

gji_extra - additional facilities for use with GJI manuscripts

1 INTRODUCTION

The following set of features are derived from other packages with slight modifications to make them compatible with the `gji` documentclass. They can be accessed by including the `extra` option to the `gji` document class e.g.

```
\documentclass[extra,mreferee]{gji}
```

2 RESERVED SPACE AND BOXED FIGURES

It is possible to reserve space for a figure (or to draw a box of a specified size) using the `\figbox` command.

The `\figbox` command takes 3 arguments: the horizontal and vertical sizes of the space that is to be left blank, as well as the contents of the box.

For example,

```
\begin{figure}  
\figbox{6cm}{5cm}{Paste orbits here}  
\caption{The orbits of some planets}  
\end{figure}
```

makes a box 4 cm wide and 6 cm high with the caption text below it. The text ‘Paste orbits here’ is simply a note to the author that is printed centered in the framed box. This third argument could be left empty, or could contain commands for importing a computer plot.

There is also a starred version `\figbox*` that behaves exactly the same as `\figbox` except

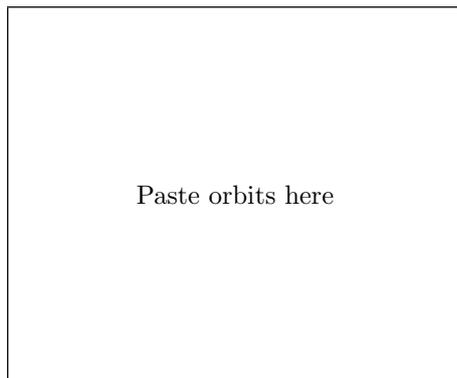


Figure 1. Illustrating the use of the `figbox` command for a display of the orbits of some planets

that no frame is drawn around the figure. This is most useful for real figures, whereas the unstarred command is more appropriate for reserved space for glued-in figures.

It is possible to have `\figbox` and `\figbox*` scale automatically to the size of its contents, something that is also appropriate when the contents are an imported graphics file. In this case, leave both the dimensions empty. As an example, if the orbit plot exists as an encapsulated PostScript file named `orbit.eps`, then it could be included directly with the commands

```
\begin{figure}
\figbox*{}{}{%
  \includegraphics[width=4cm]{orbit.eps}}
\caption{The orbits of some planets}
\end{figure}
```

For this to work, you must have loaded the `graphicx` package with `\usepackage` at the beginning of the file, and you must have a PostScript driver for the output. (There are other packages with different syntaxes for importing graphics; use the one that you are most familiar with.)

3 ALTERNATIVE TEXTS FOR ONE OR TWO COLUMNS

Mathematical formulas often have to be fiddled to fit them into the narrow confines of a single column in two-column format, whereas they will fit with no problem in the wide columns of the manuscript mode. This often results in the author having to massage his formulas when he changes between manuscript and camera-ready options, and then back again when he wants to print the manuscript once more.

The special command `\iftwocol` allows both versions of the text to be included in the

one document, for automatic selection depending on whether two-column mode is active or not. Its syntax is

```
\iftwocol{yes}{no}
```

where *yes* is the text that is inserted if two-columns are in effect, and *no* the text that is otherwise taken.

This command may be used in other situations, but the main application is in the case of mathematics.

4 LITERATURE CITATIONS

Geophysical Journal International uses the author-year system of literature citation, something that is not supported by standard L^AT_EX. The `gji` documentclass provides partial support but more comprehensive features are available using features from the `egs` package and the `natbib` module developed by P.W.Daly.

Since there are two ways of making a citation in the author-year system, either as Jones et al. (1990) or as (Jones et al., 1990), there are two variations of the original `\cite` command. Suppose the key for the above reference is `jones90`, then use

```
\citet{jones90} for Jones et al. (1990)
```

```
\citep{jones90} for (Jones et al., 1990)
```

```
\citep[p.~32]{jones90} for (Jones et al., 1990, p. 32)
```

```
\citep[e.g.,][]{jones90} for (e.g., Jones et al., 1990)
```

```
\citep[e.g.,][p.~32]{jones90} for (e.g., Jones et al., 1990, p. 32).
```

Note that the use of the optional arguments to add notes within the brackets of the citation: a single note behaves as in standard L^AT_EX, as a note *after* the citation; however, with two notes (non-standard), the first goes *before*, the second *after* it.

Two other citation commands are available:

```
\citeauthor{jones90} prints Jones et al.
```

```
\citeyear{jones90} prints 1990.
```

For the above examples to function properly, either the `gji` bibliography style must be used with BIB_TE_X, or the `thebibliography` environment must be formatted accordingly.

With BIB_TE_X

```
\bibliographystyle{gji}
```

```
\bibliography{bib.file.name}
```

Without BIBTEX

```
\begin{thebibliography}{}
\bibitem[Jones et al.(1990)]{jones90}
  Jones, J. K., Thomas, P. R.
  \& Peters, R. F., 1990.
  The best results of fitting curves.
  \textit{J. Math. Dev.}, \textbf{12}, 1245--1261.
\end{thebibliography}
```

As an example the References at the end of these notes are the same set as used in `gjilguid2e.tex` but now cast in the appropriate bibliography environment.

5 BALANCING COLUMNS

It is possible to make the two columns on the last page to be nearly the same height. It is only necessary to give the command `\balance` somewhere within the text of the first column on the last page. Issuing `\balance` too soon can yield strange results on earlier pages; calling it too late has no effect.

It is best to print out the last page without `\balance` when the work is nearly completed. If this page has more than one column of text, then find some appropriate place within the *first* column, preferably between paragraphs, and add `\balance` to the text there. If there is less than one column of text on the last page, then `\balance` may be inserted anywhere within the text of that column.

6 PLANOTABLES

The `planotable` environment that facilitates the formatting of lengthy tables. Tables longer than one page will require the use of `planotable`.

It is possible to create fairly complex tables with arbitrary spacing, straddle heads, rules, etc. in \LaTeX . Authors who need to create complicated tables should consult the \LaTeX manual [*Lamport*, 1985] for details. Most of \LaTeX 's `tabular` capabilities are applicable to `planotables` as well.

Planotables automatically produce table lines and vertical table spacing. In addition, `planotables` have several capabilities that facilitate the formatting of tables. For instance,

it is possible to break long planotables across pages, and, where tabular tables print at an automatic width, authors may choose a specific planortable width.

Type `\begin{planortable}{COLS}`, where COLS sets the justification for each column. Choose one letter (“l,” “c,” or “r”) for each column, indicating left, center, or right justification.

To set a planortable to a specific width, type `\tablewidth{}`, with the desired table width between the curly braces, after the `\begin{planortable}` command. For instance, to create a single-column table type `\tablewidth{20pc}`, where “20pc” represents 20 picas.

Type planortable titles within the curly braces of `\tablecaption{}` commands. Capitalize the first letter of each word (except for prepositions, conjunctions, and articles that are three letters or shorter). Do not allow table caption lines to hyphenate; use a `\protect\` command to break lines where necessary. The `\tablecaption` command automatically generates the “**Table #.**” information.

Type a `\startdata` command, and then type your table data. The `startdata` command formats column headings, engages the tabular formatting, and produces the table caption. Data within a table row are separated by `&` (ampersand) characters. The end of each row is indicated with a `\n1` command. Extra vertical space can be inserted between rows with a `\vspace{}` command (type the desired amount of space between the curly braces).

If a planortable is longer than one page, L^AT_EX will automatically break it across pages. To force a page break in a particular place, type a `\tablebreak` command. This command affects the following line of table data (not the line it appears with) as shown in the `sample.tex` document.

If a cell contains no data, type a `\nodata` command to create a “no data” symbol.

6.1 Table footnotes and table comments

If your table contains material requiring footnotes, use a `\tablemark{TAG}` command to indicate the footnote, then type the associated information (with a corresponding TAG) within a `\tablenotetext{TAG}{}` command.

Short table comments can be created using a `\tablenotetext{\null}{TEXT}` command, with a `\null` argument as the tag. Longer comments may be placed within a `\tablecomment{TEXT}` command. Lists of table references should use the following format: `\tablecomment{References: Names of your references.}`. Only one paragraph of ma-

material is permitted at the end of a table, (excluding superscripted footnotes), so if both references and notes exist, they should be run in together.

Both `\tablenotetext` and `\tablecomment` commands must appear after the column heading information and before the table data; otherwise, they will affect indentation of the last table cell. These commands work with `planotables` and `tabular` tables.

ACKNOWLEDGMENTS

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REFERENCES

- Butcher J. 1992. *Copy-editing: The Cambridge Handbook*, 3rd edn, Cambridge Univ. Press, Cambridge.
- The Chicago Manual of Style*, Univ. Chicago Press, Chicago, 1982.
- Chao, B. F., 1985. Normal mode study of the Earth's rigid body motions, *Geophys. Res. Lett.*, **12**, 526-529.
- Hinderer, J., 1986. Resonance effects of the earth's fluid core in earth rotation, in *Solved and Unsolved Problems*, pp. 277-296, ed. Cazenave A., Reidel, Dordrecht.
- Kopka H. & Daly P.W., 1995, *A guide to L^AT_EX2e*, Addison-Wesley, New York
- Lamport L., 1986, *L^AT_EX: A Document Preparation System*, Addison-Wesley, New York
- Lindberg, C., 1986. Multiple taper harmonic analysis of terrestrial free oscillations, *PhD thesis*, University of California.
- Maupin, V., 1992. Modelling of laterally trapped surface waves with application to Rayleigh waves in the Hawaiian swell, *Geophys. J. Int.* **110**, 553-570.
- Rutherford, S. R. & Hawker, K. E., 1981, Consistent coupled mode theory of sound propagation for a class of non-separable problems, *J. acoust. Soc. Am.*, **71**, 554-564