Joint DESY and University of Hamburg Accelerator Physics Seminar

Tuesday July 13, 2003

(16:00 in Room 459/30b)

An Energy Recovery Linac Extension to the CESR Ring

Georg Hoffstaetter

Cornell University

Abstract

Cornell University has proposed an Energy–Recovery Linac (ERL) based synchrotron–light facility which can provide improved X–ray beams due to the high electron–beam quality that can be available from a linac. To additionally utilize currents that are competitive with ring–based light sources, the linac has to operate with the novel technique of energy recovery, the feasibility of which we plan to demonstrate in a downscaled prototype. Here we present a 5GeV ERL upgrade of the existing 2-nd generation light source CHESS at CESR. This proposed upgrade suggests how existing storage rings can be extended to ERL light sources with much improved beam qualities.

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