The HEP-FLOAT package*

Convenience package for float placement

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Abstract

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

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

figure (*env.*)
table (*env.*)

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.

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

manualplacement

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 can be deactivated using the `manualplacement` package option.

\raggedright

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

panels (*env.*)
\panel

The `panels` environment makes use of the SUBCAPTION package [1]. It provides 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}[`⟨*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 `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` in terms of a `\linewidth` fraction

\panelhspace
\panelvspace

*This document corresponds to HEP-FLOAT v1.1.

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```
\begin{panels}{2}
  code
\panel
  \begin{tabular}...\end{tabular}
\end{panels}
```

(a) Code for this panel environment.

	one		two	
a	b	c	d	
	b	c	d	

(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).

\renewcommand{\panelhspace}fraction and the \panelvspace in terms of a length \renewcommand{\panelvspace}{⟨*length*⟩}.

tabular (*env.*) The BOOKTABS [2] and MULTIROW [3] packages are loaded enabling publication quality tabulars such as in table 1b.

\graphic
\graphics The 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 \linewidth as optional argument (default 1). If the graphics are located in a sub-folder its path can be indicated by \graphics{⟨*subfolder*⟩}.

References

[1] A. Sommerfeldt. 'The subcaption package: Support for sub-captions' (2007). CTAN: subcaption. GitLab: axelsommerfeldt/caption.

[2] D. Els and S. Fear. 'The booktabs package: Publication quality tables in LaTeX' (1995). CTAN: booktabs.

[3] P. van Oostrum and J. Leichter. 'The multirow, bigstrut and bigdelim packages: Create tabular cells spanning multiple rows' (1994). CTAN: multirow.

[4] D. Carlisle and S. Rahtz. 'Packages in the "graphics" bundle: Enhanced support for graphics' (1994). CTAN: graphicx.