Final Technical Report
for the Grant DE-FG02-03ER41236
Partial Support of CPO6, The Sixth International Charged-Particle Optics Conference

June 2004

Alex J. Dragt
Principal Investigator
Professor of Physics
University of Maryland

The International Conference on Charged Particle Optics, CPO, is held every 4 years, and brings together scientists working in all areas of charged-particle optics including electron microscopy, accelerators, spectrometers, electron and ion sources, and theory. In October 2002 the sixth such conference, CPO6, was held near Washington, DC. The costs of this conference were supported in part by the United States Department of Energy, the University of Maryland, the FEI company, and the JEOL company. University overhead charges were waived on all these contributions.

There were 67 participants at CPO6, a significant decrease from 1998 when CPO5 (held in the Netherlands) hosted 182 participants. This sad decrease arose from safety concerns and travel restrictions associated with terrorism.

Despite these serious impediments to the advance of scientific knowledge, 66 papers were presented at the meeting, and in addition there were demonstrations of charged-particle optics software. The papers covered general optics; sources; aberration theory; analyzers, filters, and energy effects; optical theory and simulations; beam cooling; storage rings and accelerators. They have since been published in Volume 519 (February/March 2004) of *Nuclear Instruments & Methods in Physics Research, Section A* (edited by Alex Dragt and Jon Orloff) and comprise some 480 pages. Five copies of this publication are being sent to DOE under separate cover.

Significant advances continue to be made in the field. The next Charged Particle Optics Conference, CPO7, is scheduled to take place in England in 2006.