

THIS IS THE TITLE

by

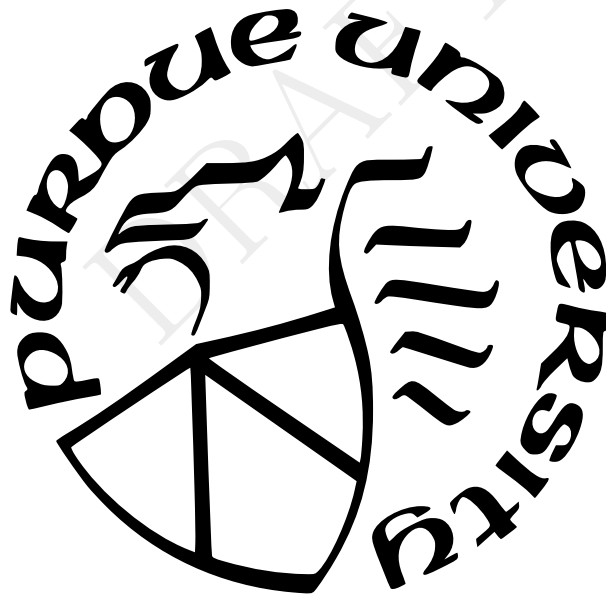
Henri Poincaré

A Dissertation

Submitted to the Faculty of Purdue University

In Partial Fulfillment of the Requirements for the degree of

Doctor of Philosophy



School of Aeronautics and Astronautics

West Lafayette, Indiana

May 2023

**THE PURDUE UNIVERSITY GRADUATE SCHOOL
STATEMENT OF COMMITTEE APPROVAL**

Dr. Kathleen C. Howell, Chair

School of Aeronautics and Astronautics

Dr. Carolin Frueh

School of Aeronautics and Astronautics

Dr. Dengfeng Sun

School of Aeronautics and Astronautics

Dr. James M. Longuski

School of Aeronautics and Astronautics

Approved by:

Dr. Gregory A. Blaisdell

TABLE OF CONTENTS

LIST OF TABLES	4
LIST OF FIGURES	5
ABSTRACT	6
1 INTRODUCTION	7
1.1 Subcaption / Cleveref Testing	7
1.1.1 Important Math	7
1.1.2 Numbers/Units	7
A subsubsection	9
1.1.3 Custom variables	9
1.1.4 Custom colors	9
1.1.5 Acronyms	9
2 BACKGROUND	10
2.1 Dynamical Model	10
2.2 Blockchains, or Whatever	10
VITA	12
REFERENCES	13

LIST OF TABLES

1.1 Sample Table 8

DRAFT

LIST OF FIGURES

1.1	Two images of Orion: (a) and (b)	8
-----	--	---

DRAFT

ABSTRACT

PurdueThesis is a L^AT_EX document class used for master's bypass reports, master's theses, PhD dissertations, and PhD preliminary reports. This template demonstrates how to use PurdueThesis.

DRAFT

1. INTRODUCTION

Experimenting with the available typographic conventions defined in the Purdue file: `pa-typographic-conventions.sty`: these include *Emph First Title* Keys Literal Menu Open menu Preferences **Shell.sh**. Now let's try out a footnote¹, one of the fancy TODO notes , and more scary TODO , as well as a a todo error as well as a citation [1]. Note the TODO comments currently only show up in quick or debug modes (for now).

1.1 Subcaption / Cleveref Testing

Here is a very important and informative figure for Orion. You can see in Figure 1.1 that there is both Figure 1.1(a) and Figure 1.1(b)! There is also important information in Table 1.1. If you're confused, then Equation (1.1) should clarify things. Some other ways to put it: Equations (1.1) and (1.2) and Equations (1.1) to (1.3).

1.1.1 Important Math

$$e^{i\pi} + 1 = 0 \tag{1.1}$$

$$a^2 + b^2 = c^2 \tag{1.2}$$

$$\frac{df}{dt} = \lim_{h \rightarrow 0} \frac{f(t+h) - f(t)}{h} \tag{1.3}$$

1.1.2 Numbers/Units

Some of the number formats available: -10^{10} . 2×4 . 10 to 11. 12.3° .

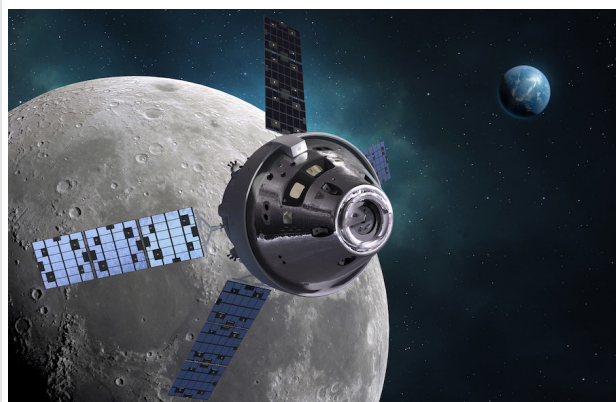
Experimenting with the siunits package: 8 kg m s^{-2} . 9N. $2.3 \times 10^{27} \text{ kg}$. $1.345 \frac{\text{C}}{\text{mol}}$.

¹↑I'm a footnote!

Do I really need this?

Be careful here

This is wrong!



(a) Orion 1



(b) Orion 2

Figure 1.1. Two images of Orion: (a) and (b).

Table 1.1. Sample Table

Sample	Table
x	2

A subsubsection

A subsubsection for testing out the table of contents

A paragraph

What happens for a paragraph in the table of contents?

1.1.3 Custom variables

Variables can be defined as functions in `t0-template` `te4-custom-variables.tex`

The rotating x axis is clearly the best of all axes. But even better is the \boldsymbol{x} vector and the \hat{x} direction! See the appendix in Debug mode for details

1.1.4 Custom colors

There are a variety of available colors from Purdue's branding² like: Boilermaker Gold, Rush. This example document also include the Tableau colors³. For example, `tab-blue` and `tab-red`.

1.1.5 Acronyms

Acronyms handled through `glossaries`, and defined in `t0-template` `te6-acronyms.tex`. For example, the first time we will refer to the Circular Restricted Three Body Problem (CR3BP), and in the future only say CR3BP.

²↑see <https://marcom.purdue.edu/our-brand/visual-identity/>

³↑used in matplotlib - https://matplotlib.org/3.4.1/gallery/color/named_colors.html

2. BACKGROUND

2.1 Dynamical Model

2.2 Blockchains, or Whatever

DRAFT

User-Defined Variables

Note: Currently does not support Greek letter sorting

β : \angleTwo

α : \angleOne

Π : \angleFour

Γ : \angleThree

C : \otherCvar

\mathbb{C} : \Complex

\mathbb{E} : \ExpVal

\mathcal{H} : \hamiltonian

\mathcal{L} : \lagrangian

N : \nBody

\mathcal{N} : \Normal

\mathbb{R} : \Real

\mathcal{U} : \Uniform

X : \xDim

Y : \yDim

Z : \zDim

x : \xNd

\boldsymbol{x} : \vectorFormat

\hat{x} : \unitVectorFormat

x^2 : \xSquared

x_2 : \xSubTwo

x_2^2 : \xSubTwoSquared

y : \yNd

\boldsymbol{y}^2 : \aVectorSquared

z : \zNd

Would it
be bet-
ter ignore
capital-
ization?

VITA

[Put a brief autobiographical sketch here.]

DRAFT

REFERENCES

- [1] K. C. Howell, “Three-dimensional, periodic, ‘halo’ orbits,” *Celestial Mechanics*, vol. 32, no. 1, pp. 53–71, 1984. DOI: [10.1007/BF01358403](https://doi.org/10.1007/BF01358403).

DRAFT