Contribution ID: **2** Type: **not specified**

Dipole Measurements For the AØ Photoinjector

Wednesday, 5 August 2009 09:40 (20 minutes)

The Emittance Exchange (EEX) Project, a Research and Development project at Fermilab focuses on the comparison of transverse to longitudinal emittance exchange is currently ongoing at the A0 Photoinjector. EEX Exchanges longitudinal beam emittance for transverse using dogleg dipole magnets and a TM110 RF cavity. Previous studies at the A0PI have noticed that the electron trajectories though the dogleg dipoles do not follow simulations. It is believed that this discrepancy is due to excessive magnetic fringe fields of the Dog Leg dipoles. Previous measurements of the individual dipole magnets were conducted at the Magnetic Test Facility for currents of 4.5A but not at the 1.8A currently used at the A0PI. This paper describes new measurements and analysis of the dipoles and their fringe fields at 1.8A.

Primary author: PARKER, Marcellus (Morehouse College)

Presenter: PARKER, Marcellus (Morehouse College)