PHYC30170 Physics with Astronomy and Space Science Lab 1; Compton Scattering

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I. INTRODUCTION

What is Compton scattering?
Applications: Inelastic photon scattering: Effects and applications in biomedical science and industry[1]
Why it is important to understand

Compton scattering is the interaction in the collision of a gamma ray with a free electron [2].

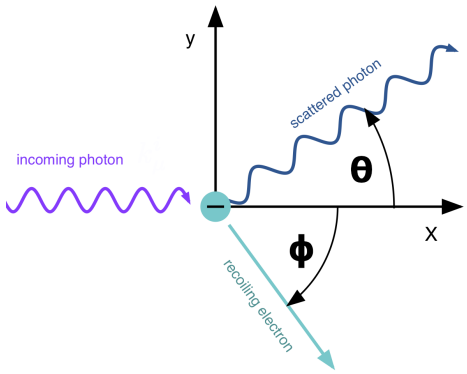

FIG. 1: A diagram of the Compton scattering interaction. A photon is scattered off an electron with a transfer of energy.

II. ENERGY AND CROSS-SECTION DETERMINATION

A. Theory

B. Methodology

C. Results and Analysis

III. RELATIVITY AND THE ELECTRON REST MASS

A. Theory

B. Methodology

C. Results and Analysis

IV. CONCLUSION

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[1] G. Harding, Inelastic photon scattering: Effects and applications in biomedical science and industry, Radiation Physics and Chemistry **50**, 91 (1997), inelastic Scattering of X-Rays and Gamma Rays.

[2] *Compton Scattering Experiment*, UCD School of Physics.