

TITLE GOES HERE

By

Author name goes here

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ABSTRACT

TITLE GOES HERE

By

Author name goes here

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TABLE OF CONTENTS

LIST OF TABLES	vii
LIST OF FIGURES	viii
Chapter 1 Introduction	1
Chapter 2 Theory	2
2.1 The Standard Model	2
2.1.1 Problems with the Standard Model	2
2.2 Beyond The Standard Model	2
Chapter 3 ATLAS and the LHC	3
3.1 The Large Hadron Collider	3
3.1.1 The Accelerator Chain	3
3.2 The ATLAS detector	3
3.2.1 Magnet system	3
3.2.2 Inner detector	3
3.2.3 Calorimeters	3
3.2.4 Muon systems	3
3.2.5 Triggering and data acquisition	3
Chapter 4 Object Definitions	4
4.1 Electron definition	4
4.2 Muon definition	4
4.3 Jet definition	4
4.3.1 Jet b-tagging	4
4.4 Missing transverse energy definition	4
Chapter 5 Background Simulation	5
5.1 Monte Carlo simulation	5
5.2 Data driven estimates	5
5.2.1 Multijets estimate	5
Chapter 6 Event selection	6
6.1 Composite objects	6
6.2 Data triggers	6
6.3 Cut flow	6
Chapter 7 Analysis	7

Chapter 8	Results	8
Chapter 9	Conclusion	9
BIBLIOGRAPHY		10

LIST OF TABLES

LIST OF FIGURES

Chapter 1

Introduction

Chapter 2

Theory

2.1 The Standard Model

2.1.1 Problems with the Standard Model

2.2 Beyond The Standard Model

Chapter 3

ATLAS and the LHC

The Large Hadron Collider (LHC) is a particle accelerator and collider 27 km in circumference situated on the French-Swiss border near Geneva, Switzerland [1].

3.1 The Large Hadron Collider

3.1.1 The Accelerator Chain

3.2 The ATLAS detector

3.2.1 Magnet system

3.2.2 Inner detector

3.2.3 Calorimeters

3.2.4 Muon systems

3.2.5 Triggering and data acquisition

Chapter 4

Object Definitions

4.1 Electron definition

4.2 Muon definition

4.3 Jet definition

$$d_{ij} = \min(p_{T,i}^{-2}, p_{T,j}^{-2}) \frac{\Delta\eta_{ij}^2 + \Delta\phi_{ij}^2}{R^2} \quad (4.1)$$

$$d_i = p_T^{-2} \quad (4.2)$$

4.3.1 Jet b-tagging

4.4 Missing transverse energy definition

Chapter 5

Background Simulation

5.1 Monte Carlo simulation

5.2 Data driven estimates

5.2.1 Multijets estimate

Chapter 6

Event selection

6.1 Composite objects

6.2 Data triggers

6.3 Cut flow

Chapter 7

Analysis

Chapter 8

Results

Chapter 9

Conclusion

BIBLIOGRAPHY

BIBLIOGRAPHY

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