minutes
Papers & Presentations
Global Collaboration & Participants



Next CC Meeting (Webex 11)

Date: Friday, June 17, 2010
 Time: 5 pm (CERN time: GMT +02:00)
For Meeting Details: [Click Here](#)

-- R. Calaga - Jun 9, 2010

This topic: Main > LHCCrabCavities

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