# Joint DESY and University of Hamburg Accelerator Physics Seminar

## Tuesday, 23.10.2012

### (16:00 in Room 459/30b)

Simulation of the Electron–Cloud Heat Load for the Cold Arcs of the Large Hadron Collider


**Humberto Maury Cuna**

CINVESTAV / CERN



**Abstract**

The heat load due to the electron cloud in the Large Hadron Collider (LHC) cold arcs is a concern for its performance near and beyond nominal beam current. We report the results of simulation studies, which examine the electron-cloud induced heat load for different values of low–energy electron reflectivity and secondary emission yield at injection energy, as well as at beam energies of 4 TeV and 7 TeV, for two different bunch spacing: 25 ns and 50 ns. Benchmarking the simulations against heat–load observations at different beam energies and bunch spacings allows an estimate of the secondary emission yield in the cold arcs of the LHC and of its evolution as a function of time.


J.Roßbach (Univ. HH) and M.Vogt (MFL).

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