

The HEP-FLOAT package*

Convenience package for float placement

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2024/11/01

Abstract

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

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

`figure` (*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 L^AT_EX macros.

`table` (*env.*)

`\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.*) 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}[\langle vertical alignment \rangle]{\langle width \rangle}` 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{\langle width \rangle}` macro takes the width of the next sub-float as mandatory argument. The example code is presented

`\panel`

`\panelhspace` in table 1a. The spacing between the panels can be adjusted by adjusting the `\panelvspace` in terms of a `\linewidth` fraction `\renewcommand{\panelhspace}{fraction}` and the `\panelvspace` in terms of a length `\renewcommand{\panelvspace}{\langle length \rangle}`.

`\panelvspace`

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

`\graphic` The `GRAPHICX` package [4] is loaded and the `\graphic[\langle width \rangle]{\langle figure \rangle}` macro is defined, which is a wrapper for the `\includegraphics{\langle figure \rangle}` 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{\langle subfolder \rangle}`.

`\graphics`

*This document corresponds to HEP-FLOAT v1.3.

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```

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

```

	one	two		
	b	c	d	
a	b	c	d	

(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

- [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`.