# Example Document

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### March 11, 2015

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11 Abstract

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## Notes to reviewers

### 35 0.1 General goals

• Audience: my undergrad or graduate student self, particle physics students, aspiring philosophers of physics.

• Blah.

### 39 **0.2 TODOs**

- Blah.
- Blah.

## 42 0.3 Version history

- **v0.0** 2015-03-06 First rough draft.
- **v0.1** 2015-03-07 Improvements.

## 1 Introduction

## 46 1.1 A Sub-section

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## <sub>52</sub> 2 How to use this template

#### 53 2.1 Citations

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• You probably want to usually cite another source in a footnote like this<sup>1</sup>, and use \citet{X} within the footnote to refer to the author directly with only the date in parentheses.

- Or you can use \citet{X} to refer to the author directly in the inline text, again with only the date in parentheses: Einstein (1905) defends the hypothesis that radiation is quantized.
- When citing the work at the end of a caption, you probably want to use \citep{X} to wrap the entire citation in parentheses: Steven Weinberg did foundational work forming the Standard Model (Weinberg 1967).
- Probably fancier than necessary if using footnotes, but one can use \citep[see][]{X} to insert words in the citation: SUSY helps relax fine-tuning (see Martin 1997). There are some important papers in this world (e.g. Einstein 1905).

#### 66 2.2 URLs

This is an example url: Structural Realism. Or, you can put the text of the link in the document directly: http://plato.stanford.edu/entries/structural-realism/.

### 69 2.3 Figures

70 Blah blah blah. See Fig. 1. And see Table 1.

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<sup>&</sup>lt;sup>1</sup> Einstein (1905).

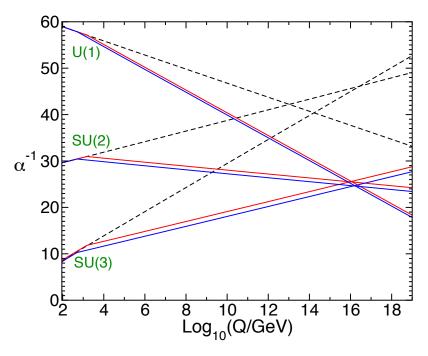


Figure 1: Two-loop renormalization group evolution of the inverse gauge couplings  $\alpha^{-1}(Q)$  in the Standard Model (dashed lines) and the Minimal Supersymmetric Standard Model (MSSM, solid lines). In the MSSM case, the sparticle masses are treated as a common threshold varied between 500 GeV (blue) and 1.5 TeV (red) (Martin 1997).

Table 1: Number of readout channels per sub-detector in ATLAS for the primary sub-detectors (ignoring the minbias trigger system, luminosity monitors, and DCS sensors) (ATLAS Collaboration 2008).

$\begin{array}{cccccccccccccccccccccccccccccccccccc$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	inner detector	Pixels	80 M
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		SCT	$6.3~\mathrm{M}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		TRT	$350~\mathrm{k}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	EM calorimeter	LAr barrel	110 k
LAr end-cap       5.6 k         LAr forward calo.       3.5 k         muon spectrometer       MDTs       350 k         CSCs       31 k         RPCs       370 k         TGCs       320 k		LAr end-cap	$64 \mathrm{\ k}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	hadronic calorimeter	tile barrel	9.8 k
$\begin{array}{ccc} \text{muon spectrometer} & \text{MDTs} & 350 \text{ k} \\ & \text{CSCs} & 31 \text{ k} \\ & \text{RPCs} & 370 \text{ k} \\ & \text{TGCs} & 320 \text{ k} \end{array}$		LAr end-cap	$5.6~\mathrm{k}$
CSCs 31 k RPCs 370 k TGCs 320 k		LAr forward calo.	$3.5~\mathrm{k}$
RPCs 370 k TGCs 320 k	muon spectrometer	MDTs	350 k
TGCs 320 k		CSCs	31  k
		RPCs	$370~\mathrm{k}$
total 88 M		TGCs	$320~\mathrm{k}$
	total		88 M

### $^{77}$ 2.4 Wrapfig

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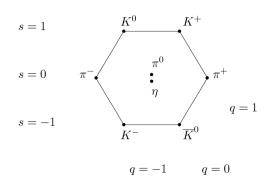


Figure 2: The lowest-energy meson octet.

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## 3 Conclusion

## 3.1 A Sub-section

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## $_{107}$ 3.2 Acknowledgements

108 We gratefully thank many.

## References

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^{110} ATLAS Collaboration (2008). The ATLAS experiment at the CERN Large Hadron Collider. JINST\ 3,\ S08003.\ 1
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- Einstein, A. (1905). Über einen die erzeugung und verwandlung des lichtes betreffenden heuristischen gesichtspunkt. Annalen der Physik 17, 132–148. 2.1, 1
- <sup>114</sup> Martin, S. P. (1997). A Supersymmetry primer. 2.1, 1
- Weinberg, S. (1967). A model of leptons. Phys. Rev. Lett. 19, 1264–1266. 2.1