# The `hep-paper` package[*]

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## Abstract

The `hep-paper` package aims to provide a single style file containing most configurations and macros necessary to write appealing publications in High Energy Physics. Instead of reinventing the wheel by introducing newly created macros `hep-paper` preferably loads third party packages as long as they are lightweight enough.

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# Contents

# 1 Introduction

For usual publications it is enough to load additionally to the `article` class without optional arguments only the `hep-paper` package [1].

```
\documentclass{article}
\usepackage{hep-paper}
```

The most notable changes after loading the `hep-paper` package is the change of some LaTeX defaults. The paper and font sizes are set to A4 and 11 pt, respectively. Additionally, the paper geometry is set to the values known from the (depreciated) `a4wide` package [2] using the `geometry` package [3]. Finally, the font is changed to `lmodern` [4] with `microtype` [5] optimizations. Portable document format (PDF) hyperlinks are implemented with the `hyperref` package [6].

## 1.1 Options

paper  The `paper=`⟨*format*⟩ option loads the specified paper format. The possible ⟨*formats*⟩ are: `a0, a1, a2, a3, a4, a5, a6, b0, b1, b2, b3, b4, b5, b6, c0, c1, c2, c3, c4, c5, c6, ansia, ansib, ansic, ansid, ansie, letter, executive, legal`.

font  The `font=`⟨*size*⟩ option loads the specified font size. The possible ⟨*sizes*⟩ are: `8pt, 9pt, 10pt, 11pt, 12pt, 14pt, 17pt, 20pt`.

defaults  The `defaults` option prevents the adjustment of the page geometry and the font size set by the document class.

lang  The `lang=`⟨*name*⟩ option switches the document language to the chosen value. The possible values are given by the `babel` package [7]. The default is `british`.

parskip  The `parskip` option makes use of the `parskip` package [8] and changes how two paragraphs are separated from each other. The LaTeX default is separation via indentation the `parskip` option switches to separation via vertical space.[1]

sansserif  The `sansserif` option switches the document including math to sans serif font shape.

title  The `title=false` option deactivates the titlepage adjustments.

manualplacement  The `manualplacement` option reactivates manual float placement.

bibliography  The `bibliography=`⟨*key*⟩ option prevents the automatic loading of the `biblatex` package [9] for ⟨*key*⟩`=false` or passes the ⟨*key*⟩ as `style` string to the `biblatex` package.

glossaries  The `glossaries=false` option deactives the use of the `glossaries` package [10, 11].

revtex  The `revtex` option switches the `hep-paper` package into a `revtex` [12] compatibility mode.

eqnarray  The `eqnarray` option reactivates the depreciated `eqnarray` environment.

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[1]The `parskip` option is used for this document.

## 2   Macros and environments

### 2.1   Title page

The PDF meta information is set according to the \title{⟨*text*⟩} and \author{⟨*text*⟩}

\author    information. In order to facilitate multiple authors with different affiliations the
\affiliation   authblk package [13] is loaded. The following lines add *e.g.* two authors with differ-
\email    ent affiliations

```
\author[1]{Author one \email{Email one}}
\affiliation[1]{Affiliation one}
\author[2]{Author two \email{Email two}}
\affiliation[1,2]{Affiliation two}
```

\preprint   The \preprint{⟨*numer*⟩} macro places a pre-print number in the upper right corner
of the first page.

abstract   The abstract environment has been adjusted to not start with an indentation.

### 2.2   Text

\enquote   Hyphenation is provided by the babel package [7] and quotation commands are
\MakeOuterQuote   provided by the csquotes package [14] recommended by the babel package. The lat-
ter package provides the convenient macro \MakeOuterQuote{"} allowing to simply
use " instead of the pair ` ` and ' '.

\eg   The foreign package [15] defines macros such as \eg, \ie, \cf, and \vs which are
\vs   typeset as *e.g.*, *i.e.*, *cf.*, and *vs*.

\no   The \no{⟨*number*⟩} macro is typeset as № 123.

\software   The \software[⟨*version*⟩]{⟨*name*⟩} macro is typeset as HEP-PAPER v1.2.

\online   The \online{⟨*url*⟩}{⟨*text*⟩} macro combines the features of the \href{⟨*url*⟩}{⟨*text*⟩}
and the \url{⟨*text*⟩} macros, resulting in *e.g.* ctan.org/pkg/hep-paper.

inlinelist   Using the enumitem package [16] the inlinelist

```
The three main points are
\begin{inlinelist}
 \item one
 \item two
 \item three
\end{inlinelist}
```

The three main points are i) one, ii) two, and iii) three.

enumdescript   and the enumdescript environments are defined

```
\begin{enumdescript}[label=\Roman*)]
 \item{First} one
 \item{Second} two
 \item{Third} three
\end{enumdescript}
```

   I) **First** one
 II) **Second** two
III) **Third** three

\textsc — A sans serif version of Small Caps is provided.

\useparskip \useparindent — If the `parskip` option is activated the \useparindent macro switches back the usual parindent mode, while the \useparskip macro switches to the parskip mode.

### 2.2.1 References and footnotes

\cref — References are extended with the `cleveref` package [17], which allows to *e.g.* just type \cref{⟨*key*⟩} in order to write 'Figure 1'. Furthermore, the `cleveref` package allows to reference multiple objects within one \cref{⟨*key*⟩} (similar to the \cite{⟨*key*⟩} macro).

\cite — Citations are adjusted to not start on a new line in order to avoid the repeated use of ~\cite{⟨*key*⟩}.

\ref \eqref — References are also adjusted to not start on a new line and are redefined in order to handle multiple references at once.

\subref \footnote — Footnotes are adjusted to swallow white space before the footnote mark and at the beginning of the footnote text.

### 2.2.2 Acronyms

\acronym \shortacronym \longacronym \resetacronym \dummyacronym — The \acronym⟨*\**⟩[⟨*typeset abbreviation*⟩]{⟨*abbreviation*⟩}{⟨*definition*⟩}[⟨*plural definition*⟩] macro generates the singluar \⟨*abbreviation*⟩ and plural \⟨*abbreviation*⟩s macros. The starred version does not add an 's' to the abbreviation plural. The long form is only shown at the first appearance of these macros, later appearances generate the abbreviation with a hyperlink to the long form. Capitalization at the beginning of paragraphs and sentences is ensured. The \shortacronym and \longacronym macros only show the short or long form of their acronym. The first use form of the acronym can be enforced by resetting the acronym counter. If the acronym counter equals one at the end of the document the short form of the acronym is not introduced. Placing a \dummyacronym{⟨*key*⟩} at the end of the document ensures that the short form is introduced.

## 2.3 Math

\mathbf — The `mathtools` [18] and `amssymb` [19] packages are loaded. They in turn load the `amsmath` [20] and `amsfonts` [19] packages. Bold math, including \mathbf is provided by the `bm` package [21], *i.e.* ($Ab\Gamma\delta\boldsymbol{Ab\Gamma\delta}$). Macros switching to `bfseries` such as \section{⟨*text*⟩} are ensured to also typeset math in bold. This may cause trouble if bold symbols carry an additional non-implicit meaning. The \text{⟨*text*⟩} macro makes it possible to write text within math mode, *i.e.* (Ab$\Gamma$δ**Ab$\Gamma$δ**). The often used \mathrm{⟨*text*⟩} and \rm{⟨*text*⟩} macros are *not* the correct tool for this purpose, as they switch to roman font shape. This behaviour conflicts *e.g.* with the `sansserif` package option. The math sans serif alphabet is redefined to be italic sans serif if the main text is serif and italic serif if the main text is sans serif, *i.e.* ($Ab\Gamma\delta\boldsymbol{Ab\Gamma\delta}$).

\text

\mathsf

\mathscr — Details about the font handling in TeX can be found in [22]. The \mathcal font *i.e.*

($\mathcal{ABCD}$) is accompanied by the `\mathscr` font *i.e.* ($\mathscr{ABCD}$).

`\nicefrac`  The `\frac{`⟨*number*⟩`}{`⟨*number*⟩`}` macro is accompanied by `\nicefrac{`⟨*number*⟩`}`
`\flatfrac`  `{`⟨*number*⟩`}` and `\flatfrac{`⟨*number*⟩`}{`⟨*number*⟩`}`

$$\frac{1}{2} \; , \qquad\qquad {}^1\!/_2 \; , \qquad\qquad 1/2 \; . \tag{1}$$

`\diag`  A diagonal matrix operator is defined `\diag`.

`\mathdef`  The `\mathdef{`⟨*name*⟩`}[`⟨*arguments*⟩`]{`⟨*code*⟩`}` macro (re-)defines macros only within
`\i`  math mode without changing the text mode definition. The imaginary unit i is
defined using this functionality.

`\numberwithin`  For longer paper it can be useful to re-number the equation in accordance with the
`\subequations`  section numbering `\numberwithin{equation}{section}`. In order to further reduce
the size the of equation counter it can be useful to wrap `align` environments with
multiple rows in a `subequations` environment.

`eqnarray`  The depreciated `eqnarray` environment is undefined as long this behaviour is not
prevented by the `eqnarray` package option. The `align` environment should be used
instead.

### 2.3.1  Physics

Greek letters are adjusted to always be italic and upright in math and text mode,
respectively, using the `fixmath` [23] and `alphabeta` [24] packages. This allows differentiations like

$$\sigma = 5\,\mathrm{fb} \; , \qquad \text{at } 5\,\sigma \text{ C.L.} \; , \qquad \mu = 5\,\mathrm{cm} \; , \qquad l = 5\,\mu\mathrm{m} \; , \tag{2}$$

and *e.g.* to distinguish gauge $\nu$ and mass $\nu$ eigenstates in models with massive light
neutrinos. Additionally, Greek letters can also be directly typed using Unicode.

`\ev`  The `physics` package [25] provides additional macros such as
`\pdv`
`\comm`
$$\langle \phi \rangle \; , \qquad \frac{\partial^n f}{\partial x^n} \; , \qquad [A, B] \; , \qquad \mathcal{O}\!\left(x^2\right) , \qquad x\Big|_0^\infty \; , \qquad \det(M) \; . \tag{3}$$
`\order`
`\slashed`  The `\slashed{`⟨*character*⟩`}` macro from the `slashed` [26] package allows to use the
Dirac slash notation.

`\overleftright`  A better looking over left right arrow is defined $\overleftrightarrow{\partial}$. The correct spacing for units,
`\unit`  *cf.* Equation (2), is provided by the macro `\unit[`⟨*value*⟩`]{`⟨*unit*⟩`}` from the `units`
`\inv`  package [27] which can also be used in text mode. The macro `\inv[`⟨*power*⟩`]{`⟨*text*⟩`}`
allows to avoid math mode also for inverse units such as $5\,\mathrm{fb}^{-1}$ typeset via
`\unit[5]{\inv{fb}}`.

```
\begin{panels}{.6}
code
\panel{.4}
\begin{tabular}...\end{tabular}
\end{panels}
```

|     | one |   | two |
| --- | --- | --- | --- |
| a   | b   | c | d   |
|     | b   | c | d   |

(a) Code for this panel environment.

(b) The `booktabs` and `multirow` features.

Table 1: Example use of the `panels` environment in Panel (a) and the features from the `booktabs` and `multirow` packages in Panel (b).

## 2.4 Floats

figure     Automatic float placement is adjusted to place a single float at the top of pages
table     and to reduce the number of float pages. The most useful float placement is usually archived by placing the float *in front* of the paragraph it is referenced in first. Additionally, manual float placement is deactivated but can be reactivated using the
\raggedright     `manualplacement` package option. The float environments have been adjusted to center their content. The usual behaviour can be reactivated using \raggedright.

panels     The `panels` environment makes use of the `subcaption` package [28]. It provides
\panel     sub-floats and takes as mandatory argument either the number of sub-floats (default 2) or the width of the first sub-float as fraction of the \linewidth. Within the \begin{panels}[⟨*vert*⟩]{⟨*width*⟩} environment the \panel macro initiates a new sub-float. In the case that the width of the first sub-float has been given as an optional argument to the `panels` environment the \panel{⟨*width*⟩} macro takes the width of the next sub-float as mandatory argument. The example code is presented in Table 1a.

tabular     The `booktabs` [29] and `multirow` [30] packages are loaded enabling publication quality tabulars such as in Table 1b.

\graphic     The `graphicx` package [31] is loaded and the \graphic[⟨*width*⟩]{⟨*figure*⟩} macro
\graphics     is defined, which is a wrapper for the \includegraphics{⟨*figure*⟩} macro and takes the figure width as fraction of the \linewidth as optional argument (default 1). If the graphics are located in a sub-folder its path can be indicated by \graphics{⟨*subfolder*⟩}.

## 2.5 Bibliography

\bibliography     The `biblatex` package [9] is loaded for bibliography management. The user has
\printbibliography     to add the line \bibliography{⟨*my.bib*⟩} to the preamble of the document and \printbibliography at the end of the document. The bibliography is generated by `biber` [32]. `biblatex` is extended to be able to cope with the `collaboration` and `reportNumber` fields provided by `inspirehep.net` and a bug in the volume number is fixed. Additionally, `ctan.org`, `github.com`, `gitlab.com`, `sourceforge.net`, and
erratum     `hepforge.org` are recognized as `eprinttypes`. Errata can be included using the `related` feature.

```
\article{⟨key1⟩,
  ...,
  relatedtype="erratum",
  related="⟨key2⟩",
}
\article{⟨key2⟩,
  ...,
}
```

## 3   Conclusion

The `hep-paper` package provides a matching selection of preloaded packages and additional macros enabling the user to focus on the content instead of the layout by reducing the amount of manual tasks. The majority of the loaded packages are fairly lightweight, the others can be deactivated with package options.

arxiv-collector   ArXiv requires the setup dependent `bbl` files instead of the original `bib` files, which causes trouble if the local LaTeX version differs from the one used by arXiv. The `arxiv-collector` python script [33] alleviates this problem by collecting all files necessary for publication on arXiv (including figures).

## A   Options

Load the `kvoptions` package and define a `hep` namespace.

```
1 \RequirePackage{kvoptions}
2 \SetupKeyvalOptions{
3   family=hep,
4   prefix=hep@
5 }
```

paper   Define a `paper=⟨size⟩` option. Make A4 paper the default.

```
6 \DeclareStringOption[a4]{paper}
```

font   Define a `font=⟨size⟩` option. Make 11 pt the default font size.

```
7 \DeclareStringOption[11pt]{font}
```

defaults   Define the `defaults` option which deactivates the `paper` and `font` options and prevents the change of the class defaults by this package.

```
8 \DeclareBoolOption[false]{defaults}
```

lang   Define the `lang` option, which takes the values provided by the `babel` package [7]. Make `british` the default language.

```
9 \DeclareStringOption[british]{lang}
```

**parskip**  Define the option pair `parindent` and `parskip` controlling the separation of paragraphs.

```
10 \DeclareBoolOption[true]{parindent}
11 \DeclareComplementaryOption{parskip}{parindent}
```

**sansserif**  Define the option pair `serif` and `sansserif` controling the font shape of the whole document.

```
12 \DeclareBoolOption[true]{serif}
13 \DeclareComplementaryOption{sansserif}{serif}
```

**eqnarray**  Provide the option `eqnarray` for reactivating the `eqnarray` environment.

```
14 \DeclareBoolOption[false]{eqnarray}
```

**bibliography**  Provide the option `bibliography` for passing a `style` string to the `biblatex` package [9] or disabling the automatic loading of `biblatex`.

```
15 \DeclareStringOption[numeric-comp]{bibliography}
```

**glossaries**  Provide the option `glossaries` able to turn of the use of the `glossaries-extra` package [11].

```
16 \DeclareBoolOption[true]{glossaries}
```

**manualplacement**  Provide the `manualplacement` option for reactivating the manual placement of floats.

```
17 \DeclareBoolOption[false]{manualplacement}
```

**title**  Provide the option `title` for deactivating redefinition of title macros.

```
18 \DeclareBoolOption[true]{title}
```

**revtex**  Provide the option `revtex` for `revtex` [12] compatibility mode.

```
19 \DeclareBoolOption[false]{revtex}
```

## A.1  Process options

```
20 \ProcessKeyvalOptions*
```

Set the `revtex` compatibility options.

```
21 \ifhep@revtex
22   \setkeys{hep}{defaults, title=false, lang=american, bibliography=false}
23 \fi
```

9

## B  Engine

\ifxetexorluatex  Load the `ifluatex` [34] and `ifxetex` [35] packages. Define the `\ifxetexorluatex` conditional.

```
24 \RequirePackage{ifluatex}
25 \RequirePackage{ifxetex}
26 \newif\ifxetexorluatex
27 \ifxetex\xetexorluatextrue\else
28   \ifluatex\xetexorluatextrue
29     \else\xetexorluatexfalse
30   \fi
31 \fi
```

## C  Text

Load `alphabeta` package [24] first in order to archive the correct behaviour. The `alphabeta` package provides upright Greek letters in text mode.

```
32 \RequirePackage{alphabeta}
```

Pick the correct font encoding depending on the engine used and load the `fontenc` package [36] with this encoding. For details of the font encoding see [37].

```
33 \ifxetexorluatex
34   \def\@encoding{TU}
35 \else
36   \def\@encoding{T1}
37 \fi
38 \RequirePackage[\@encoding]{fontenc}
```

Load the `lmodern` font [4], the `textcomp` extension [38], and the `microtype` font optimization [5].

```
39 \RequirePackage{lmodern}
40 \RequirePackage{textcomp}
41 \RequirePackage{microtype}
```

Define sans serif small caps font shapes.

```
42 \ifxetexorluatex
43   \DeclareFontShape{\@encoding}{lmss}{bx}{sc}{<->cmssbxcsc10}{}
44   \DeclareFontShape{\@encoding}{lmss}{m}{sc}{%
45     <-9>cmsscsc8<9-10>cmsscsc9<10->cmsscsc10%
46   }{}
47 \else
48   \sffamily
49   \DeclareFontShape{\@encoding}{lmss}{bx}{sc}{<->ssub*xcmss/bx/sc}{}
50   \DeclareFontShape{\@encoding}{lmss}{m}{sc}{<->ssub*xcmss/m/sc}{}
51 \fi
```

Load the `inputenc` [39] package.

```
52 \ifxetexorluatex\else
53   \RequirePackage[utf8]{inputenc}
54 \fi
```

Load the `babel` [7] package for hyphenation and the recommended `csquotes` package [14].

```
55 \RequirePackage[\hep@lang]{babel}
56 \RequirePackage{csquotes}
```

Set the whole text to sans serif if requested.

```
57 \ifhep@serif\else
58   \renewcommand\familydefault{\sfdefault}
59 \fi
```

\underline  Load the `soul` package [40] for hyphenable underlined text.

```
60 \RequirePackage{soul}
61 \let\underline\ul
```

## C.1   Font size

Undefine previously defined font sizes and load the LATEX font size file corresponding to the font size option.

```
62 \ifhep@defaults\else
63   \def\remove@pt#1pt{#1}
64   \edef\@ptsize{\expandafter\remove@pt\hep@font}
65   \let\small\relax
66   \let\footnotesize\relax
67   \let\scriptsize\relax
68   \let\tiny\relax
69   \let\large\relax
70   \let\Large\relax
71   \let\LARGE\relax
72   \let\huge\relax
73   \let\Huge\relax
74   \input{size\@ptsize.clo}
75 \fi
```

## C.2   Text macros

\vs  Load the `foreign` package [15] in order to highlight abbreviations and vocabularies from foreign languages. Add the missing \vs command.

```
76 \RequirePackage{pdftexcmds}
77 \newcommand{\hep@lang@foreign}{british}
78 \ifnum\pdf@strcmp{\hep@lang}{american}=0%
```

```
79    \renewcommand{\hep@lang@foreign}{USenglish}%
80  \fi
81  \ifnum\pdf@strcmp{\hep@lang}{USenglish}=0%
82    \renewcommand{\hep@lang@foreign}{USenglish}%
83  \fi
84  \RequirePackage[all, \hep@lang@foreign]{foreign}
85  \DeclareRobustCommand\vs{\xperiodafter{{\foreignabbrfont{vs}}}}
```

\no    Define the macro \no{⟨*number*⟩} for the use of № with appropriate spacing.

```
86  \newcommand{\no}[1]{\textnumero~#1}
```

\software    Define a macro for software with optional version information \software[⟨*version*⟩] {⟨*name*⟩}, using the relsize package [41].

```
87  \RequirePackage{relsize}
88  \newcommand{\software}[2][\hspace{-\fontdimen2\font}]{%
89    {\smaller\textsc{#2}~#1}%
90  }
```

\online    The \online{⟨*text*⟩}{⟨*url*⟩} macro combines the features of the \href and the \url macros.

```
91  \newcommand{\online}[2]{\href{#1}{\url{#2}}}
```

## C.3    Lists

Load the enumitem package [16].

```
92  \RequirePackage[inline]{enumitem}
```

inlinelist    Define an inline list environment.

```
93  \newlist{inlinelist}{enumerate*}{1}
94  \setlist*[inlinelist,1]{%
95    label=\roman*), itemjoin={,\ }, itemjoin*={, and\ }, after=.%
96  }
```

enumdescript    Define an enumdescript list environment.

```
97   \newlist{enum@descript}{enumerate}{2}
98   \setlist[enum@descript]{label=\arabic*.}
99   \newenvironment{enumdescript}[1][]{
100  \begin{enum@descript}[#1]
101    \let\old@item\item
102    \renewcommand{\item}[2][]{
103      \ifx&##1&\old@item\else\old@item[##1]\fi
104      \textbf{##2}\ifx##2\empty\else~\fi\@ifnextchar\par\@gobble\relax
105    }
106 }{\end{enum@descript}}
```

### C.4 Footnotes

\footnote Ensure that no spaces appear before the footmark or at the beginning of the footnote.

```
107 \let\@foot@note\footnote
108 \renewcommand{\footnote}[1]{\unskip\@foot@note{\ignorespaces#1}}
```

## D Geometry

Load the `geometry` package [3] and adjust the text width and height to the values of the `a4wide` package [2].

```
109 \ifhep@defaults\else
110   \RequirePackage[\hep@paper paper]{geometry}
111   \geometry{hscale=.75, vscale=.8, vmarginratio=3:4, includeheadfoot}
112 \fi
```

\useparskip Load the `parskip` package [8] and provide two commands switching between the
\useparindent two paragraph modes.

```
113 \ifhep@parindent\else
114 \RequirePackage{parskip}
115 \newcommand{\useparskip}{%
116   \setlength{\parskip}{.5\baselineskip plus 2pt}%
117   \setlength{\parindent}{0pt}%
118 }
119 \newcommand{\useparindent}{%
120   \setlength{\parskip}{0pt}%
121   \setlength{\parindent}{15pt}%
122   \if@twocolumn\setlength\parindent{1em}
123   \else\setlength\parindent{1.5em}
124   \fi
125 }
126 \fi
```

## E Math

Load the `mathtools` package [18] which loads the `amsmath` package [20]. Additionally, load the `amssymb` package [19] which provides further math symbols and also loads the `amsfont` package [19]. Allow page breaks within equations if necessary.

```
127 \RequirePackage{mathtools}
128 \RequirePackage{amssymb}
129 \allowdisplaybreaks[1]
```

\diag Provide a diag operator

```
130 \DeclareMathOperator{\diag}{diag}
```

`\mathdef`  Define the `\mathdef{⟨name⟩}[⟨arguments⟩]{⟨macro⟩}` macro which (re-)defines macros in math mode only. This macro is implemented using the `xparse` package [42].

```
131 \RequirePackage{xparse}
132 \DeclareDocumentCommand{\mathdef}{mO{0}m}{%
133   \expandafter\let\csname old\string#1\endcsname=#1
134   \expandafter\newcommand\csname new\string#1\endcsname[#2]{#3}
135   \DeclareRobustCommand#1{%
136     \ifmmode
137       \expandafter\let\expandafter\next\csname new\string#1\endcsname
138     \else
139       \expandafter\let\expandafter\next\csname old\string#1\endcsname
140     \fi
141     \next
142   }%
143 }
```

`\i`  Provide an upright imaginary unit in math mode.

```
144 \AtBeginDocument{\mathdef{\i}{\operatorname{i}}}
```

`eqnarray`  Undefine the `eqnarray` environment.

```
145 \ifhep@eqnarray\else%
146   \let\eqnarray\@undefined
147   \let\endeqnarray\@undefined
148 \fi
```

### E.1  Math fonts

`\mathbf`  Load the `bm` package [21] for superior boldmath. Make math symbols bold whenever they appear in bold macros such as `\section{⟨text⟩}`.

```
149 \RequirePackage{bm}
150 \let\mathbf\bm
151 \g@addto@macro\bfseries{\boldmath}
```

`\mathsf`  Load the `fixmath` package [23] which ensures that upper Greek letters in math mode are italic. Ensure that also math mode is sans serif using the `sfmath` package [43] if the option sans serif is passed to the package. Ensure that `\mathsf` is italic as well as sans serif and sans for sans and sans serif documents, respectively.

```
152 \ifhep@serif
153   \RequirePackage{fixmath}
154   \DeclareMathAlphabet{\mathsf}{OML}{cmbr}{m}{it}
155   \SetMathAlphabet{\mathsf}{bold}{OML}{cmbr}{bx}{it}
156 \else
157   \RequirePackage[slantedGreek]{sfmath}
158   \DeclareMathAlphabet{\mathsf}{OML}{cmm}{m}{it}
```

```
159    \SetMathAlphabet{\mathsf}{bold}{OML}{cmm}{bx}{it}
160 \fi
```

\mathscr    Load the `mathrsfs` package for the `\mathscr` math script font.

```
161 \RequirePackage{mathrsfs}
```

## E.2  Physics notation

\slashed    Load the `physics` package [25] which provides macros useful for publications in
\units    physics. Additionally, load the `slashed` package [26] which provides the slashed
macro for Dirac notation. Finally, load the `units` package [27] which provides
the `\units` and `\nicefrac` macros.

```
162 \RequirePackage{physics}
163 \RequirePackage{slashed}
164 \RequirePackage{units}
```

\inv    Provide a macro for the inverse, useful in combination with the unit macro in
text mode.

```
165 \newcommand{\inv}[2][1]{#2\ensuremath{^{-#1}}}
```

\oset    Define a new overset macro `\oset[⟨offset⟩]{⟨over⟩}{⟨base⟩}`

```
166 \newcommand{\oset}[3][-1pt]{%
167    \raisebox{1pt}{\ensuremath{\mathop{#3}\limits^{%
168        \vbox to#1{\kern-2\ex@\hbox{$\scriptscriptstyle#2$}\vss}%
169 }}}%
170 }
```

\overleftright    Define a over left right arrow `\overleftright{⟨base⟩}`.

```
171 \newcommand{\overleftright}[1]{\oset{\leftrightarrow}{#1}}
```

## F  Floats

Adjust the LaTeX float placement defaults

```
172 \renewcommand{\textfraction}{0.01}
173 \setcounter{topnumber}{1}
174 \renewcommand{\topfraction}{.9}
175 \setcounter{bottomnumber}{0}
176 \renewcommand{\floatpagefraction}{.8}
```

figure    Center the content of `figure` and `table` environments. Ignore the manual placement
table    if the `manualplacement` option is set to false.

```
177 \let\@figure@\figure%
```

```
178 \let\@end@figure@\endfigure%
179 \let\@table@\table%
180 \let\@end@table@\endtable%
181 \ifhep@manualplacement%
182    \renewenvironment{figure}[1][tbp]{%
183       \@figure@[#1]\centering%
184       }{\@end@figure@}%
185    \renewenvironment{table}[1][tbp]{%
186       \@table@[#1]\centering%
187    }{\@end@table@}%
188 \else%
189    \renewenvironment{figure}[1][]{%
190       \@figure@\centering%
191    }{\@end@figure@}%
192    \renewenvironment{table}[1][]{%
193       \@table@\centering%
194    }{\@end@table@}
195 \fi%
```

## F.1  Sub-floats

Prevent the `caption` package [44] from complaining about the `revtex` class.

```
196 \ifhep@revtex
197    \setlength\abovecaptionskip{\f@size\p@}
198    \setlength\belowcaptionskip{0\p@}
199    \long\def\@makecaption#1#2{%
200       \vskip\abovecaptionskip
201       \sbox\@tempboxa{#1: #2}%
202       \ifdim \wd\@tempboxa >\hsize
203          #1: #2\par
204       \else
205          \global \@minipagefalse
206          \hb@xt@\hsize{\hfil\box\@tempboxa\hfil}%
207       \fi
208       \vskip\belowcaptionskip%
209    }
210 \fi
```

Load the `subcaption` package [28].

```
211 \RequirePackage[subrefformat = parens]{subcaption}
212 \captionsetup{font=small}
213 \captionsetup[sub]{font=small}
```

panels  Load the `subcaption` package [28] and define the `panels` environment as well as
\panel  the `\panel` macro.

```
214 \newenvironment{panels}[2][b]{%
```

Define an internal macro for global behaviour.

```
215  \newcommand{\begin@subcaption@minipage}[2][b]{%
216    \caption@withoptargs\subcaption@minipage[##1]{##2}%
217    \centering\vskip 0pt%
218  }
```

Define the \panel macro for the case that the number of panels is given.

```
219  \ifdim#2pt>1pt%
220    \newcommand{\panel}[1][b]{%
221      \endminipage\hfill\begin@subcaption@minipage[#1]{\linewidth/#2}%
222    }%
223    \begin@subcaption@minipage[#1]{\linewidth/#2}%
```

Define the \panel macro for the case that the width of the panel is given.

```
224  \else%
225    \newcommand{\panel}[2][b]{%
226      \endminipage\hfill\begin@subcaption@minipage[#1]{##2\linewidth}%
227    }%
228    \begin@subcaption@minipage[#1]{#2\linewidth}%
229  \fi%
230 }{\endminipage}
```

Reajust the captions to the revtex class.

```
231 \ifhep@revtex
232   \renewcommand{\figurename}{Figure}
233   \renewcommand{\tablename}{Table}
234   \RequirePackage{ragged2e}
235   \DeclareCaptionFormat{revtex}{#1#2\justifying{#3}}
236   \captionsetup{font = small, format = revtex}
237   \captionsetup[sub]{font = footnotesize, format = plain}
238 \fi
```

## F.2  Tables

tabular   Enhance tabulars with the `booktabs` and `multirow` packages [29, 30].

```
239 \RequirePackage{booktabs}
240 \RequirePackage{multirow}
```

## F.3  Figures

\graphic   Provide the \graphic macro for the inclusion of figures using the `graphicx` package [31].

```
241 \RequirePackage{graphicx}
242 \providecommand{\tikzsetnextfilename}[1]{}
243 \newcommand{\graphic}[2][1]{\tikzsetnextfilename{#2}{%
```

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```
244    \centering\includegraphics[width=#1\linewidth]{#2}%
245 }}
```

\graphics  Provide the \graphics macro for the inclusion of figures located in a subfolder.

```
246 \newcommand{\graphics}[1]{\graphicspath{{./#1/}}}
```

## G   Title page

\date  Allow empty date field.

```
247 \ifhep@title
248 \date{}
```

### G.1   Authors

\author  Allow empty author field.

```
249 \author{}
```

\email  Provide macro for the email of authors used as \author{⟨*name*⟩ \email{⟨*email*⟩}}.

```
250 \AtEndOfClass{\newcommand{\email}[1]{%
251   \unskip\thanks{\online{mailto:#1}{#1}}
252 }}
```

Enable the handling of multiple authors with different affiliations using the authblk package [13].

```
253 \RequirePackage{authblk}
254 \renewcommand\Affilfont{\footnotesize}
```

\affiliation  Define the \affiliation macro, ensure that linebreaks happen after a comma.

```
255 \newcommand\active@comma{,\penalty-5\relax}
256 \newcommand\cat@comma@active{\catcode`\,\active}
257 {\cat@comma@active\gdef,{\active@comma}}
258 \newcommand\@affil[1]{%
259   \endgroup\@flushglue=0pt plus .5\linewidth\affil{#1}%
260 }
261 \def\@affil@opt[#1]#2{%
262   \endgroup\@flushglue=0pt plus .5\linewidth\affil[#1]{#2}%
263 }
264 \DeclareRobustCommand\@affiliation{\@ifnextchar[{\@affil@opt}{\@affil}}
265 \newcommand{\affiliation}{\begingroup\cat@comma@active\@affiliation}
```

### G.2 Preprint

\preprint Places a preprint number in the top right corner of the first page. This code uses the `varwidth` [45], `atbegshi` [46], and `picture` [47] packages.

```
266 \let\@preprint\relax
267 \newcommand\preprint[1]{\long\gdef\@preprint{#1}}
268 \RequirePackage{varwidth}
269 \newcommand{\@preprint@box}{%
270   \begin{varwidth}{\textwidth}%
271     \textsc{\small\@preprint}%
272   \end{varwidth}%
273 }
274 \RequirePackage{atbegshi}
275 \RequirePackage{picture}
276 \AtBeginShipoutFirst{%
277   \put(
278     \textwidth+\oddsidemargin-\widthof{\@preprint@box},
279     -2pt-\topmargin-\heightof{\@preprint@box}
280   ){\normalfont\@preprint@box}
281 }
```

### G.3 Abstract

abstract Adjust the `abstract` environment to not start with indentation.

```
282 \let\old@abstract\abstract
283 \renewcommand\abstract{\old@abstract\noindent\ignorespaces}
```

End of check for `title` option.

```
284 \fi
```

## H   Bibliography

Check if bibliography management is requested using the `pdftexcmds` package [48].

```
285 \ifnum\pdf@strcmp{\hep@bibliography}{false}=0\else
```

\bibliography Load the `biblatex` package [9] with a JHEP like bibliography style.

```
286 \RequirePackage[style=\hep@bibliography]{biblatex}
287 \ExecuteBibliographyOptions{
288   sorting=none,
289   giveninits=true
290 }
```

Read the collaboration and pre-print information if present. Move letters from the volume field to the journal field.

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```
291 \newcommand{\@reg@exp}{\regexp{\A(\p{L}+)?\d+(\p{L}+)?\Z}}
292 \newcommand{\@reg@exp@}{\regexp{\A(\p{L}+)?(\d+)(\p{L}+)?\Z}}
293 \DeclareSourcemap{%
294   \maps[datatype=bibtex,overwrite=true]{%
295     \map{%
296       \step[fieldsource=Collaboration,final=true]%
297       \step[fieldset=usere,origfieldval,final=true]
298     }%
299     \map{%
300       \step[fieldsource=reportNumber,final=true]%
301       \step[fieldset=userf,origfieldval,final=true]
302     }%
303     \map[overwrite]{
304       \step[fieldsource=volume, match=\@reg@exp, final]
305       \step[fieldsource=volume, match=\@reg@exp@, replace={$2}]
306       \step[fieldsource=journal, fieldtarget=journaltitle]
307       \step[fieldset=journaltitle, fieldvalue={\space$1$2}, append=true]
308     }
309   }%
310 }
```

Override the author information with collaboration information if present.

```
311 \renewbibmacro*{author}{%
312   \iffieldundef{usere}{\printnames{author}}{\textbf{\printfield{usere}}}%
313 }
```

Remove spurious 'In:' if no journal is present.

```
314 \renewbibmacro*{in:}{%
315   \iffieldundef{journal}{}{\printtext{\bibstring{in}\intitlepunct}}%
316 }
```

Provide the `\letbibmacro` macro for old `biblatex` installations.

```
317 \providecommand{\letbibmacro}[2]{\csletcs{abx@macro@#1}{abx@macro@#2}}
```

Add the pre-print information if present.

```
318 \letbibmacro{doi+eprint+url-old}{doi+eprint+url}
319 \renewbibmacro*{doi+eprint+url}{%
320   \usebibmacro{doi+eprint+url-old}
321   \iffieldundef{userf}{}{\textls[0]{%
322     \newunitpunct\textnumero\intitlepunct%
323     \textsc{\small\printfield{userf}}%
324   }}%
325 }
```

Add CTAN as a pre-print option

```
326 \DeclareFieldFormat{eprint:ctan}{%
327   CTAN\addcolon\space\ifhyperref{%
```

```
328      \href{https://ctan.org/pkg/#1}{\nolinkurl{#1}}%
329    }{\nolinkurl{#1}}%
330 }
331 \DeclareFieldAlias{eprint:CTAN}{eprint:ctan}
```

Add GitHub as a pre-print option

```
332 \DeclareFieldFormat{eprint:github}{%
333   GitHub\addcolon\space\ifhyperref{\href{%
334       https://github.com/\thefield{eprintclass}/#1%
335     }{\nolinkurl{\thefield{eprintclass}/#1}}%
336   }{\nolinkurl{\thefield{eprintclass}/#1}}%
337 }
338 \DeclareFieldAlias{eprint:GitHub}{eprint:github}
```

Add GitLab as a pre-print option

```
339 \DeclareFieldFormat{eprint:gitlab}{%
340   GitLab\addcolon\space\ifhyperref{\href{%
341       https://gitlab.com/\thefield{eprintclass}/#1%
342     }{\nolinkurl{\thefield{eprintclass}/#1}}%
343   }{\nolinkurl{\thefield{eprintclass}/#1}}%
344 }
345 \DeclareFieldAlias{eprint:GitLab}{eprint:gitlab}
```

Add SourceForge as a pre-print option

```
346 \DeclareFieldFormat{eprint:sourceforge}{%
347   SourceForge\addcolon\space\ifhyperref{%
348     \href{https://sourceforge.net/projects/#1}{\nolinkurl{#1}}%
349   }{\nolinkurl{#1}}%
350 }
351 \DeclareFieldAlias{eprint:SourceForge}{eprint:sourceforge}
```

Add HEPForge as a pre-print option

```
352 \DeclareFieldFormat{eprint:hepforge}{%
353   HEPForge\addcolon\space\ifhyperref{%
354     \href{https://#1/hepforge.org/}{\nolinkurl{#1}}%
355   }{\nolinkurl{#1}}%
356 }
357 \DeclareFieldAlias{eprint:HEPForge}{eprint:hepforge}
```

Add new bibliography string 'Erratum' for the use in the `relatedtype` field.

```
358 \NewBibliographyString{erratum}
359 \DefineBibliographyStrings{english}{erratum={Erratum:}}
```

`\printbibliography`    Allow the bibliography to be printed sloppy

```
360 \let\old@printbibliography\printbibliography
361 \renewcommand{\printbibliography}{\sloppy\old@printbibliography}
```

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End check for bibliography option.

```
362 \fi
```

# I    Hyperlinks and References

Load the `hyperref` package [6] enable Unicode encoding and hide links.

```
363 \RequirePackage{hyperref}
364 \hypersetup{
365   pdfencoding=auto,
366   psdextra,
367   hidelinks,
368   linktoc=all,
369   breaklinks=true,
370   pdfcreator={},
371   pdfproducer={}
372 }
```

Set the PDF meta data according to the paper information and ensure that unnecessary information is suppressed.

```
373 \pdfstringdefDisableCommands{\def\varepsilon{\textepsilon}}
374 \AtBeginDocument{
375   \pdfstringdefDisableCommands{\let\ensuremath\@gobble}
376   \pdfstringdefDisableCommands{\let\mathsurround\@gobble}
377   \pdfstringdefDisableCommands{\let\unskip\@gobble}
378   \pdfstringdefDisableCommands{\let\thanks\@gobble}
379   \pdfstringdefDisableCommands{\let\footnote\@gobble}
380   \pdfstringdefDisableCommands{\let\\\@gobble}
381 }
382 \AtBeginShipout{\hypersetup{pdftitle={\@title}}}
383 \ifhep@title
384   \AtBeginDocument{\hypersetup{pdfauthor=\AB@authlist}}
385 \else
386   \AtBeginDocument{\hypersetup{pdfauthor={\@author}}}
387 \fi
```

\cref    Improve reference using the `cleveref` package [17].

```
388 \RequirePackage[noabbrev, capitalize, nameinlink]{cleveref}
389 \crefname{enumi}{point}{points}
390 \Crefname{enumi}{Point}{Points}
```

\refstepcounter@...    Adjust the `cleveref` \refstepcounter@noarg and \refstepcounter@optarg to use the \@currentlabel in order to fix problems with \subref.

```
391 \def\refstepcounter@noarg#1{%
392   \cref@old@refstepcounter{#1}%
393   \cref@constructprefix{#1}{\cref@result}%
```

```
394    \@ifundefined{cref@#1@alias}%
395      {\def\@tempa{#1}}%
396      {\def\@tempa{\csname cref@#1@alias\endcsname}}%
397    \protected@edef\cref@currentlabel{%
398      [\@tempa][\arabic{#1}][\cref@result]%
399      \noexpand\@currentlabel%
400    }% changed
401 }
402
403 \def\refstepcounter@optarg[#1]#2{%
404    \cref@old@refstepcounter{#2}%
405    \cref@constructprefix{#2}{\cref@result}%
406    \@ifundefined{cref@#1@alias}%
407      {\def\@tempa{#1}}%
408      {\def\@tempa{\csname cref@#1@alias\endcsname}}%
409    \protected@edef\cref@currentlabel{%
410      [\@tempa][\arabic{#2}][\cref@result]%
411      \noexpand\@currentlabel% changed
412    }%
413 }
```

\no@break@before    Provide macro able to prevent line breaks.

```
414 \newcommand\no@break@before{%
415    \relax\ifvmode\else%
416      \ifhmode%
417        \ifdim\lastskip > 0pt%
418          \relax\unskip\nobreakspace%
419        \fi%
420      \fi%
421    \fi%
422 }
```

\ref    Adjust \ref{⟨key⟩} in order to prevent preceding line breaks and to enable the possibility to reference multiple references at once.

```
423 \let\old@ref\ref
424 \AtBeginDocument{\renewcommand\ref{\no@break@before\labelcref}}
```

\eqref    Adjust \eqref{⟨key⟩} in order to prevent preceding line breaks and to enable the possibility to reference multiple equations at once.

```
425 \renewcommand\eqref{\no@break@before\labelcref}
```

\subref    Adjust \subref{⟨key⟩} in order to prevent preceding line breaks.

```
426 \let\old@subref\subref
427 \renewcommand\subref{\no@break@before\old@subref}
428 \renewcommand*\subcaption@ref[2]{\begingroup%
429    \caption@setoptions{sub}%
```

```
430    \subcaption@reffmt\p@subref{\old@ref#1{sub@#2}}%
431 \endgroup}
```

\subcref    Provide the \subcref macro.

```
432 \newcommand{\subcref}[1]{\cref{sub@#1}}
```

\eqcrefname    Define the \eqcrefname macro for named equation types.

```
433 \DeclareDocumentCommand{\eqcrefname}{mmo}{
434    \crefname{#1}{#2}{\IfValueTF{#3}{#3}{#2s}}
435    \creflabelformat{#1}{(##2##1##3)}
436 }
```

\labelcrefrange    Define the missing \labelcrefrange{⟨key1⟩}{⟨key2⟩} macro.

```
437 \DeclareRobustCommand{\labelcrefrange}[2]{%
438    \@crefrangenostar{labelcref}{#1}{#2}%
439 }
```

## I.1  Citation macros

\cite    Adjust \cite{⟨key⟩} in order to prevent preceding line breaks.

```
440 \let\old@cite\cite
441 \renewcommand\cite{\no@break@before\old@cite}
```

Begin of bibliography if.

```
442 \ifnum\pdf@strcmp{\hep@bibliography}{false}=0\else
```

Define bibstrings for reference names.

```
443 \NewBibliographyString{refname}
444 \NewBibliographyString{refsname}
445 \DefineBibliographyStrings{english}{%
446    refname = {Reference},
447    refsname = {References}
448 }
```

\ccite    Define *clever* citation macros.
\Ccite
```
449 \DeclareCiteCommand{\ccite}{%
450    \ifnum\thecitetotal=1%
451       \bibstring{refname}%
452    \else%
453       \bibstring{refsname}%
454    \fi%
455    \addnbspace\bibopenbracket%
456    \usebibmacro{cite:init}\usebibmacro{prenote}%
```

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```
457 }{\usebibmacro{citeindex}\usebibmacro{cite:comp}}{}{%
458   \usebibmacro{cite:dump}\usebibmacro{postnote}%
459   \bibclosebracket%
460 }
461
462 \newrobustcmd*{\Ccite}{\bibsentence\ccite}
```

End of biblatex if.

```
463 \fi
```

## J  Acronyms

Acronyms are implemented with the `glossaries-extra` package [11] which is an extension of the `glossaries` package [10].

```
464 \ifhep@glossaries
465 \RequirePackage[nostyles]{glossaries-extra}
```

The entry count feature is used.

```
466 \glsenableentrycount
467 \glssetcategoryattribute{abbreviation}{entrycount}{1}
```

Provide macros for older `glossaries-extra` installations.

```
468 \providecommand{\glsxtrusefield}[2]{\@gls@entry@field{#1}{#2}}
469 \providecommand{\glsxtrsetfieldifexists}[3]{\glsdoifexists{#1}{#3}}
470 \providecommand{\gGlsXtrSetField}[3]{%
471   \glsxtrsetfieldifexists{#1}{#2}{%
472     \csgdef{glo@\glsdetoklabel{#1}@#2}{#3}%
473   }%
474 }
```

Hyperlinks from the abbreviation to their definition in the text are set.

```
475 \glssetcategoryattribute{abbreviation}{nohyperfirst}{true}
476 \renewcommand*{\glsdonohyperlink}[2]{{%
477   \glsxtrprotectlinks\edef\fieldvalue{%
478     \glsxtrusefield{\glslabel}{hastarget}%
479   }%
480   \ifdefstring\fieldvalue{true}{#2}{%
481     \gGlsXtrSetField{\glslabel}{hastarget}{true}%
482     \glsdohypertarget{#1}{#2}%
483   }%
484 }}
```

\if@begin@of@sentence  Mark the beginning of a paragraph as if it would follow a full stop using the `everyhook` package [49]. Provide a macro checking for the beginning of a sentence

by examining the length of the preceeding space. (This breaks if `\frenchspacing` is activated)

```
485 \usepackage[excludeor]{everyhook}
486 \PushPostHook{par}{{\spacefactor=3000}}
487 \newcommand{\if@begin@of@sentence}[2]{\leavevmode\protecting{%
488   \ifboolexpr{ test {\ifnumcomp{\spacefactor}{=}{3000}} or%
489            test {\ifnumcomp{\spacefactor}{=}{2000}}%
490   }{#1}{#2}%
491 }}
```

`\acronym`  The `\acronym`⟨*⟩[⟨*typeset abbreviation*⟩]{⟨*abbreviation*⟩}{⟨*definition*⟩}[⟨*plural definition*⟩] macro is defined.

  #1 star for omitting the 's' in the short plural
  #2 optional typeset abbreviation
  #3 mandatory abbreviation
  #4 mandatory long form
  #5 optional plural long form

```
492 \DeclareDocumentCommand{\acronym}{sommo}{
493   \newabbreviation[
494     longplural=\IfNoValueTF{#5}{#4s}{#5},
495     \glsshortpluralkey=\IfBooleanTF{#1}{#3}{\IfNoValueTF{#2}{#3s}{#2s}}
496   ]{#3}{\IfNoValueTF{#2}{#3}{#2}}{#4}
```

Provide the singular acronym macro.

```
497   \expandafter\newcommand\csname#3\endcsname{%
498     \if@begin@of@sentence{\cGls{#3}}{\cgls{#3}}\@\xspace%
499   }
```

Expand the singular acronym macro in PDF labels.

```
500   \pdfstringdefDisableCommands{\expandafter\def\csname#3\endcsname{%
501     \IfNoValueTF{#2}{#3}{#2} }%
502   }
```

Provide the singular acronym macro in math mode.

```
503   \expandafter\mathdef\csname#3\endcsname{%
504     \text{\glsxtrshort{#3}}\glsunset{#3}%
505   }
```

Provide the plural acronym macro.

```
506   \expandafter\newcommand\csname#3s\endcsname{%
507     \if@begin@of@sentence{\cGlspl{#3}}{\cglspl{#3}}\@\xspace%
508   }
```

Expand the plural acronym macro in PDF labels.

```
509 \pdfstringdefDisableCommands{\expandafter\def\csname#3s\endcsname{%
510   \IfBooleanTF{#1}{#3}{\IfNoValueTF{#2}{#3s}{#2s}} }%
511 }
```

Provide the plural acronym macro in math mode.

```
512 \expandafter\mathdef\csname#3s\endcsname{%
513   \text{\glsxtrshortpl{#3}}\glsunset{#3}%
514 }
515 }
```

The \shortacronym never expands into the long form.

```
516 \DeclareDocumentCommand{\shortacronym}{somm}{
517   \newabbreviation[
518     \glsshortpluralkey=\IfBooleanTF{#1}{#3}{\IfNoValueTF{#2}{#3s}{#2s}}
519   ]{#3}{\IfNoValueTF{#2}{#3}{#2}}{#4}
```

Provide the singular acronym macro.

```
520   \expandafter\newcommand\csname#3\endcsname{\cgls*{#3}\@\xspace}
```

Expand the singular acronym macro in PDF labels.

```
521   \pdfstringdefDisableCommands{\expandafter\def\csname#3\endcsname{%
522     \IfNoValueTF{#2}{#3}{#2} }%
523   }
```

Provide the singular acronym macro in math mode.

```
524   \expandafter\mathdef\csname#3\endcsname{\text{\glsxtrshort*{#3}}}
```

Provide the plural acronym macro.

```
525   \expandafter\newcommand\csname#3s\endcsname{\cglspl*{#3}\@\xspace}
```

Expand the plural acronym macro in PDF labels.

```
526   \pdfstringdefDisableCommands{\expandafter\def\csname#3s\endcsname{%
527     \IfBooleanTF{#1}{#3}{\IfNoValueTF{#2}{#3s}{#2s}} }%
528   }
```

Provide the plural acronym macro in math mode.

```
529   \expandafter\mathdef\csname#3s\endcsname{\text{\glsxtrshortpl*{#3}}}%
530   \glsunset{#3}
531 }
```

The \longacronym never shows the abbreviated form.

```
532 \DeclareDocumentCommand{\longacronym}{sommo}{
```

Provide the singular acronym macro.

```
533    \expandafter\newcommand\csname#3\endcsname{%
534      \if@begin@of@sentence{\MakeUppercase#4}{#4}\@\xspace%
535    }
```

Expand the singular acronym macro in PDF labels.

```
536    \pdfstringdefDisableCommands{\expandafter\def\csname#3\endcsname{#4 }}
```

Provide the plural acronym macro.

```
537    \expandafter\newcommand\csname#3s\endcsname{%
538      \if@begin@of@sentence{%
539        \IfNoValueTF{#5}{\MakeUppercase#4s}{\MakeUppercase#5}%
540      }{%
541        \IfNoValueTF{#5}{#4s}{#5}}\@\xspace%
542    }
```

Expand the plural acronym macro in PDF labels.

```
543    \pdfstringdefDisableCommands{\expandafter\def\csname#3s\endcsname{%
544      \IfNoValueTF{#5}{#4s}{#5} }%
545    }
546 }
```

Silence warning if no acronyms are defined.

```
547 \renewcommand*{\@gls@write@entrycounts}{%
548    \immediate\write\@auxout{%
549      \string\providecommand*{\string\@gls@entry@count}[2]{}
550    }%
551    \count@=0\relax
552    \forallglsentries{\@glsentry}{%
553      \glshasattribute{\@glsentry}{entrycount}{%
554        \ifglsused{\@glsentry}{%
555          \immediate\write\@auxout{%
556            \string\@gls@entry@count{\@glsentry}{%
557              \glsentrycurrcount{\@glsentry}%
558            }
559          }%
560        }{}\advance\count@ by \@ne
561      }{}%
562    }%
563 }
```

\resetacronym    Add two macros for acronym management.
\dummyacronym
```
564 \newcommand{\resetacronym}[1]{\protect\glsreset{#1}}
565 \newcommand{\dummyacronym}[1]{\protect\glsunset{#1}}
```

End of glossaries if.

`566 \fi`

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# Change History

v1.0
  General: Initial version of the style file  1

v1.1
  General: Transition to documented

LATEX source file . . . . . . . . . . . . .  1

v1.2
  General: Inclusion of package options  1