

# Measurements of $H \rightarrow b\bar{b}$ decays and $VH$ production

Thomas Charman

Supervisor: Dr. Jonathan Hays



Queen Mary University of London

Submitted in partial fulfillment of the requirements of the Degree of  
Doctor of Philosophy February 10, 2021.

I, Thomas Paul Charman, confirm that the research included within this thesis is my own work or that where it has been carried out in collaboration with, or supported by others, that this is duly acknowledged below and my contribution indicated. Previously published material is also acknowledged below.

I attest that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge break any UK law, infringe any third party's copyright or other Intellectual Property Right, or contain any confidential material.

I accept that the College has the right to use plagiarism detection software to check the electronic version of the thesis. I confirm that this thesis has not been previously submitted for the award of a degree by this or any other university.

The copyright of this thesis rests with the author and no quotation from it or information derived from it may be published without the prior written consent of the author.

Signature:

Date:

Details of collaboration and publications:

# Contents

<b>List of Figures</b>	<b>3</b>
<b>List of Tables</b>	<b>3</b>
<b>1 Results</b>	<b>4</b>
1.1 VH(b,b) multi-variate discriminant fit results . . . . .	4
1.2 Di-jet mass fit results . . . . .	4
1.3 VZ Cross-check results . . . . .	4
<b>Bibliography</b>	<b>5</b>

## List of Figures

## List of Tables

# Chapter 1

## Results

### 1.1 VH(b,b) multi-variate discriminant fit results

### 1.2 Di-jet mass fit results

### 1.3 VZ Cross-check results

# Bibliography