

# **PHYC30170 Physics with Astronomy and Space Science Lab 1; Ramsauer-Townsend; Statement of Intent**

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## **I. WHAT IS THE AIM OF THE EXPERIMENT?**

To demonstrate the Ramsauer-Townsend effect, showing that the minimum scattering probability and ionisation point agrees with the theory.

## **II. WHAT MEASUREMENTS SHOULD BE MADE AND HOW?**

Liquid nitrogen will be used to reduce the pressure of the xenon in the apparatus. The plate current will be measured with varying the voltage source from 0 V to 15 V.

## **III. HOW WILL THE FINAL RESULT BE OBTAINED FROM THE EXPERIMENTAL DATA?**

The electron energy can be calculated from the difference in the voltage and the shield voltage

## **IV. WHAT ARE THE MAIN SAFETY CONCERNS WITH THE EXPERIMENT AND PRECAUTIONS THAT SHOULD BE TAKEN?**