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Publications of the Astronomical Society of the Pacific Conference Series—Instructions for Authors and Editors Using LaTeX Markup

Iman Author

The Name of My Institution, The Full Address of My Institution, Run in Address to Make Minimum Number of Lines

Ima Co-Author

The Name of My Institution, The Full Address of My Institution

Abstract. A concise abstract is recommended. Enter the text of the abstract in an "abstract" environment, i.e., within `\begin{abstract}` and `\end{abstract}` commands. Do *not* make a paragraph break between `\begin{abstract}` and the first line of the text of the abstract! Abstracts are required for all papers.

1. Introduction

In order to ensure that papers received for publication from different authors are consistent in format, style, and quality, authors are required to type their manuscripts exactly according to the following instructions. The editors will modify the electronic manuscripts as necessary to ensure that they conform to these standards in order to produce a final camera ready copy. This document is a revised version of the PASP documents paspman.tex and revpaspman.tex[1].

2. LaTeX Markup Commands

Authors using LaTeX are requested to use the `newpasp` style file, and declare it as a substyle to the standard LaTeX `article` style. A copy of the style file and the file for these instructions are available via anonymous ftp (using a suitable browser such as Netscape or Internet Explorer) at `docs.byu.edu`. You will find the files in the subdirectory `/pub/pasp/style`.

You should use only those markup commands from LaTeX plus the several extensions provided by this style file. Do *not* define any commands of your own for any reason (no `\def` or `\newcommand` statements).

[1]The present version, based on LaTeX 2.09, will shortly be revised to incorporate LaTeX 2_ε.

2.1. Preamble

The first piece of markup in the manuscript must declare the overall style of the document.

```
\documentstyle[11pt,newpasp,twoside]{article}
```

The `\documentstyle` command must appear first in any LaTeX file, and this one specifies the main style to be the LaTeX `article` style using eleven point fonts, with modifications and additions for the `newpasp` substyle.

To get the running headers at the top of each page (authors' names on the left page and title on the right page), enter the following commands directly beneath the `\documentstyle` command:

```
\markboth{author's surnames}{title of contribution}
\pagestyle{myheadings}
```

The author must include a

```
\begin{document}
```

command to identify the beginning of the main portion of the manuscript.

2.2. Title, Byline, Abstract, etc.

Title and author identification are by way of the standard LaTeX commands `\title` and `\author`. An author's principal affiliation is specified with a separate macro `\affil`. Each `\author` command should be followed by a corresponding `\affil` (address).

```
\title{lucid text}
\author{name(s)}
\affil{address}
```

The `\affil` command should be used to give the author's full postal address. The address will be broken over several lines automatically; do *not* use LaTeX's `\\` command to indicate the line breaks. Please use mixed case text for *all* these fields rather than supplying all capitals; the style file will convert to upper case as necessary.

The article's abstract should be enclosed in an `abstract` environment.

```
\begin{abstract}
abstract text
\end{abstract}
```

Don't include the word "Abstract" in your text; it is inserted automatically. Do *not* make a paragraph break between `\begin{abstract}` and the first line of the text of the abstract!

2.3. Sections

The LaTeX `article` environment supports three levels of sectioning.

```
\section{heading}
\subsection{heading} \subsubsection{heading}
```

Please use mixed case text for the section heads. Note that these commands delimit sections by marking the *beginning* of each section; there are not separate commands to identify the *ends*.

If one wishes to have an acknowledgments section, it should be set off simply with the command

```
\acknowledgments
```

2.4. Equations

Displayed equations can be typeset in many ways using the standard displayed math environments of LaTeX; these three are probably of greatest use.

```
\begin{displaymath}
\end{displaymath}
\begin{equation}
\end{equation}
\begin{eqnarray}
\end{eqnarray}
```

The `displaymath` environment will break out a single, unnumbered formula. The equation will appear the same if it is set in an `equation` environment, and it will be autonumbered by LaTeX. In order to set several formulæ in which vertical alignment is required, use the `eqnarray` environment.

2.5. Tables

Tables should appear in `table` environments.

```
\begin{table}
\caption{text}
\begin{tabular}{cols}
\end{tabular}
\end{table}
```

There should be only one table per environment. The `table` environment encloses not only the tabular material but also any title (caption) or footnote information associated with the table. Tabular information is typeset within LaTeX's `tabular` environment; the *cols* argument specifies the formatting for each column. Tables and figures will be identified with arabic numerals, e.g., "Table 2."; the identifying text, including the number, is generated automatically by the `\caption` command.

There is a `\tableline` command for use in `tabular` environments.

```
\tableline
```

This command produces a single horizontal rule. There should be a `\tableline` above and below between the column headings, and one at the end of the table. Authors should not use additional `\tablelines` themselves, and are discouraged from using vertical rules unless really essential.

Table 1. Example of a properly formatted table

	T_{eff} (K)	PrD$_j$	Molecules (condensible)	V_J	Num (mas)	Spc	T-W (deg)
a	3500	13.4	CH_4	1.26	11232	1.6×10^5	359
b	3650		NH_3 + H_2O	2.13	9878	0.7×10^6	320
c	4000	9.2	TiO	3.41	23451	2.0×10^7	213
d	5250	0.1	$^{12}C^{14}N$	12.10	125	3.6×10^3	91

2.6. EPS Files

Authors who can prepare computer graphics in Encapsulated PostScript (EPS) format may use one of two additional markup commands to mark the point of inclusion, both of which should be used inside a LaTeX `figure` environment. If the DVI translator *dvips* by Tom Rokicki is available on your computer, it is also possible to prepare the final copy with such figures in place. If you have Tom's *dvips* program, you must include the `epsf` substyle in the `\documentstyle` definition:

```
\documentstyle[11pt,newpasp,twoside,epsf]{article}
```

You may have to copy `epsf.tex` to `epsf.sty` or create a symbolic link, since *dvips* is distributed with `epsf.tex` which serves both plain TeX and LaTeX. The same file works fine as a LaTeX style file, it just needs the .sty extension.

The markup commands for including EPS files are:

```
\plotone{file}
\plottwo{file}{file}
```

The *file* argument is used to name the file(s) to be included. The `\plotone` command includes one figure that is scaled to the width of the current text column; `\plottwo` inserts two figures side by side, and the pair is scaled to fit the text width. If one uses these macros, the necessary vertical space is provided automatically.

```
\begin{figure}
\plotone{mygraph.eps}
\caption{My EPS graphic.}
\end{figure}
```

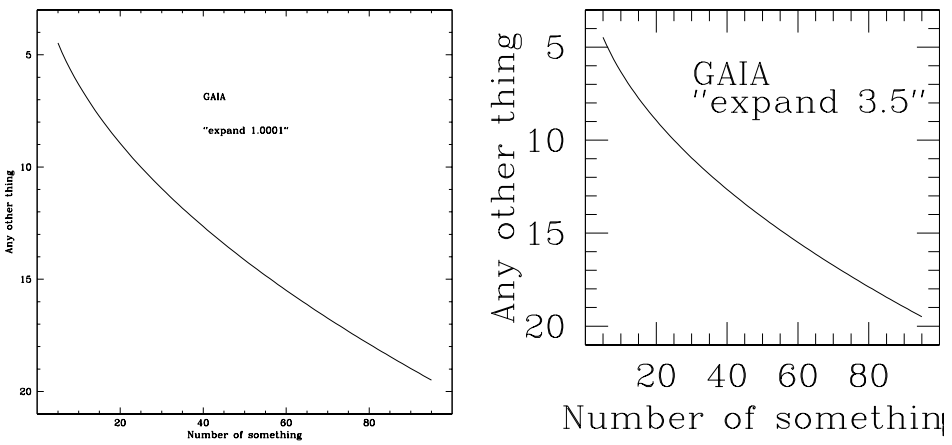

Figure 1. Example of two figures with obviously too small (left) and too large (right) characters when mounted side-by-side with the *plottwo* command. In SMONG default configuration and postencap output they are the result of using *expand 1.001* and *expand 3.5*, respectively.

or

```
\begin{figure}
\plottwo{mygraph.eps}{another.eps}
\caption{Two related graphics.}
\end{figure}
```

Please note that the caption will be centered under the `pair` of graphics when `\plottwo` is used. It is not possible to caption the two plots individually with this package at this time. As with tables, figures will be identified with arabic numerals, e.g., "Figure 1.".

If you must fuss with the positioning and scaling of the EPS plot on the printed page, you can try using this command:

`\plotfiddle{`*file*`}{`*vsize*`}{`*rot*`}{`*hsf*`}{`*vsf*`}{`*htrans*`}{`*vtrans*`}`

`vsize`	vertical white space to allow for plot, any valid LaTeX dimension
`rot`	rotation angle, in degrees, counter-clockwise
`hsf`	horiz scale factor, percent
`vsf`	vert scale factor, percent
`htrans`	horiz translation, in PS points 72/in
`vtrans`	vert translation, in PS points 72/in

If you *can* produce EPS but you do *not* have *dvips*, you can still put the `\plotone` or `\plottwo` commands in the the appropriate places, but you will have to comment them out and put in a `\vspace{`*dimen*`}` command to open up the text. The *dvips* program is in the public domain and is available from labrea.stanford.edu.

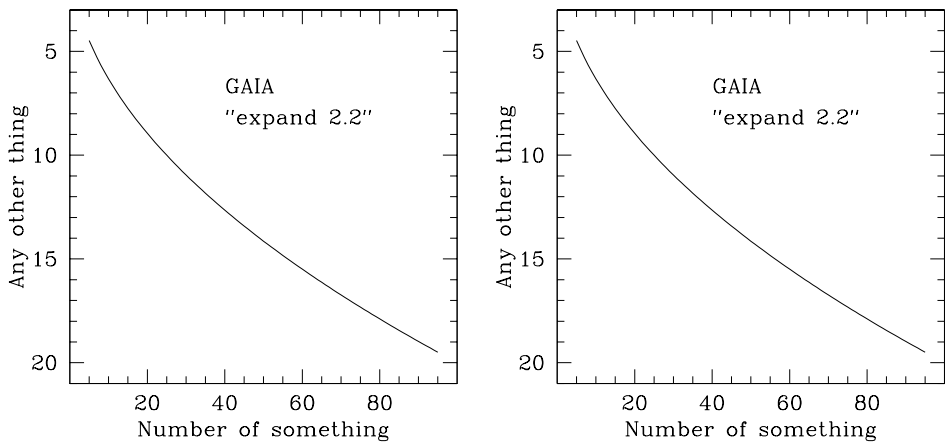

Figure 2. Example of two figures with fine character dimension when mounted side-by-side with the *plottwo* command. In SMONG default configuration and postencap output they are the result of using *expand 2.2*.

A special note to authors: Color EPS files should be avoided if possible. And since it is sometimes necessary to edit EPS files to make them printable, authors should try to avoid EPS files with lines longer than 1024 characters.

2.7. Pasted in Illustrations

Illustrations must be inserted in the text at the appropriate places, with the relevant caption underneath each. The finished pages are reduced by 10% before printing. Thus, illustrations will appear somewhat smaller in print.

These illustrations should appear in `figure` environments.

```
\begin{figure}
\vspace{dimen}
\caption{text}
\end{figure}
```

There should be only one figure per environment. Space for the figure is created with the `\vspace` command; *dimen* should be a valid LaTeX dimension, e.g., "`2.5in`".

Stick glue is normally preferred for pasting in illustrations, but other adhesives will suffice. Do not use a glue which will wrinkle the paper. Illustrations must not be fixed to the pages by transparent adhesive (cellophane) tape since this will show in the printing. Paste in each illustration so that it is centered on the page. Also check (e.g., with a set-square) that the illustration is not crooked.

Size of Illustrations The maximum width of an illustration is normally 13.4cm (5.25in) so that it will fit within the width of the text area. Of course an illustration may be smaller if appropriate. A large illustration may be placed sideward ("landscape") on the paper if necessary.

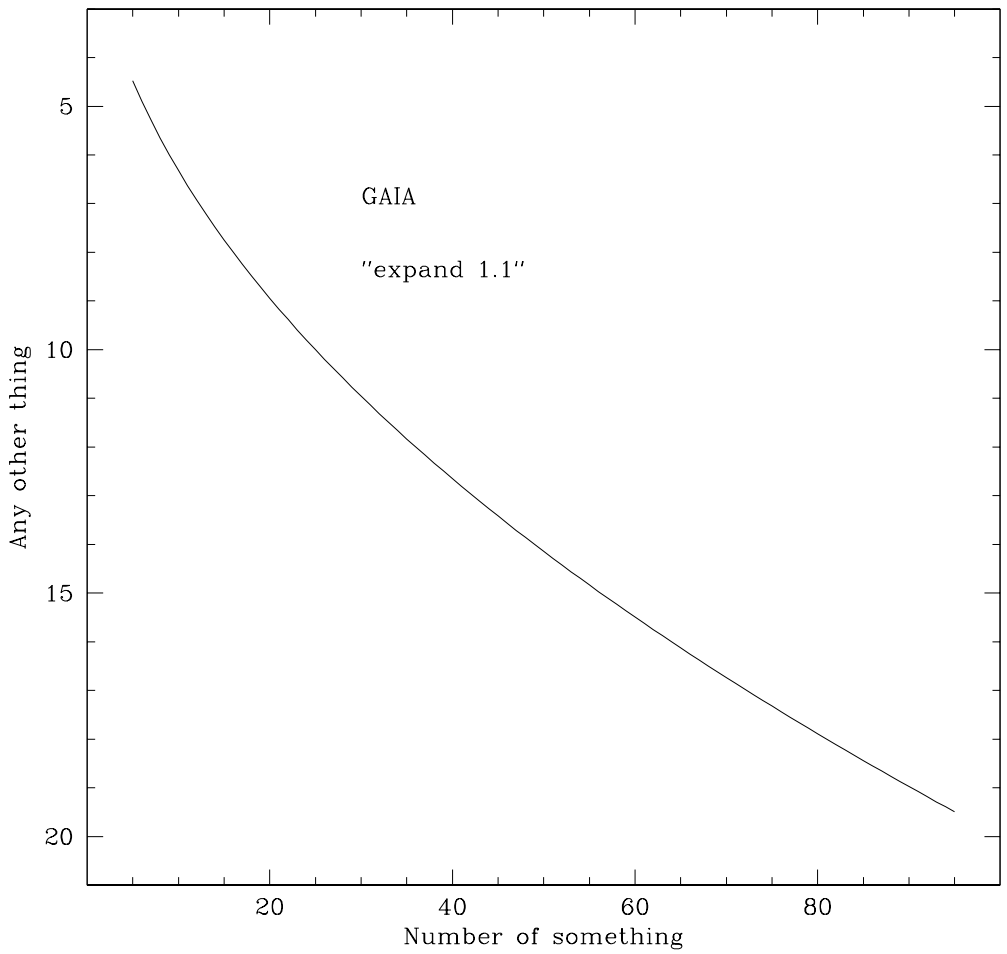

Figure 3. Example of a full-span figure with fine character dimension when mounted with the *plotone* command. In SMONG default configuration and postencap output it is the result of using *expand 1.1*.

Halftone Illustrations (Photographs) Good glossy original prints are required, black and white *only*; color plates cannot be reproduced. Photographs cut from other publications will not reproduce well, and usually infringe copyright. Supply both a large photograph and a reduced version pasted in the text. The pasted-in version will be used for size and placement only; a copy machine can be used for this reduction. If a reduction is not supplied, leave appropriate space in text above the figure caption. The publisher will take care of the photographic reduction and mounting of the original glossy print in the space provided by your pasted-in version.

Line Illustrations If line drawings are submitted as the original, they should be drawn in black ink on good quality tracing paper or a glossy photographic print.

The lettering on line illustrations must be satisfactory — not too large, not too small. The preferred style of lettering is "all capitals", with capital letters between 2mm and 3mm in height (roughly, 6pt to 8pt). Lettering should be done with a lettering stencil or press-on lettering; free-hand or typewritten lettering is not recommended. All lettering and fine detail on both line and photographic illustrations must be very clear and of good visual quality. It is often easier to prepare line illustrations at a larger size (e.g., twice the required size), then have them reduced photographically for pasting into the text.

Illustrations produced on laser printers are acceptable and are probably the preferred way to produce drawings by most authors.

3. References

3.1. In the Text

The reference system to be followed is the standard ApJ system. We adopt the editorial convention of not italicizing the phrase "et al.".

Single Author Author name followed by the year in parentheses, as in Abt (1990), or author and year both in parentheses (Abt 1990).

Two Authors Author names separated by an ampersand (no comma). *Not* to be abbreviated subsequently to "Author1 et al." In parentheses use "(Author1 & Author2 1999)".

Three Authors When first mentioned in text use the format "Author1, Author2, & Author3 (year)" (note comma before ampersand). Subsequently, abbreviate to "Author1 et al.". When authors and year are both within parentheses use "(Author1, Author2, & Author3 1999)" or "(Author1 et al. 1999)".

More than Three Authors Use the format "Author1 et al.". Please do not use "Author1, Author2, Author3, et al.", since Authors 2 and 3 will be deleted during the copy editing! In parentheses: "(Author1 et al. 1999)".

Citing Multiple Works Inside parentheses, citations are separated by a semicolon: "(Biretta, Lo, & Young 1982; Forrest et al. 1987; Lee 1995)".

Outside of parentheses, use commas: "According to Biretta, Lo, & Young (1982), Forrest et al. (1987), and Lee (1995), there is strong evidence to suggest that...".

3.2. Reference List

There is a `references` environment that sets off the list of references and adjusts spacing parameters.

```
\begin{references}
\reference bibliographic information
   .
   .
\end{references}
```

The *bibliographic information* should be in the order directed by Abt (1990): author, year, journal, volume, and page. For instance, the reference for this editorial would be typed in as

```
Abt, H. 1990, ApJ, 357, 1
```

Note that there is not a comma following the author name(s), there is not a trailing period at the end of the reference, and the entire line is set in the body typeface (*no* font changes).

Please note the order of the bibliographical information in the following entries:

```
Biretta, J. A., Lo, K., & Young, P. J. 1982 in AIP Conf.
Proc., 83, The Galactic Center, ed. G. R. Riegler & R. D.
Blandford (New York: AIP), 91

van der Kruit, P. C., & Shostak, G. S. 1983, in IAU Symp.
100, Internal Kinematics and Dynamics of Galaxies, ed. E.
Athanassoula (Dordrecht: Reidel), 69

Garcia-Lorenzo, B., Mediavilla, E., Arribas, S., & del
Burgo, C. 1998, in ASP Conf. Ser. Vol. 152, Fiber Optics
in Astronomy III, ed. S. Arribas, E. Mediavilla \& F.
Watson (San Francisco: ASP), 185
```

Care should be taken that each literature citation in the manuscript has its counterpart in the reference list and vice versa. Care should also be given to checking the accuracy of the references—author(s), date, volume, and page number. While the accuracy of the references is the sole responsibility of the author(s), the editor(s) should nevertheless aim to ensure uniformity of presentation throughout the volume.

3.3. Abbreviations for Journals

There are macros for many of the oft-referenced journals so that authors may use the LaTeX names rather than having to look up a particular journal's specific abbreviation. Any stylistic requirements of the editors are taken care of by the macros, so authors need not be concerned about such editorial preferences.

`\aj`	Astronomical Journal (AJ)
`\araa`	Annual Review of Astronomy and Astrophysics(ARA&A)
`\apj`	Astrophysical Journal (ApJ)
`\apjs`	——, Supplement Series (ApJS)
`\ao`	Applied Optics (Appl.Optics)
`\apss`	Astrophysics and Space Science(Ap&SS)
`\aap`	Astronomy and Astrophysics (A&A)
`\aaps`	——, Supplement Series (A&AS)
`\azh`	Astronomicheskii Zhurnal (AZh)
`\baas`	Bulletin of the AAS (BAAS)
`\jrasc`	Journal of the RAS of Canada (JRASC)
`\memras`	Memoirs of the RAS (MmRAS)
`\mnras`	Monthly Notices of the RAS (MNRAS)
`\pra`	Physical Review A: General Physics (Phys.Rev.A)
`\prb`	Physical Review B: Solid State (Phys.Rev.B)
`\prc`	Physical Review C (Phys.Rev.C)
`\prd`	Physical Review D (Phys.Rev.D)
`\prl`	Physical Review Letters (Phys.Rev.Lett)
`\pasp`	Publications of the ASP (PASP)
`\pasj`	Publications of the ASJ (PASJ)
`\qjras`	Quarterly Journal of the RAS (QJRAS)
`\skytel`	Sky and Telescope (S&T)
`\sovast`	Soviet Astronomy (Soviet Ast.)
`\ssr`	Space Science Reviews (Space Sci.Rev.)
`\zap`	Zeitschrift für Astrophysik (ZAp)

3.4. Mathematical Symbols

The following macros produce various troublesome or laborious mathematical symbols.

`\deg`	($^\circ$)	`\farcs`	($''$)
`\sun`	($\odot$)	`\fp`	($^{\rm p}$)
`\earth`	($\oplus$)	`\micron`	(μm)
`\la`	($\lesssim$)	`\onehalf`	($^1/_2$)
`\ga`	($\gtrsim$)	`\onethird`	($^1/_3$)
`\arcmin`	($'$)	`\twothirds`	($^2/_3$)
`\arcsec`	($''$)	`\onequarter`	($^1/_4$)
`\fd`	($^{\rm d}$)	`&\threequarters`	($^3/_4$)
`\fh`	($^{\rm h}$)	`\ubvr`	($UBVR$)
`\fm`	($^{\rm m}$)	`\ub`	($U-B$)
`\fs`	($^{\rm s}$)	`\bv`	($B-V$)
`\fdg`	($^\circ$)	`\vr`	($V-R$)
`\farcm`	($'$)	`\ur`	($U-R$)