Universidade Federal do Espírito Santo

Programa de Pós-Graduação em Astrofísica, Cosmologia e Gravitação

Quantum effects in cosmology

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Thesis submitted as part of the requirements for the degree of
Doctor of Philosophy in Astronomy & Physics

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PPGCosmo

2020

Universidade Federal do Espírito Santo
Centro de Ciências Exatas
Programa de Pós-Graduação em Astrofísica, Cosmologia e Gravitação

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A presente tese "*Quantum effects in cosmology*" foi submetida no ano de 2020 ao PPGCosmo por *Emmanuel Frion* como parte dos requisitos para a obtenção do título de Doutor em Astronomia e Física.

Caso esta tese venha a ser aprovada, esta folha deverá ser substituída pela correspondente de aprovação.

Abstract

The abstract goes here.

Resumo

Versão em português do *abstract*.

Acknowledgments / Agradecimentos

This section does not need to be written in English.

Here you should acknowledge all those that contributed directly to the accomplishment of this work. You may add acknowledgements to indirect contributions.

By the end, you should acknowledge any relevant funding for the work of this thesis. Some funding agencies have strict rules on how to express these acknowledgements.

Contents

Introduction

1.1. Introduction part 1

1.2. Introduction part 2

We take the opportunity to cite [1, 2, 3].

A chapter title goes here

2.1. Equations

A section with some subsections.

2.1.1. Two equations

We know that

$$\boldsymbol{F} = m\boldsymbol{a} \tag{2.1}$$

and

$$G_{\mu\nu} = 8\pi G\, T_{\mu\nu}\,. \tag{2.2}$$

Equations (2.1) and (2.2) are both very important. You may also group the equations inside \eqref: Naturally, eqs. (2.1, 2.2) are both very important. There is no contraction [4, 5, 3].

You can insert figures, as Figure 2.1.

Figure 2.1.: PPGCosmo logo.

2.1.2. Particular cases

Sometimes it is relevant to cite other sections, see for instance Section 1.2.

2.2. Another section

2.3. Chapter conclusions

Conclusions

The sections below are suggestions.

3.1. Summary of achievements

3.2. Prospective directions

Further details on the post-Minkowskian expasion

An appendix goes here.

The code on the H_0 tension analysis

Another appendix.

Bibliography

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