

Electron Cloud Mitigation Investigations at CEsrTA

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Over the course of the CEsrTA program at Cornell, over 30 Retarding Field Analyzers (RFAs) have been installed in the CESR storage ring. These devices, which measure the local electron cloud density and energy distribution, have been deployed in drift, dipole, quadrupole, and wiggler field regions. They can be used to evaluate the efficacy of cloud mitigation techniques in each magnetic field element. Techniques investigated so far include different beam pipe coatings, grooves, and clearing electrodes. This talk will provide an overview of the electron cloud mitigation program at CESR, give a preliminary evaluation of the effectiveness of various mitigation techniques, and discuss methods used to obtain quantitative information about vacuum chamber properties via simulation.

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