

Ciências
ULisboa

Very long title for the document and the thesis

“Documento Provisório”

Doutoramento em Designação do Doutoramento

Designação da Especialidade de, se aplicável

Nome completo do estudante

Tese orientada por:

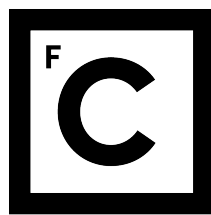
Orientador 1

Orientador 2

Orientador 3

Documento especialmente elaborado para a obtenção do grau de doutor

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Doutoramento em Designação do Doutoramento

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Orientador 1

Orientador 2

Orientador 3

Menção a colaborações ou entidades financiadoras (se aplicável)

Documento especialmente elaborado para a obtenção do grau de doutor

Dedicado à vida.

Acknowledgements

This work was supported by several people and institutions. The author can also express their gratitude to different people.

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Resumo

Deve incluir-se um resumo em português.

Palavras-chave: Palavras-chave 1, Palavras-chave 2, Palavras-chave 3.

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Abstract

Here, an abstract can be included.

Keywords: First keyword, Second keyword, Third keyword.

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A. NAME

It is also possible to include a mention to all the products of the work presented in this document.

For example:

- An article (full bibliographic entry)
- A patent (complete details)
- A book (full bibliographic entry)

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Contents

| | |
|--|-------------|
| ACKNOWLEDGEMENTS | iii |
| RESUMO | v |
| ABSTRACT | vii |
| LIST OF TABLES | xiii |
| LIST OF FIGURES | xv |
| LIST OF ACRONYMS | xvii |
| LIST OF SYMBOLS | xix |
| 1 INTRODUCTION | 1 |
| 1.1 FIRST SECTION OF INTRODUCTION | 1 |
| 1.2 SECOND SECTION OF INTRODUCTION | 1 |
| DATA AND SOFTWARE ACKNOWLEDGEMENTS | 5 |
| REFERENCES | 7 |
| APPENDICES | 9 |
| A ONE APPENDIX | 11 |

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List of tables

| | | |
|-----|-------------------------------|---|
| 1.1 | First example table | 3 |
|-----|-------------------------------|---|

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List of figures

| | | |
|-----|---|---|
| 1.1 | First example image | 2 |
| 1.2 | Example of figure with two images | 2 |

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List of acronyms

NASA National Aeronautics and Space Administration

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List of symbols

H_0 Hubble constant

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Introduction

1.1 First section of Introduction

The text of this chapter is shown as written. Additionally, it is possible to include glossary entries, such as [National Aeronautics and Space Administration \(NASA\)](#). The definitions for such entries must be included in the file `glossaries.tex` following the instructions from the packages `glossaries` and `glossaries-extra`. The first time they are used, the full description is included. For additional uses, only the acronym is shown, as in [NASA](#).

It is also possible to use symbols in the same way. For instance, to include something as H_0 . Then, these symbols and acronyms will be shown in the preambles.

References can also be used in the document. In-text names can be added, such as Martin (1996). It is also possible to show them in parentheses (such as: Whitman 1855). Here, the commands `parencite` and `textcite` are preferred since they are more powerful than the older `citet` and `citep`.

An example figure is shown in Fig. 1.1. The size it will have when displayed can be selected.

Including more than one image per figure is also possible thanks to the package `subcaption`. Figure 1.2 shows an example of its implementation, where Figs. 1.2a and 1.2b can be referenced individually.

1.2 Second section of Introduction

As expected more sections can be added in one chapter. In it, it is possible to include, for instance, a table. The preferred way to do it is through the packages `threeparttable` and `threeparttablex`. They allow, for instance, including footnotes directly below the table. Also, the package `booktabs` creates the commands `toprule`, `midrule`, `bottomrule`, and `cmidrule`. Additionally, the use of the package `siunitx` makes easier to align quantities in

1. INTRODUCTION

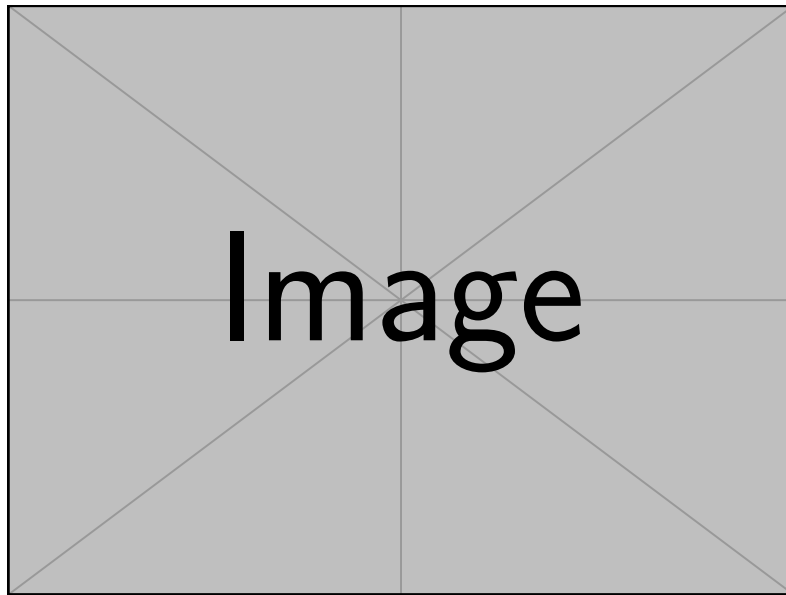


Figure 1.1: First example image in this document. There are several ways in which a figure can be added.

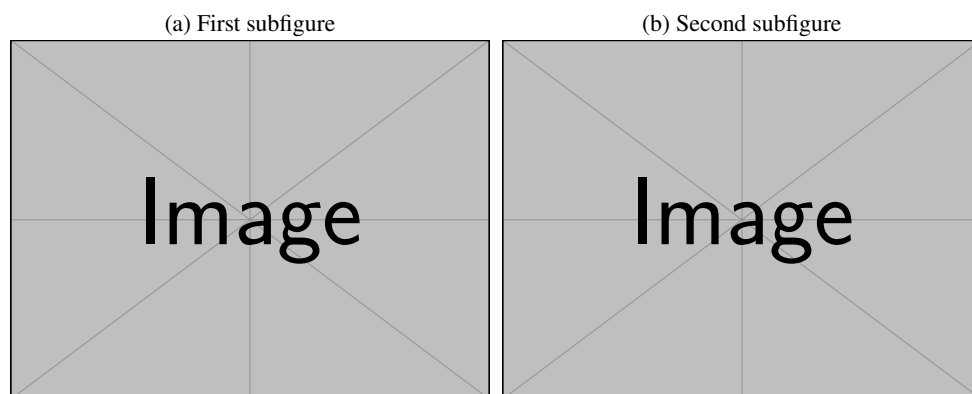


Figure 1.2: Example of figure with two images. They can be labelled and called individually.

different columns. An example is shown in Table 1.1.

Table 1.1: First example table. It highlights the use of the packages `sinuitx`, `threeparttable`, and `booktabs`.

| Name ^a | First part | | | |
|--------------------|----------------------|-------------------------|----------------------|----------------------|
| | Column 1 (unit 1) | Column 2 (unit 2) | Column 3 (unit 3) | Column 4 (unit 4) |
| Row A | 34.10 ± 0.21 | $78.78^{+0.22}_{-0.21}$ | 33.28 ± 0.34 | 30.51 ± 0.23 |
| Row B | 51.80 ± 0.13 | $49.71^{+0.31}_{-0.15}$ | 8.77 ± 0.12 | 7.12 ± 0.11 |
| Row C | 65.21 ± 0.40 | $1.30^{+0.02}_{-0.01}$ | 67.68 ± 0.33 | 3.43 ± 0.09 |
| Row D ^b | 3.14 ± 0.01 | $75.76^{+0.11}_{-0.19}$ | 77.34 ± 0.51 | 22.62 ± 0.23 |

| Name ^a | Second part | | | |
|--------------------|----------------------|-------------------------|----------------------|----------------------|
| | Column 1 (unit 1) | Column 2 (unit 2) | Column 3 (unit 3) | Column 4 (unit 4) |
| Row A | 63.59 ± 0.43 | $25.47^{+0.55}_{-0.23}$ | 33.00 ± 0.33 | 16.52 ± 0.12 |
| Row B | 46.80 ± 0.23 | $28.22^{+0.11}_{-0.11}$ | 9.59 ± 0.12 | 33.44 ± 0.42 |
| Row C | 24.63 ± 0.11 | $7.76^{+0.03}_{-0.02}$ | 28.80 ± 0.26 | 0.32 ± 0.01 |
| Row D ^b | 9.73 ± 0.09 | $51.02^{+0.23}_{-0.21}$ | 38.72 ± 0.74 | 38.37 ± 0.05 |

^a Footnote for the first column of the table.

^b Footnote for a particular row.

As expected, mathematical expressions can also be included in this document.

$$\sin^2(a) + \cos^2(a) = 1, \quad (1.1)$$

where each element of Eq.1.1 can be defined. Also, matrices can be included, such as the following.

$$\begin{pmatrix} (1-p)^2 & p(1-p) \\ (1-p)p & p^2 \end{pmatrix}. \quad (1.2)$$

Another relevant feature is the use, as mentioned earlier, of the package `siunitx`. Adding the needed parameters in the preamble, it is possible to create new units and quantities that can be used. For instance, masses can be expressed as $M_{\odot} \sim 2 \times 10^{30} \text{ kg}$ and then use new units as $M_a = 1 \times 10^6 M_{\odot}$. Checking the file `mythesis.cls` additional units (and their definitions) can be found (e.g. mJy , deg^2 , \AA). In the same way, it is also possible to include angular distances, such as $2^{\circ}23'15''1$, and celestial coordinates: right ascension $12\text{h}12\text{m}0\text{s}$ and declination $-20^{\circ}0'0''$.

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Data and software acknowledgements

This section can be used to acknowledge the use of several datasets and tools. In particular, information from different databases can be acknowledged as well as different computational packages.

Typically, several modern tools have a dedicated text that can be pasted in this section.

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References

Martin, G. R. (1996). *A game of thrones*. New York, Bantam Books (cit. on p. [1](#)).

Whitman, W. (1855). *Leaves of Grass*. Eakins Press (cit. on p. [1](#)).

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Appendices

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One example appendix in the document

In this appendix, it is possible to show additional information that does not fully fit in the main text. For instance, mathematical derivations, long tables, and more.

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