



### Université Paris Sud

#### ÉCOLE DOCTORALE PNC LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE

### THÈSE DE DOCTORAT

Soutenue le 11 juillet 2014 par

#### ESTELLE SCIFO

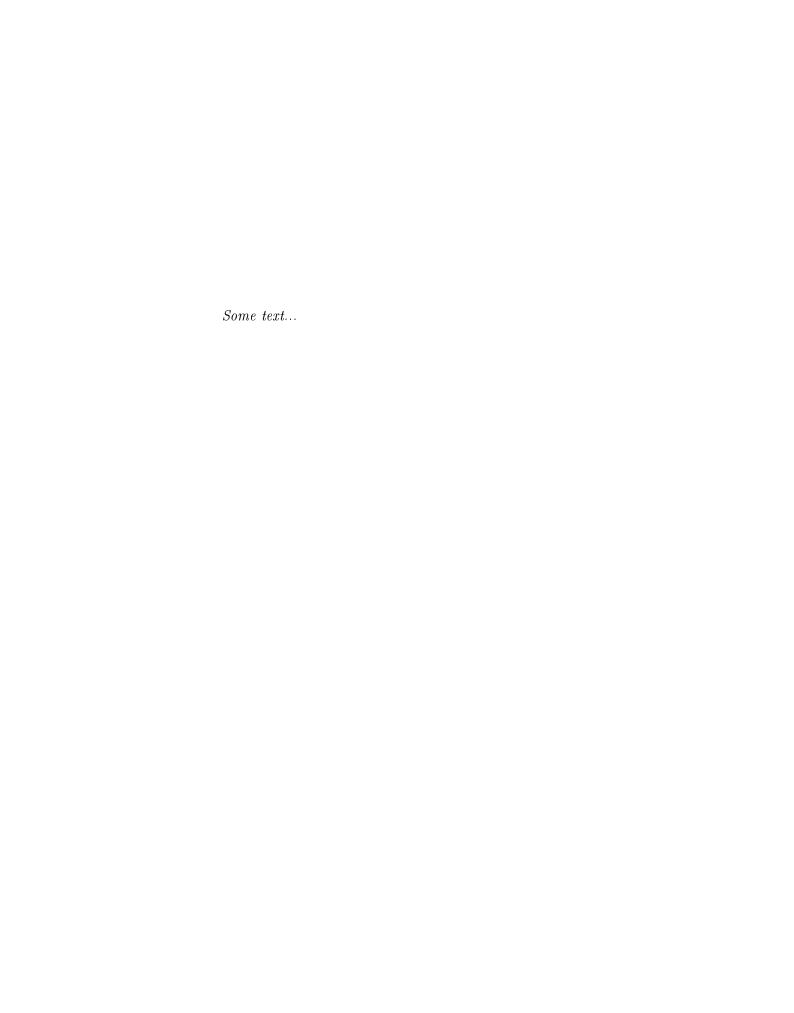
### The Thesis full title

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#### Chapter



### $0 \frac{}{\mathrm{Abstract}}$

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# Part I Theory overview

### 1

### STANDARD MODEL

(6 A very profound sentence... ),
ITS AUTHOR

### Part II

Experimental setup and performances



### THE LARGE HADRON COLLIDER



### THE ATLAS EXPERIMENT

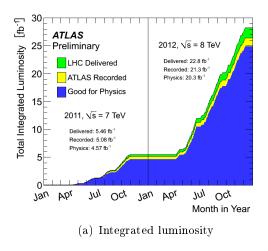
The only way of discovering the limits of the possible is to venture a little way past them into the impossible.

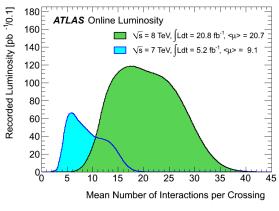
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#### Introduction

- 3.1 Physical goals and required performances
- 3.2 Physical constraints and design
- 3.3 Detector performances during Run I





(b) Mean number of interactions per bunch crossing

Figure 3.1: (a): luminosity delivered and recorded in ATLAS. (b): mean number of interaction per bunch crossing in 2011 and 2012 data [twiki lumi].

# Part III Outlooks and conclusion

#### Chapter



## 4 CONCLUSION

### BIBLIOGRAPHY

References