

Instructions for PDG Review Authors

1 Introduction to PDG review example

This file, `examples.tex`, contains examples for writing PDG reviews. When you start writing your review, you should comment out the line in `reviewinstructions-main.tex` that includes this file.

PDG review source files consist of files edited by the review author as well as generated files. Do NOT edit generated files - your changes will be lost as the files are periodically regenerated.

Files edited by review authors:

- `BASENAME-main.tex` - this file contains the text of your review (you may include other files)
- `BASENAME-booklet.tex` - contents of the booklet version (if there is one)
- `BASENAME-preamble.tex` - for review-specific definitions or packages that need to go into the document's preamble
- `BASENAME.bib` - BibTeX bibliography entries (see below)
- `figures` - directory where to put all figures

Generated files (do not edit them!):

- `Makefile` - Makefile to generate different formats
- `pdg.cls` - PDG review style file
- `pdg.bst` - BibTeX style file
- `pdgdefs.tex` - PDG standard symbols and macros
- `BASENAME.tex` - driver file for this review in standalone mode
- `examples.tex`

The PDG Latex class typesets in four different version styles: draft, web, book and booklet. The draft and web versions are referred to below jointly as ‘web’. Macros with version specific implementations are implemented with naming convention `<version><macroname>`, where `<version>` may take values of `book`, `booklet` and `web`.

2 Type-setting style

We give here our conventions on type-setting style. Particle symbols are italic (or slanted) characters: e^- , \bar{p} , Λ_b , π^0 , K_L^0 , D^* . Charge is indicated by a superscript: B^- , Δ^{++} . Charge is not normally indicated for p , n , or the quarks, and is optional for neutral isosinglets: η or η^0 . Antiparticles and particles are distinguished by charge for charged leptons and mesons: τ^+ , K^- . Otherwise, distinct antiparticles are indicated by a bar (overline): $\bar{\nu}_\mu$, \bar{t} , \bar{p} , \bar{K}^0 .

3 Column switching

The web version is typeset as single column, singleside 11pt style, the book as 8pt double column, double sided.

In all versions of the review, switching between single and double column mode can be done *in situ* with `\onecolumn` or `\twocolumn` respectively. For example

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra me-</p>	<p>tus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu,</p>
--	---

accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

4 Graphics scaling and width keys

4.1 Environments

As in the usual implementation of the `graphicx` package, the `\includegraphics` command takes optional standard keys `width = ...`, `scale = ...`. This is used, e.g., in figure environments to control the width or scale of the bounding box.

The version specific keys `<version>width` and `<version>scale` have been added, that implement width or scaling choices only in the specific `<version>`. One may use these keys in concert with the usual `width` and `scale` keys, with the caveat that the order of keys matters: Keys are read left to right, and leftwards keys may override rightwards ones. For example,

```
\includegraphics[width=0.8\linewidth, bookwidth=0.9\linewidth]{figure.pdf}
```

implements the `width` key setting except in the book version. The option `bookwidth=0.9\linewidth` followed by `width=0.8\linewidth` would instead implement only the version-general `width=0.8\linewidth` setting.

5 How to include figures

To add a figure, it is recommended to use the `\pdgfigure` or `\pdgwidefigure` environments for a single-column or double-column wide figure in the book format, respectively. To include two images in one figure use the environment `\pdgdoublefigure`. The figures need to be in `.pdf` format. Depending on your version of latex, running `pdflatex` may or may not convert the `.eps` files into `.pdf`. In case the conversion fails, the conversion can be done manually with various programs (ImageMagick on linux for example). Make sure that the `.pdf` figure is added into the subdirectory `figures`, and that it is committed in svn or provided with your text.

The macros `\pdgfigure` and `\pdgwidefigure` take the following arguments:

```
\pdgfigure{name of the file in the figures directory}
{your caption }{ label }{option to determine the position}
{other options}
```

The macro `\pdgdoublefigure` takes the following arguments:

```
\pdgdoublefigure{name of the file1 in the figures directory}
{name of the file2 in the figures directory}
{your caption }{ label }{option to determine the position}
{other options}
```

Good practice for the label is to use the following convention: `reviewinstructions:fig:some-meaningful-name`. Examples on how to use these environments are shown below. The snippets of code can be directly included in `reviewinstructions-main.tex`.

```
\pdgfigure{filename.pdf}{Figure with caption and label}
{reviewinstructions:fig:ideogram}{}{}
```

```
\pdgdoublefigure{filename.pdf}{filename.pdf}
{Two figures, with caption and label, reduced in size}
{reviewinstructions:fig:ideogram2}{ht!}{width=0.4\textwidth}
```

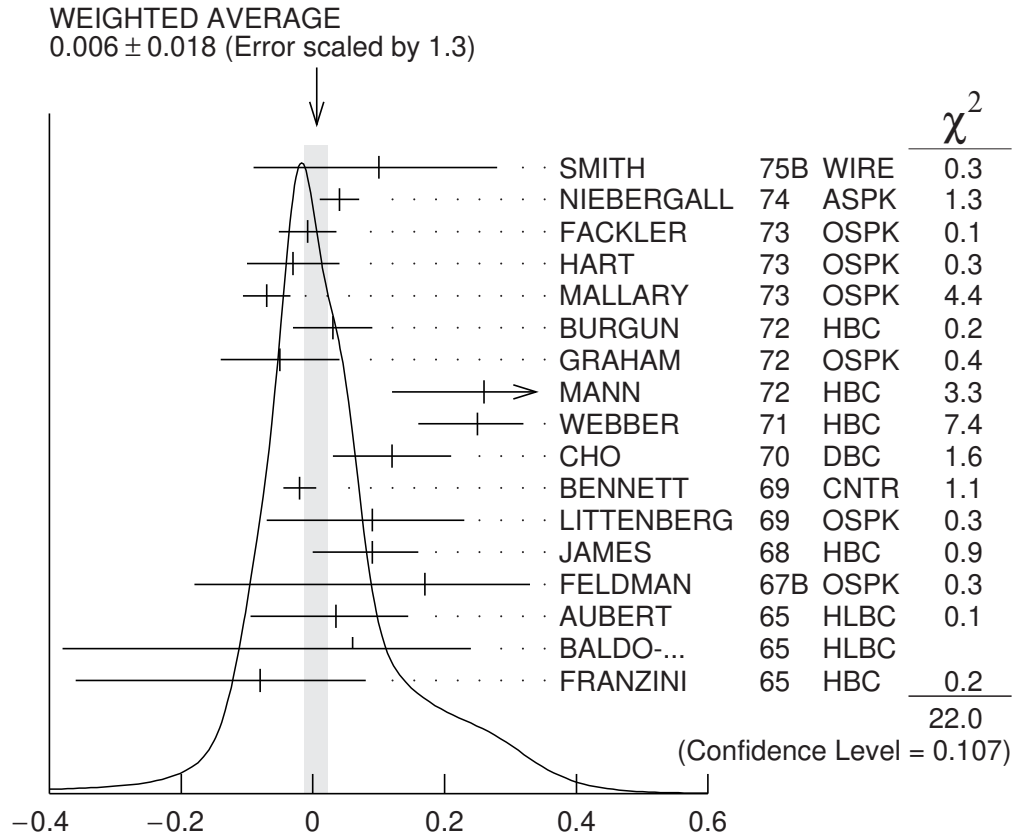


Figure 1: Figure with caption and label

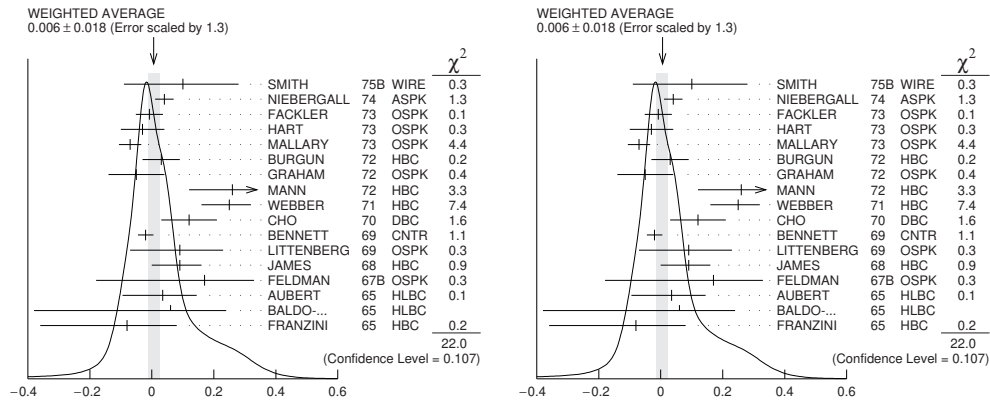


Figure 2: Two figures, with caption and label, reduced in size

`\pdgwidefigure{filename.pdf}`
 {Wide figure forced to be placed at the top of the page}
 {reviewinstructions:fig:ideogram3}{t}{}

To add a reference to the figure in the text, the following command can be used: `\ref{label}`. For example, to reference Figure 1 use the following code: `\ref{reviewinstructions:fig:ideogram}`.

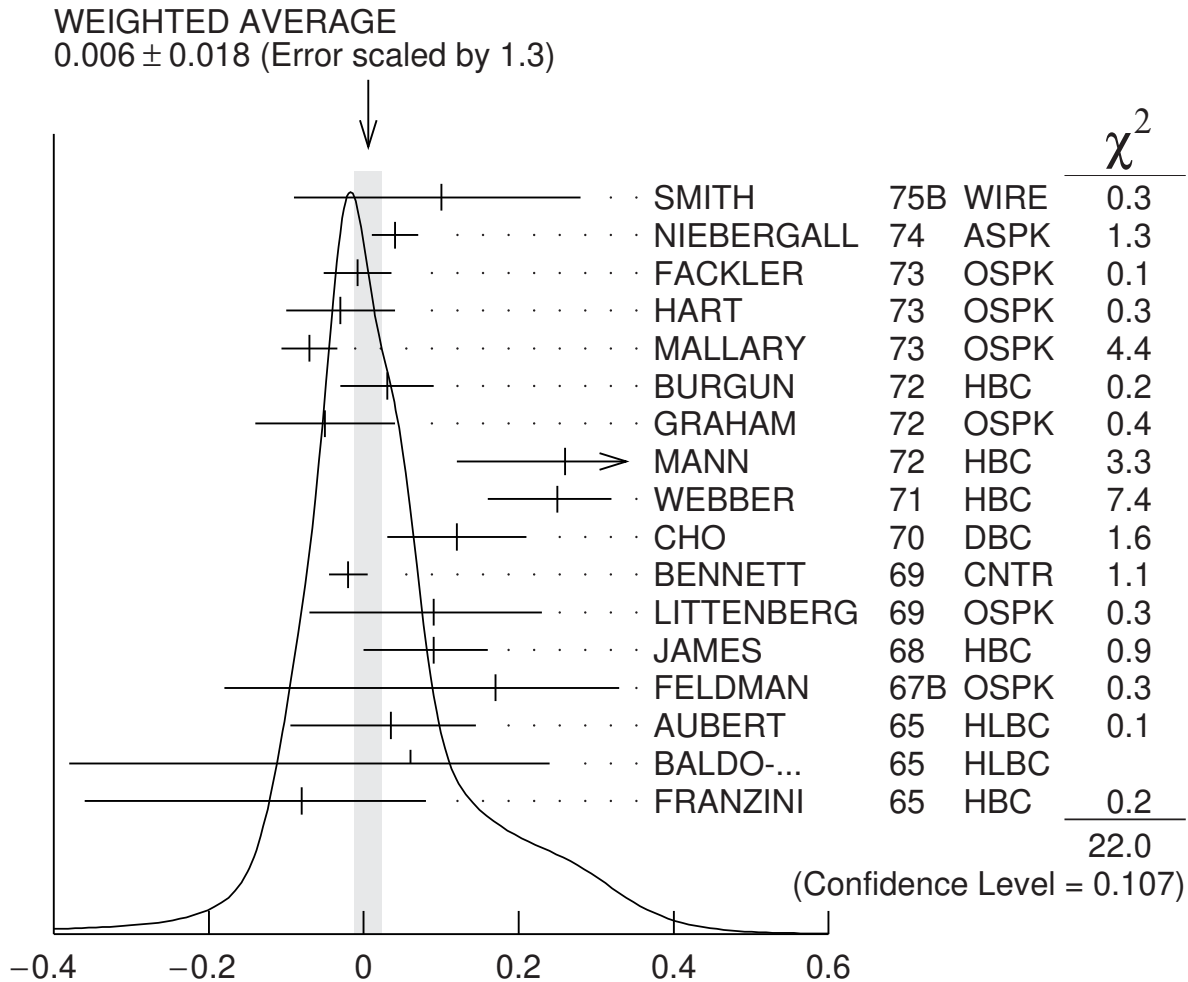


Figure 3: Wide figure forced to be placed at the top of the page

6 Tables: `pdgxtable` and `pdgxtabular`

Multipurpose table and tabular environments, `pdgxtable` and `pdgxtabular` are now available. These operate similarly to the standard `table` and `tabular` environments: `(pdgx)table` creates a floating environment, while (one or multiple implementations of) `(pdgx)tabular` creates an actual tabulated display.

The `\caption` and `\label` commands may be used as in the usual `table` environment. In addition, `pdgtable` takes a wide array of additional option keys that implement features and formatting of the existing PDG table commands/environments. These include keys that control placement, multicolumn spanning, version-specific widths and scaling, rotation, stretching, and caption widths.

The generic usage is

```
\begin{pdgxtable}[<option keys>]
  \caption{This is a PDG table}
  \label{tab:label}
  \begin{pdgxtabular}{<column settings>} % the usual c, l, r, | etc
    \pdgtableheader{...} %column header & separated entries go here
    %table & separated entries go here
  \end{pdgxtabular}
```

```
%multiple pdgtabular environments are allowed
\end{pdgxtable}
```

6.1 *pdgxtable* keys

Following is a list of available optional keys, and default settings if not invoked. As usual, keys are evaluated left to right. While, the version-general `width` key can be used (and will override any preceeding version-specific width key), there is no version-general `scale` key. Scaling of the tables is best done with the `<version>scale` keys.

- `place`: Takes any combination of `h`, `t`, `b`, `p` (with optional `!`) that specifies float placement. Default is `!ht`.
- `wide`: Takes `true` or `false` to specific the figure as full page width in either single or two column mode. Default is `false`.
- `width` or `<version>width`: Sets the version specific maximum width of the table bounding box. Default is the maximum text width implied by the `wide` key setting. Width settings exceeding this default are ineffective. Footnotes are scaled, but caption width is not affected.
- `<version>scale`: Scales the table according to float value passed to the key. For overwide tables, there is always a value < 1 at which the table will be properly set to maximum page width. Footnotes are scaled, but caption width is not affected.
- `widcaptionscale`: For `wide = true` tables, scales the caption width with respect to the maximum page width. Default is 0.75.
- `narrowcaptionscale`: For `wide = false` or default tables, scales the caption width with respect to the maximum page width. Default is 0.9.
- `rotated`: Takes `left` or `right` to rotate the table, but not the caption, 90° anticlockwise or clockwise, respectively.
- `sideways`: Takes `true` or `false` to rotate the table, including the caption, 90° anticlockwise or clockwise, according to whether page number is even or odd. In a sideways table, other key width and scaling settings are still effective, but scale with respect to the page height.

7 Legacy – How to include tables

For new content we recommend the `\pdgxtable` class defined in the previous section. However, there are also a number older table environments that are still understood and available. This section describes the use of those.

To add a table it is recommended to use the `\pdgtable` or `\pdgwidetable` environments for single-column or double-column wide tables in the book format, respectively. It is recommended also to use `\pdgtableheader` environment for the first line of the table. The macros `\pdgtable` and `\pdgwidetable` take the following arguments:

```
\pdgtable{ dimension of the table }
{ your caption }{ label }{options}
```

Good practice for the label is to use the following convention: `reviewinstructions:tab:some-meaningful-name`. Examples on how to use these environments are shown below. The snippets of code can be directly included in `reviewinstructions-main.tex`.

```
\begin{pdgtable}{c c c}
{Table}{reviewinstructions:tab:mytable}{h!}
\pdgtableheader{ Column 1 & Column 2 & Column 3}
row1 & 1 & 2\\
```

```
row2 & 1 & 2\\
row3 & 1 & 2\\
\end{pdgtable}
```

Table 1: Table

Column 1	Column 2	Column 3
row1	1	2
row2	1	2
row3	1	2

```
\begin{pdgtable}{|c|c|c|c|}
{Multicolumn table}{reviewinstructions:tab:mytable2}{h!}
\pdgtableheader{ \multicolumn{2}{c}{Column 1} &
\multicolumn{2}{c}{Column 2}}
\pdgtableheader{ A & B& C & D }
row1 & 1 & 2 & 3 \\
row2 & 1 & 2 & 3 \\
\end{pdgtable}
```

Table 2: Multicolumn table

Column 1		Column 2	
A	B	C	D
row1	1	2	3
row2	1	2	3

```
\begin{pdgtable}{c l}
{Table with footnotes}{reviewinstructions:tab:table3}{}
One value & another\footnote{This is something to notice}
\label{reviewinstructions:foot:one}}\\
Two values\footref{reviewinstructions:foot:one} & another \\
\end{pdgtable}
```

Table 3: Table with footnotes

One value	another*
Two values*	another

*This is something to notice

To add a reference to a table in the text, the following command can be used: `\ref{label}`. For example, to reference Table 2 use the following code: `\ref{reviewinstructions:tab:mytable2}`.

8 Equations

If you want to add equations, you need to use the `equation` environment. A working example is:

```
\begin{equation}\label{reviewinstructions:eq:equation}
N_{\text{exp}} = \sigma_{\text{exp}} \times \int L(t) dt
\end{equation}
```

$$N_{\text{exp}} = \sigma_{\text{exp}} \times \int L(t) dt \quad (1)$$

If you want to add a set of equation, please use the `subequation` environment, together with `align`. This will add a number for every equation in the array. A working example is:

```
\begin{subequations}
\label{reviewinstructions:eq:equation1}
\begin{align}
A + B &= C \\
D &= \frac{E}{F}
\end{align}
\end{subequations}
```

$$A + B = C \quad (2a)$$

$$D = \frac{E}{F} \quad (2b)$$

You can also add text within equation with the `\intertext` environment.

```
\begin{subequations}
\begin{align}
A+B &= C \\
\intertext{One can then add a comment or a reference here}
D &= E
\end{align}
\end{subequations}
```

$$A + B = C \quad (3a)$$

One can then add a comment or a reference here

$$D = E \quad (3b)$$

9 Wide equation typesetting

9.1 *pdgstrip*

Some wide equations are not easily amenable to display in the PDG book double column format. Similar to the ReVTeX `widetext` environment, the PDG style provides a `pdgstrip` environment, that may wrap any other equation (or align, array etc) environment. For example:

```
\begin{pdgstrip}
\begin{equation} % or any other display environment
...
\end{equation}
\end{pdgstrip}
```

In the web and booklet versions, this environment performs no operation on the wrapped environment. In the book version, the equation is preserved as a single ‘strip’ across both columns, with column-wide rules to guide the reader’s eye. For example:

The possibility of arbitrary mixing between massive neutrino states was first discussed in the context of two neutrinos intro-

parameters: three mixing angles and three phases. In this case the mixing matrix can be conveniently parametrized as:

$$U = \begin{pmatrix} 1 & 0 & 0 \\ 0 & c_{23} & s_{23} \\ 0 & -s_{23} & c_{23} \end{pmatrix} \cdot \begin{pmatrix} c_{13} & 0 & s_{13}e^{-i\delta_{\text{CP}}} \\ 0 & 1 & 0 \\ -s_{13}e^{i\delta_{\text{CP}}} & 0 & c_{13} \end{pmatrix} \cdot \begin{pmatrix} c_{21} & s_{12} & 0 \\ -s_{12} & c_{12} & 0 \\ 0 & 0 & 1 \end{pmatrix} \cdot \begin{pmatrix} e^{i\eta_1} & 0 & 0 \\ 0 & e^{i\eta_2} & 0 \\ 0 & 0 & 1 \end{pmatrix}, \quad (14.33)$$

where $c_{ij} \equiv \cos \theta_{ij}$ and $s_{ij} \equiv \sin \theta_{ij}$. The angles θ_{ij} can be taken without loss of generality to lie in the first quadrant, $\theta_{ij} \in [0, \pi/2]$

η_1 and η_2 , can be absorbed in the neutrino states so number of physical phases is one (similar to the CKM matrix). Thus we can

The column-wide rules may be disabled – e.g if the strip environment falls at the top or bottom of a page – by passing the option `plain` to the `pdgstrip` environment. I.e. `\begin{pdgstrip}[plain]`.

9.2 Alignment

Within `align`, `eqnarray` or any other environment that uses the special `&` and `\\` control characters for alignment, one may use version specific `\bookalign`, `\webalign`, `\bookletalign` and `\bookcr`, `\webcr`, `\bookletcr` macros.

The `\<version>align` macros insert a ‘&’ control character only in the `<version>` of the review. The `\<version>cr` macro similarly inserts a carriage return ‘\\’ only in the `<version>` of the review, but takes two additional arguments that are placed before and after the carriage return, respectively. For instance, `\bookcr{\nonumber}{[10pt]}` inserts `\nonumber\\[10pt]`. An example usage is

```
\begin{align}
  {\cal A}_f &= \frac{\Gamma(\bar{B}^0(t) \rightarrow f) - \Gamma(B^0(t) \rightarrow f)}{\Gamma(\bar{B}^0(t) \rightarrow f) + \Gamma(B^0(t) \rightarrow f)} = S_f \sin(\Delta m_d t) - C_f \cos(\Delta m_d t), \\
  \bookalign &= S_f \sin(\Delta m_d t) - C_f \cos(\Delta m_d t), \quad \bookcr{\,,}{\nonumber}{}
\end{align}
```

which produces in the web version

$$\mathcal{A}_f = \frac{\Gamma(\bar{B}^0(t) \rightarrow f) - \Gamma(B^0(t) \rightarrow f)}{\Gamma(\bar{B}^0(t) \rightarrow f) + \Gamma(B^0(t) \rightarrow f)} = S_f \sin(\Delta m_d t) - C_f \cos(\Delta m_d t), \quad (4)$$

and in the two column book version

$$\begin{aligned} \mathcal{A}_f &= \frac{\Gamma(\bar{B}^0(t) \rightarrow f) - \Gamma(B^0(t) \rightarrow f)}{\Gamma(\bar{B}^0(t) \rightarrow f) + \Gamma(B^0(t) \rightarrow f)}, \\ &= S_f \sin(\Delta m_d t) - C_f \cos(\Delta m_d t), \end{aligned} \quad (4)$$

10 Labels and referencing

If you are creating a new label, use the following convention: `reviewinstructions:type:some-meaningful-na` with `type` corresponding to one of the following options:

- `fig` for figures
- `eq` for equation
- `tab` for tables
- `sec` for section, subsection etc..

- `foot` for footnotes.

Please, pay special attention when referencing sections, subsections, figures, table, equations in different reviews - use the `BASENAME` associated with the target review, not the `BASENAME` of the review you're currently working on.

To identify the `BASENAME` of a review, login into [pdgWorkspace](#) (click to be redirected). Under **Reviews** select from the drop-down menu **all reviews**. Click on the title of the review you are interested in, and then select the **Technical details** tab. The **Basename** is the first entry.

When including references or citations into caption, use the `\protect` environment, as shown below:

```
\begin{pdgtable}{ c | c }
{Example on how to cite a paper {\protect \cite{InspireLabel}}
into a caption.}{\ht!}
\pdgtableheader{ Column 1 & Column 2}
A & B \\
\end{pdgtable}
```

11 Footnotes

Footnote styles are standardized throughout the review. In (rare) cases that the style needs to be changed, this is achieved via `\setfootnotestyle{<style>}`, where `<style>` can be `\fnsymbol` or `\alph`, `\Alph`, `\arabic`, `\roman`, `\Roman` etc.

12 Bibliography

References are handled using BibTeX. To add a reference to your review:

- look up the reference in INSPIRE and download its BibTeX entry (see bottom of the **Information** tab for the article, under **Export**).
- add the BibTeX entry to `reviewinstructions.bib` file. Note the article tag assigned by INSPIRE - you can see it in the first line of the BibTeX entry, after `\@article{`.
- cite the reference with `\cite`, using the article tag assigned by INSPIRE.

In case the reference does not appear in INSPIRE, use the standard convention for the label: `reviewinstructions:meaningful-name`. For example, to add a reference to the Review of Particle Physics (2018) add the following code to `reviewinstructions.bib`:

```
@article{Tanabashi:2018oca,
  author      = "Tanabashi, M. and others",
  title       = "{Review of Particle Physics}",
  collaboration = "Particle Data Group",
  journal     = "Phys. Rev.",
  volume      = "D98",
  year        = "2018",
  number      = "3",
  pages       = "030001",
  doi         = "10.1103/PhysRevD.98.030001",
  SLACcitation = "%%CITATION = PHRVA,D98,030001;%%"
}
```

and then use the following snippet of code to add a reference to it in `reviewinstructions-main.tex`:

```
\cite{Tanabashi:2018oca}
```

If a BibTeX entry downloaded from INSPIRE does not render correctly, you should first make sure you have the latest PDG style files. If this doesn't fix the issue and it appears this might be a general problem for a certain type of entries, please contact latexsupport@pdg.lbl.gov for advice. If the issue cannot be easily fixed in the style file, or if it is simply a mistake in INSPIRE's entry, you should rename the label to the form `BASENAME:INSPIRELABEL` and then you can edit the entry as needed. Please do not edit entries downloaded from INSPIRE without changing the label. The idea behind this is that it will greatly simplify identifying and letting INSPIRE know about entries that need correcting and to automatically update our files with any corrections from INSPIRE.

In case you need to add multiple references within the same set of brackets, use the following code:

```
\cite{paper1,paper2}
```

In case you want to cluster into one reference multiple papers, use the following code:

```
\cite{paper1,*paper2,*paper3}
```

Note the use of the asterisk to signal trailing papers. If a paper is preceded by the asterisk, it can't be cited separately later - latex will fail and provide an error. In general, the recommendation is to cite papers individually, without using the asterisk to group them.

13 Booklet

If your review has a booklet version, it needs to be prepared at the same time as you prepare your full review. The content to be displayed in the booklet needs to be included in `reviewinstructions-booklet.tex`. To test the rendering of your review in the booklet, you can run the following command:

```
make booklet
```

14 Standard PDG symbols

The `pdgdefs.tex` file implements a series of useful shortcuts to typeset the reviews, such as particle symbols. All definitions are terminated with `\xspace`, so you can simply write `\ttbar production` instead of `\ttbar\ production`.

Most Monte Carlo generators have a form with a suffix 'V' that allows you to include the version, e.g. `\PYTHIAV8` to produce `PYTHIA 8`. In case you need to define other symbols, please add them to the `reviewinstructions-preamble.tex` file.

Table 4: Units

<code>\TeV</code>	TeV	<code>\syin</code>	"	<code>\barn</code>	b
<code>\MeV</code>	MeV	<code>\inch</code>	in	<code>\mbarn</code>	mb
<code>\keV</code>	keV	<code>\ft</code>	ft	<code>\microbarn</code>	μb
<code>\eV</code>	eV	<code>\km</code>	km	<code>\nb</code>	nb
<code>\GeVc</code>	GeV/ c	<code>\m</code>	m	<code>\pb</code>	pb
<code>\GeVcSq</code>	GeV ² / c^2	<code>\cm</code>	cm	<code>\fb</code>	fb
<code>\GeVcc</code>	GeV/ c^2	<code>\mm</code>	mm	<code>\invnb</code>	nb ⁻¹
<code>\GeVccSq</code>	GeV ² / c^4	<code>\mum</code>	μm	<code>\invpb</code>	pb ⁻¹
<code>\MeVc</code>	MeV/ c	<code>\nm</code>	nm	<code>\invfb</code>	fb ⁻¹
<code>\MeVcc</code>	MeV/ c^2	<code>\fm</code>	fm	<code>\invab</code>	ab ⁻¹
<code>\invps</code>	ps ⁻¹	<code>\nm</code>	nm	<code>\lum</code>	\mathcal{L}
		<code>\ma</code>	m ²		
<code>\degr</code>	°	<code>\cma</code>	cm ²		
		<code>\mma</code>	mm ²		
		<code>\muma</code>	μm^2		

Table 5: Particles

<code>\pp</code>	pp	<code>\ee</code>	e^+e^-	<code>\pizero</code>	π^0
<code>\pbar</code>	\bar{p}	<code>\epm</code>	e^\pm	<code>\piplus</code>	π^+
<code>\ppbar</code>	$p\bar{p}$	<code>\epem</code>	e^+e^-	<code>\piminus</code>	π^-
<code>\tbar</code>	\bar{t}	<code>\en</code>	e^-	<code>\pipm</code>	π^\pm
<code>\ttbar</code>	$t\bar{t}$	<code>\ep</code>	e^+	<code>\pimp</code>	π^\mp
<code>\bbar</code>	\bar{b}	<code>\mumu</code>	$\mu^+\mu^-$	<code>\etaprime</code>	η'
<code>\bbbar</code>	$b\bar{b}$	<code>\mun</code>	μ^-	<code>\Kzero</code>	K^0
<code>\cbar</code>	\bar{c}	<code>\mup</code>	μ^+	<code>\Kzerobar</code>	\bar{K}^0
<code>\ccbar</code>	$c\bar{c}$	<code>\tautau</code>	$\tau^+\tau^-$	<code>\kaon</code>	K
<code>\sbar</code>	\bar{s}	<code>\taup</code>	τ^+	<code>\Kplus</code>	K^+
<code>\ssbar</code>	$s\bar{s}$	<code>\taum</code>	τ^-	<code>\Kminus</code>	K^-
<code>\ubar</code>	\bar{u}	<code>\lepton</code>	ℓ	<code>\KzeroL</code>	K_L^0
<code>\ubar</code>	$u\bar{u}$	<code>\leptonm</code>	ℓ^-	<code>\Kzerol</code>	K_L^0
<code>\dbar</code>	\bar{d}	<code>\elllm</code>	ℓ^-	<code>\Klong</code>	K_L^0
<code>\ddbar</code>	$d\bar{d}$	<code>\leptonp</code>	ℓ^+	<code>\KzeroS</code>	K_S^0
<code>\fbar</code>	\bar{f}	<code>\elllp</code>	ℓ^+	<code>\Kzeros</code>	K_S^0
<code>\ffbar</code>	$f\bar{f}$	<code>\leptonlepton</code>	$\ell^+\ell^-$	<code>\Kshort</code>	K_S^0
<code>\qbar</code>	\bar{q}	<code>\ellell</code>	$\ell^+\ell^-$	<code>\Kstar</code>	K^*
<code>\qqbar</code>	$q\bar{q}$	<code>\enu</code>	$e\nu$	<code>\jpsi</code>	J/ψ
<code>\nbar</code>	$\bar{\nu}$	<code>\munu</code>	$\mu\nu$	<code>\Jpsi</code>	J/ψ
<code>\nnbar</code>	$\nu\bar{\nu}$	<code>\taunu</code>	$\tau\nu$	<code>\psip</code>	$\psi(2S)$
<code>\neutron</code>	n	<code>\lnu</code>	$\ell\nu$	<code>\chic</code>	χ_c
<code>\antineutron</code>	\bar{n}	<code>\nub</code>	$\bar{\nu}$	<code>\UoneS</code>	$\U(1S)$
<code>\deuteron</code>	d	<code>\nunub</code>	$\nu\bar{\nu}$	<code>\chib</code>	χ_b
<code>\Zzero</code>	Z	<code>\nue</code>	ν_e	<code>\Dstar</code>	D^*
<code>\Zboson</code>	Z	<code>\nueb</code>	$\bar{\nu}_e$	<code>\Bd</code>	B_d^0
<code>\Wplus</code>	W^+	<code>\nuenueb</code>	$\nu_e\bar{\nu}_e$	<code>\Bs</code>	B_s^0
<code>\Wminus</code>	W^-	<code>\num</code>	ν_μ	<code>\Bu</code>	B_u
<code>\Wboson</code>	W	<code>\numb</code>	$\bar{\nu}_\mu$	<code>\Bc</code>	B_c
<code>\Wpm</code>	W^\pm	<code>\numnumb</code>	$\nu_\mu\bar{\nu}_\mu$	<code>\Lb</code>	Λ_b
<code>\Wmp</code>	W^\mp	<code>\nut</code>	ν_τ	<code>\Bstar</code>	B^*
		<code>\nutb</code>	$\bar{\nu}_\tau$	<code>\BoBo</code>	$B^0\bar{B}^0$
		<code>\nutnutb</code>	$\nu_\tau\bar{\nu}_\tau$	<code>\BodBod</code>	$B_d^0\bar{B}_d^0$
				<code>\BosBos</code>	$B_s^0\bar{B}_s^0$
				<code>\LambdaStar</code>	Λ^*

Table 6: Hypothetical Particles

\Azero	A^0	\gravino	\tilde{G}	\slepton	$\tilde{\ell}$
\hzero	h^0	\Zprime	Z'	\sleptonL	$\tilde{\ell}_L$
\Hzero	H^0	\Zstar	Z^*	\sleptonR	$\tilde{\ell}_R$
\Hboson	H	\squark	\tilde{q}	\sel	\tilde{e}
\Hplus	H^+	\squarkL	\tilde{q}_L	\sell	\tilde{e}_L
\Hminus	H^-	\squarkR	\tilde{q}_R	\selR	\tilde{e}_R
\Hpm	H^\pm	\gluino	\tilde{g}	\smu	$\tilde{\mu}$
\Hmp	H^\mp	\stop	\tilde{t}	\smuL	$\tilde{\mu}_L$
\ggino	$\tilde{\chi}$	\stopone	\tilde{t}_1	\smuR	$\tilde{\mu}_R$
\chinop	$\tilde{\chi}^+$	\stoptwo	\tilde{t}_2	\stau	$\tilde{\tau}$
\chinom	$\tilde{\chi}^-$	\stopL	\tilde{t}_L	\stauL	$\tilde{\tau}_L$
\chinopm	$\tilde{\chi}^\pm$	\stopR	\tilde{t}_R	\stauR	$\tilde{\tau}_R$
\chinomp	$\tilde{\chi}^\mp$	\sbottom	\tilde{b}	\stauone	$\tilde{\tau}_1$
\chinoonep	$\tilde{\chi}_1^+$	\sbottomone	\tilde{b}_1	\stautwo	$\tilde{\tau}_2$
\chinoonem	$\tilde{\chi}_1^-$	\sbottomtwo	\tilde{b}_2	\snu	$\tilde{\nu}$
\chinoonepm	$\tilde{\chi}_1^\pm$	\sbottomL	\tilde{b}_L		
\chinotwop	$\tilde{\chi}_2^+$	\sbottomR	\tilde{b}_R		
\chinotwom	$\tilde{\chi}_2^-$				
\chinotwopm	$\tilde{\chi}_2^\pm$				
\nino	$\tilde{\chi}^0$				
\ninoone	$\tilde{\chi}_1^0$				
\ninotwo	$\tilde{\chi}_2^0$				
\ninothree	$\tilde{\chi}_3^0$				
\ninofour	$\tilde{\chi}_4^0$				

Table 7: Useful symbols for proton-proton physics

\pT	p_T	\mh	m_h
\pt	p_T	\mW	m_W
\ET	E_T	\mZ	m_Z
\eT	E_T	\mH	m_H
\et	E_T		
\HT	H_T		
\pTsqr	p_T^2		
\MET	E_T^{miss}		
\met	E_T^{miss}		
\Ecm	E_{cm}		
\rts	\sqrt{s}		
\sqs	\sqrt{s}		

Table 8: Monte Carlo Generators

\ACERMC	ACERMC	\MCatNLO	MC@NLO	\Comphep	CompHEP
\ALPGEN	ALPGEN	\AMCatNLO	aMC@NLO	\Prospino	Prospino
\GEANT	GEANT	\MCFM	MCFM	\LO	LO
\Herwigpp	Herwig++	\METOP	METOP	\NLO	NLO
\HERWIGpp	Herwig++	\POWHEG	POWHEG	\NLL	NLL
\Herwig	Herwig	\POWHEGBOX	POWHEG-Box	\NNLO	NNLO
\HERWIG	HERWIG	\POWPYTHIA	POWHEG+PYTHIA	\muF	μ_F
\JIMMY	JIMMY	\PROTOS	PROTOS	\muR	μ_R
\MADSPIN	MADSPIN	\PYTHIA	PYTHIA		
\MADGRAPH	MADGRAPH	\SHERPA	SHERPA		
\MGMCatNLO	MADGRAPH5_aMC@NLO				