

The EPL document class

ep12.cls 2007-07-05

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Abstract

This document describes the `ep12` document class, used to typeset papers for EPL, the journal jointly published by Società Italiana di Fisica, Italy, EDP Sciences, France, IOP Publishing, UK, under the scientific control of the European Physical Society.

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1 Introduction

The `ep12` class is used by the SIF Production Office of EPL to produce the final layout of the articles. All other types of \LaTeX documents are converted to `ep12` at the very beginning of the production process, therefore all authors submitting to EPL should consider writing their paper in `ep12` format.

The class is based on the standard `article` class of \LaTeX and an effort has been made to retain its syntax and to keep changes to a minimum.

2 Requirements

This package, `ep12.cls`, requires at least \LaTeX 2_ε with the `article` class. Some features provided by `ep12.cls` rely on other packages that must be installed on your system for those features to work; below is a short description of these other packages. All these packages are more or less ‘standard’ and should already be in your system if your \TeX installation is recent; otherwise they can easily be downloaded from the CTAN and installed —see subsection 4.2 for instructions. If you have any problem in finding or installing any of these, please write us: we can send you the relevant files and help you with the installation. See section 7 for e-mail addresses.

You will immediately know that a package is missing because upon compilation of a paper (for example the `ep12-template.tex` provided with `ep12.cls`) you will get some error message like the following:

```
! LaTeX Error: File ‘bm.sty’ not found.
```

```
Type X to quit or <RETURN> to proceed,  
or enter new name. (Default extension: sty)
```

```
Enter file name:
```

In this case, you can download the package(s) as described in subsection 4.2.

3 Structure of a document

The paper should contain a *preamble* and the *main body*. Refer to table 1 for a sketch of a minimal document; table 2 shows a more complex document.

4 The preamble

The preamble is the part of the document that goes from the `\documentclass` command to the `\begin{document}`. It should contain the following material (each item is described at length in the following sections)

- the class declaration with the necessary parameters:

<code>\documentclass{ep12}</code>
<code>\title{...}</code>
<code>\author{...}</code>
<code>\institute{...}</code>
<code>\pacs{...}{...}</code>
<code>\abstract{...}</code>
<code>\begin{document}</code>
<code>\maketitle</code>
<code>...</code>
<code>\acknowledgments</code>
<code>...</code>
<code>\begin{thebibliography}</code>
<code>\bibitem{...} ...</code>
<code>\end{thebibliography}</code>
<code>\end{document}</code>

Table 1: Structure of a minimal `ep12` document

<code>\documentclass[doublecol]{ep12}</code>	<code>\begin{figure}</code>
<code>\usepackage{amsmath}</code>	<code>\onefigure{filename.eps}</code>
<code>\usepackage{mymacros}</code>	<code>\caption{Figure caption.}</code>
	<code>\label{f.lbl}</code>
	<code>\end{figure}</code>
<code>\newcommand{\cmdA}{First command definition}</code>	
<code>\newcommand{\cmdB}{Second command definition}</code>	
<code>\title{Title of the paper}</code>	<code>\begin{table}</code>
<code>\author{F. Author\inst{1} \and S. Author\inst{2}}</code>	<code>\caption{Table caption.}</code>
<code>\institute{</code>	<code>\label{t.lbl}</code>
<code> \inst{1} First Institute - Address\\</code>	<code>\begin{center}</code>
<code> \inst{2} Second Institute - Address</code>	<code>\begin{tabular}{lcr}</code>
<code>}</code>	<code>first & table & row\\</code>
<code>\pacs{nn.mm.xx}{First pacs description}</code>	<code>second & table & row</code>
<code>\pacs{nn.mm.xx}{Second pacs description}</code>	<code>\end{tabular}</code>
<code>\pacs{nn.mm.xx}{Third pacs description}</code>	<code>\end{center}</code>
	<code>\end{table}</code>
<code>\abstract{Text of the abstract}</code>	
<code>\begin{document}</code>	<code>\acknowledgments</code>
	Paper text.
<code>\maketitle</code>	<code>\begin{thebibliography}{0}</code>
	<code>\bibitem{b.lbl.A} First reference.</code>
	<code>\bibitem{b.lbl.B} Second reference.</code>
<code>\section{Section title}</code>	<code>\end{thebibliography}</code>
Paper text.	<code>\end{document}</code>

Table 2: Structure of an average `ep12` document

```
\documentclass[doublecol]{ep12}
```

- the commands for including useful *packages*¹

```
\usepackage{amsmath}
\usepackage{mymacros}
```

- the definition of new commands to be used in the text:

```
\newcommand{\tensor}[1]{\mathss{#1}}
\newcommand{\diag}[1]{\left(\begin{array}{ccc}
#1&0&0\\0&#1&0\\0&0&#1
\end{array}\right)}
```

- the paper title, authors, institutions and pacs:

```
\title{Title of the paper}
\author{F. Author\inst{1} \and S. Author\inst{2} \and
        T. Author\inst{3}}
\institute{
  \inst{1} First Institute - Address\\
  \inst{2} Second Institute - Address\\
  \inst{3} Third Institute - Address
}
\pacs{nn.mm.xx}{First pacs description}
\pacs{nn.mm.xx}{Second pacs description}
```

4.1 The document class declaration

```
\documentclass[options]{ep12}
```

The first line of a L^AT_EX file should contain the `\documentclass` command², which

- specifies the class file for the document (ep12 in this case!)
- declares options to be passed to the class and/or to third-party packages included with subsequent `\usepackage` commands.

The options supported by the ep12 class for authors purposes are resumed below.

¹Packages are third-party L^AT_EX files that define new commands (for example, to implement the inclusion of Postscript figures) or that modify the behaviour of existing commands (for example, to introduce HTML hyperlinks in the cross-references).

²This was called `documentstyle` in the old version of L^AT_EX, L^AT_EX 2.09.

<code>doublecol</code>	Produce a document in two-column layout similar to the final printed version.
<code>page-classic</code>	Produce a document in one-column style. Note that the use of the <code>doublecol</code> option is strongly encouraged.
<code>figures</code>	To define commands for handling inclusion of pictures. Described in sect. 5.6.
<code>comment</code>	Produce a document for a <i>comment</i> paper
<code>reply</code>	Produce a document for a <i>reply</i> paper

4.2 Package inclusion

`\usepackage{packagename}`

Extra features not provided by the \LaTeX kernel or by the `ep12` class are available via the inclusion of packages. Among the most commonly used packages (by us, at least!) are:

`graphics`, `epsf`, `psfig`, etc.: Used for inclusion of (Encapsulated) Postscript graphics in the document. See subsection 5.5 below for further information.

`amssymb`, `amsmath`, `amsmath`: AMS enhanced mathematical symbols, fonts and equation structures.

There are packages for doing almost anything and new ones are continually developed. Many of them are shipped with \LaTeX and should already be installed on your system; all of them are available in the CTAN (“Comprehensive \TeX Archive Network”) which is a collection of \TeX -related material stored in ftp sites around the world. This is the primary source for obtaining information and packages to install in your computer. The main hosts for the CTAN are

- `ftp.dante.de`
- `ctan.tug.org`

4.3 Command definitions

`\newcommand{\cmdname}[number_of_arguments]{command definition}`

\LaTeX allows the definition of new commands to be used in the document. Refer to a \LaTeX manual³ for an explanation of this feature. We will just add some hints that are meant to ease the task of the Production Office.

³For example, Mittelbach, F., Carlisle, D., Rowley, C., *The \LaTeX Companion* (Addison-Wesley) 2004.

- Keep the command definitions to a minimum; do not include definitions which are not used in the text.
- If you have more than a half-dozen definitions, put them in a file, *e.g.* `mymacros.sty` and include it with the command

```
\usepackage{mymacros}
```

- *Never* redefine existing commands, unless you exactly know what you are doing.
- Do not use the T_EX command `\def`; use instead the L^AT_EX `\newcommand` and `\renewcommand`.
- Good command definitions are those that implement generic constructs such as

```
\newcommand{\tens}[1]{\mathss{#1}}
```

(which means “typeset in sans-serif font the argument of `\tens{arg}`”); this makes it easy to change the formatting of all the tensors in the document with a single operation: the author’s idea of what a tensor should look like is not necessarily the same as the editor’s! As another example, instead of typing `$_{\mathrm{H_2O}}$` one should define a command such as

```
\newcommand{\chem}[1]{\mathrm{#1}}
```

and use it consistently throughout the document: `$_{\chem{H_2O}}$`.

4.4 The paper title

```
\title{Paper title}
```

The paper title should be typed following these rules:

- Only the first word capitalized.
- Use the `\title` macro; do not use low-level formatting such as

```
\centerline{\Large\textbf{Title of the paper}}
```

A short version of the title for the running heads may be included using the macro `\shorttitle` (very useful for titles exceeding 70 characters):

```
\title{Title of the paper}
\shorttitle{Short title}
```

For maths in the title use the macro `\mth{...}` and for chemical formulas use `\chem{...}`.

4.5 The author(s)

```
\author{F. Author\inst{1,2} \and S. Author\inst{2} \and  
        T. Author\inst{3}}
```

The authors list should follow these rules:

- Separate the authors with `\and` macros.

```
\author{F. Author \and S. Author \and T. Author}
```

- Initials of name (two or more initials separated by spaces) followed by surname: `A. B. Author`
- Each author tagged with a `\inst` macro specifying the institute(s) he belongs to:

```
A. Author\inst{1}  
A. Author\inst{1,2}
```

- Footnotes after the `\inst`; use the `\thanks` macro:

```
A. Author\inst{1}\thanks{E-mail: \email{a.author@inst.eu}}
```

- `\email{}` should be used to insert e-mail addresses.
- If there is only one institute, the `\inst` tags are superfluous and should not be used.
- Just like the title, do not use low-level formatting; always use the `\author` command.
- Only one author is allowed in the running head, the `\shortauthor` macro has to be used:

```
\author{F. Author\inst{1} \and S. Author\inst{2} \and  
        T. Author\inst{3}}  
\shortauthor{F. Author \etal}
```

4.6 The institute(s)

```
\institute{  
  \inst{1} First Institute - Address\\  
  \inst{2} Second Institute - Address\\  
  \inst{3} Third Institute - Address  
}
```

Rules for the institutes:

- Each institute is tagged by a `\inst` macro.
- Institutes are separated by `\\`.
- If there is only one institute, omit the `\inst`, as for the `\author` command.

4.7 The pacs

```
\pacs{nn.mm.xx}{First pacs description}  
\pacs{nn.mm.xx}{Second pacs description}  
\pacs{nn.mm.xx}{Third pacs description}
```

The pacs list is available online at <http://www.aip.org/pacs/>; or contact us: see sect. 7 for addresses.

4.8 The abstract

```
\abstract{Text of the abstract}
```

The macro `\abstract` has to be put just before `\begin{document}`. Note that the macro `\abstract` is not accepted while using the options `comment` and `reply`.

5 The main body of the document

5.1 Text

The text of the document should adhere to a few rules:

- Sectioning:
 - Only one level of sectioning is allowed, that is, only `\section` commands are permitted. In case you really need second sectioning use `\subsection`. Do not use `\subsubsection`, `\paragraph`, etc.
 - Only the first word of section titles should be capitalized:

```
\section{Only first word of section title capitalized}
```
- Since the file you send us is edited and its layout can change considerably, *never get involved in visual formatting*, that is:
 - Do not use `\linebreaks`, `\pagebreaks`, `\newpages`, etc. to obtain a better page layout.
 - Do not worry about overfull hboxes and do not waste time in trying to prevent them.
 - By contrast, you are encouraged to use tildes (~) whenever a line break should *never* occur, even if it does not actually occur at present:
`A.~Author, fig.~\ref{f.1}, a)~left side; b)~right side.`

5.2 Maths

Some rules for mathematical formulas:

- Do not personalize the spacing in formulas; let \LaTeX decide. For example, do not do things like $x \sim y$ or $x \setminus, = \setminus, y$, or (horror!) $x \setminus != \setminus ! y$.
- Actually, there *are* good places for extra spacing:
 - before dx in an integral: `\int x \setminus, \updownarrow x`
 - before punctuation at the end of the formula: $x=y \setminus, ,$
 - to separate two formulas on a row: $x=y \setminus, , \quad y=z \setminus, ,$
- Never refer “by hand” to equations, like this:

see eq.~(3)

Instead, always label the equations and refer to them with `\ref`:

```
\begin{equation}
\label{e.triv}
0 \neq 1
\end{equation}
```

see eq.~(\ref{e.triv})

- *Never use* `\over`; use `\frac` instead. `\over` is not a \LaTeX command and is incompatible with `amsmath`.
- If you cannot satisfactorily reduce your formula to any of the structures provided by \LaTeX (`equation`, `eqnarray`, etc.), try using the package `amsmath`.
- Upright letters in mathematics are required in the following cases:
 - the d of dx as a differential form; there is a macro in `ep12` that does this: `\updownarrow`.
 - letters that do not represent *variables* but *abbreviations* of words: H_{dR}^n is the n -th de Rham cohomology group; such letters should be typeset with `\mathrm{}`.
 - words or phrases such as “for each”, “whenever”, etc. in formulas should be typeset with `\mbox{}` to retain the text spacing between words and characters. We have an alias for this: `\text{}`⁴.
- Vectors are set in boldface as a rule, our mnemonic alias is `\vect{}`. Note that `\vec` gives \vec{v} which can also be used for vectors.

⁴Do not use this macro in super/subscripts because it switches back to the normal font size: use `\ab` instead.

- Sans-serif upright letters are required for tensors: `\mathsf{T}`. We have defined `\tens{}`.
- Measure units should be upright and separated from the numeric value by a small space: the macro `\un{}` does this; for example 9.8ms^{-2} is obtained with `$9.8\un{ms^{-2}}$`. See also the `units` package by A. Reichert and the `SIunits` package by M. Helder.

5.3 Chemical formulas

Use `\chem{}` to insert chemical formulas:

```
\chem{H_2O}
```

It works both in text and math mode; the formula is typeset in a maths environment with upright letters.

5.4 Long equations

If you cannot satisfactorily insert your equation in the two-column format, you have two choices: you can use the option `page-classic` and compile your file in the one-column style (the Production Office will transform it into the two-column format), or you can use the environments `widetext` and `floatequation`:

```
\begin{widetext}
\begin{equation}
\label{s.long}
Edit your long equation here
\end{equation}
\end{widetext}
\begin{floatequation}
\mbox{\textit{see eq.~\eqref{s.long}}}}
\end{floatequation}
```

It works only if you used the `doublecol` option and displays the equation over two columns.

5.5 Figures

To include figures in your paper you can either use our facilities, described in subsect. 5.6 below, or just do as you are used to. We recommend using our macros, but do not enforce it; this is because figure inclusion is still not fully standardized and different implementations of \LaTeX require different mechanisms for figure inclusion.

In this subsection we list general rules for figure inclusion; in the next section we will focus on our own macros for figures.

A typical figure example which uses the syntax of the \LaTeX package `graphics`:

```

\begin{figure}
\centerline{\includegraphics{figfile.eps}}
\caption{Figure caption.}
\label{f.lbl}
\end{figure}

```

Rules for figure inclusion:

- *Always* label your figures and use `\ref` to refer to them in the text.
- Use whatever package you prefer to include the drawings, provided it is “well known”; possible choices are `graphics`, `graphicx`, `epsf`, `epsfig`. See also our macros in the next section.
- Insert the figure environments in the text near the first reference to their label; do not worry if L^AT_EX makes them appear in unwanted places, we will take care of that as well as of every other layout accident.

Rules for encapsulated postscript (EPS) production:

- Whenever possible avoid using printer drivers (“printing to file”); use instead exportation/translation facilities.
- If a printer driver is the only choice for you, check the driver properties before producing the file and set it for
 - EPS format (not “Postscript” or “Postscript max. portability” or the like).
 - No preview.
 - ASCII output, not binary.
 - No Ctrl-D added to the end of file.
 - All fonts included. If possible, “All fonts but the standard (predefined) ones”
- Also when exporting/converting from other file formats, set the same values as above for your conversion facility.

Figures are subject to reduction by the Production Office in order to make them fit nicely into the page and save as much space as possible.

You should be aware of a potential problem regarding reduction and lines width: when a figure has very thin lines, these are printed fairly well on a 600 dpi laser printer, but when the same figure is printed on a high-resolution device such as a Lynotronics, the lines just vanish. *If your software allows you to control the linewidth, do not choose the thinnest; always choose an intermediate value which looks neither too thick nor too thin.*

Please note that after reduction, as a general rule, the text inside figures should be of the same dimension as the main text, and make sure that relevant details should still be discernible.

5.6 The figures option

The `figures` option (`\documentclass[doublecol,figures]{ep12}`) loads the `graphicx` package, which is our default (and a sort of default for \LaTeX as well) and makes available a high-level command for including EPS files in a convenient way. The figure environment becomes:

```
\begin{figure}
\onefigure{figfile.eps}
\caption{Figure caption.}
\label{f.lbl}
\end{figure}
```

That is, instead of `\centerline{\includegraphics{figfile.eps}}` you just type `\onefigure{figfile.eps}`.

5.7 Large figures in two-column format

When using two-column format (available with the `doublecol` option), some large figures may not conveniently fit the column width. In these cases, you can put your large figure over two columns filling all the page width with the environment `figure*`:

```
\begin{figure*}
\begin{center}
\includegraphics{figfile.eps}
\caption{Figure caption.}
\label{f.lbl}
\end{center}
\end{figure*}
```

5.8 Scaling

With the `figures` option the syntax for scaling figures is exactly the same of `\includegraphics` which is the command defined by the `graphicx` package. Please refer to the documentation of `graphicx` for a complete list of parameters. Here we will just list some common examples:

```
\onefigure[scale=0.5]{file.eps}
\onefigure[width=5cm]{file.eps}
\onefigure[height=4cm]{file.eps}
\onefigure[width=5cm,height=4cm]{file.eps}
```

Note that:

- if you specify both the width and the height, the proportions of your figure will not be conserved.

5.9 Tables

A table might be something like:

```
\begin{table}
\caption{Table caption.}
\label{t.lbl}
\begin{center}
\begin{tabular}{lcr}
first & table & row\\
second & table & row
\end{tabular}
\end{center}
\end{table}
```

Tables are subject to the following rules:

- Always label the tables and use `\ref` to refer to them in the text.
- Just as with figures, insert the table environments in the text near the first reference to their label and do not worry if \LaTeX makes them float to unwanted places.
- The caption goes *above* the table.
- Use horizontal lines only when determinant in the readability of the table, and vertical lines *almost never*!

For table larger than the column width we have defined the new table environment `largetable` to produce a table as large as the page:

```
\begin{largetable}
\caption{Table caption.}
\label{t.lbl}
\begin{tabular}{lcr}
first & table & row\\
second & table & row
\end{tabular}
\end{largetable}
```

6 Bibliography

6.1 Rules

Re-formatting the bibliography is actually the most time-consuming task of the Production Office; please write the references with great care and stick to the rules given below.

Note that footnotes should not be listed in the bibliography as references. Always use the standard \LaTeX macro `\footnote` instead.

- *Always* use the `\bibitem/\cite` mechanism; *do not* cite “by hand” like this: `see~[1]`.
- In each occurrence of the `\cite` command include *all* the references that you want to cite, even if it’s a long list: the `cite` package will automatically sort and rearrange the citations:

`\cite{b.abook,b.areview,b.anotherbook,b.something}`

will be rearranged in the output to produce something like

[1,6–8]

- The references in the bibliography must be sorted according to *the order of citation* in the text.
- Authors names. Use the commands `\Name{}` and `\and`:

`\Name{Author A., Author B. \and Author C.}`

and carefully follow these guidelines:

- Initials after the surname: ‘AUTHOR A.’, not ‘A. AUTHOR’.
- Multiple initials separated by spaces: ‘AUTHOR A. B.’, not ‘AUTHOR A.B.’
- Composite names with the dash: ‘AUTHOR J.-PH.’
- Authors separated with commas, last author separated with `\and`.
- Paper title. The paper title is *not* allowed, unless the paper is still ‘submitted to’, ‘to be published in’ or a preprint; the correct form is

AUTHOR A., *Some Rev.*

the incorrect form is

AUTHOR A., *A very important paper in Some Rev.*

- Reviews. Use the four commands `\Review{}` `\Vol{}` `\Year{}` `\Page{}` or the single command `\REVIEW{}{}{}{}`:

`\Name{Author A.} \Review{Some Rev. A} \Vol{69} \Year{1969}`
`\Page{9691}`
`\Name{Author A.} \REVIEW{Some Rev. A}{69}{1969}{9691}`

Use `\Vol{}` `\Year{}` `\Page{}` or `\SAME{}{}{}` to insert another paper of the same review:

`\Name{Author A.} \REVIEW{Some Rev. A}{69}{1969}{9691};`
`\SAME{70}{1970}{101}`

Also follow these rules:

- Review series italic and linked to the name, not to the volume number: ‘*Some Rev. A*, **69**’, not ‘*Some Rev.*, **A69**’ —that is,

`\Review{Some Rev A.} \Vol{69}`

not

`\Review{Some Rev.} \Vol{A69}`

- Review names abbreviated and without prepositions.

- Books. Use the commands `\Book{}` `\Editor{}` `\Vol{}` `\Publ{}` `\Year{}` `\Page{}` `\Pages{}` `\Section{}`; there are two cases:

with author names:

`\Name{Author A.} \Book{Some Book} \Editor{Editor A.}`
`\Vol{9} \Publ{Publishing house, City}`
`\Year{1939} \Page{666}`

without author names:

`\Editor{Editor A.} \Book{Some Book} \Vol{9}`
`\Publ{Publishing house, City} \Year{1939}`
`\Page{666}`

- Only the initial page of the article; for books you can put ‘pp. 99-107’ using the command `\Pages{}` or ‘sect. A’ using `\Section{}`:

`\Page{99}`
`\Pages{99}{107}`
`\Section{A}`

6.2 Complete examples

[Review]

AUTHOR A., AUTHOR B. and AUTHOR C., *Some Rev. A*, **69** (1969) 9691;
70 (1970) 101.

[Book]

AUTHOR A. and AUTHOR B., *Some Book*, edited by EDITOR A., Vol. **9**
(Publishing house, City) 1939, p. 666.

[Book, only editor]

EDITOR A. (Editor), *Some Book*, Vol. **9** (Publishing house, City) 1939,
p. 666.

obtained with:


```

\begin{thebibliography}{0}

\bibitem{b.a}
  \Name{Author F., Author S. \and Author T.}
  \REVIEW{Some Rev. A}{69}{1969}{9691};
  \SAME{70}{1970}{101}.

\bibitem{b.b}
  \Name{Author F. \and Author S.}
  \Book{Some Book}
  \Editor{Editor A.}
  \Vol{9}
  \Publ{Publishing house, City}
  \Year{1939}
  \Page{666}.

\bibitem{b.c}
  \Editor{Editor A.}
  \Book{Some Book}
  \Vol{9}
  \Publ{Publishing house, City}
  \Year{1939}
  \Page{666}.

\end{thebibliography}

```

6.3 BiBTeX

If you use BiBTeX to prepare your references, our preferred `.bst` style file is `eplbib.bst` available with the `ep12 LATEX` package.

Please make sure that you include your `.bib` bibliographic database file and any `.bst` style file you have used (other than `eplbib.bst`).

7 Contacts

- For questions about this macro package please write to:

`marco@sif.it`

- The relevant WWW sites are:

`www.epljournal.org`
`www.sif.it`
`http://journals.iop.org`
`www.edpsciences.org`

8 Command index

`\ab{}`

An alias for `\mathrm{}`

Used in maths to insert upright letters in sub/superscript etc.

See also `\tx`.

`$F_{\ab{ort}} \times F_{\ab{perp}}$`

`\acknowledgments`

Prints a visual break * * * between the body of the paper and the acknowledgments.

`...end of paper text.`

`\acknowledgments`

`The authors would like to thank...`

`\and`

Used inside the `\author{}` list to separate the authors from each other; in `\Name{}` and `\Editor` to produce a normal font ‘and’ (*i.e.*, not ‘AND’).

`\author{A. Author \and B. Author \and C. Author}`
`\Name{Author A., Author B. \and Author C.}`
`\Editor{Editor A., Editor B. \and Editor C.}`

`\author{}`

`\author{}` works just like in L^AT_EX article class, with some extensions. See `\inst`, `\and`, `\shortauthor`.

`\author{A. Author\inst{1} \and B. Author\inst{2}`
`\and C. Author\inst{1,2}}`

`\Book{}`

A book entry in the bibliography.

`\bibitem{b1}`
`\Name{Author A.} \Book{Some Book} \Editor{Editor A.}`
`\Vol{9} \Publ{Publishing house, City} \Year{1939}`
`\Page{666}.`

`\drm`

Synonym of `\upd`, for backwards compatibility.

`\Editor{}`

An editor entry in the bibliography; it goes after the `\Book`; if there are no authors, it replaces the `\Name` command:

```
\bibitem{b1}
  \Name{Author A.} \Book{Some Book} \Editor{Editor A.}
  \Vol{9} \Publ{Publishing house, City} \Year{1939}
  \Page{666}.
\bibitem{b2}
  \Editor{Editor A.} \Book{Some Book} \Vol{9}
  \Publ{Publishing house, City} \Year{1939} \Page{666}.
```

This macro automatically detects the presence of an `\and` command inside the editors list and switches to the plural form ‘(Editors)’.

`\email{}`

Typesets an e-mail address. To be used in footnotes to the author names.

```
\author{A. Author\thanks{E-mail: \email{auth@some.edu}}}
```

`\etal`

To be used inside `\shortauthor{}`

```
\author{A. Author \and B. Author \and C. Author}
\shortauthor{A. Author \etal}
```

`\inst{}`

Prints an institute tag, *i.e.* a number which identifies each author’s institute. Use it inside `\author` and `\institute`.

If there is only one institute do not use any `\inst{}` tag.

```
\author{A. Author\inst{1} \and B. Author\inst{1,2}}
\institute{
  \inst{1} First Institute - Address\\
  \inst{2} Second Institute - Address
}
```

`\institute{}`

Put the list of institutes in the argument of this command. Each institute

is to be preceded by a `\inst{}` tag and terminated by a `\\`.
The address should be separated from the institute name with a dash ‘-’.
Do not put a `\\` after the last institute.
If there is only one institute do not put the `\inst{}` tag either.

```
\institute{
  \inst{1} First Institute - Address\\
  \inst{2} Second Institute - Address
}
```

`\Name{}`

An author entry in the bibliography. It should be the first entry in each `\bibitem`.
Separate the authors with commas, the last one with `\and`.

```
\bibitem{b1}
  \Name{Author A., Author B. \and Author. C}
  \Review{Some Rev.}
...
```

`\onefigure[]{}{}`

Inserts a figure.
Only available with the `figures` option.

```
\begin{figure}
\onefigure{fig1.eps}
\caption{...}
\label{f1}
\end{figure}
```

`\pacs{id}{description}`

Use `\pacs{}{}{}` to insert the PACS for your paper.

```
\pacs{95.10.Ce}{Celestial mechanics}
\pacs{95.10.Eg}{Orbit determination}
```

`\Page{}`

A start page entry in the bibliography; usually the last entry of a reference:

```
\bibitem{b1}
  \Name{Author A.} \Book{Some Book} \Editor{Editor A.}
  \Vol{9} \Publ{Publishing house, City} \Year{1939}
  \Page{666}.
```

`\Pages{start}{end}`

A page interval entry in the bibliography.

Use it only when necessary: normal references should contain only the start page of the referenced paper; see `\Page` above.

`\bibitem{b1}`

`\Name{Author A.} \Book{Some Book} \Editor{Editor A.}`
`\Vol{9} \Publ{Publishing house, City} \Year{1939}`
`\Pages{666-696}.`

`\Publ{}`

A publishing house entry in the bibliography.

Put it after the `\Editor` and `\Vol` entries, just before the `\Year`.

`\bibitem{b1}`

`\Name{Author A.} \Book{Some Book} \Editor{Editor A.}`
`\Vol{9} \Publ{Publishing house, City} \Year{1939}`
`\Pages{666-696}.`

`\Review{}`

A review entry in the bibliography. It is the second entry, just after the `\Name`. It should contain the abbreviated name of the review, complete with section letter.

`\bibitem{b1}`

`\Name{Author A.} \Review{Some Rev. A} \Vol{9}`
`\Year{1969} \Page{696}.`

`\REVIEW{review}{volume}{year}{page}`

This is an alias for

`\Review{review} \Vol{volume} \Year{year} \Page{page}`

Use whatever form you like.

`\Name{Author A.} \REVIEW{Some Rev. A}{9}{1969}{696}`

`\revision{}`

Used to highlight the text.

`\SAME{volume}{year}{page}`

This is an alias for

`\Vol{volume} \Year{year} \Page{page}`

Use it when citing a paper from the previously mentioned review:

```
\Name{Author A.} \REVIEW{Some Rev. A}{9}{1969}{696};  
\SAME{10}{1970}{767}.
```

`\section{}`

This is the only sectioning command allowed and its appearance is quite different from the standard \LaTeX `article`. However, the syntax is unchanged.

```
\section{Introduction}  
Paper text
```

`\shortauthor{}`

This command is necessary: in fact only one author is admitted in the running heads. Use `\etal` inside `\shortauthor`.

```
\author{A. Author \and B. Author \and C. Author}  
\shortauthor{A. Author \etal}
```

`\shorttitle{}`

When the title is too long for the running head a shorter version must be provided with this command.

```
\title{Far too long title not usable with the running  
heads: it is larger than the page width}  
\shorttitle{Shortened title etc.}
```

`\tens{}`

Math command: an alias for `\mathsf{}`, to be used for tensors.

```
 $\tens{T}$ 
```

`\title{}`

The title of the paper. Only the first letter capitalized. See also `\shorttitle`.

```
\title{Title of the paper}
```

`\tx{}`

An alias for `\mbox{}`.

Used in maths to insert words and phrases in math context.

See also `\ab`.

```

\begin{equation}
x=y \text{ \tx{ for any } } y
\end{equation}

```

`\un{}`
A command to insert measure units.

```
$9.8\un{ms^{-2}}$
```

`\upd`
Math command: inserts an upright ‘d’ to be used for differentials.

```

\begin{equation}
\int x\,\upd x
\end{equation}

```

`\Vol{}`
A volume number entry in the bibliography. It goes after the `\Review` for review references; after the `\Editor` for book references.

```

\bibitem{b1}
  \Name{Author A.} \Review{Some Rev. A} \Vol{9}
  \Year{1969} \Page{696}.
\bibitem{b2}
  \Name{Author A.} \Book{Some Book} \Editor{Editor A.}
  \Vol{9} \Publ{Publishing house, City} \Year{1939}
  \Pages{666-696}.

```

`\Year{}`
A year entry in the bibliography. It is the last but one, just before the `\Page` entry.

```

\bibitem{b1}
  \Name{Author A.} \Review{Some Rev. A} \Vol{9}
  \Year{1969} \Page{696}.

```