

MEASURING THE STANDARD MODEL AND SEARCHING FOR  
NEW PHYSICS WITH JET SUBSTRUCTURE USING THE ATLAS DETECTOR

A DISSERTATION  
SUBMITTED TO THE DEPARTMENT OF PHYSICS  
AND THE COMMITTEE ON GRADUATE STUDIES  
OF STANFORD UNIVERSITY  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

Maximilian Swiatlowski  
February 2015

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I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

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(Ariel Schwartzman) Principal Adviser

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

---

(Su Dong)

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

---

(Jay G. Wacker)

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

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(Blas Cabrera (??))

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Approved for the Stanford University Committee on Graduate Studies

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# Preface

This thesis tells you all you need to know about...

# Acknowledgments

I would like to thank...

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# Introduction

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## Chapter 2

# The Standard Model, and the Theory of Strong Interactions

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## Chapter 3

# Supersymmetry, $R$ -Parity, and Naturalness

...

## Chapter 4

# The Large Hadron Collider

Do I need this?

## Chapter 5

# The *ATLAS* Detector

It's a detector.

It has a lot of parts.

Woo.

## Chapter 6

# Conclusions

...

## Appendix A

### A Long Proof

...