

This is Your Title

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# 1 Introduction

Type in introductory text here. Here is an example of using **bold face**, here is *italics face*, and here is sans serif face. One can also underline. Putting things in math mode within text is done by using the the dollar signs (*i.e.*,  $y = e^{-x}$ ):  $y = e^{-x}$ .

## 2 Your Section 2

Add whatever section title you want between the { } above and write the text afterward. Make as many “\sections” as you see fit. Equations are done like the following lines in L<sup>A</sup>T<sub>E</sub>X:

$$\gamma_c = 17C_6^{0.4}v^{0.6}n_H, \tag{1}$$

## 3 Including Figures in a L<sup>A</sup>T<sub>E</sub>X File

Figures can be included as shown in Figure 1 (the Unix version is done below, the PCT<sub>E</sub>X version is in comments directly after the Unix version — if you are using PCT<sub>E</sub>X uncomment the PCT<sub>E</sub>X version and comment out the Unix version. The details of including figures in L<sup>A</sup>T<sub>E</sub>X are now specified.

L<sup>A</sup>T<sub>E</sub>X can set up a figure environment where it produces a figure number and a caption, as well as, leave enough space for the figure to reside. However, L<sup>A</sup>T<sub>E</sub>X itself does not place a figure into the document itself. Instead, L<sup>A</sup>T<sub>E</sub>X communicates *picture* information to the software that generates the final hardcopy version of the paper (*e.g.*, dvips) — see below.

This *picture* information is passed to the hardcopy software with the special command. The best way to understand its use is through example:

```
\begin{figure}
\vspace*{3.2in}
\caption{This is the 1st figure caption.}
\special{psfile=figure.eps hoffset=20 voffset=10 hscale=80 vscale=80}
\end{figure}
```

- **psfile:** This is the name of the *encapsulated* postscript file that is to be inserted in the manuscript. On our Unix machines, you will always be making postscript hardcopy files to be printed out on one of our postscript printers.

- **Postscript** is a programming mark-up language that instructs postscript printers how to generate a printed page.
  - Normal postscript files contain pictures that can be output directly to the printer — they have `eject page` and `page set-up` commands inside of them. These files usually have names that end with a `.ps` suffix.
  - **Encapsulated** postscript files do not have the `eject page` and `page set-up` commands. These pictures are designed to be included in another postscript file with such printer control commands. These file names end with a `.eps` suffix.
- `hoffset`: Tell `dvips` to move the picture horizontally in point (=1/72 inches) units. Positive is towards the right, negative towards the left from the default position, which is defined by whatever  $\LaTeX$  environment you are in.
  - `voffset`: Tell `dvips` to move the picture vertically in point (=1/72 inches) units. Positive raises the picture, negative lowers it.
  - `hscale`: Expand or shrink the size of the image horizontally that is stored in the file in units of percentage. Numbers less than 100 shrink the image, greater than 100 expand the image.
  - `vscale`: Same as `hscale` except in the vertical direction.

Note that one should create encapsulated postscript figures in **portrait** format. However, if you mistakenly create it in **landscape** format, one can *rotate* the image with the `angle` key-word in `special`. For instance, `angle=90` will rotate the image by 90° in the counterclockwise direction. Negative angles rotate in the clockwise direction.

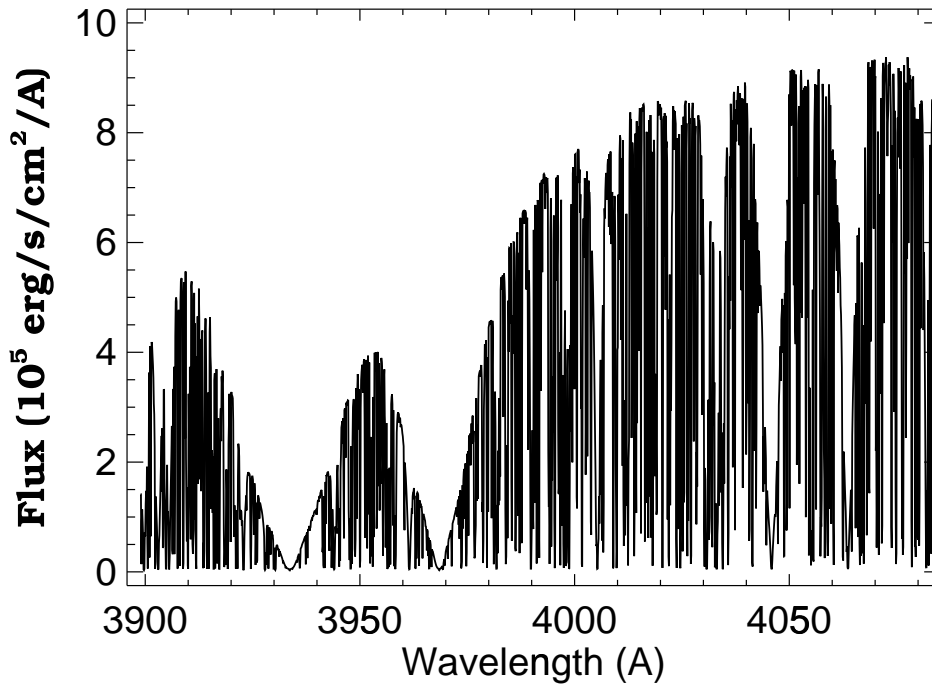
One should have a separate `\begin{figure}` `\end{figure}` environment for each figure that you want to display. Note, however, that one can place 2 or more figures in one figure environment by using 2 or more `special` commands. Note that the following will place 2 figures in 2 separate encapsulated postscript files in the same figure environment.

```

\begin{figure}
\vspace*{4.0in}
\caption{(a) Figure on left and (b) figure on the right.}
\special{psfile=figure1.eps hoffset=-20 voffset=10 hscale=40 vscale=40}
\special{psfile=figure2.eps hoffset=320 voffset=10 hscale=40 vscale=40}
\end{figure}

```

In  $\text{PCT}_{\text{E}}\text{X}$  on the PCs, the “special” command has a slightly different syntax, and unlike the Unix version of  $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ , you have the ability to include bitmap (`.bmp`) images, gif (`.gif`) images, jpeg (`.jpg`) images, and a few others, as well as encapsulated. Here are some examples:



**Run: alboo2, Vers: 2, Date: 26 Apr 96**

Figure 1: An  $\alpha$  Boo synthetic spectrum in the Ca II *H* and *K* spectral region with the Kurucz line opacities turned on.

- Include an encapsulated postscript file:

```
\special{eps:c:/figures/figure1.eps x=2cm y=5cm}
```

Note that one must use a “slash” (/) instead of a “backslash” (\) to delineate directories in the  $\LaTeX$  `\special` command (even though Microsoft Windows actually uses the backslashes). The reason for this is that the “backslash” is a special control character in both  $\TeX$  and  $\LaTeX$ . Here, there are no offsets in the special command and the sizes are given in actual lengths (x and/or y) measured in either centimeters (cm) or inches (in).

- Include a bitmap file and offsetting it by 1 inch:

```
\hskip1in\special{bmp:c:/figures/figure2.bmp x=3cm y=4cm}
```

- Include a gif file and offsetting it by 1.6 inches:

```
\hskip1.6in\special{bmp:c:/figures/figure3.gif x=2.5in y=5.6in}
```

Note that we still use the “bmp:” keyword for the gif file.

- Include a jpeg file and offsetting it by 0.5 inches, and include a 0.5 inch space between the previously written text and the beginning of the image, then include an additional 3 inches for the image, and finally put a 0.5 inch vertical space between the end of the image and the next line of text:

```
\vskip.5in
\vskip3in
\vskip.5in\special{bmp:c:/figures/figure4.jpg x=5in y=3in}
\vskip.5in
```

Once again, use the “bmp:” keyword for the jpeg file in the “special” command.

## 4 Conclusions

Put concluding remarks here. If you want to include itemized list, use the following template:

- text 1.
- text 2.
- text 3.

## 5 References

If you make any references in the text (and you should), list them here.