Sample file for your final report

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This is where the abstract should be placed. It should consist of one paragraph and give a concise summary of the material in the article below.

1 Guidelines

1.1 Writing your report

If you unpacked the archive correctly, you should have a directory named report containing the following files[1]

gsipaper.cls — the class file that provides the higher level LaTeX commands for the reports. Don't change these parameters.

gsiindex.sty — a style file that also provides something, but you should not bother.

example.tex — the main text - this is what you are reading now.

fig.pdf — a little plot in in the pdf format.

SummerBanner.jpg — a graphic in jpg format.

You can delete my sample text and replace it with your own contribution to the volume, however we recommend keeping a copy of the initial version of the file for reference. We work with `pdflatex`, which implies that the format of figures is either `pdf` or `jpg`. If you use an editor adapted to deal with LaTeX, such as `kile` or `emacs` under `LINUX` or the `LEd` (Latex editor) together with the package `"MiKTeX 2.8"` under Microsoft, care that the processing is done as `pdflatex`; the `TeXShop` editor under MacOS automatically works with `pdflatex`. On the commandline level, the command for latexing is `pdflatex template.tex`, do this twice to sort out the cross-referencing.

These files should work with standard pdfLaTeX. Page numbers are included at the bottom of the page for your guidance. Do not worry about the final pagination of the volume which will be done after you have submitted the paper.

[1] You probably obtained these files from the web. And by the way this is how you make a footnote.

1.2 Headings and Text

Please preserve the style of the headings, text fonts and line spacing to provide a uniform style for the reports volume. In a two column format there may arise difficulties when finding suitable line and page breaks. We would strongly recommend that you leave such problems until preparing the final draft and after you have checked the placing of the two-column wide tables etc.

1.3 Equations

You can use inline equations, like $1 = 2 \pm 1$, but you should make sure that equations should be confined to one column wherever possible. Use the *equation* environment to display equations that you would like to reference to

$$a^2 + b^2 = c^2 \tag{1}$$

like this (see very important Eqn. 1) or use the *align* environment to split equations into several lines, and/or to align several equations with the & tabulator, *cf.* Eqs. (2 - 3). The second equation contains also some formatting hints concerning spacing using $\sim$ or \, or \! etc. and the insertion of text into formulae. If it's essential to have a two-column wide equation then use the method of Eqs. (2 - 3).

For problems of placement of a wide equation, see Section 1.6 below.

1.4 Tables

The tables are designed to have a uniform style throughout the reports volume. It doesn't matter how you choose to place the inner lines of the table, but we would prefer the border lines to be of the style shown in Tables 1 and 2. For either a single or a double column table, the top and bottom horizontal lines should be single (using

$$U = D(\delta_1, \delta_2, \delta_3, \delta_4) R_{12}(a, \delta_5) R_{13}(b, \delta_6) R_{14}(c, \delta_7) R_{23}(d, \delta_8) R_{24}(e, \delta_9) R_{34}(f, \delta_{10}) \quad (2)$$

$$V(\vec{r}) = \int_{-\infty}^{\vec{r}} \vec{F}(\vec{r}')\, \mathrm{d}\vec{r}' \quad \text{for} \quad \vec{r} \in \mathbb{R}^3 \quad \text{(potential energy)} \quad (3)$$

Title	ϵ'	λ	γ
12	34	56	78
and even more importantly			
6.8977	8.9087	**42**	4.2928

Tab. 1: *Small Table with some fancy input*

\hline), and there should be single vertical lines on the perimeter, (using \begin{tabular}{|...|}) as in Tables 1 and 2. For the inner lines of the table, it looks better if they are kept to a minimum.

The use of single column-wide tables is recommended wherever possible. For the page wide tables, use the environment given in the example of Table 2. Do **not** change the latex commands from \begin{table*} to \begin{tabular}, or from \end{tabular} to \end{table*}, apart from inserting your own caption and table label. The captions for tables and figure should be placed at the bottom.

1.5 Figures

The same arguments as given above also apply for figures, i.e. it is preferable to have figures that fit into one column of the text. If this is not possible, then use the full page-width commands \begin{figure*} and \end{figure*}. The \includegraphics command can take optional arguments such as width or height of the graphics, as can be seen in the examples given in this document. LaTeX will scale the figure based on the width provided and adjust the height accordingly. You can use any form of the units of measurement described in the LaTeX Book.

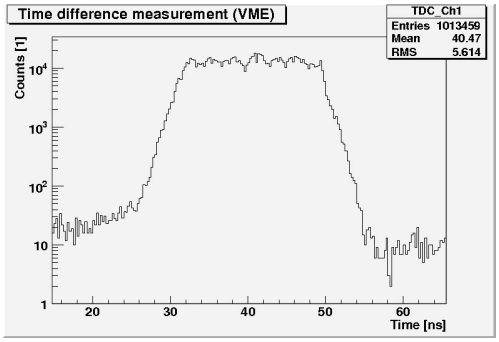

Fig. 1: *Caption for the figure will come here.*

Preferred graphic formats are *pdf*- or *jpg*. You will find this format amongst other output formats of most graphics software. The *eps* format is allowed! DO NOT - I repeat - DO NOT use the Unix command `convert` unless you really know what you are doing!

1.6 Limitations on the Placement of Equations, Tables and Figures

Figures and tables are so-called float objects that the LaTeXprocessor tries locate into some available space in the columns or at the page according to the directives given in square brackets, like [tb]. In order to have these float objects properly placed it may be necessary to shift the figure of tables declaration to appropriate places in the LaTeXsource file. Thus, in the final stages of preparing the document, try to declare the two-column wide figures, tables or equations at a point in *example.tex* that is prior to the top of the column of text where you would like the item to appear.[2] If you want to place an oversized object, as shown above in Fig. 2 for our logo reaching out of the standard text area, wrap the object by the *picture* environment of proper size. You can add further picture elements like text, etc.

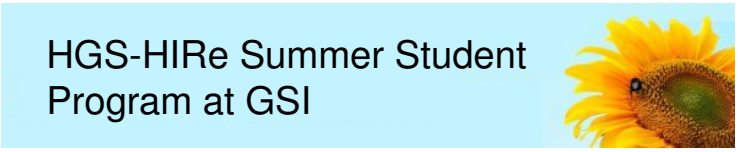

Fig. 2: *Summer banner in picture environment*

For *figure* environments try to use \begin{figure}[htb] (which is the default) where ever you can. Only very large figures and

[2] By 'declaring' I refer to placing the chunk of material describing the table or whatever at a particular point in the tex file.

Meson	$\Gamma(\pi^+\pi^-)\ s^{-1}$	$\Gamma(\pi^+\pi^-\gamma)\ s^{-1}$	
K_S^0	0.769×10^{10}	5.46×10^7	No DE observed, not even (IB)-E1 interference, despite large statistics, for $E_\gamma^* >$ 20MeV.
K_L^0	3.93×10^4	$(\mathrm{DE} = 0.62 \times 10^3)$	DE prominent, exceeding IB over the range of measurement $20 < E_\gamma^* < 160$MeV.

Tab. 2: *Nonsense Data. Note the difference between with(out) raisebox attribute in the code*

tables should be placed on a page by themselves. One can use the instruction *begin*{*figure**}[*p*] or *begin*{*table**}[*p*] to position these, and they will appear on a separate page devoted to figures and tables. Again, we would recommend making any necessary adjustments to the layout of the figures and tables only in the final draft. It is also simplest to sort out line and page breaks in the last stages.

1.7 Footnotes, the Bibliography, and Acknowledgments

Acknowledgments to tutors etc. may be placed in a separate section at the end of the text, before the bibliography. This should not be numbered so use *section**{*Acknowledgements*}.

Footnotes are denoted by a letter superscript in the text, and references are denoted by a number in square brackets. We have used *bibitem* to produce the bibliography. Citations in the text use the labels defined in the bibitem declaration, for example, the first paper by Jarlskog[1] is cited using the command *cite*{*ex:ja*}.

1.8 Your own packages

If you like to use other packages than the already provided ones (*amsmath, amsfonts, verbatim, graphicx, float*) please use an extra *usepackage*{*...*} line, since we will cut off the marked lines at the top of the document as indicated in the comments. If you use non-standard packages please include them in your tarfile.

2 Happy LaTeXing and howto submit your manuscript

Once you finished writing your report, please print it out and check it once more for misspellings etc. If you have already done it, do it again. We won't be able to find typos in your formulas. So check them carefully! Also please check your bibliography items. See whether the figures and tables appear in the positions you would like to have them, otherwise move them. If you think, everything that could be done is done, which means that you triple and quadruple checked everything, please save your TeXfile as `report_yourname.tex` and 'zip' your files (including the images and whatsoever) into one archive `yourname.zip` (e.g. under LINUX: `zip -r yourname.zip yourdirectory`). Then send the resulting file to the Summer Student in charge of compiling the book. Please refrain from sending your file twice or more to avoid unecessary confusion on his side.

Acknowledgments

This is where one places acknowledgments to your tutors, Albert Einstein etc. Note that there are no section numbers for the Acknowledgments. The style file will automatically generate the heading for references.

References

[1] C Jarlskog in *CP Violation*, ed. C Jarlskog (World Scientific, Singapore, 1988).

[2] L. Maiani, *Phys. Lett.* B **62**, 183 (1976).

[3] J.D. Bjorken and I. Dunietz, *Phys. Rev.* D **36**, 2109 (1987).