The **HEP-FLAT** package

Convenience package for float placement

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Abstract

The **HEP-FLAT** package redefines some \LaTeX float placement defaults and defines convenience wrappers for floats.

The **HEP-FLAT** package can be loaded with `\usepackage{hep-float}`.

Automatic float placement is adjusted to place a single float at the top of pages and to reduce the number of float pages, using the \LaTeX macros.

\begin{itemize}
  \item \texttt{\setcounter{bottomnumber}{0}} no floats at the bottom of a page (default 1)
  \item \texttt{\setcounter{topnumber}{1}} a single float at the top of a page (default 2)
  \item \texttt{\setcounter{dbltopnumber}{1}} same for full widths floats in two-column mode
  \item \texttt{\renewcommand{\textfraction}{.1}} large floats are allowed (default 0.2)
  \item \texttt{\renewcommand{\topfraction}{.9}} (default 0.7)
  \item \texttt{\renewcommand{\dbltopfraction}{.9}} (default 0.7)
  \item \texttt{\renewcommand{\floatpagefraction}{.8}} float pages must be full (default 0.5)
\end{itemize}

The most useful float placement is usually archived by placing the float \textit{in front of the paragraph} it is referenced in first. Additionally, manual float placement can be deactivated using the \texttt{\manualplacement package option}.

The float environments have been adjusted to center their content. The usual behaviour can be reactivated using `\raggedright`.

The \texttt{\panels} environment makes use of the \texttt{subcaption} package [1]. It provides sub-floats and takes as mandatory argument the number of sub-floats (default 2) or the width of the first sub-float as fraction of the \texttt{\linewidth}. Within the `\begin{panels}{vertical alignment}{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 \texttt{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. The spacing between the panels can be adjusted by adjusting the `\panelvspace` terms of a \texttt{\linewidth} fraction \texttt{\renewcommand{\panelvspace}{\linewidth}{\<length>}} fraction and the `\panelvspace` in terms of a length \texttt{\renewcommand{\panelvspace}{\panelvspace}{\<length>}}.

The \texttt{\booktabs} [2] and \texttt{multirow} [3] packages are loaded enabling publication quality tabulars such as in table 1b.

The \texttt{graphicx} package [4] is loaded and the `\graphic{width}{figure}` macro is defined, which is a wrapper for the `\includegraphics{figure}` macro and takes the figure width as fraction of the \texttt{\linewidth} as optional argument (default 1). If the graphics are located in a sub-folder its path can be indicated by `\graphics{\<subfolder>}`.

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\*This document corresponds to **HEP-FLAT** v1.2.

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\begin{panels}{2}
\begin{tabular}{|c|c|c|}
\hline
one & two \\
\hline
 a & b & c & d \\
\hline
\end{tabular}
\end{panels}

\begin{panels}{2}
\begin{tabular}{|c|c|}
\hline
 one & two \\
\hline
 a & b & c & d \\
\hline
\end{tabular}
\end{panels}

(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).

References