### Dissertation Title

A DISSERTATION PRESENTED

BY

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TO

THE DEPARTMENT OF PHYSICS

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHYSICS
IN THE SUBJECT OF
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#### Dissertation Title

#### Abstract

While the search for ever heavier Beyond the Standard Model (BSM) particles is a popular excercise at the energy frontier, the search for XXX has been less explored. This thesis presents a search for YYY in a novel 140 fb<sup>-1</sup> dataset collected by the ATLAS experiment during Run 2 at the Large Hadron Collider (LHC) at  $\sqrt{s} = 13$  TeV. The dataset is unique in that it is collected at the

# CONTENTS

1	THE LHC AND THE ATLAS	1
	1.1 Some equations · · · · · · · · · · · · · · · · · · ·	2

1

## THE LHC AND THE ATLAS

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Ĭ	у	0.3s	0.4s	0.8s

Table 1.1: Timing results

#### 1.1 Some equations

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$$0.002(x + 89.6)^{-1.06\log(x)} \tag{1.1}$$