

UNIVERSITÉ PARIS DIDEROT

LABORATOIRE ASTROPARTICULES & COSMOLOGIE

DOCTORAL THESIS

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# Cross-correlations in cosmology: Planck and BOSS

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*A thesis submitted in fulfilment of the requirements  
for the degree of Doctor of Philosophy*

*in the*

Research Group Name  
Department or School Name

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# Declaration of Authorship

I, Julien TRÉGUER, declare that this thesis titled, 'Cross-correlations in cosmology: Planck and BOSS' and the work presented in it are my own. I confirm that:

- This work was done wholly or mainly while in candidature for a research degree at this University.
- Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.
- Where I have consulted the published work of others, this is always clearly attributed.
- Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work.
- I have acknowledged all main sources of help.
- Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself.

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*“Thanks to my solid academic training, today I can write hundreds of words on virtually any topic without possessing a shred of information, which is how I got a good job in journalism.”*

Dave Barry

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# *Abstract*

Faculty Name

Department or School Name

Doctor of Philosophy

**Cross-correlations in cosmology: Planck and BOSS**

by Julien TRÉGUER

The Thesis Abstract is written here (and usually kept to just this page). The page is kept centered vertically so can expand into the blank space above the title too...

# *Acknowledgements*

The acknowledgements and the people to thank go here, don't forget to include your project advisor...

# Contents

Declaration of Authorship	i
Abstract	iii
Acknowledgements	iv
Contents	v
List of Figures	vi
List of Tables	vii
Abbreviations	viii
Physical Constants	ix
Symbols	x
Introduction	1
1 Modern Cosmology overview	2
1.1 Introduction . . . . .	2
1.1.1 Subsection 1 . . . . .	2
1.1.2 Subsection 2 . . . . .	2
1.2 Main Section 2 . . . . .	3
A Appendix Title Here	4

# List of Figures

# List of Tables



# Abbreviations

**LAH** List Abbreviations **H**ere

**GR** General **R**elativity

# Physical Constants

Speed of Light  $c = 2.997\,924\,58 \times 10^8 \text{ ms}^{-\text{s}}$  (exact)

# Symbols

$a$	distance	m
$P$	power	W ( $\text{Js}^{-1}$ )
$\omega$	angular frequency	$\text{rads}^{-1}$

*For/Dedicated to/To my...*

# Introduction

There are countless historical evidences of

# Chapter 1

## Modern Cosmology overview

*"Use the Force, Luke"*

— Master Yoda, *Star Wars*

### 1.1 Introduction

Cosmology studies the physics of the universe as a whole focuses on its eg

Modern or physical cosmology was born in 1917 in the wake of the birth of General Relativity when Albert Einstein applied his newly found equation to the whole universe

#### 1.1.1 Subsection 1

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## 1.2 Main Section 2

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## Appendix A

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