Two Higgs are Better than One

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Abstract

This is a LaTeX template and document class for Ph.D. dissertations at Princeton University. It was created in 2010 by Jeffrey Dwoskin, and adapted from a template provided by the math department. Their original version is available at: `http://www.math.princeton.edu/graduate/tex/puthesis.html`

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Don't forget to ask your advisor if your work was sponsored by a grant that needs to be acknowledged in this section.

To my parents.

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Introduction

This is the introduction. Physics is awesome.

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1.3 Successes of the SM

1.4 Shortcomings of the SM

1.5 diHiggs as a probe of SM and New Physics

Chapter 2

Experimental Facility

2.1 CERN

overview of facilities, experiments, history

2.2 LHC

proton beams, how do they work?

2.3 CMS

plenty of subsections here for tracker, ecal, hcal, solenoid, muons talk about trigger and storage later

Chapter 3

Physics Objects

Talk about stuff used in the analysis

3.1 Photons

3.2 Jets

Chapter 4

Big Data

data taking eff, pretty lumi plot

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This section describes how we got from events with collections of photons and jets to 2 higgs candidates, and in the resonant case to a resonant candidate

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both SM and anomolous couplings

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Some rehash of abstract and intro

Appendix A

Mom, this is for you.

Explain the work of this thesis to my mom and anybody else.

Appendix B

Other Projects

B.1 Lumi Results

B.2 PLT Results

B.3 W' Results

B.4 VHbb Results

Bibliography

[1] ProQuest. PQ/UMI GradWorks Guide F2006. `http://www.princeton.edu/~mudd/thesis/Submissionguide.pdf`, 2006.

[2] Seeley G. Mudd Manuscript Library. Submitting your Doctoral Dissertation or Masters Thesis to the Mudd Manuscript Library. `http://www.princeton.edu/~mudd/thesis/`, May 2009.