Sample LaTeX Document

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Abstract

This document is intended to provide a sample of the LaTeX options that I use most frequently. If you already have LaTeX working on your computer, then this sample document may prove useful.

1 Introduction

This document has been compiled with TeXShop (2.10 beta 9) on Mac OS X. While I wrote this sample, I used examples from the following websites to eventually find the layout I wanted. Some of the web pages no longer exist, so here are the ones still available as of today.

  a. TeXShop: `http://www.uoregon.edu/~koch/texshop/index.html`

  b. Example of the longtable package: `http://users.sdsc.edu/~ssmallen/latex/longtable.html`

  c. hyperref, placing clickable weblinks in PDF output (and much more): `http://www.tug.org/applications/hyperref/manual.html`

  d. Very helpful coverage of indexes and Bibtex usage (even though I'm not covering that here): `http://web.image.ufl.edu/help/latex/`

  e. My website, the source of this document: `http://www.davidpace.com`

2 Text

Not so much text examples, as these are math shortcut examples. All of my equation sets are placed in the equation array environment and the following equation set uses some of the

shorthand notation defined in the document's preamble.

$$\vec{\nabla} \cdot \vec{B} \;=\; 0 \tag{1}$$

$$\left| \vec{P}(x) \right| \;=\; \begin{cases} 0 & \text{for } x \leq 9 \\[2ex] 27 & \text{for} x > 9 \end{cases} \tag{2}$$

$$\tag{3}$$

$$a \;\approx\; b \tag{4}$$

where these are all simple expressions because there are a lot of resources available for learning how to typeset math.

The equation array example illustrates the following,

a. Use of shorthand notation in the divergence line in (1).

b. Large bracket with multiple lines in (2).

c. Numbering of empty line in (3).

d. Use of an alignment character other than the predefined equal sign in (4).

and the above list demonstrated the enumerate environment with the defined lower case alphabet listing.

3   Images

3.1   Single Image

Getting things started with an introductory paragraph.

The second paragraph is indented.

At this point a reference is made to figure 1, to point out that it is a single image with resizing performed in the document processing.

3.2   Side-by-Side Images

Figure 2 displays two images next to each other in a horizontal alignment. It is possible to adjust the sizes as necessary, though if you set the sizes too large, then the images will be displayed vertically.

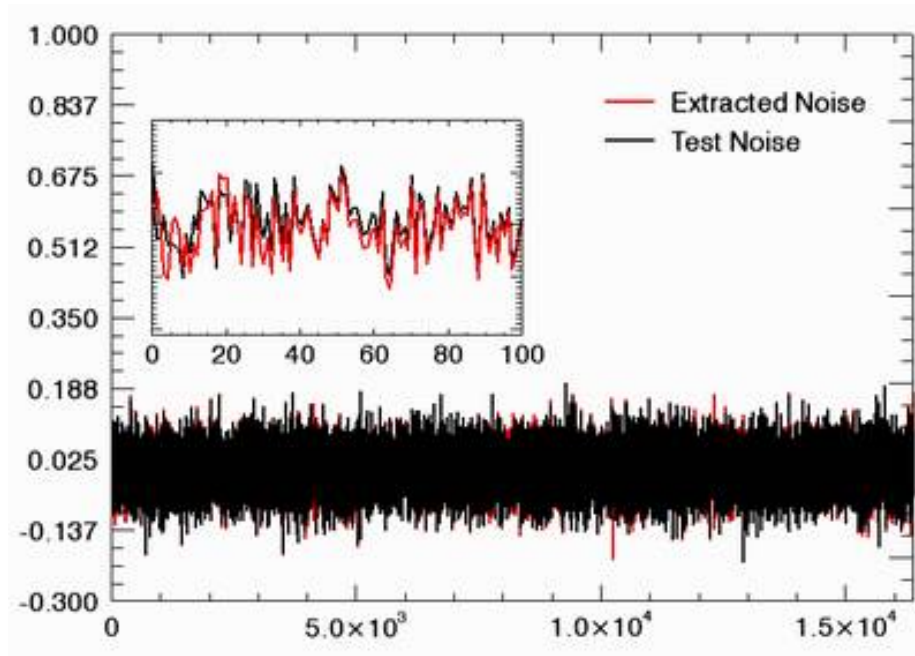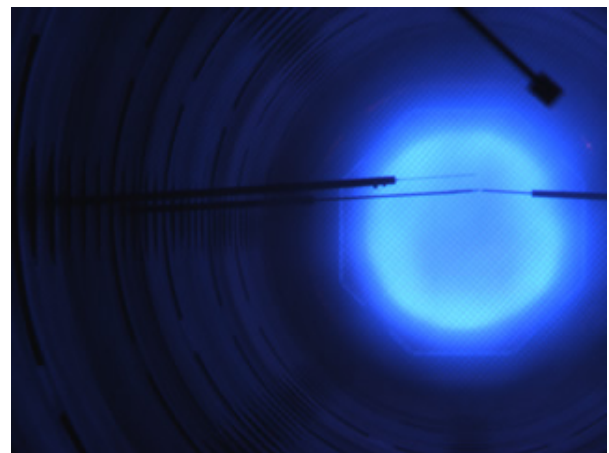It is also possible to reference figures 2(a) and 2(b) separately.

Figure 1: Noisy Signal

(a) Small Logo

(b) Large Plasma Device

Figure 2: It is also possible to place a caption here and leave the individual captions blank. The (a) and (b) markers will still be printed and you can still reference them individually.

4 Tables

Table 1 will stretch across multiple pages if necessary.

Name	Parameters and Notes

Name	Parameters and Notes (continued)

This paragraph stretches across both columns of the table, just in case you want to write some kind of message or differentiate table areas without making new headers.

Item 1	The description is input just like writing a paragraph of normal text.
	New paragraphs are not indented, however, so it is not exactly like writing body text.
	After this entry is complete, double vertical spacing is forced in the table (see \\ \\)
Another Item	We can just keep adding items because the management of this table across multiple pages will be handled by LaTeX.