# HYBRID METHODS FOR SIMULATION OF MUON IONIZATION COOLING CHANNELS

BY

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# LIST OF SYMBOLS

| Symbol | Definition |
|---|---|
| $C_{Euler}$ | Euler's constant ($\approx 0.577$) |
| c | Speed of light in a vaccuum |
| $f$ | Distribution function (general; context dependent) |
| $\beta$ | Relativistic velocity ($\beta = v/c$) |
| $\pi$ | Circle constant |
| $\rho$ | Density |
| $^*$ | Complex conjugate |
| $^\dagger$ | Transpose conjugate |
| $^T$ | Transpose of a matrix |

# ABSTRACT

Abstract goes here!

# CHAPTER 1

# INTRODUCTION

Here's what this chapter is going to be about...

## 1.1 Ellipses

Figure 1.1 is an example of an ellipse I created in Python for my thesis. The script can be found under `Figures/scripts`. Note that when you use captions, it

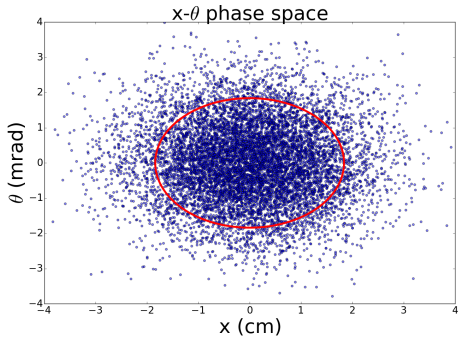


Figure 1.1. An ellipse I created in Python. I am intentionally making this caption long so that you can see that the captions are single-spaced with the indention aligning under the "g" of "Figure".

should go `\caption[short description]{long description}`. The short description appears in the list of figures and the long description appears underneath the figure. The same goes for tables[1].

# CHAPTER 2

# MAIN TEXT

This chapter is all about equations.

## 2.1 Equations Galore!

This equation should be referenced using the `Eq.~\eqref{}` command.

$$y = mx + b \tag{2.1}$$

It will be referenced in the conclusions.

# CHAPTER 3

# CONCLUSIONS

In conclusion, it has been shown in Section 2.1 that equations (such as Eq. (2.1)) can be referenced using `Eq.~\eqref`.

# APPENDIX A

# AN APPENDIX EXAMPLE

This is just like any other example!

# BIBLIOGRAPHY

[1] J. Kunz, M. Sangroula, and D. Vader, "Example thesis," *Z. für Physik*, vol. 76, 1932.