



山东大学
SHANDONG UNIVERSITY

Doctoral Thesis

Searching for New Physics in $E_T^{miss} + \ell\ell$
Final state using The ATLAS detector

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- Where I have consulted the published work of others, this is always clearly attributed.
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Doctoral Thesis

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Abstract

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Doctor of Philosophy

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by Bo Liu

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

Acknowledgements

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

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68 Abbreviations

LAH List Abbreviations **Here**

⁶⁹ 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}

Dedicated To My Family

72 Chapter 1

73 Introduction

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113 **Chapter 2**

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117 **2.3 Dark Matter**

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133 channel

134 Chapter 6

135 Searching for the Higgs Boson
136 invisible decay signal in Higgs
137 boson associated Z boson
138 production mode

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¹⁴⁰ Summary and Prospect

141 Appendix A

142 An Appendix

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¹⁷⁹ Bibliography