Joint DESY and University of Hamburg Accelerator Physics Seminar

Tuesday, March 22, 2005

(16:00 in Room 459/30b)

Collective Beam–Beam — Theory and Simulation —

Andrey Sobol

University of New Mexico, Department of Mathematics

Abstract

We present new results of numerical simulations of the density evolution in 4 dimensional phase space for strong–strong beam–beam interaction using parallel computers. The implemented Perron–Frobenius method is compared to the weighted macroparticle tracking method. We also present some results of analytic calculations for σ and π mode using the averaging technique for a linearized Vlasov equation.

D.P.Barber (MPY), J.Rossbach (Univ. HH) and M.Vogt (MPY).