修士論文

# Title of your thesis

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# 概要

This is the abstract of the thesis.

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# 第 1 章

# Introduction

This is the introduction.

## 1.1 2 番目

This is the second page of the introductory chapter.

## 1.2 Third page

This is the third page of the introductory chapter.

You can use `\putFigure` command to put a figure into the document. The formula is following:

```
\putFigure[option]{file location}{caption}{label name}
```
(1.1)

where in the `option` we can set the width of the figure with the unit of `\textwidth`. The example shows in 図 1.1.

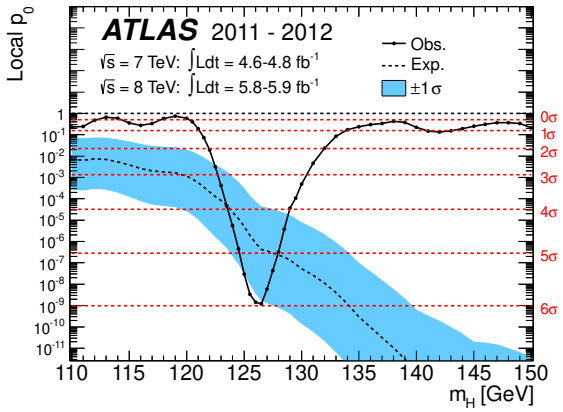


図 1.1: Higgs observation

The command `\putTable` is also available. But it is less useful than the `\putFigure` since there are a lot of parameters for definition a table. Here, an example is shown. If you define a table with 2 columns and 2 rows, the command you should type is following:

```
\putTable{cc}{1 & 2\\ \midrule 3 & 4}{Example of the table}{tab:exmpl}
```
(1.2)

then we get 表 1.1.

表 1.1: Example of the table

| | |
|---|---|
| 1 | 2 |
| 3 | 4 |

The format of Fig. 1.1 is a bit old (`.eps`... ). Of course, the command works for `PDF` format like Fig. 1.2. `JPEG` format can also be handled (see Fig. 1.3).

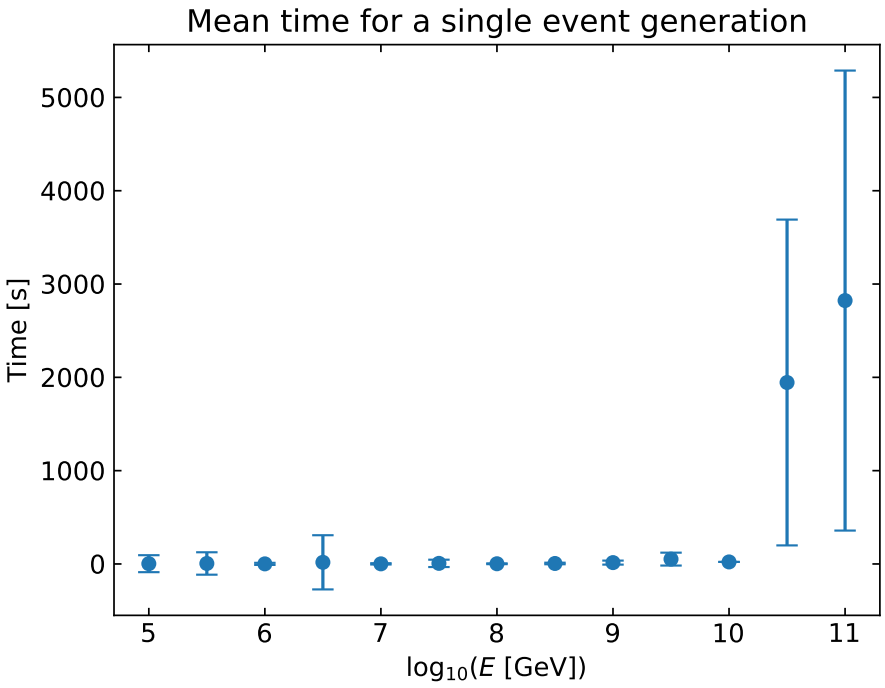


図 1.2: PDF format example

図 1.3: JPEG format example

# 第 2 章

# Physics motivation

## 2.1 Unit

Units are important for the physics. This template includes `siunitx` package so that you can easily write units properly. You can find several descriptions for the way to use `siunitx` on the internet (for example, http://www.yamamo10.jp/yamamoto/comp/latex/make_doc/unit/index.php in Japanese).

## 2.2 Physics package

This template already includes the `physics` package. A helpful reference can be https://qiita.com/HelloRusk/items/ce9f49e9b3fc0344ae23.

## 2.3 Overleaf support

This template should work in the Overleaf platform. If you write in Japanese, all of the files in the template should be uploaded, and the “compiler“ should be set to LaTeX (the default is pdfLaTeX, but it is not working if the document contains non-alphabet characters).

# 第 3 章

# Description of the Detector

The ATLAS Detector [1] is the multi-purpose detector for the experiment of the particle physics.

# 第 4 章

# Object definition

# 第 5 章

# Signal Optimisation

# 第 6 章

# Background Estimation

# 第 7 章

# Systematics

# 第 8 章

# Results

# 第 9 章

# Conclusion

# 謝辞

Thanks, many thanks for all my friends. ありがとう．本当にありがとう．日本語の場合は「謝辞」であることが多いが，英語の時は追記事項 (Acknowledgment) を書くことが多い．その中での謝辞である．

# Bibliography

[1] G. Aad et al. (ATLAS Collaboration), *"The ATLAS Experiment at the CERN Large Hadron Collider"*, JINST **3**, S08003 (2008).

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