

Abstract Submitted
for the SES11 Meeting of
The American Physical Society

e/m Experiment Analysis Refinement¹ MICHAEL HARMON,
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Thomson's e/m experiment is widely popular in undergraduate courses to help gain
an understanding of the properties of the electron. Our results using a standard
apparatus, however, reveal significant systematic errors. We examine possible rea-
sons for the discrepancy with the aim of modeling effects that were not included in
the original analysis. We conclude that the energy loss of the electron beam as it
travels through the helium and the distortion of the beam radius measurement by
the curved glass of the tube are the two factors which dominate the discrepancy.

¹Funded by Erskine College Faculty Development

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Date submitted: 19 Sep 2011

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