ANN_REP_EXAMPLE

INTRODUCTION

The TRIUMF Annual Report Scientific Activities 1999 is being produced using LaTeX 2ε and Encapsulated PostScript (EPS) files for figures.

Full instructions, skeleton files, and last year's report are available on the WWW at `http://www.triumf.ca/annrep/` which may be reached via the TRIUMF Home Page.

This example file `ann_rep_example.tex` demonstrates the format that authors should follow when preparing their contributions.

The skeleton file `ann_rep_skeleton.tex`, which should be used to produce all contributions, is displayed at the end of this document.

Contributor Contact Information

Contributors should provide their contact information in the fields provided in the skeleton file at the beginning of the document.

Section Headings

Centred, double-column-wide headings, typeset in capital letters in a `\large \bfseries` font, are only used for the division headings in the report.

Headings for major aspects of each division are treated as LaTeX 2ε sections and are typeset in capital letters, with no indentation, in a `\normalsize \bfseries` font in two-column mode throughout the report.

Contribution Headings

Authors should provide an explicit contribution heading which indicates the subject of the report.

Contribution headings should be in lower-case letters with the initial letter of significant words capitalized.

Sub headings should be in lower-case letters with the initial letter of the first word capitalized.

The skeleton file provides the fields required for Science Division experiment report headings. The experiment title should be in lower-case letters with the initial letter of the first word capitalized.

As shown in the skeleton file, the LaTeX 2ε sectioning commands have been redefined for the annual report format to allow contributors to use the `\subsection*`, `\subsubsection*` and `\paragraph*` commands for their section headings and hence use three levels of sectioning if required.

All text is typeset in a `\normalsize \rmfamily` [10pt] font, in two-column mode.

Tables

A skeleton table is displayed below. Most tables will be displayed in single-column-wide mode. Exceptionally, double-column-wide mode will be used.

Please observe the horizontal line convention and always provide a table caption.

Column headings and data may be left, centre or right justified to suit the format of the information being presented. The default skeleton settings should be edited as required to produce the correct number of columns and column justification.

Table I. Please provide a concise table caption. Please see the code for guidance on how to format single and multiple line table captions correctly.

Column 1	Column 2	Column 3
text	text	text
or	or	or
numbers	numbers	numbers
left	centre	right
justified	justified	justified
⋮	⋮	⋮

Figures

All figures should be included at the end of the text.

Figures should always be submitted in Encapsulated PostScript (EPS) format with correct bounding box values.

Concise captions must always be provided.

Most figures will be displayed in single-column-wide mode. Exceptionally, double-column-wide mode will be used.

If authors submitted figures for the 1998 annual report, they should study the post mortem of the 170 figures to see what editing, if any, was necessary in order to be able to use them in the annual report. Please see `www.triumf.ca/annrep/ar99www/ar98_figures.html` for full details. Please try to correct any errors before submitting figures this year.

Figures must **not** have borders. The figures shown below have borders for demonstration purposes only.

Figures with correct orientation

Figure 1 has been produced using the EPS file `ann_rep_example_figure_1.eps` which has the correct portrait orientation. Note the exact width scaling through the use of `width=\linewidth` in the `\epsfig` command.

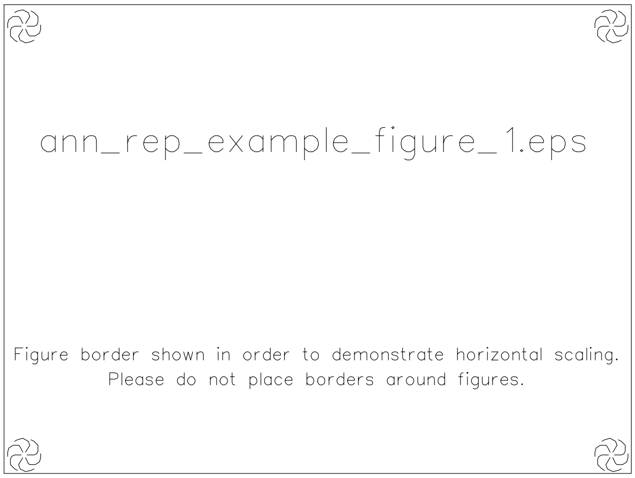

Fig. 1. Please provide a concise figure caption.

Figures with incorrect orientation

Figure 2 has been rotated through 90 degrees (see code listing below) to compensate for the incorrect orientation of the Encapsulated PostScript file `ann_rep_example_figure_2.eps`. Again, exact width scaling is produced using `width=\linewidth` in the `\epsfig` command.

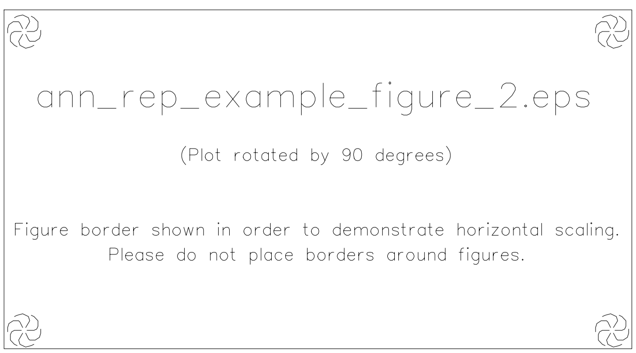

Fig. 2. Please see the code for guidance on how to rotate figures and scale them to the column width, and also how to format single and multiple line figure captions correctly.

Legibility and use of colour in figures

Authors should always use the LaTeX 2ε template, print the final version of the contribution on a 600 dpi monochrome laser printer, and carefully inspect the printout for legibility prior to submission. In particular, good rendering of colour or greyscale figures should be confirmed.

All lettering and arrows should be in black or a dark colour which renders well when printed on a monochrome laser printer.

Figure 3 shows the rendering of the default colours defined in the TRIUMF Graphics package. Identical colour names are available in other software packages and will be rendered in a similar fashion. The image was created with a linewidth setting of 1.

Authors viewing this file in colour on screen or colour hardcopy should produce a 600 dpi monochrome printout in order to fully appreciate the degradation which occurs when printing at 600 dpi greyscale.

Fig. 3. Rendering of default colours defined in the TRIUMF Graphics package. Identical colour names are available in other software packages and will be rendered in a similar fashion. The image was created with a linewidth setting of 1.

It should be noted that the digital printing process presently used to produce the monochrome hardcopy version of the annual report further degrades colours, giving the appearance of rendering greyscale equivalents at 200 dpi rather than the 600 dpi resolution supplied. The reason for this print quality degradation is not understood but is believed to be due to the raster image processor (RIP) software engine used in the Xerox Docutech printers. The problem is being researched and a solution sought.

Hence the appearance of figures printed on 600 dpi monochrome laser printers is the best that can be expected in the final printed version of the annual report, and often the results will be worse. If the submitted figures are already of marginal quality, then the final result will almost certainly be unsatisfactory.

Apart from the colours used in figures, another major issue is the linewidth setting. If lines or text are too fine when printed on a 600 dpi monochrome laser printer, increase the linewidth setting in the software package used to produce the figure and create a new EPS file.

Naming convention for figure .eps files

Please use the following naming convention for figures when using the `\epsfig` command: `figure=n_m.eps` where `n` is the experiment number or short alphanumeric string to identify the subject of the contribution, and `m` is the contribution figure number.

Publications

After the text and figures, list all journal or conference publications published, in press, or submitted during 1999.

Theses

List all theses awarded in association with the work during 1999. Provide name, thesis title, type of degree, department and institution awarding degree.

Science Division Experiments

Science Division contributors should also list the names and affiliations of all people presently associated with their experiment and the present status of the experiment. The information will be used to update Appendix D and Appendix E.

Skeleton File ann_rep_skeleton.tex

The skeleton file `ann_rep_skeleton.tex` is displayed below. Authors should use this file to produce their contributions. It may be downloaded from the TRIUMF Annual Report home page at `http://www.triumf.ca/annrep/`.

```
% ann_rep_skeleton.tex         Last updated 20-DEC-1999

% Skeleton LaTeX file for contributions to the
% TRIUMF Annual Report Scientific Activities 1999
% in LaTeX2e format.

\documentclass{article}
\usepackage{latexsym,multicol,epsfig,rotating}

%\usepackage{armargins,calc,draftcopy_990}
%\usepackage{longtable}
%\usepackage{macros99}

\makeatletter
\renewcommand{\section}
 {\@startsection{section}{1}{\z@}%
 {1.5ex plus 0.5ex minus 1.2ex}{1.3ex plus 0.1ex}%
 {\normalsize\bfseries\mathversion{bold}}}
\renewcommand{\subsection}
 {\@startsection{subsection}{2}{\z@}%
 {1.5ex plus 0.5ex minus 1.2ex}{1.3ex plus 0.1ex}%
 {\normalsize\bfseries\mathversion{bold}}}
\renewcommand{\subsubsection}
 {\@startsection{subsubsection}{3}{\z@}%
 {1.5ex plus 0.5ex minus 1.2ex}{1.3ex plus 0.1ex}%
 {\small\bfseries\mathversion{bold}}}
\renewcommand{\paragraph}
 {\@startsection{paragraph}{4}{\z@}%
 {1.5ex plus 0.5ex minus 1.2ex}{1.3ex plus 0.1ex}%
 {\footnotesize\bfseries\mathversion{bold}}}
\makeatother

\newcounter{time}
 \setcounter{time}{\time}

\newcounter{hours}
\newcounter{minutes}
\newcommand{\ptime}{%
 \setcounter{hours}{\time/60}%
 \setcounter{minutes}{\time-\value{hours}*60}%
  \thehours :\theminutes}

\makeatletter
\renewcommand{\ps@plain}{%
 \renewcommand{\@oddfoot}{\rmfamily\rightmark \hfil
  {\tiny
   Experiment X
   \ \ldots \ \
\thetime
%\ptime
   \ \ \today \ \ \ldots \ \ } \thepage \hfil}
 \renewcommand{\@evenfoot}{\@oddfoot}}
\makeatother

\textwidth     175mm
\oddsidemargin  -5mm
\topmargin     -18mm
\textheight    230mm
\columnsep       9mm
\fboxsep         0mm
\flushbottom
\frenchspacing

\pagestyle{plain}
\setcounter{page}{1}

\begin{document}

\begin{multicols}{2}

%###############################################
%# All contributors must provide their contact #
%# information after the colons below.         #

%  Name         :
%  E-mail       :
%  TRIUMF Tel # :

%  OFF-SITE CONTRIBUTORS ONLY:

%  Tel # :
%  FAX # :
%###############################################

%@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
%@ Contribution heading for Science Division   @
%@ experiment reports ONLY.                    @
%@ Contributors from other divisions should    @
%@ delete or comment out these lines.          @
%@ Replace keywords with relevant information. @
```

```
\subsection*{Experiment X \\
 Experiment title \\
 \textnormal{\emph{
 (Spokesperson, Affiliation)
}}}
%@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

%**********************************************
%* Contribution heading for other divisions. *
%* Science Division contributors should      *
%* delete or comment out this line.          *

\subsection*{Type contribution heading here }
%**********************************************


% Enter main text of contribution here.

   Main text.


\subsubsection*{Type subsubsection heading here }

% Enter subsubsection text here.
% Use as many subsubsections as required.

   Subsubsection text.


\paragraph*{Type paragraph heading here }

% Enter paragraph text here.
% Use as many paragraphs as required.

   Paragraph text.


%***********************************
% Skeleton table - insert in text. *
%***********************************

\begin{center}
%\vspace*{-3mm}
\parbox{\linewidth} %Comment out if single line caption
{\small \setlength{\baselineskip}{2.6ex}
Table~I. \ Please provide a concise table caption.
Please see the code for guidance on how to format
single and multiple line table captions correctly.
}\\[2mm]
\begin{tabular*}{83mm}{l@{\extracolsep{\fill}}cr}
 \hline\hline
Column 1  & Column 2  & Column 3  \\ \hline
text      & text      & text      \\
or        & or        & or        \\
numbers   & numbers   & numbers   \\
left      & centre    & right     \\
justified & justified & justified \\
\vdots    & \vdots    & \vdots    \\ \hline\hline
\end{tabular*}
\end{center}


%*******************
% Skeleton figure. *
%*******************

\begin{center}
%\vspace*{-3mm}
\epsfig{figure=n_1.eps,width=\linewidth}\\[2mm]
%\parbox{\linewidth} %Comment out if single line caption
{\small \setlength{\baselineskip}{2.6ex}
Fig.~1. \ Please provide a concise figure caption.
}
\end{center}


%*************************************
% Skeleton figure requiring rotation. *
%*************************************

\begin{center}
%\vspace*{-3mm}
\epsfig{figure=n_2.eps,angle=90,width=\linewidth}\\[2mm]
\parbox{\linewidth} %Comment out if single line caption
{\small \setlength{\baselineskip}{2.6ex}
Fig.~2. \ Please see the code for guidance on how to
rotate figures and scale them to the column width,
and also how to format single and multiple line
figure captions correctly.
}
\end{center}


%***************************************************
% For all contributions, list below all journal or *
% conference publications published, in press,     *
% or submitted during 1999.                        *
%***************************************************

   Publications:


%*******************************************************
% For all contributions, list below all theses awarded *
% in association with the work during 1999.  Provide   *
% name, thesis title, type of degree, department and   *
% institution awarding degree.                         *
%*******************************************************

   Theses:


%******************************************************
% For Science Division experiment contributions ONLY, *
% list the names and affiliations of all people       *
% presently associated with the experiment and the    *
% present status of the experiment.                   *
% Information will be used to update Appendix D and   *
% Appendix E.                                         *
%******************************************************

   Appendix D and Appendix E update:


\end{multicols}

\end{document}
```