

EVOLUTION OF THE SLC STEERING FACILITY FOR THE NEXT GENERATION LINEAR COLLIDER

Hamid Shoaee
SLAC, USA

Abstract

In planning for beam steering facility for the Next Linear Collider (NLC), it is useful to study the existing steering systems in SLC and the PEP-II B-factory. The goal for NLC would be to make use of successful features of the existing systems, while providing more automation and intelligent diagnostic features.

The SLC Steering package is a generic facility that has been successfully used by machine operators and accelerator physicists for orbit correction and lattice diagnostics during the past decade. It has been routinely applied to a variety of beam-lines and machines including linacs, damping and storage rings, transfer-lines, and achromatic arcs. The program is entirely database and model driven i.e., for any beam-line, it obtains the device list (Correctors, BPMs, etc.) as well as their operational characteristics and optics modeling information from the control system database. Thus any new line or machine, once registered with the database and optically modeled, may be corrected with the package without any software modification.