EXPERIMENTAL AND SIMULATION STUDIES OF ELECTRON CLOUD MULTIPACTING IN THE PRESENCE OF SMALL SOLENOIDAL FIELDS

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Abstract

The SLAC PEP-II B-factory operates at high electron and position currents. To damp the transverse instability initiated by the electron cloud a solenoidal magnetic field was placed in the positron ring. Solenoid sections of approximately 5 m long are connected in series with individual power supplies. Study of the electron cloud behavior was performed in a short solenoid section. Simulation studies were carried out in order to determine the secondary emission parameters from experimental measurements.

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