

UNIVERSITÉ PARIS DIDEROT

LABORATOIRE ASTROPARTICULES & COSMOLOGIE

DOCTORAL THESIS

Cross-correlations in cosmology: Planck and BOSS

Author :

Julien TRÉGUER

Supervisor :

Dr. Eric AUBOURG

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

in the

Research Group Name
Department or School Name

17 juin 2015

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.

Signed :

Date :

“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

UNIVERSITY NAME (IN BLOCK CAPITALS)

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...

Table des matières

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

Table des figures

Liste des tableaux

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 (Js^{-1})
ω	angular frequency	rads^{-1}

For/Dedicated to/To my...

Introduction

History of religions, myths, works of arts offer countless examples of Humanity interrogations about the origin of the Universe.

Chapitre 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 focusing on its origin, geometry, composition, past and future evolution.

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

Ceci est un test de saisie en français. è é à

1.1.1 Subsection 1

Nunc posuere quam at lectus tristique eu ultrices augue venenatis. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Aliquam erat volutpat. Vivamus sodales tortor eget quam adipiscing in vulputate ante ullamcorper. Sed eros ante, lacinia et sollicitudin et, aliquam sit amet augue. In hac habitasse platea dictumst.

1.1.2 Subsection 2

Morbi rutrum odio eget arcu adipiscing sodales. Aenean et purus a est pulvinar pellentesque. Cras in elit neque, quis varius elit. Phasellus fringilla, nibh eu tempus venenatis,

dolor elit posuere quam, quis adipiscing urna leo nec orci. Sed nec nulla auctor odio aliquet consequat. Ut nec nulla in ante ullamcorper aliquam at sed dolor. Phasellus fermentum magna in augue gravida cursus. Cras sed pretium lorem. Pellentesque eget ornare odio. Proin accumsan, massa viverra cursus pharetra, ipsum nisi lobortis velit, a malesuada dolor lorem eu neque.

1.2 Main Section 2

Sed ullamcorper quam eu nisl interdum at interdum enim egestas. Aliquam placerat justo sed lectus lobortis ut porta nisl porttitor. Vestibulum mi dolor, lacinia molestie gravida at, tempus vitae ligula. Donec eget quam sapien, in viverra eros. Donec pellentesque justo a massa fringilla non vestibulum metus vestibulum. Vestibulum in orci quis felis tempor lacinia. Vivamus ornare ultrices facilisis. Ut hendrerit volutpat vulputate. Morbi condimentum venenatis augue, id porta ipsum vulputate in. Curabitur luctus tempus justo. Vestibulum risus lectus, adipiscing nec condimentum quis, condimentum nec nisl. Aliquam dictum sagittis velit sed iaculis. Morbi tristique augue sit amet nulla pulvinar id facilisis ligula mollis. Nam elit libero, tincidunt ut aliquam at, molestie in quam. Aenean rhoncus vehicula hendrerit.

Annexe A

Appendix Title Here

Write your Appendix content here.