

Package hvfloat

Rotating and scaling of objects and captions ver 2.21

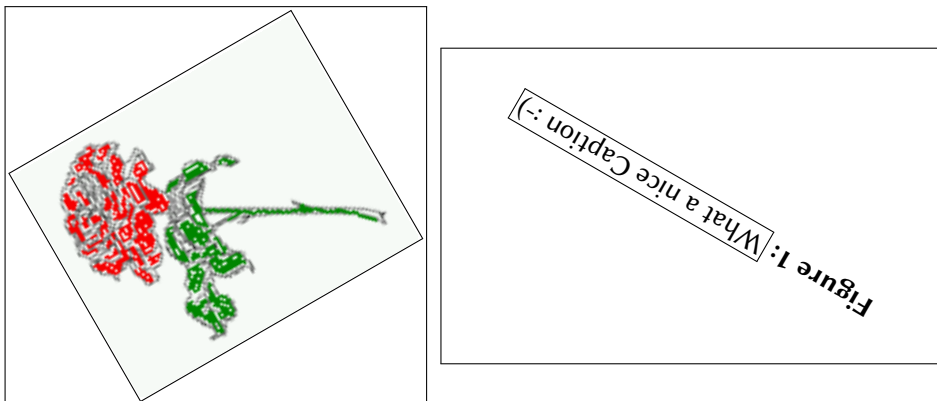
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The package hvfloat defines a macro to place objects and captions of floats in different positions with different rotating angles.

All objects and captions are framed on the first pages, which is only for some demonstration here and has no additional sense!

To compare the place of the definition of the floating objects in the source and the output a marginnote `float` is set into the margin. This is done also only for demonstration!



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1 The package options

- fbox The objects and captions are put into a `\fbox` command, like in this documentation. This doesn't make real sense and is only for some demonstration useful or for locating problems if images seems to have too much whitespace.
- hyperref Load package `hyperref`.

The length `\belowcaptionskip` is set by \LaTeX to 0pt and changed in `hvfloat` to the same value than `\abovecaptionskip`. This length can be changed to another value in the usual way with `\setlength` or `\addtolength`.

The following packages are loaded by `hvfloat` and the optional argument `hypcap` is passed to the packages `caption` and `subcaption`:

`caption`, `subcaption`, `atbegshi`, `expl3`, `multido`, `graphicx`, `xkeyval`, `ifoddpage`, and `afterpage`.

2 The Macros and optional arguments

The syntax for the macros and `\hvFloatSetDefaults`, `\hvFloatSet`, and `\hvFloat` is

```
\hvFloatSet{key=value list}
\hvFloatSetDefaults
\hvFloat* [Options] + {float type}{floating object}[short caption]{long caption}{label}
```

The star version is explained in section [11 on page 24](#) and [19.2 on page 52](#) and the optional `+` is explained in section [17.3 on page 39](#).

`\hvFloatSet` allows the global setting of keywords and `\hvFloatSetDefaults` sets all keywords to its default value as shown in [Table 2 on the next page](#).

If `\hvFloat` has an empty second parameter `<float type>`, then `\hvFloat` switches by default to a nonfloat (see [table 2](#)) object, which is not important for the user. All other parameters may also be empty and the short caption as second optional parameter missing. This one is as usual the caption for the `\listoffigures`.

There are some more macros defined, more or less for internally use in `hvfloat`, but they can be used for own purposes.

```
\figcaption[short caption text]{caption text}
\tabcaption[short caption text]{caption text}
```

They are used for the `nonFloat` keyword, where these macros write captions in the same way but outside of a float environment. The default caption cannot be used here. It is no problem to use the `\tabcaption` command to place a caption anywhere, like here in an inlined mode:

Table 1: A Caption without any sense and any object

A label can be put inside the argument or after the command in the usual way, so that a reference to the not existing [table 2](#) is no problem.

2 The Macros and optional arguments

[...] It is no problem to use the `\verb|\tabcaption|` command to place a caption anywhere, like here in an `inlined` mode: `\tabcaption[The Caption without sense ...]{A Caption without any sense and any object}\label{dummy}` A label can be put inside the argument or after the command in the usual way, so that a reference to the not existing table `\ref{dummy}` is no problem.

With the macro `\hvDefFloatStyle` one can define a style which can be used instead of the individual setting:

`\hvDefFloatStyle{name}{setting}`

Internally the style is saved in a macro named `\hv@<name>`.

There are the following keywords:

Table 2: The optional keywords for the macro `\hvFloat`

Keyword	Default	Description
<code>floatPos</code>	<code>tbp</code>	This is the same default placement setting like the one from standard \LaTeX , but maybe not always the best setting.
<code>rotAngle</code>	<code>0</code>	The value for the angle if both, the object and the caption should be rotated in the same way.
<code>capWidth</code>	<code>n</code>	The width of the caption. Can be <code>»n«</code> like a natural width, <code>»w«</code> for the width of the object, <code>»h«</code> for the height of the object, or a scale for <code>\columnwidth</code> .
<code>capAngle</code>	<code>0</code>	The value for the angle if the caption should be rotated. Counted anti clockwise.
<code>capPos</code>	<code>bottom</code>	The position of the caption relative to the object. Possible values are before: <i>always</i> before (left) from the object. top: <i>always</i> on top of the object. left: <i>always</i> before (left) from the object, but on the <i>same page</i> in twocolumn mode. after: <i>always</i> after (right) from the object. bottom: <i>always</i> on the bottom of the object. right: <i>always</i> after (right) from the object, but on the <i>same page</i> in twocolumn mode. inner: in twoside mode <i>always</i> typeset at the inner margin. outer: in twoside mode <i>always</i> typeset at the outer margin. evenPage: in twoside mode with fullpage objects <i>always</i> on an even page. oddPage: in twoside mode with fullpage objects <i>always</i> on an odd page.
<code>capVPos</code>	<code>center</code>	This is only important for <code>capPos=left right</code> . Only in this case the caption can vertically placed at the bottom, center and top.
<code>objectPos</code>	<code>center</code>	The horizontal placement of the object relative to the document. Possible values are (l) eft (c)enter (r)ight.

Keyword	Default	Description
objectAngle	0	The value for the angle if the object should be rotated. Counted anti clockwise.
floatCapSep	5pt	The additional width between the object and a left or right placed caption.
use0Box	false	Instead of passing the object as parameter to the \hvFloat, the contents maybe saved in the box \hv0Box With use0Box=true the contents of this box will be used.
onlyText	false	The caption will be printed as normal text and there is no entry in the list of
nonFloat	false	The object isn't put in a floating environment. It is printed as standard text with an additional caption. The float counters are increased as usual and can be referenced.
wide	false	The float can use \textwidth+\marginparwidth as horizontal width.
objectFrame	false	put a frame with no separation around the float object.
style	-	Use a defined style
capFormat	-	Define formatting options for \caption (see documentation of package caption).
subcapFormat	-	Define formatting options for \subcaption.

3 The default use of floating environments

In this case there is no essential difference to the well known figure or table environment, f.ex.:

```
\begin{figure}
... object ...
\caption{...}% caption below the object
\end{figure}
```



Fig. 2

Figure 2: Without any keywords (only the fbox package option)

Code for figure 2:

4 Caption width

```
\hvFloat{figure}{\includegraphics{images/rose}}{Without any keywords (only the \texttt{fbox}
package option)}{fig:0}
```

Tab. 3

Table 3: With the only Option capPos=top to place the caption on top of the table, which is often the default.

Name	Type	Description
\hvFloat	command	places object and caption in different ways
hvFloatEnv	environment	places object and caption exactly Here
\figcaption	command	writes a figure caption in a non floating environment
\tabcaption	command	writes a table caption in a non floating environment
\hvFloatSetDefaults	command	sets all options to the defaults
\hvDefFloatStyle	command	define a user style

Code for table 3:

```
\hvFloat[capPos=top]{table}{%
\begin{tabularx}{\textwidth}{>{\ttfamily}l|l|X}
\rmfamily Name & Type & Description\\ \hline
\CMD{hvFloat} & command & places object and caption in different ways\\
hvFloatEnv & environment & places object and caption exactly Here\\
\CMD{figcaption} & command & writes a figure caption in a non floating environment\\
\CMD{tabcaption} & command & writes a table caption in a non floating environment\\
\CMD{hvFloatSetDefaults} & command & sets all options to the defaults\\
\CMD{hvDefFloatStyle} & command & define a user style
\end{tabularx}}%
{With the only Option \texttt{capPos=top} to place the caption on top of the table, which is often
the default.}%
{tab:0}
```

See section 14 for some more informations about tabulars as objects.

4 Caption width

4.1 Default – natural width

The default setting is the natural width of a paragraph with respect to the current linewidth or columnwidth for a caption below or above an object. It behaves in the same way as a caption set by one of the default floating environments like figure or table:

```
\hvFloat[floatPos=!htb]{figure}{\includegraphics{images/rose}}%
{Default caption width setting, which is the natural width with respect to the current linewidth
.}{fig:width0}
```

Fig. 9 For the following examples the package option fbox is disabled. All frames are now set with the macro \frame or the optional keyword objectFrame.



Figure 3: Default caption width setting, which is the natural width with respect to the current linewidth.

For a caption beside an object, the *natural* caption width (without the optional argument `wide`) is given by the current linewidth minus the width of the object and the space between object and caption, which is set by `floatCapSep` (see Table 2 on page 8).

```
\hvFloat[floatPos=!htb,capPos=after,objectFrame]{figure}{\includegraphics[scale=1.5]{images/rose}}
%
{Caption right beside with a \emph{natural} width, which is given by the width of the object,
the separation between object and caption, and the current linewidth.}{fig:width1}
```

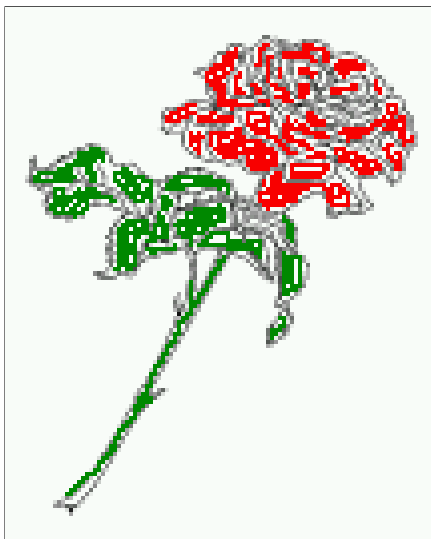


Figure 4: Caption right beside with a *natural* width, which is given by the width of the object, the separation between object and caption, and the current linewidth.

Fig. 4

4.2 Relative linewidth

With `capWidth=<number>` the caption width is set to `<number>\columnwidth`. For captions at the bottom or on top of objects the setting is not checked if `<number>` is greater than 1.

4 Caption width

```
\hvFloat[floatPos=!htb,capWidth=0.9]{figure}{\includegraphics{images/rose}}%  
{Caption below with a width of 0.9 of the current line width (column width), which is  
in this special case \the\linewidth. Divide it by 28.82 to get cm.}{fig:width2}
```

Fig. 5



Figure 5: Caption below with a width of 0.9 of the current line width (column width), which is in this special case 376.4258pt. Divide it by 28.82 to get cm.

If such a value like 0.9\linewidth is used for a caption beside an object, then the macro does a test if the space beside the object is less equal the defined caption width. If not then the width is set to the possible value between object and margin:

```
\hvFloat[floatPos=!htb,  
capPos=after,  
capWidth=0.9]{figure}{\includegraphics[scale=1.5]{images/rose}}%  
{Caption right beside with a width setting of \texttt{0.9\textbackslash linewidth}  
which is too big for this example and therefore corrected  
by the macro to the maximal width.}{fig:width3}
```

Fig. 6

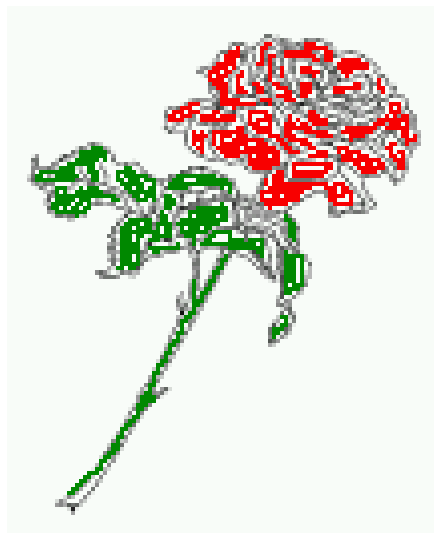


Figure 6: Caption right beside with a width setting of 0.9\linewidth which is too big for this example and therefore corrected by the macro to the maximal width.

4.3 Identical object and caption width

With `capWidth=w` the caption width is like the object width which makes only real sense if you have a lot of identical images with respect to its widths.

```
\hvFloat[floatPos=!htb, capWidth=w]{figure}{\includegraphics[width=0.5\linewidth]{images/CTAN}}%
{Caption below with a width of the given object which may be a problem
if it is a very small object.}{fig:width4}
```

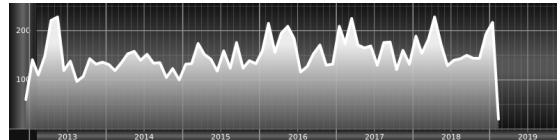


Figure 7: Caption below with a width of the given object which may be a problem if it is a very small object.

4.4 caption width to height of the object

With `capWidth=h` the caption width is like the object height which makes only real sense if you want to put a rotated caption beside the object.

```
\hvFloat[floatPos=!htb, capPos=after, capWidth=h, capAngle=90, objectFrame]{figure}{\includegraphics{
images/rose}}%
{Caption beside with a width of the given object height which may be a problem
if it is a very small object.}{fig:width5}
```



Figure 8: Caption beside with a width of the given object height which may be a problem if it is a very small object.

Fig. 8

5 Caption left or right of the object

By default the caption is set on the left side of the object. If the caption and the object are set side by side, then the keyvalue before is identical to the setting left.

5 Caption left or right of the object

5.1 Caption right with specific length

Code for figure 9:

```
\hvFloat%  
[floatPos=htb,  
capPos=right,  
objectFrame,  
objectPos=c]{figure}{\includegraphics[scale=0.9]{images/rose}}%  
[Caption beside object and vertically centered]%  
{Caption vertically centered right beside the float with a natural caption width  
(the default). \blindtext}%  
{fig:1}
```

floatFig. 9
capPos=right



Figure 9: Caption beside object and vertically centered

5.2 Caption left and rotated

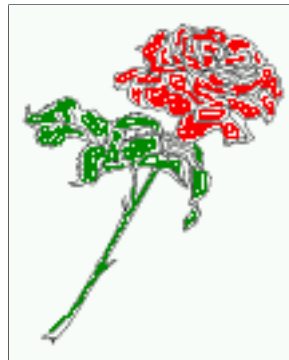
Code for figure 10:

```
\hvFloat%  
[floatPos=htb,  
capPos=left,  
capWidth=h,% of \columnwidth  
capAngle=90,  
objectFrame  
{figure}{\includegraphics{images/rose}}%  
[Centered Caption beside Object]%  
{Caption vertically centered left beside the float with a caption width  
of \texttt{capWidth=h}, which is the height of the object.}{fig:2}
```

Fig. 10 It is no problem to rotate the object, too. But with a different angle value than for the caption. Do not ask for the sense, it is only a demonstration of what is possible ... The object (image) is rotated by -30 degrees with the macro `\rotatebox`. Without any definition the caption will be placed vertically centered to the object. Important for the height of the object is the surrounding orthogonal rectangle.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”?

Figure 10: Centered Caption
beside Object



Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Code for figure 11:

```
\hvFloat[%
  capWidth=h,
  capPos=after,
  capAngle=180,
  objectAngle=90,
  capVPos=center,
  objectPos=center]{figure}{\frame{\includegraphics{images/rose}}}%
[Centered Caption beside Object]{%
{Caption vertically centered right beside the float with a caption width of the height
of the image and a rotation of the caption and the object.}}{fig:3}
```



Figure 11: Caption ver-
tically centered right be-
side the float with a cap-
tion width of the height
of the image and a rota-
tion of the caption and
the object.

Fig. 11

6 Caption inner or outer

Setting the caption position to *inner* or *outer* makes only sense for a document in twoside mode. For a onside document *inner* is the same as *left* and *outer* is the same as *right*. We show only the code for the first image with the setting `capPos=inner`, whereas the second one chooses only `capPos=outer`.

Code for figure 12:

6 Caption inner or outer

```
\hvFloat[capPos=inner]{figure}{\includegraphics{images/rose}}%  
[Centered Caption on the inner side]{%  
Caption set with the parameter setting \texttt{capPos=inner}, which will be  
a caption on the right side for an even page and on the left side for  
an odd page.}{fig:20}
```

Fig. 12



Figure 12: Centered Caption on the inner side

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Now the same Image with `capPos=outer` . The current pagenumber is 16, an even page. We now set a pagebreak at the end of the second image to see if it works with *inner/outer*.

```
\hvFloat[capPos=outer]{figure}{\includegraphics{images/rose}}%  
[Centered Caption on the inner side]{%  
Caption set with the parameter setting \texttt{capPos=outer}, which will be  
a caption on the right side for an even page and on the left side for  
an odd page.}{fig:20b}
```

Fig. 13

Figure 13: Centered Caption on the inner side



Fig. 14



Figure 14: Centered Caption beside Object

We have an odd page, the reason why figure 13 has the caption for *inner* on the left side and figure 14 for *outer* on the right side.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Code for figure 15:

```
\hvFloat[%
  capWidth=0.5,% of \columnwidth
  capPos=inner,% ==> INNER
  capAngle=0,
  capVPos=bottom,
  objectPos=center]{figure}{\includegraphics{images/rose}}%
  [Centered Caption beside Object]{%
  Caption vertically centered right beside the float with a caption
  width of \texttt{0.5\textbackslash columnwidth} and \texttt{capPos=outer} }{fig:22}
```

Fig. 15



Figure 15: Centered Caption beside Object

We have an odd page, the reason why figure 12 has the caption for *inner* on the right side and figure 14 for *outer* on the left side.

7 Vertical Position of the Caption

The caption can be placed beside the object in the positions

(c)enter|(b)ottom|(t)op

The code for figure 16:

```
\hvFloat[%  
  floatPos=htb,%  
  capWidth=0.25,%  
  capPos=right,%  
  capVPos=bottom,%  
{figure}{\frame{\includegraphics{images/rose}}}{Caption at bottom right beside the float}{fig:4}
```

Fig. 16



Figure 16: Caption at bottom right beside the float

The code for figure 17:

```
\hvFloat[%  
  floatPos=htb,  
  capWidth=0.25,  
  capPos=right,  
  capVPos=top,  
{figure}{\frame{\includegraphics{images/rose}}}{Caption at top left beside the float}{fig:5}
```

Fig. 17

Figure 17: Caption at top left beside the float



The code for figure 18:

```
\hvFloat[%
  capWidth=0.25,
  capPos=right,
  capVPos=center,% the default
]{figure}{\frame{\includegraphics{images/rose}}}{Caption centered right beside the float}{fig:6}
```

Fig. 18



Figure 18: Caption centered right beside the float

8 Caption format

The `\caption` and `\subcaption` macros are fully under the control of the package `caption`. The formatting can be set with the macros `\captionsetup`, `\subcaptionsetup`, or via the optional argument setting of `\hvFloat` with the keywords `capFormat` and `subcapFormat`. The argument itself will then be used internally by `\captionsetup` and/or `\subcaptionsetup` in a minipage, the reason why it will be local to the current image..

```
\hvFloat[%
  capPos=right,
  capFormat={labelsep=newline,justification=RaggedRight,font={small,it},labelfont=bf}
]{figure}{\frame{\includegraphics{images/rose}}}{\blindtext}{fig:66}
```

Fig. 19



Figure 19

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

9 Horizontal Position of the Float

The caption is always near the object, only divided by the length `\floatCapSep` which can be set by the keyword of the same name `floatCapSep`. It accepts only a value with any allowed unit. The keyword `objectPos` refers always to the complete floating object: caption *and* object. The meaning of `objectPos=left` is: Put the object as far as possible to the left margin. If `capPos=left` is also used, then the caption is at the left margin followed by the object (see Figure 21 on the next page).

The code for figure 20:

```
\hvFloat[%
  capWidth=0.25,
  capPos=right,
  capVPos=top,
  objectPos=left,
  objectFrame,
]{figure}{\includegraphics{images/rose}}{%
  Caption at top right beside the float and object position left}{fig:7}
```

Fig. 20



Figure 20: Caption at top right beside the float and object position left

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

The same with `capPos=left` :

Fig. 21

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Figure 21: Caption at top right beside the float and object position left



The code for figure 22:

```
\hvFloat[%
  capWidth=0.25,
  capPos=before,
  capVPos=top,
  objectPos=right,
  objectFrame,
]{figure}{\includegraphics{images/rose}}{%
  Caption at top leftt beside the float and object position right}{fig:8}
```

Figure 22: Caption at top left beside the float and object position right



Fig. 22

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

10 Wide floats

With the optional argument `wide` the width of the defined `\marginparwidth` is added to the allowed horizontal width of the float.

10 Wide floats

The code for figure 23:

```
\hvFloat[wide,
  capPos=right,
  capVPos=top,
  objectPos=left,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}{%
  Caption at top right beside the float and object position left and
  the option \texttt{wide}.}{fig:70}
```

Fig. 23

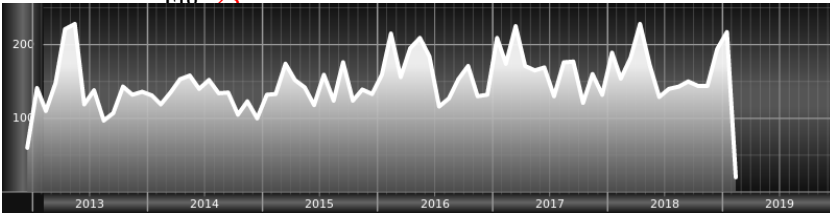


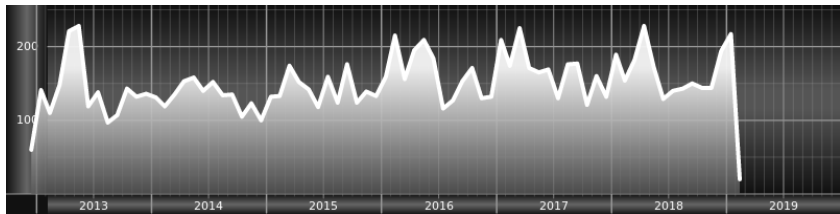
Figure 23: Caption at top right beside the float and object position left and the option wide.

The code for figure 24:

```
\hvFloat[wide,
  capPos=left,
  capVPos=top,
  objectPos=right,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}{%
  Caption at top left beside the object and object position left and
  the option \texttt{wide}.}{fig:80}
```

Fig. 24

Figure 24: Caption at top left beside the object and object position left and the option wide.



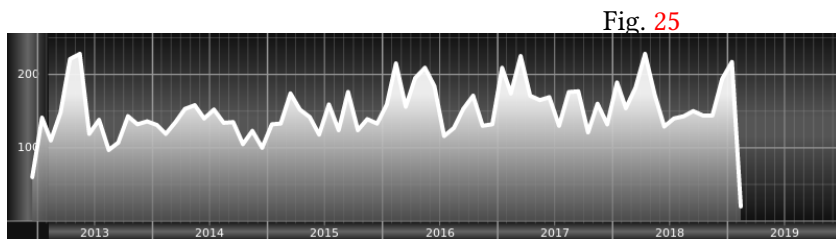
For a twosided document it will place the object always in the margin.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

```
\hvFloat[wide,
  capPos=inner,
  capVPos=top,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}{%
  Caption at top and inner beside the float and object position right and
```

the option `\texttt{wide}.`{fig:81}

Figure 25: Caption at top and inner beside the float and object position right and the option wide.

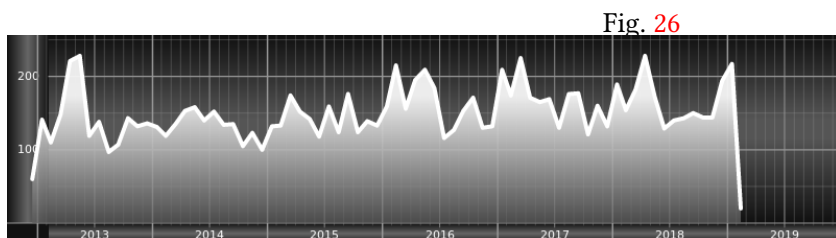


Now we set the same image with the same setting on the next page. The caption will change its side due to the setting `capPos=outer`.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

```
\hvFloat[wide,
  capPos=inner,
  capVPos=top,
]{figure}{\includegraphics[width=0.75\linewidth]{images/CTAN}}{%
Caption at top inner beside the float and object position right and
the option \texttt{wide}.
```

Figure 26: Caption at top inner beside the float and object position right and the option wide.



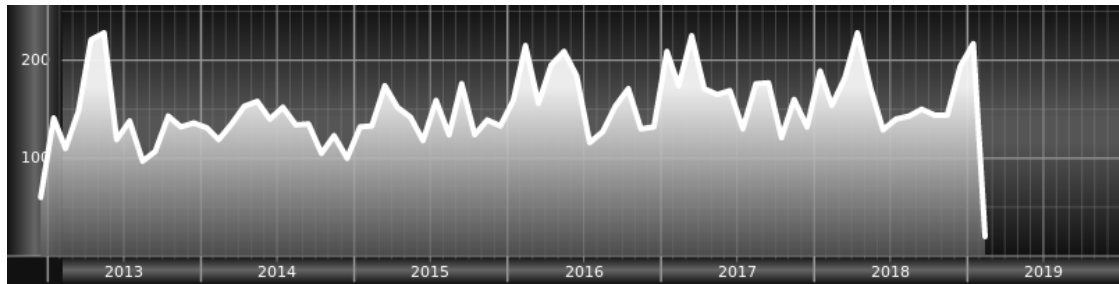
The caption can be typeset completely into the margin with:

```
\captionsetup{justification=RaggedRight}
\hvFloat[wide,
  capPos=outer,
  capVPos=top,
  floatCapSep=\marginparsep,
]{figure}{\includegraphics[width=\linewidth]{images/CTAN}}{%
Caption at top inner beside the float and object position right and
the option \texttt{wide}.
```

Fig. 27

12 Full Page Width in Landscape Mode

Figure 27: Caption at top inner beside the float and object position right and the option wide.



11 The star version \hvFloat*

In the twocolumn mode the floating environment can be set over both columns with the star version `\hvFloat*`. The floating environment will not be on the bottom of the page. The code for the following example (Figure 28) is:

```
\hvFloat*[capPos=right]{figure}%
{\includegraphics{images/frose}}%
[A float with the default caption setting]%
{A default caption of a '' object with the default setting, which
is a ''left'' caption which means that it always appears before the object.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}%
{fig:0}
```

The example shows on page 3 the star version and on page 4 the same without using the star.

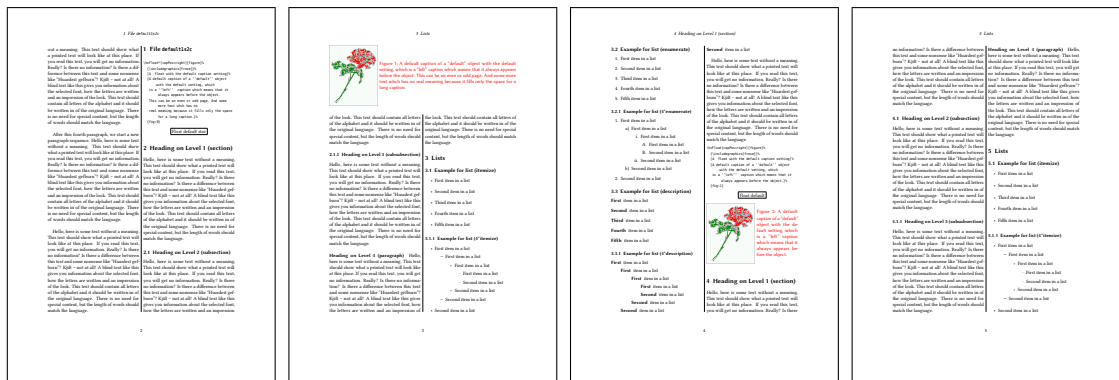


Figure 28: Output of default1s2c (pages 2 –5)

12 Full Page Width in Landscape Mode

If you do not want to load the package `lscape` (or `pdfscape`) you can use the `floatPos=p` option to put the image on an own page and rotated by 90 degrees (figure 29).

Code for figure 29:

```

\hvFloat[%
    floatPos=p,
    capPos=bottom,
    rotAngle=90,
    objectPos=center,
]{figure}{\includegraphics[width=0.9\textheight]{images/CTAN}}%
    [Object and Caption in landscape mode]{%
    Caption and object in landscape mode. \blindtext}{fig:9}

```

The float can also be put to the left or to the right (above/below in landscape) with the `objectPos=l` parameter

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fig. 29

The code for figure 30:

```

\hvFloat[%
    floatPos=p,
    capWidth=h,
    capPos=right,
    objectAngle=90,
    capAngle=-90,
    objectPos=left,
]{figure}{\includegraphics[width=\textheight]{images/CTAN}}%
    [Rotated Caption in Landscape]{%
    Caption right beside the float and object position left. The caption rotated by $-90$
    degrees.\blindtext}{fig:10}

```

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fig. 30

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

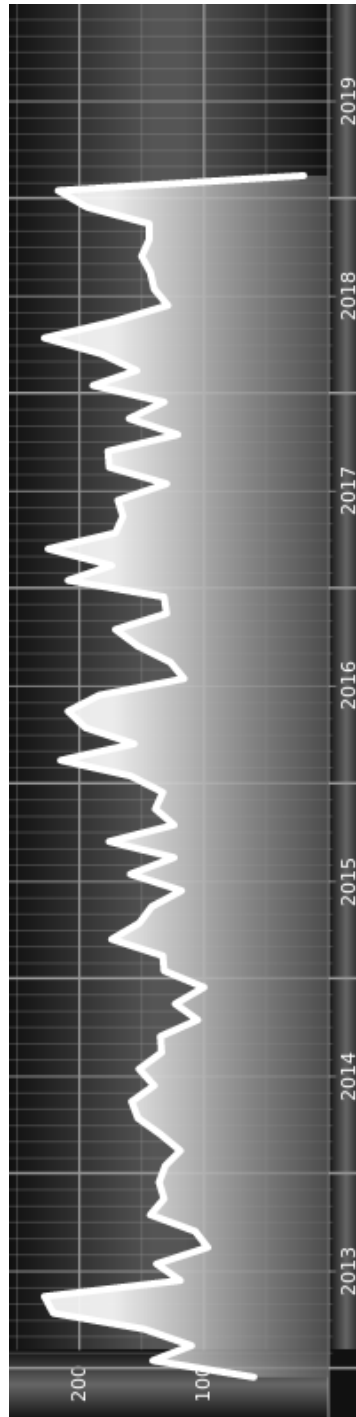


Figure 29: Object and Caption in landscape mode

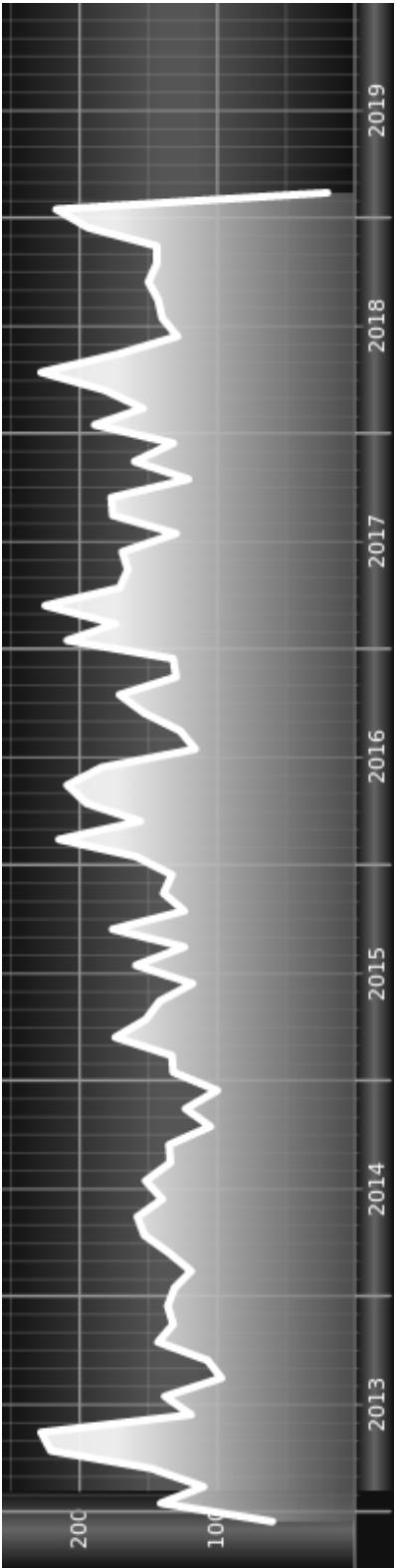


Figure 30: Rotated Caption in Landscape

13 The nonFloat Option

Sometimes it is better to put a “float” in a specific position of the page. This is possible with the nonfloat package and the keyword nonFloat.

Some nonsense text before the following `\emph{non floating}` object.

```
\hvFloat[%
  nonFloat,
  capWidth=0.25,
  capPos=right,
  capVPos=bottom,
  objectPos=center,
  objectFrame,
]{figure}{\includegraphics[scale=1.5]{images/rose}}%
[Nonfloat Captions]{%
  Caption of a “nonfloat” Object, using the \texttt{nonfloat} Package}{fig:11}
```

Some nonsense text after the preceding `\emph{non floating}` object.

Some nonsense text before the following *non floating* object.

Fig. 31

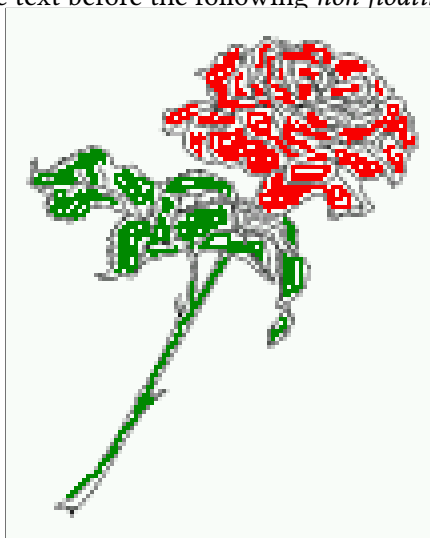


Figure 31: Caption of a “nonfloat” Object, using the nonfloat Package

Some nonsense text after the preceding *non floating* object.

The image 31 is exactly placed where the command `\hvFloat` appears. There are only commands for figure and table environments:

```
\newcommand{\figcaption}{\def\@captive{figure}\caption}
\newcommand{\tabcaption}{\def\@captive{table}\caption}
```

But it is no problem, to define more xxxcaption commands to support other with the float package defined new floats.

14 Tabulars as Objects

The object has to be passed as an parameter to the `\hvFloat` macro. This is no problem with images but maybe with tables, so it is easier to use the box `\hv0Box` to save the table in this box and pass it then to `\hvFloat` with the `use0Box` option. For example see table 4 and 5:

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

```
\savebox{\hv0Box}{%
\begin{tabular}>{\small\ttfamily}l|l|l\hline
\rmfamily Name      & Type      & Description\\\hline
\CMD{hvFloat} & command      & places object and caption in different ways\\
hvFloatEnv & environment & places object and caption exactly Here\\
\CMD{figcaption} & command      & writes a figure caption in a non floating environment\\
\CMD{tabcaption} & command      & writes a table caption in a non floating environment\\
\CMD{hvFloatSetDefaults} & command & sets all options to the defaults\\\hline
\end{tabular}%
}
```

The code for table 4 and 5 is:

```
\hvFloat[%
floatPos=!hb,
capPos=top,
use0Box=true]{table}{{Demonstration of the \texttt{use0Box} Parameter}{table:1}

\hvblindtext

\marginnote{Tab.~\ref{table:2}}
\hvFloat[%
floatPos=hb,
use0Box=true,
objectAngle=90,
capPos=right,
capVPos=top,
capWidth=0.3]{table}{{Another demonstration of the \texttt{use0Box} Parameter}{table:2}}
```

In this case leave the third parameter empty.

Tab. 4

15 Text and objects

With the `onlyText` keyword it is no problem to put some text beside an image without getting the caption title Figure/Table. The object still can be a floating one or a nonfloating if the `nonfloat` keyword is used.

Table 4: Demonstration of the use0Box Parameter

Name	Type	Description
\hvFloat	command	places object and caption in different ways
hvFloatEnv	environment	places object and caption exactly Here
\figcaption	command	writes a figure caption in a non floating environment
\tabcaption	command	writes a table caption in a non floating environment
\hvFloatSetDefaults	command	sets all options to the defaults

Name	Type	Description
\hvFloat	command	places object and caption in different ways
hvFloatEnv	environment	places object and caption exactly Here
\figcaption	command	writes a figure caption in a non floating environment
\tabcaption	command	writes a table caption in a non floating environment
\hvFloatSetDefaults	command	sets all options to the defaults

Table 5: Demonstration of the use0Box Parameter

The code for figure 15:

```
\hvFloat[%  
  onlyText=true,
```

```
capAngle=90,
capPos=right,
capVPos=top,
objectFrame,
capWidth=h]{\includegraphics{images/rose}}%
[["\texttt{onlyText}" Caption]{%
  Demonstration of the \texttt{onlyText} Parameter, which makes it
  possible to put some text beside a floating object without getting
  a starting \texttt{Figure:} or \texttt{Table:}]{fig:text}
```



Demonstration of the `onlyText` Parameter, which makes it possible to put some text beside a floating object without getting a starting `Figure:` or `Table:`

Fig. 15

16 Environment `hvFloatEnv`

With the environment `hvFloatEnv` one can place an object exactly on that position where the environment is defined. For captions the use of `\captionof` is recommended:

```
\begin{hvFloatEnv}
\captionof{table}{A caption for a nice table}
\begin{tabular}{@{} l c r @{}}\hline
left & center & right \\
L & C & R \\
\end{tabular}
\end{hvFloatEnv}
```

Table 6: A caption for a nice table

left	center	right
L	C	R

The environment has an optional argument for setting the line width which is preset to `\textwidth`. The object is always centered.

```
\begin{hvFloatEnv}[0.5\textwidth]
\captionof{table}{A caption for a nice table}
\begin{tabular}{@{} l c r @{}}\hline
left & center & right \\
\end{tabular}
```

17 Full page objects in onecolumn mode

```
L & C & R \\hline
\end{tabular}
\end{hvFloatEnv}
```

Table 7: A caption for a nice table

left	center	right
L	C	R

17 Full page objects in onecolumn mode

For an image or table which needs the whole space of a page the caption can be printed at the bottom of the preceeding or following page. It is possible in oneside and twoside mode, but makes only real sense in the twoside mode. hvfloat defines three additional optional arguments for placing images in a complete column, page or paper:

```
\define@key{Gin}{fullpage}[true]{%
\def\Gin@ewidth{\columnwidth}%
\def\Gin@eheight{\textheight}%
\Gin@boolkey{false}{iso}%
}
\define@key{Gin}{FullPage}[true]{%
\def\Gin@ewidth{\textwidth}%
\def\Gin@eheight{\textheight}%
\Gin@boolkey{false}{iso}%
}
\define@key{Gin}{FULLPAGE}[true]{%
\def\Gin@ewidth{\paperwidth}%
\def\Gin@eheight{\paperheight}%
\Gin@boolkey{false}{iso}%
}
```

Figure 32 on the next page shows the meaning of the optional arguments fullpage, FullPage, and FULLPAGE for `\includegraphics[...]{tiger}`.

17.1 Using the textarea

The setting capPos=evenPage (even) or capPos=oddPage (odd) page for a document in twocolumn mode makes no real sense. For a twosided document a setting like capPos=inner for inner or capPos=outer for outer margin makes more sense. For an image or table which needs the whole space of a page the caption can be printed at the bottom of the preceeding or following page. It is possible in oneside and twoside mode, but makes only real sense in the twoside mode. Without any additional argument the caption is set first and the object on the following page:

17.1.1 Using the default or capPos=before

Without any additional argument the caption is set first (left) at the bottom of the current page and the object on the following page. This is the same setting like capPos=left for a onecolumn document. For the twocolumn option it makes more sense to use the setting capPos=before if the caption and object can appear on different pages.

```
\hvFloat[fullpage]{%
```

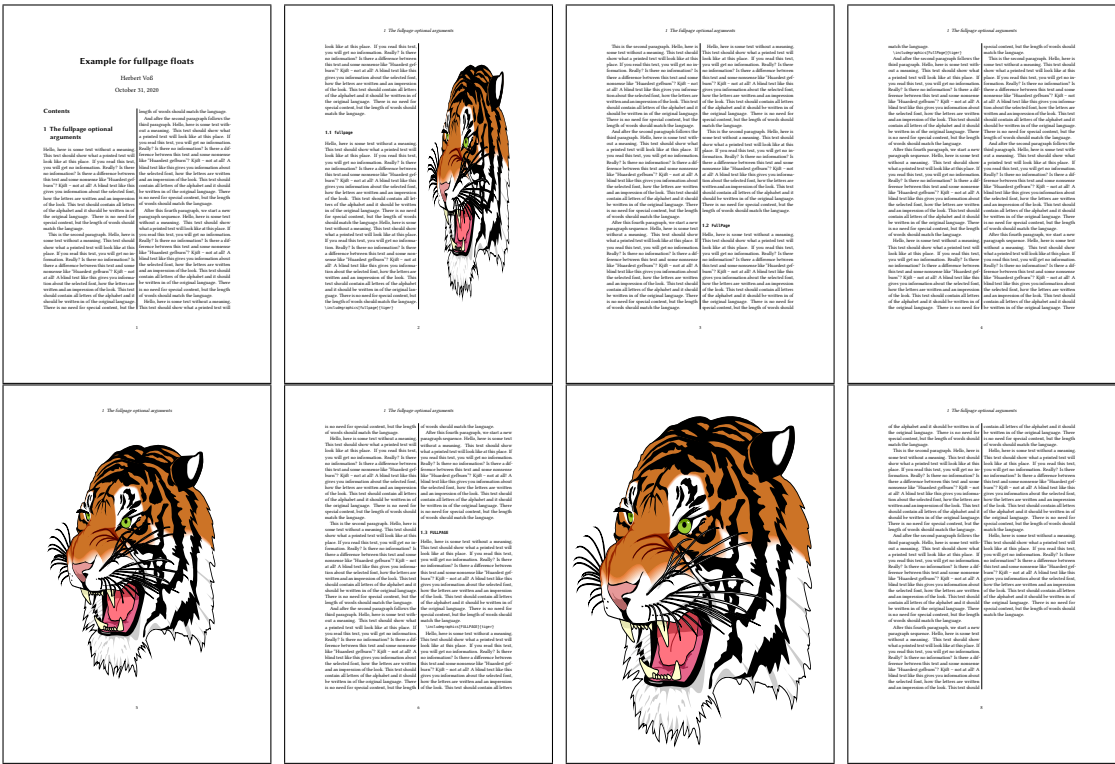


Figure 32: Output of fullpage1s2c (pages 1–8)

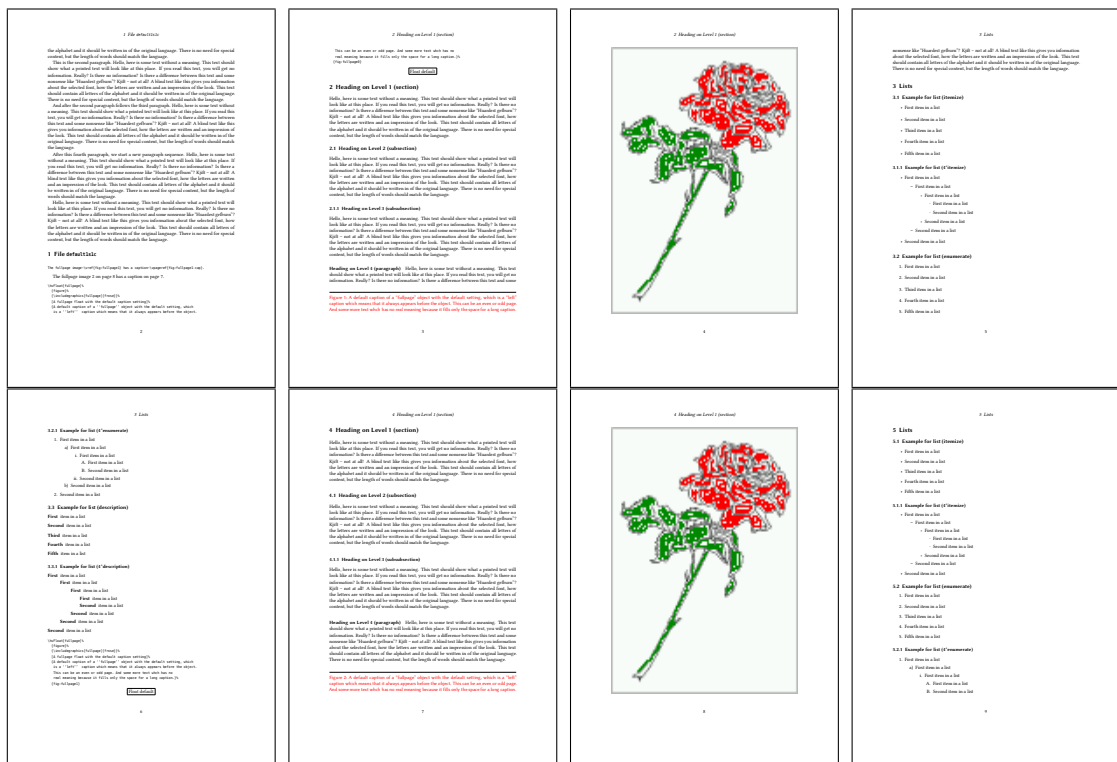
```
{figure}%
{\includegraphics[fullpage]{images/froze}}%
[A fullpage float with the default caption setting]%
{A default caption of a “fullpage” object with the default setting, which
is a “left” caption which means that it always appears “before” the object.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}%
{fig:fullpage0}
```

With this setting the caption is always placed *before* the following object. This maybe sufficient for a oneside document but not the best solution if this document is printed on a duplex machine. In such a case it may make sense to have the captions always on an even (left) page, even though the document is typeset in a oneside mode. Figure 33 on the following page shows the output for a oneside document with a setting capPos=before .

Depending to the used documentclass it can be a problem, if the caption should be placed on the first page. In such a case use one of the other setting. Table 8 on the next page shows the valid optional arguments for a full page floating object.

Table 8: Valid optional arguments for a full page object.

Name	Type	Description
fullpage	true false	Put the caption on the bottom of the preceding or following page and the object alone a page.
FULLPAGE	true false	The same for full papersize objects over one or two columns. The <code>pagestyle</code> is set to empty
multiFloat	true false	For multiple objects with captions for every object. See section 17.3 on page 39.
subFloat	true false	For multiple objects with one main and more subcaptions. See section 18 on page 41.
separatorLine	true	Put a line with a predefined width of 0.4pt between the text and the caption. Only valid for the keyword <code>fullpage</code> .
capPos	value	caption before, after an object or on an evenPage or oddPage.

**Figure 33:** Output of default1s1c (pages 2–9)

17.1.2 Using capPos=after

The caption will be printed always on the right side which is the same as *after* the full page object. The object appears immediately on the next page and the caption of the next following page at the bottom. There is no check for an even or odd page. This behaviour makes only sense for a oneside document.

```
\hvFloat[fullpage, capPos=after]%
{figure}%
{\includegraphics[fullpage]{images/frose}}%
[A float which needs the complete page width and height.]%
{A Caption of a “fullpage” object, which follows on the next page.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}
{fig:fullpage}
```

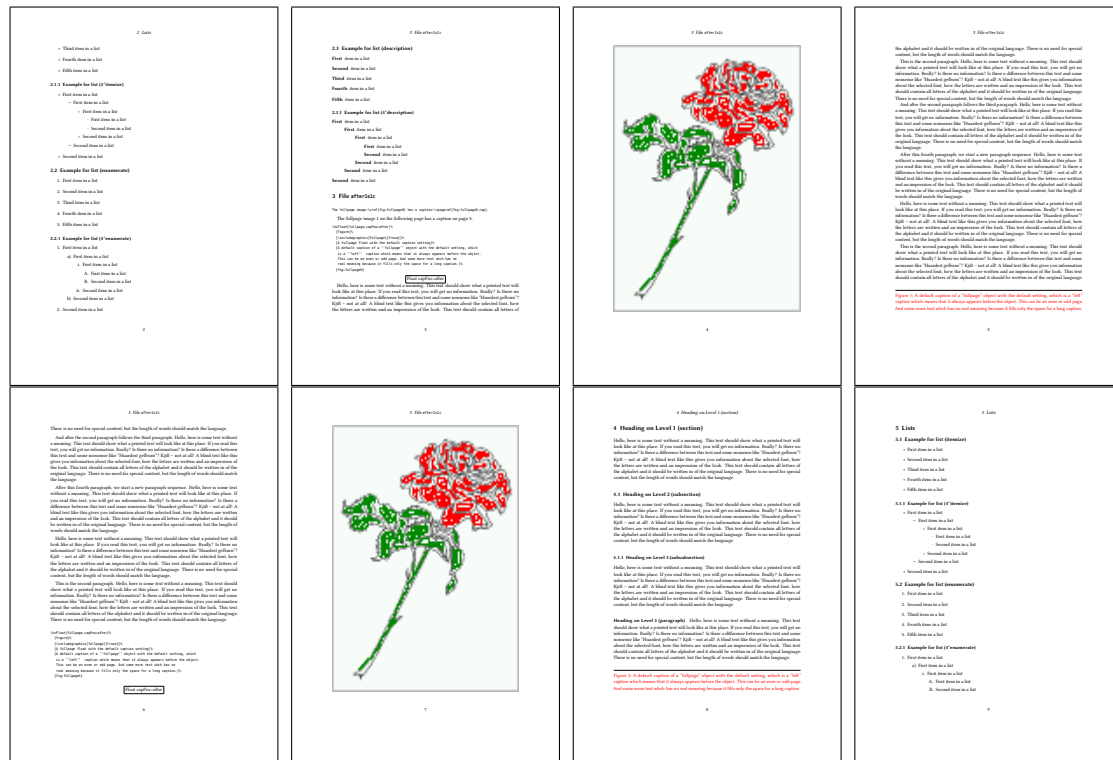


Figure 34: Output of after1s1c (pages 2–9)

17 Full page objects in onecolumn mode

17.1.3 Using capPos=evenPage — caption on an even page

With capPos=evenPage the caption will be printed on an even (left) page, the object will always be on an odd (right) page. This option makes only real sense for The twoside mode!

```
\hvflo[fullpage, capPos=evenPage]%  
{figure}%  
\includegraphics[fullpage]{images/frose}}%  
[A float with a caption on an even page (left)]%  
{A caption on an even (left) page of a “fullpage” object.. \blindtext}  
{fig:fullpage3}
```

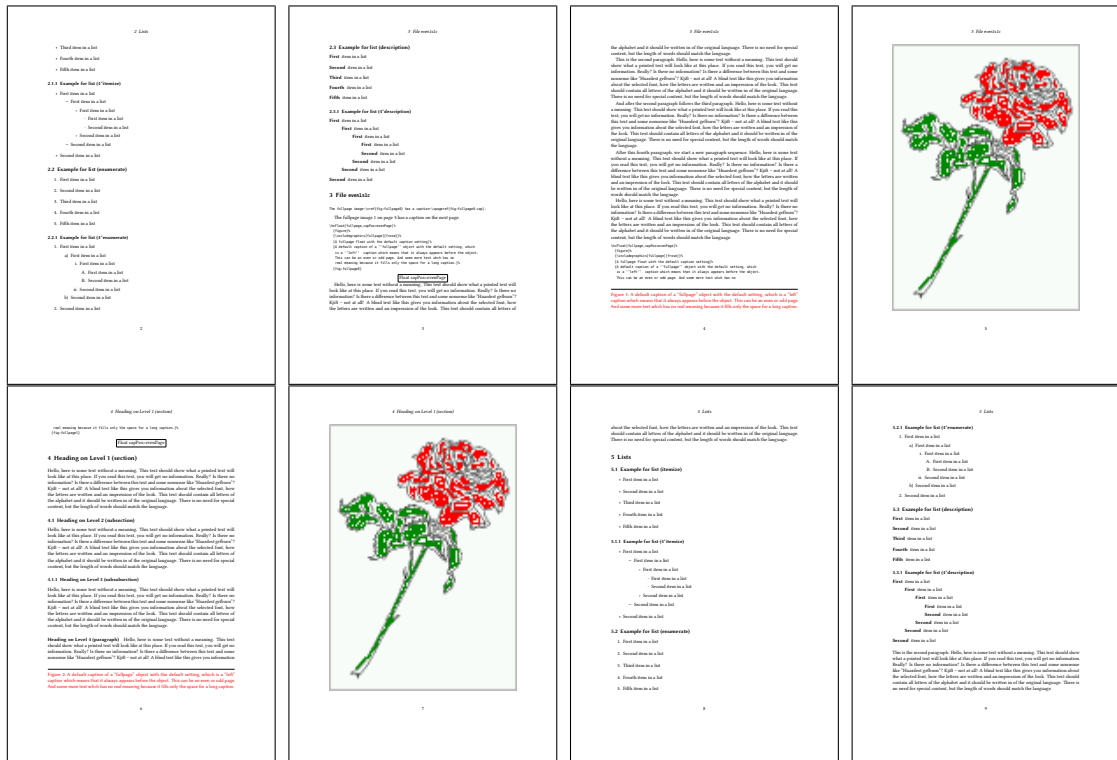


Figure 35: Output of even1s1c (pages 2–9)

17.1.4 Using capPos=oddPage — caption on an odd page

With capPos=oddPage the caption will be printed on an odd (right) page, the object will always be on an even (left) page, which is before the caption.

```
\hvFloat[fullpage, capPos=oddPage]%
{figure}%
{\includegraphics[fullpage]{images/frose}}%
[A float which needs the complete page width and height.]%
{A Caption on an odd page of a ‘‘fullpage’’ object, which follows on the next page.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}
{fig:fullpage2}
```

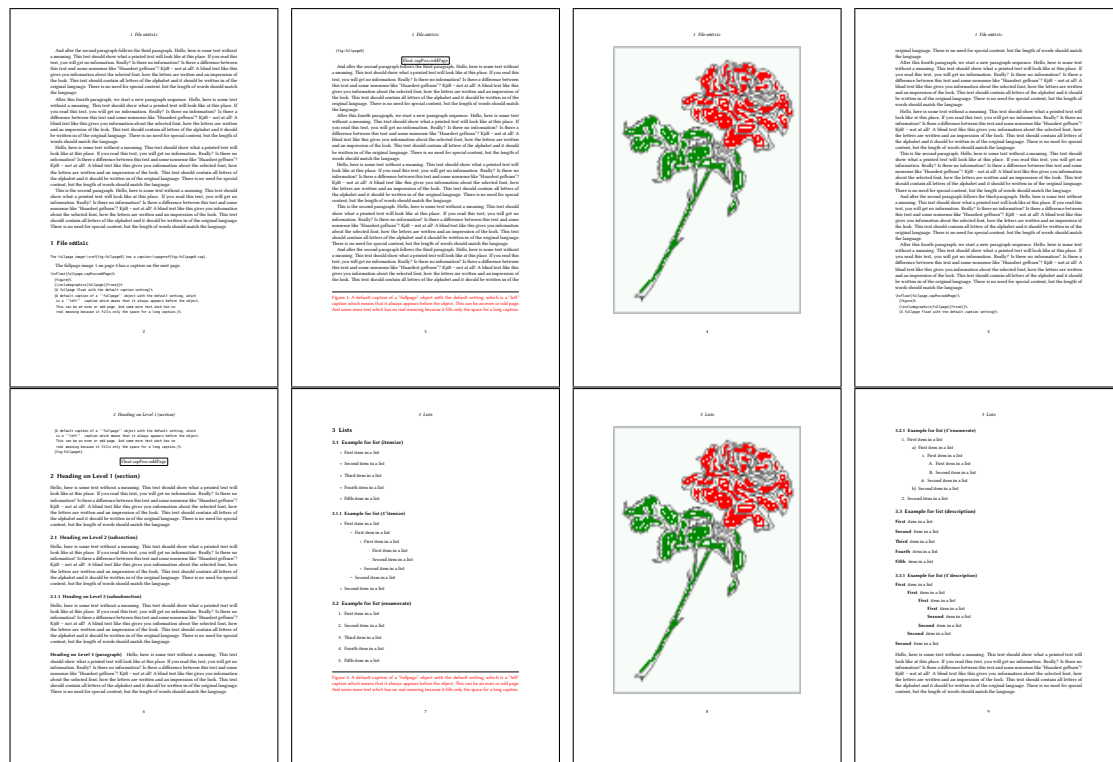


Figure 36: Output of odd1s1c (pages 2–9)

17.1.5 Using capPos=inner or capPos=outer — caption on the inner or outer side

These settings make no sense in onecolumn mode.

17 Full page objects in onecolumn mode

17.2 Using the paper size

It belongs to the user to create an object which fills the complete page. However, with the keyword `FULLPAGE` which is valid for `\hvfloat` and for the macro `\includegraphics` an image will be scaled to the paper dimensions `\paperwidth` and `\paperheight`. It can be used in one- and twocolumn mode!

```
\hvFloat[FULLPAGE]%
{figure}%
{\includegraphics[FULLPAGE]{froese.png}}%
[A fullpage float with the default caption setting]%
{A default caption of a "fullpage" object with the default setting, which
is a "left" caption which means that it always appears before the object.
This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}%
{fig:fullpage0}
```

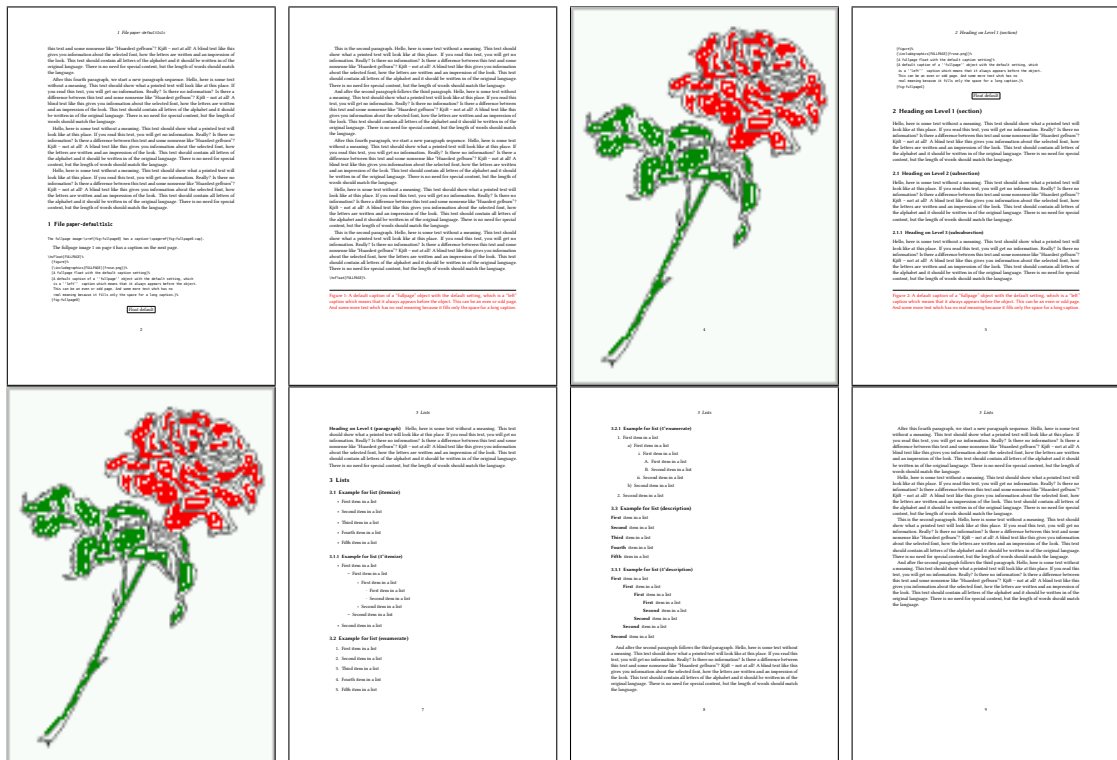


Figure 37: Output of paper-default1s1c (pages 2–9)

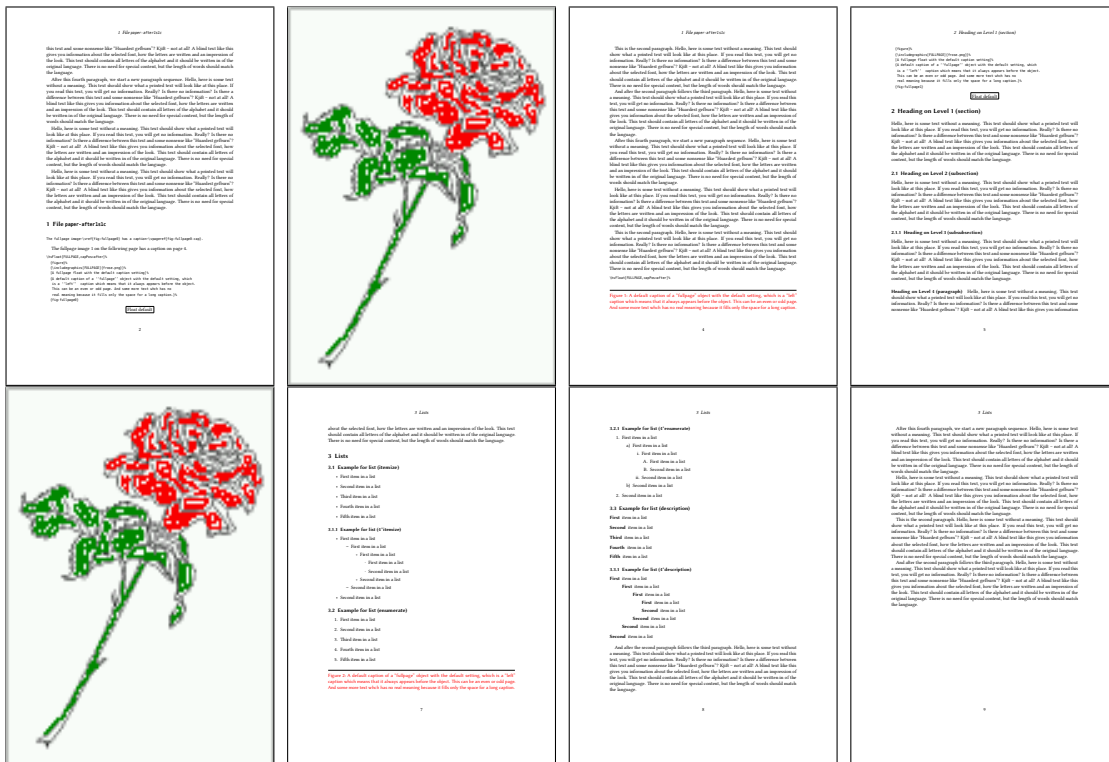


Figure 38: Output of paper-after1s1c (pages 2–9)

17.3 Multifloats

Multifloats is the name for more than one image and/or tabular in *one* floating environment. Every image and/or tabular has its own caption, which is different to a subcaption. The syntax for multiple floats is

```
\hvfFloat [Options] +{float type}{floating object} [short caption] {long caption}{label}
+{float type}{floating object} [short caption] {long caption}{label}
+...
+{float type}{floating object} [short caption] {long caption}{label}
```

The + symbol defines an additional Object which will be part of the same floating environment. It's up too the user to be sure that one page or one column can hold all defined objects. Every object gets its own caption which is the reason why figures and tabulars and ... can be mixed:

```
\captionsetup{singlelinecheck=false}
\hvfFloat[fullpage,capPos=before,multiFloat]%
+{figure}{\includegraphics[width=\linewidth]{images/CTAN}}%% no 1
[Short caption A]%
{A Caption A of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page. And some more text which has no
```

17 Full page objects in onecolumn mode

```

real meaning because it fills only the space for a long caption.}%
%
+{table}{\begin{tabular}{lrcp{3cm}}\hline
Linksbündig & Rechtsbündig & Zentriert & Parbox\\\hline
L & R & C & P\\
left & right & center & Text with possible linebreaks\\
\multicolumn{4}{c}{Multicolumn over all columns}\\\hline
\end{tabular}}%
[Short Caption B]%
{A Caption B of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page.}%
+{figure}{\includegraphics[width=\linewidth]{images/CTAN}}}%
{A Caption C of a "fullpage" object, which follows on the left or
right column.}%

+{figure}{\includegraphics[width=\linewidth]{images/CTAN}}}%
{A Caption C of a "fullpage" object, which follows on the left or
right column.}%


```

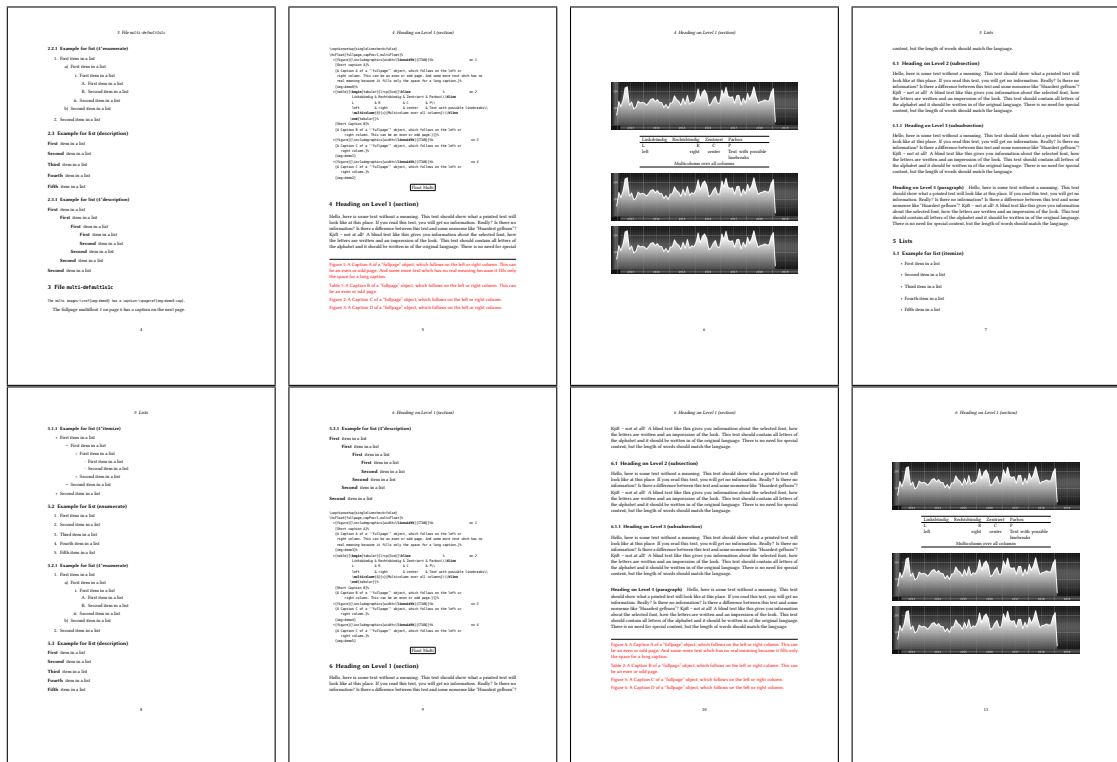


Figure 39: Output of multi-default1s1c (pages 4–11)

The page with the objects has no additional informations it holds only the figures and/or

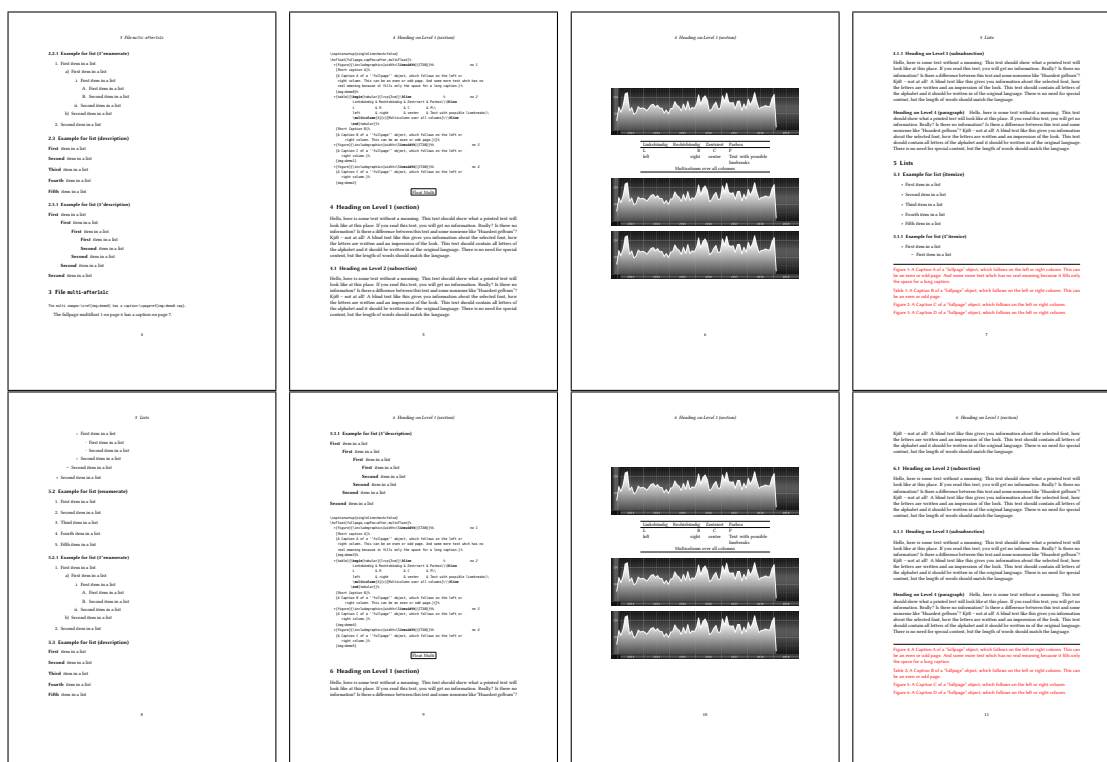


Figure 40: Output of multi-after1s1c (pages 4–11)

tabulars. If you want it like subfigures or subtabulars then go to section 18. The setting `\captionsetup{singlelinecheck=false}` is needed if you want the captions always left aligned.

18 Subfloat page

A subfloat page can have only one type of floats which will have one main caption and individual subcaptions. The syntax is similar to the one for a multifloat page:

```
\hvFloat [Options] +{float type}{<empty>} [short caption] {long caption}{label}
+{<empty>}{floating object} [short caption] {long caption}{label}
+...
+{<empty>}{floating object} [short caption] {long caption}{label}
```

Some arguments are ignored for a subfloat, one can leave them empty. The first line defines only the type and the main caption, the object entry is ignored! All additional lines will have the same float type, the reason why the float type entry is ignored.

```
\hvFloat[fullpage,capPos=before,objectFrame,subFloat]%
+{figure}{}[Short main caption of the objects]% main short lsi entry
{The main caption of a "fullpage" object, which follows on the left or
```

18 Subfloat page

```
right column. This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}% main caption
{sub:demo0}%
+{}{\includegraphics[width=\linewidth]{images/CTAN}}%
[Short caption B]%
{A Caption B of a “fullpage” sub object.}% subcaption
}%
+{}{\includegraphics[width=\linewidth]{images/CTAN}}%
{A Caption C of a “fullpage” object, which follows on the left or right column.}%
{sub:demo1}
+{}{\includegraphics[width=\linewidth]{images/CTAN}}%
{A Caption D of a “fullpage” object}%
{sub:demo2}
+{}{\includegraphics[width=\linewidth]{images/CTAN}}%
{A Caption E of a “fullpage” object}%
{sub:demo3}
```

The keyword `subFloat` defines the images or tabulars as subfloats. The package `subcaption` is loaded by default and should be activated with `\captionsetup[sub][singlelinecheck]`.

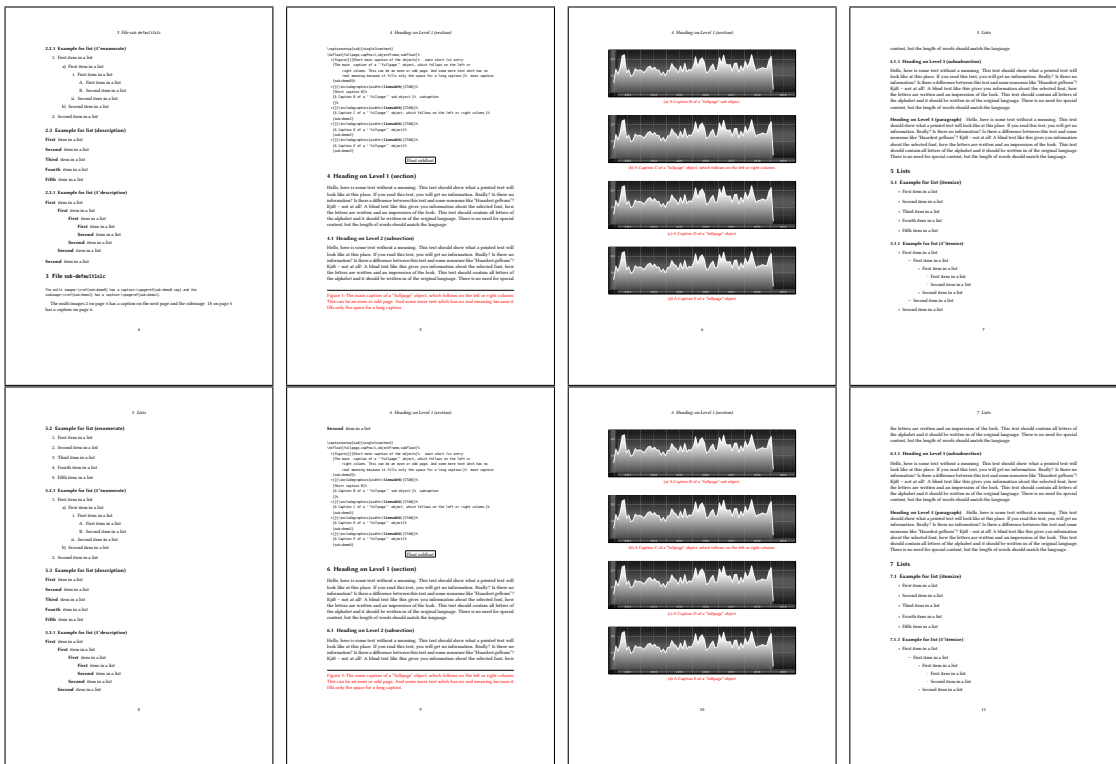


Figure 41: Output of sub-default1s1c (pages 4–11)

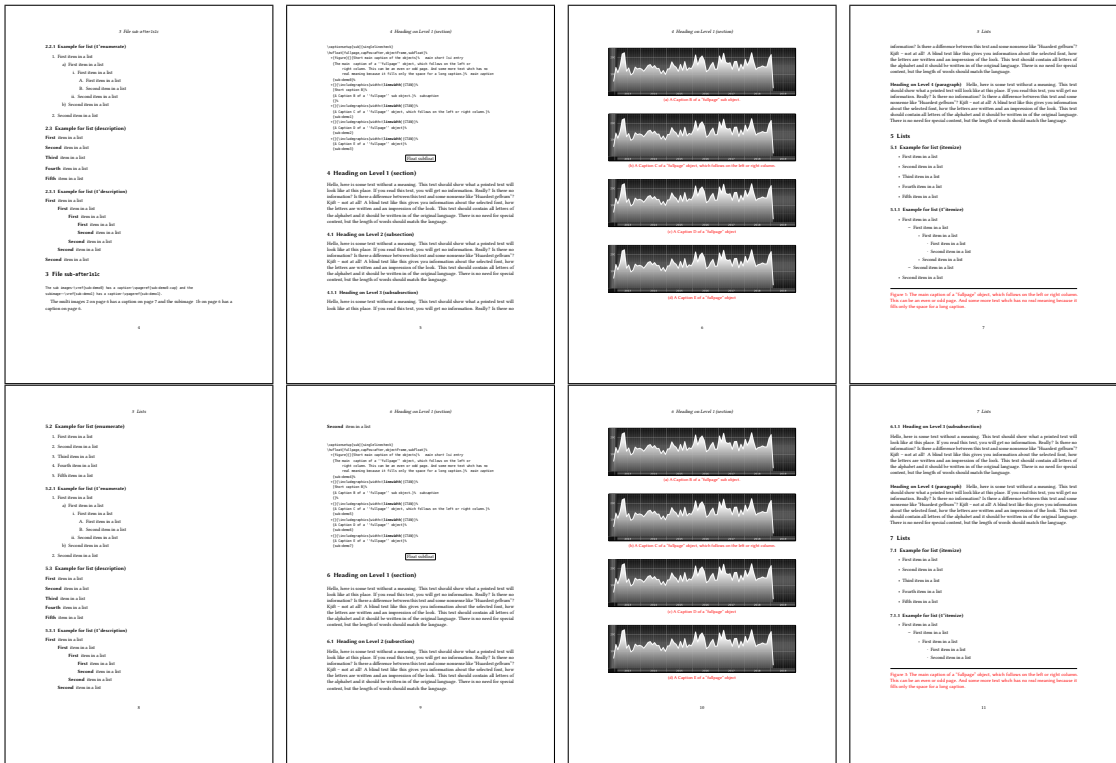


Figure 42: Output of sub-after1s1c (pages 4–11)

19 Full page objects in twocolumn mode

The filenames always have a “2c” for two columns in its names, e.g. left2s2c indicates capPos=before and the documentclass setting twoside and twocolumn. Depending to the used documentclass it can be a problem, if the caption should be placed on the first page of the whole document. In such a case use one of the other setting. Table 8 on page 34 shows the valid optional arguments for a full page floating object.

19.1 Default setting

For the twocolumn mode the caption can be in the left (first) or right (second) column. With the default setting (without using the keyword capPos) it is equivalent to the setting capPos=before, the caption is always placed *before* (left of) the object. This can be the first or the second column and both can be on different pages. With capPos=before (uppercase L) it is possible to get the caption and the object in the twocolumn mode always on one page. This is then the left (first) column for the caption (see figure 43).

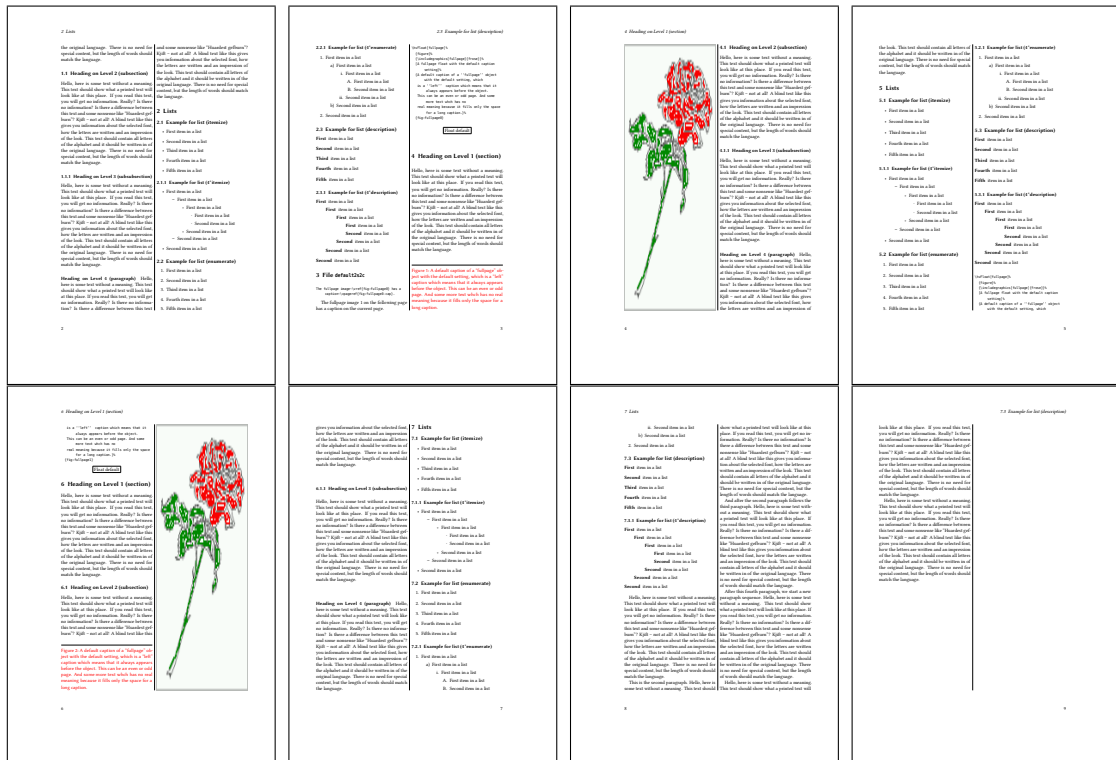


Figure 43: Output of default2s2c (pages 2–9)

```
\hvFloat[fullpage]{figure}%
{\includegraphics[width=\columnwidth,height=0.9\textheight]{images/frose}}%
[A float which needs the complete column width and height.]%
```


{A Caption of a “fullpage” object, which follows on the next column.
This is always the right column on an even or odd page. And some more
text which has no real meaning because it fills only the space for a long
caption.}%
{fig:fullpage0-2}

The example 43 on the preceding page shows that the caption and the object can be on different pages. If you do not like this behaviour, then use the setting `capPos=left`, which puts the caption before the object, but always on the *same page* (see Figure 44).

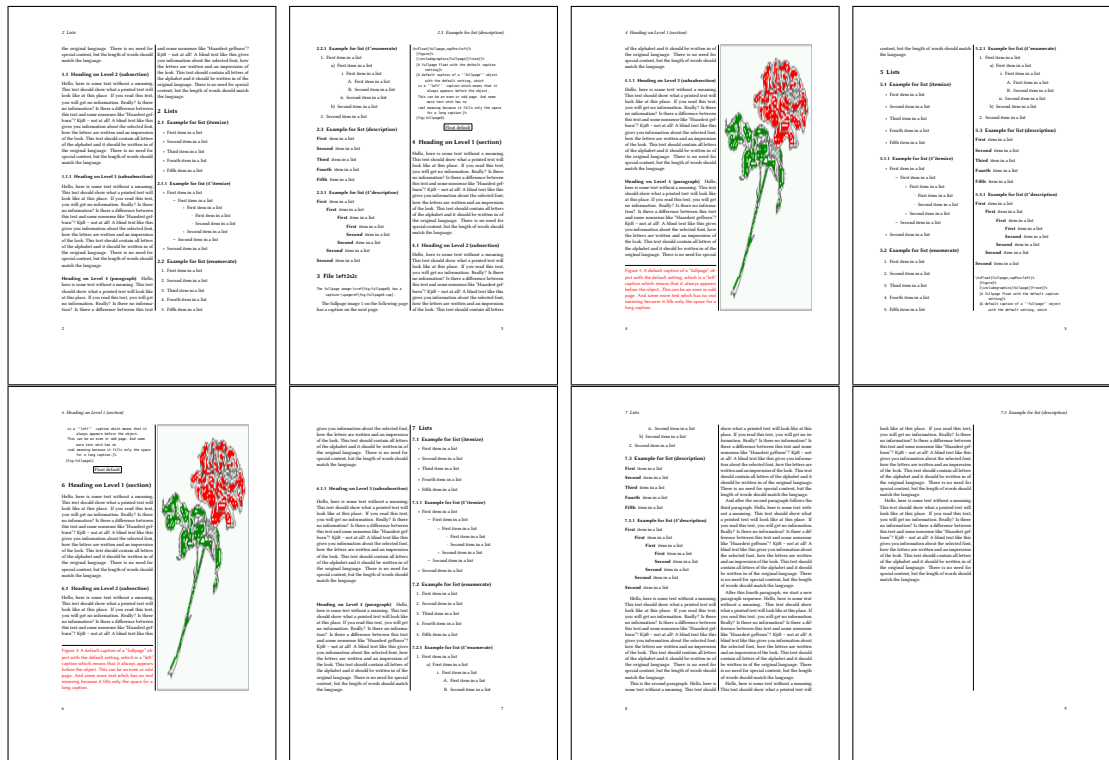


Figure 44: Output of left2s2c (pages 2–9)

19.1.1 Using `capPos=after`

The caption will be printed always right of the object which is the same as *after* the full page object. With `capPos=after` it is possible to get the caption in the twocolumn mode always in the right (second) column (see figure 46 on page 47)

```
\hvFloat[fullpage, capPos=after]{figure}%
{\includegraphics[fullpage]{images/rose}}%
[A float which needs the complete column width and height.]%
{A Caption of a “fullpage” object, which is on the left column.
This is always the right column on an even or odd page. And some more
```

19 Full page objects in twocolumn mode

text which has no real meaning because it fills only the space for a long caption.%
{fig:fullpage1-2}

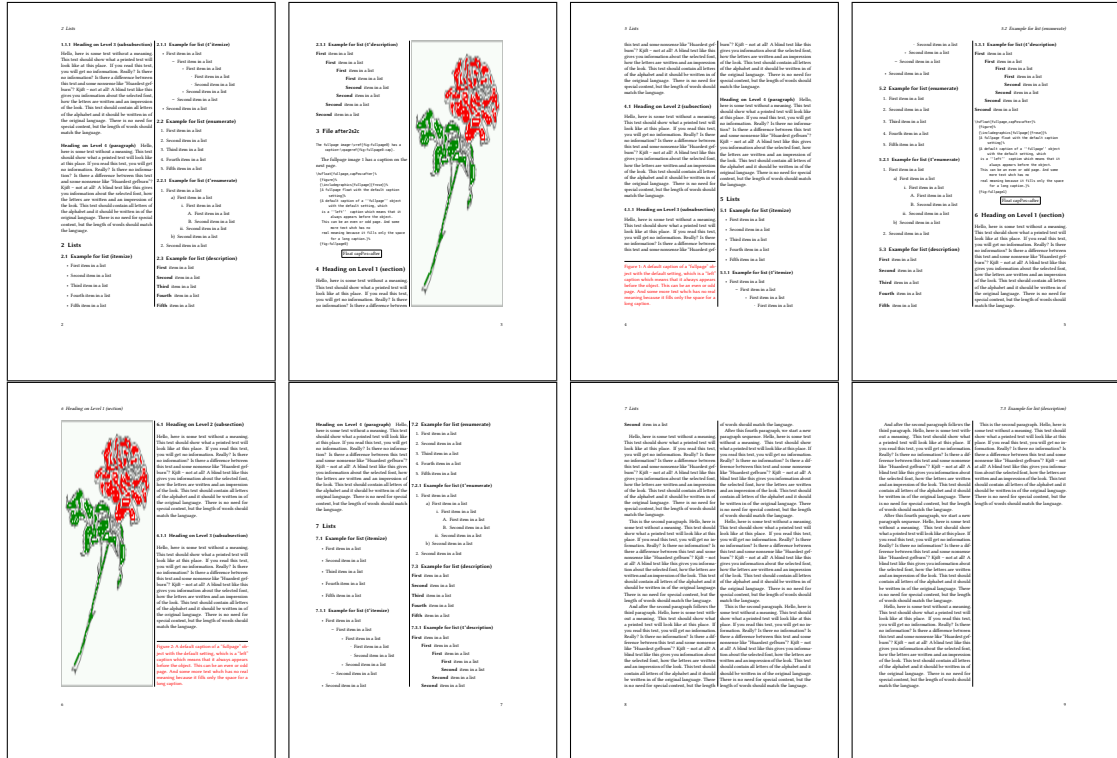


Figure 45: Output of after2s2c (pages 2–9)

The caption and the object can be on different pages (Figure 45). If you do not like this behaviour, then use the setting `capPos=right` instead of `capPos=after`. Figure right2s2c shows that caption and object in this case are always on the same page.

[illegible]

Figure 46: Output of right2s2c (pages 2–9)

There can be a problem if there is not enough space on the bottom of the even page. Then the caption will be on the next page which is an odd one. In such a case use a manually `\clearpage` or wait for an update of `hvf`.

Figure 47: Output of even2s2c (pages 2–9)

19.1.3 Using capPos=oddPage — caption on an odd page

There can be a problem if there is not enough space on the bottom of the even page. Then the caption will be on the next page which is an odd one. In such a case use a manually `\clearpage` or wait for an update of `hvfloat`.

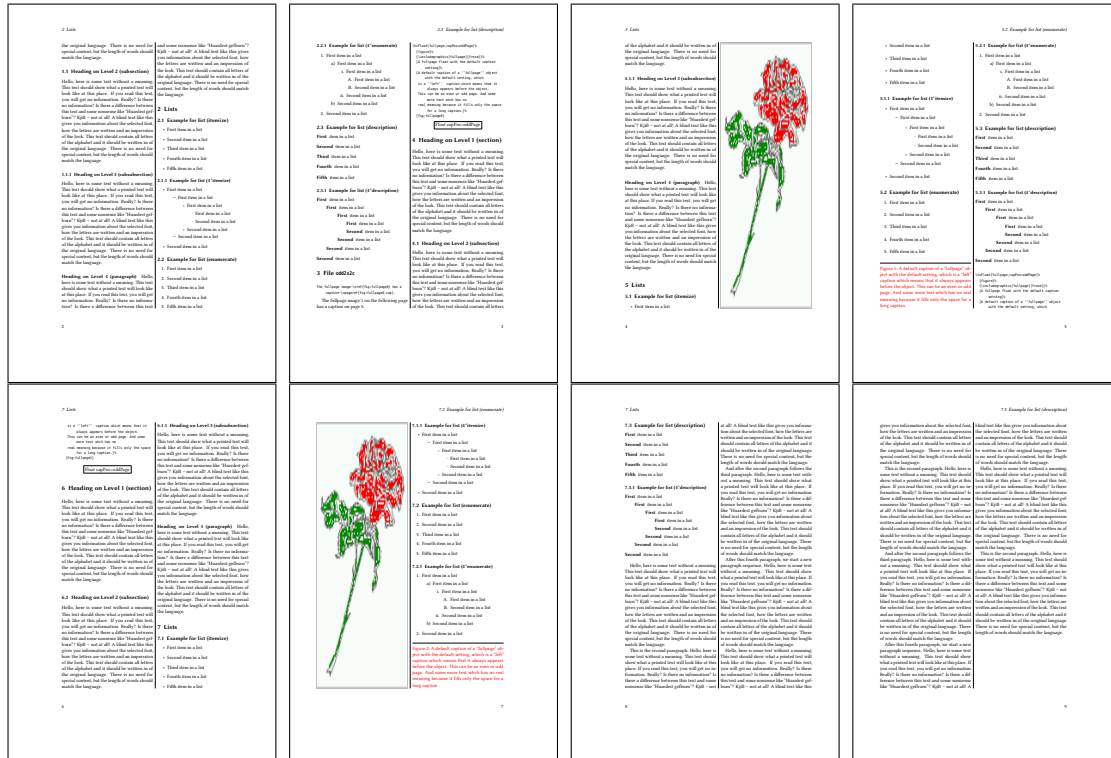


Figure 48: Output of odd2s2c (pages 2–9)

19 Full page objects in twocolumn mode

19.1.4 Using capPos=inner — caption in the inner column

The caption will be printed in the right column for an even page and in the left column for an odd page.

```
\hvflo{[fullpage,capPos=inner]{figure}{\includegraphics[fullpage]{images/rose}}%  
[A float which needs the complete column width and height.]%  
{A Caption of a “fullpage” object, which follows on the left or right column.  
This can be an even or odd page. And some more text which has no  
real meaning because it fills only the space for a long caption.}}{fig:fullpage3-2}
```

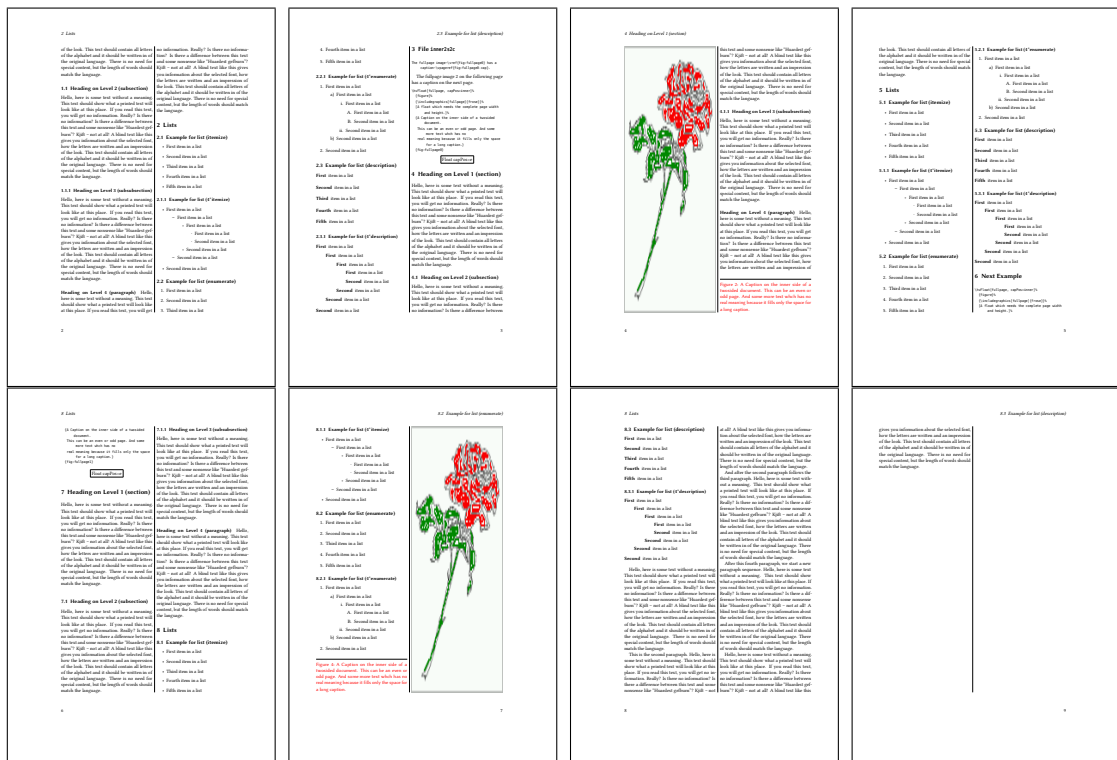


Figure 49: Output of inner2s2c (pages 2–9)

19.1.5 Using capPos=outer — caption on the outer column

The caption will be printed on the left column an odd page, the object can appear before or after this caption.

```
\hvFloat[fullpage, capPos=outer]{figure}%
{\includegraphics[fullpage]{images/rose}}%
[A float which needs the complete page width and height with \texttt{capPos=outer}.]%
{A Caption of a "fullpage" object, which has the caption position in the
outer page. This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}{fig:fullpage2-2a}
```

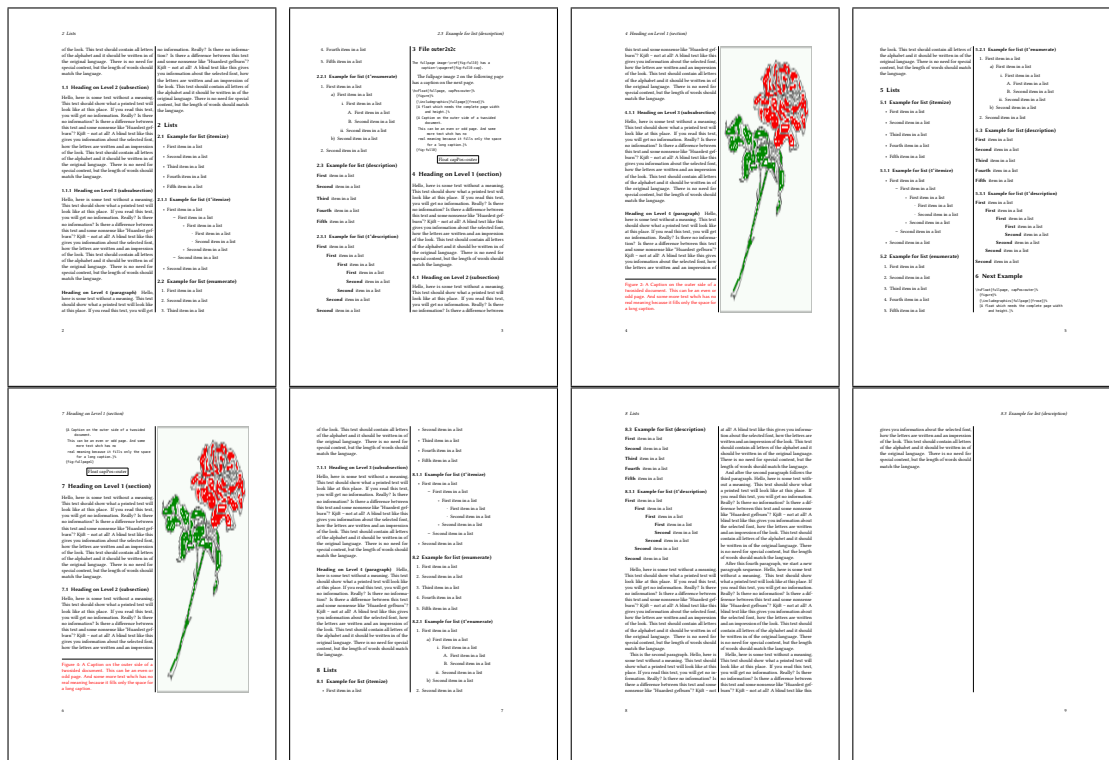


Figure 50: Output of outer2s2c (pages 2–9)

19 Full page objects in twocolumn mode

19.2 Using full page in twocolumn mode

With the star version of `\hvfloat` The object is placed over both columns, the whole page. In such a case the only useful caption position is `capPos=inner` for *inner*.

```
\hvfloat*[fullpage, capPos=inner]{figure}%
{\includegraphics[FullPage]{images/rose}}%
[A float which needs the complete page width and height with \texttt{capPos=outer}.]%
{A caption of a "fullpage" object in twocolumn mode: It uses the star version
of \textbackslash hvfloat. The object goes over both columns.}{fig:two}
```

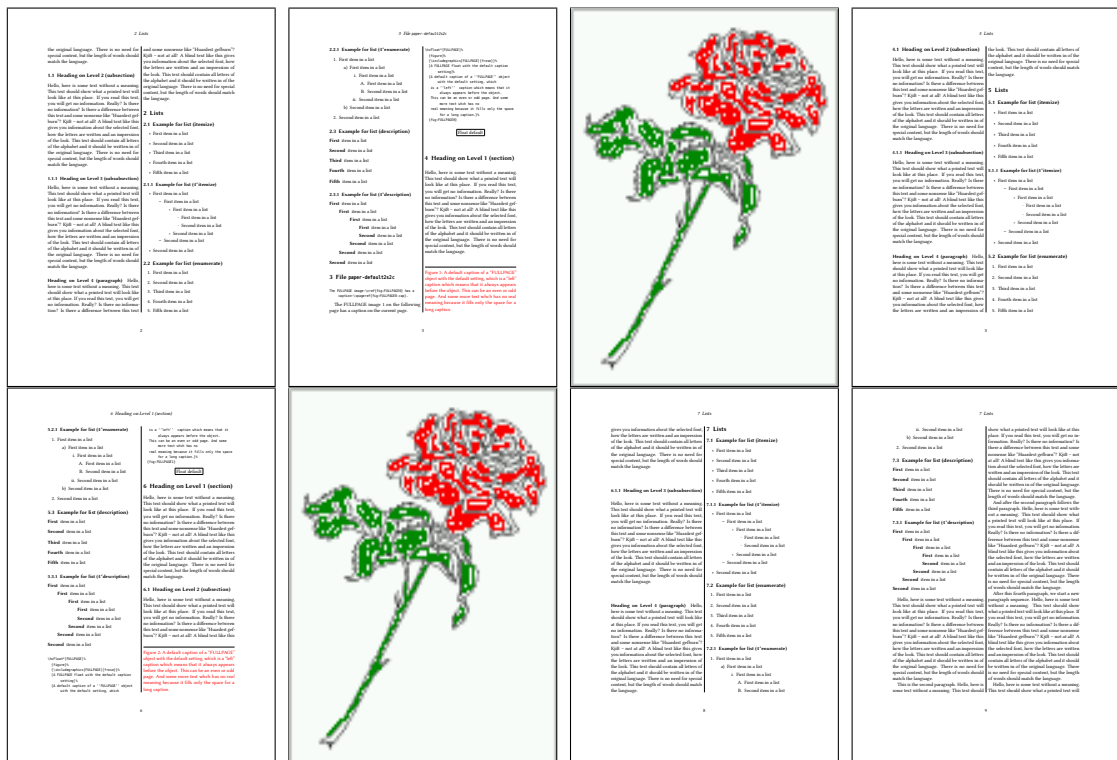


Figure 51: Output of paper-default2s2c (pages 2–9)

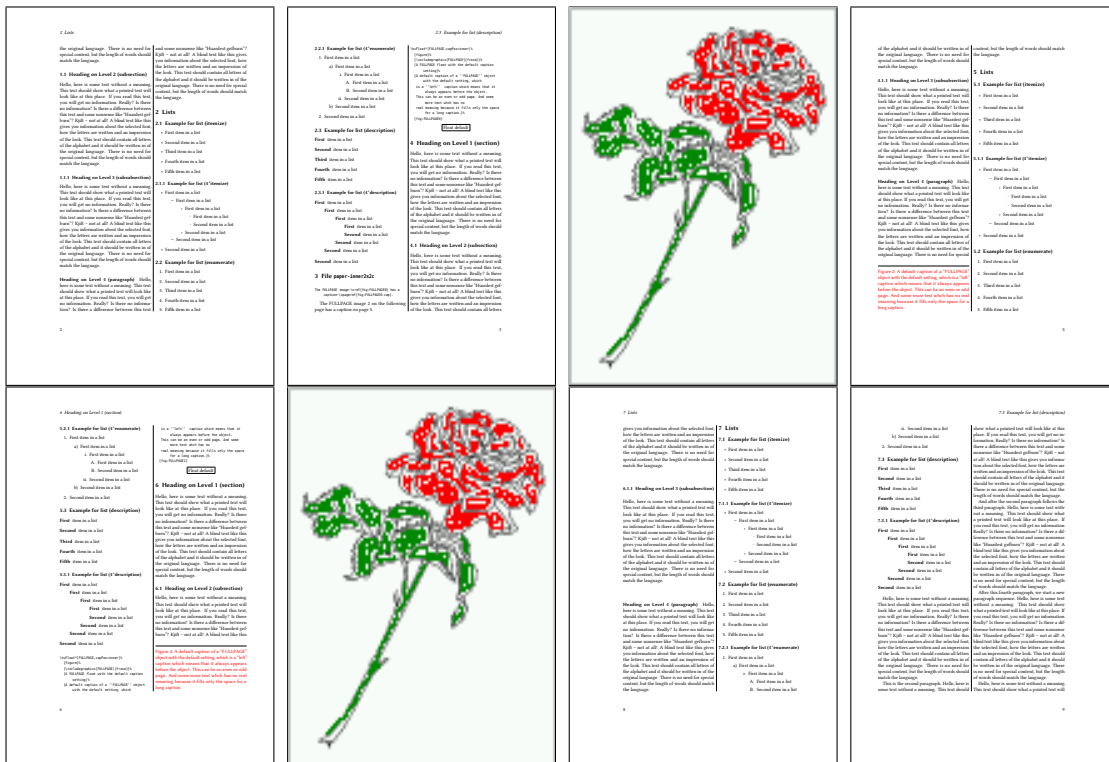


Figure 52: Output of paper-inner2s2c (pages 2–9)

19.3 Multifloats

Multifloats is the name for more than one image and/or tabular in *one* floating environment. Every image and/or tabular has its own caption, which is different to a subcaption. The + symbol defines an additional Object which will be part of the same floating environment. It's up too the user to be sure that one page or one column can hold all defined objects. Every object gets its own caption which is the reason why figures and tabulars and ... can be mixed:

```
\captionsetup{singlelinecheck=false}
\hvFloat[fullpage,multiFloat,capPos=inner]%
+{figure}{\includegraphics[height=0.4\textheight]{images/rose}}%% no 1
[Short caption A]%
{A Caption A of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}%
{multi:demo0}%
+{table}{\begin{tabular}{lr}\hline
Linksbündig & Rechtsbündig\\
L & R & \\
left & right & \\
\multicolumn{2}{c}{Multicolumn}\hline
\end{tabular}}% no 2
```

20 Subfloat page

```
\end{tabular}}%
[Short Caption B]%
{A Caption B of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page.}%
}%
+{figure}{\includegraphics[height=0.4\textheight]{images/rose}}%% no 3
{A Caption C of a "fullpage" object, which follows on the left or
right column.}%
{\multi{demol}}
```

The page with the objects has no additional informations it holds only the figures and/or tabulars. If you want it like subfigures or subtabulars then go to section 18 on page 41. The setting `\captionsetup{singlelinecheck=false}` is needed if you want the captions always left aligned.

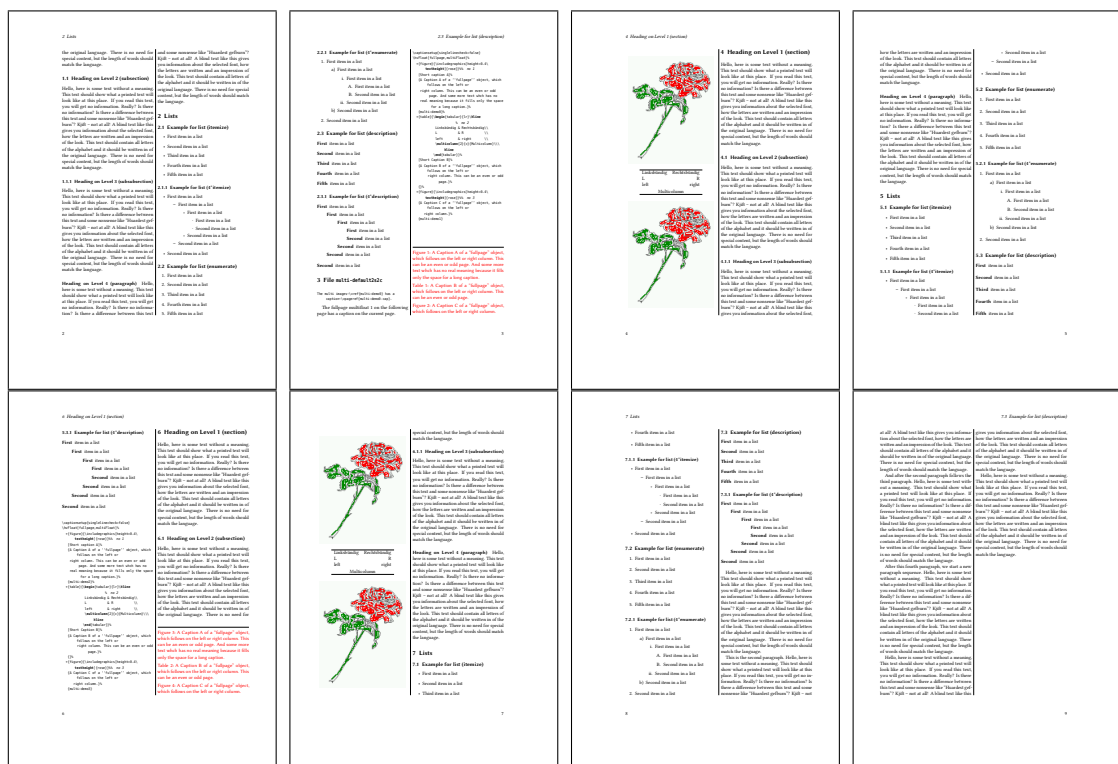


Figure 53: Output of multi-default2s2c (pages 2-9)

20 Subfloat page

A subfloat page can have only one type of floats which will have one main caption and individual subcaptions. Some arguments are ignored for a subfloat, one can leave them empty. The first line defines only the type and the main caption, the object entry is ignored! All additional lines will have the same float type, the reason why the float type entry is ignored.

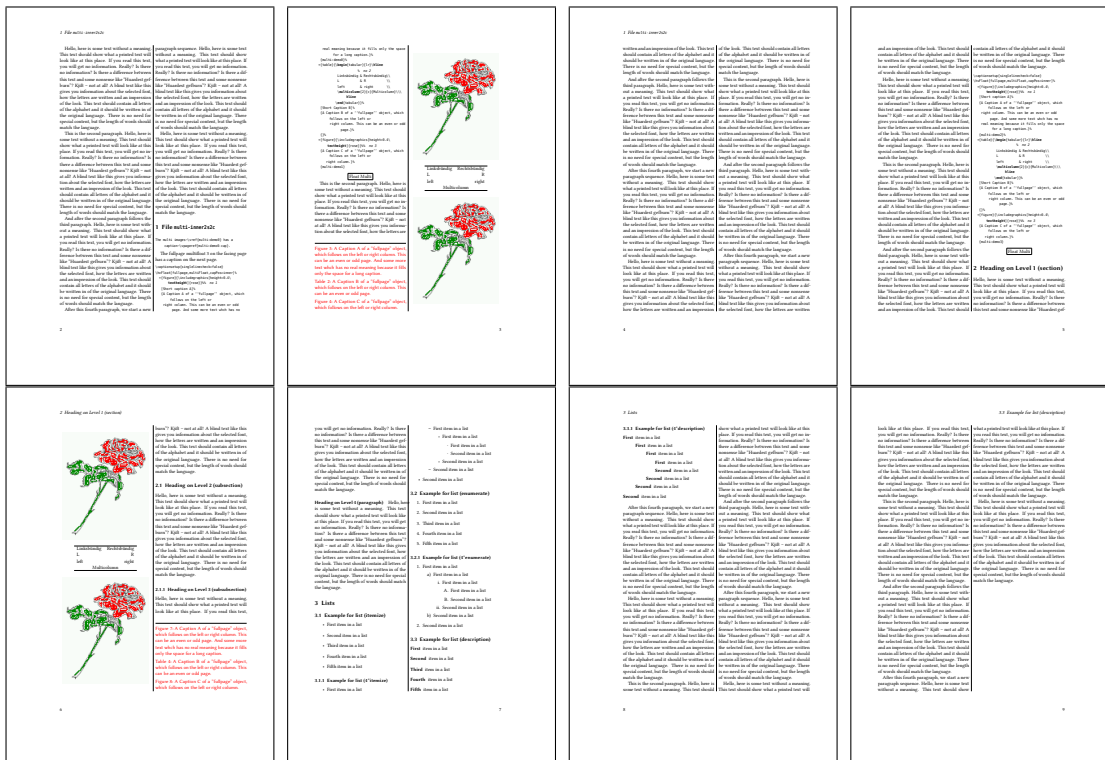


Figure 54: Output of multi-inner2s2c (pages 2-9)

```
\captionsetup[sub]{singlelinecheck}
\hvFloat[fullpage,capPos=before,objectFrame,subFloat]%
+{{figure}}[Short main caption of the objects]% main short lsi entry
{The main caption of a "fullpage" object, which follows on the left or
right column. This can be an even or odd page. And some more text which has no
real meaning because it fills only the space for a long caption.}% main caption
{sub:demo00}%
+{{\includegraphics[height=0.28\textheight]{images/rose}}}%
[Short caption B]%
{A Caption B of a "fullpage" sub object.}% subcaption
}%
+{{\includegraphics[height=0.28\textheight]{images/rose}}}%
{A Caption C of a "fullpage" object, which follows on the left or right column.}%
{sub:demo10}
+{{\includegraphics[height=0.28\textheight]{images/rose}}}%
{A Caption D of a "fullpage" object}%
{sub:demo20}
```

The keyword subFloat defines the images or tabulars as subfloats. The package subcaption is loaded by default. For the subcaptions the singlelinecheck should be true (see listing).

20 Subfloat page

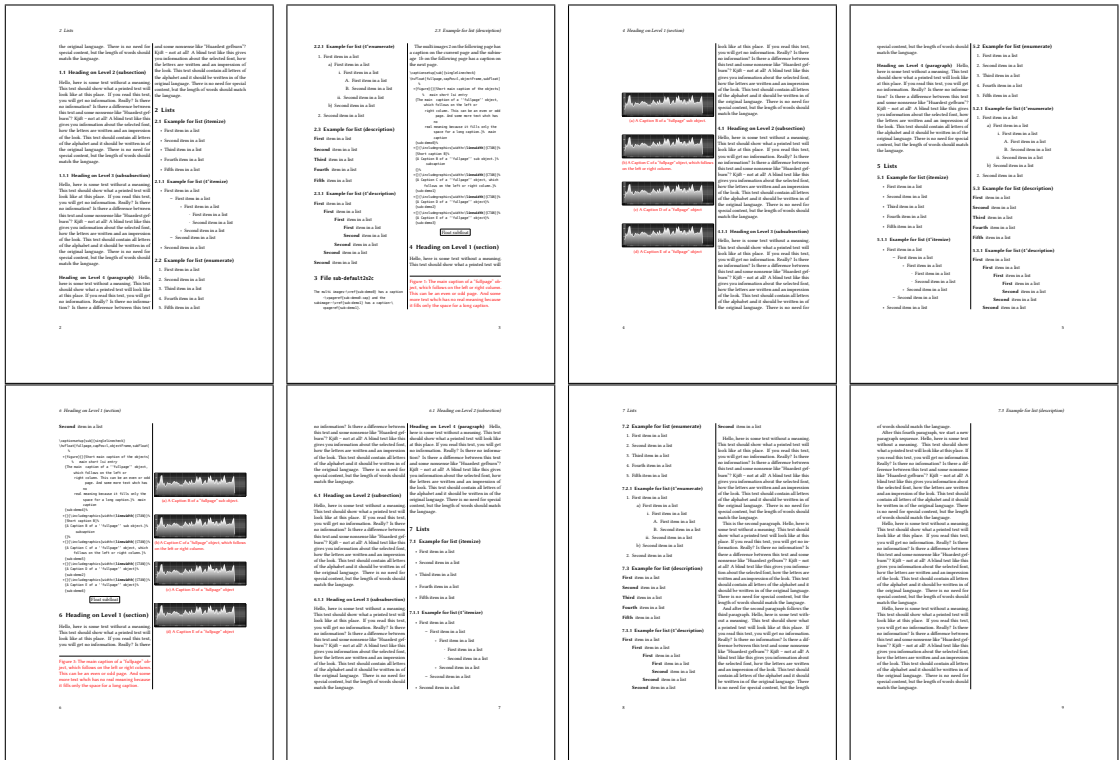


Figure 55: Output of sub-default2s2c (pages 2–9)

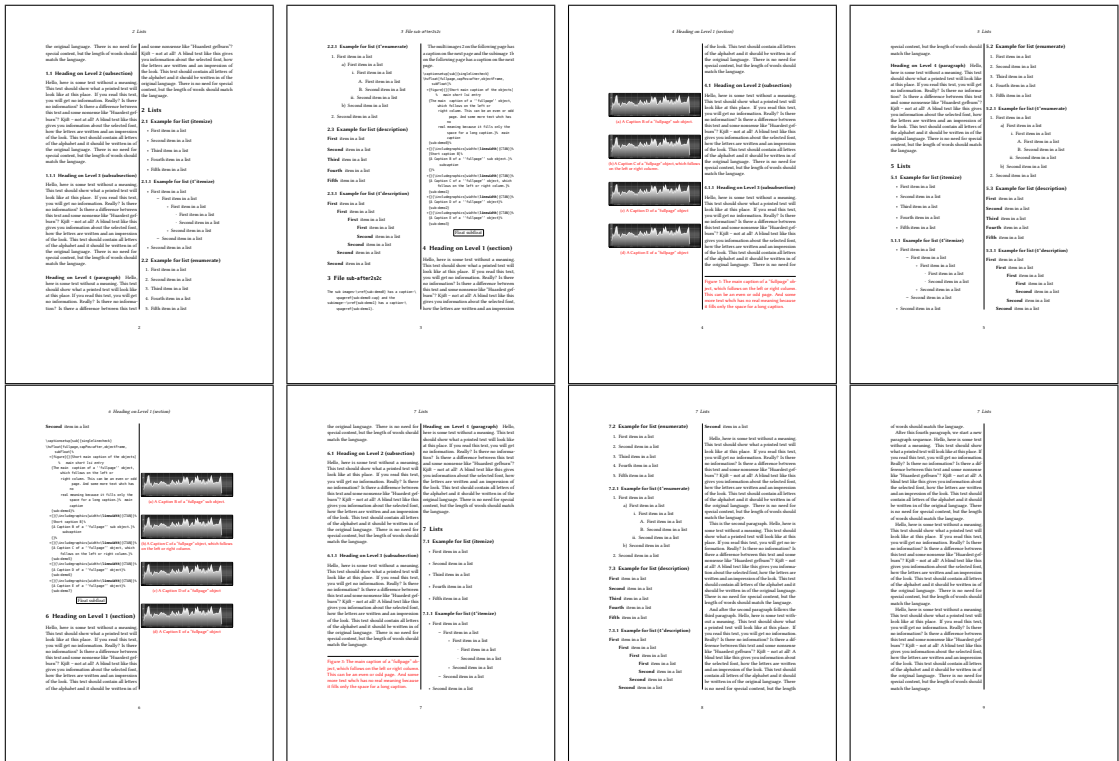


Figure 56: Output of sub-after2s2c (pages 2–9)

21 Doublepage objects – images and/or tabulars

If an image or a tabular or any other object is too big for one page, it can be split over two pages (left – right). It is obvious that this makes only sense for twoside documents. There are three optional arguments:

doublePage A splitted object with or without a caption on top of a double page, beginning in the left top text area. The user has to scale the image to be sure that the object will not be greater than $2\backslash\text{paperwidth}-4\backslash\text{margin}$. The caption can be rotated on the right side of the right object part or under the right part.

doublePAGE A splitted object with or without a caption on top of a double page, beginning at the left side of the paper area and top of the text area. The user has to scale the image to be sure that the object will not be greater than $2\backslash\text{paperwidth}$. The caption can only be under the right part of the object. There will be *no additional text* on the double page.

doubleFULLPAGE A splitted object with or without a caption on the right or below of a double page. The object can fill the complete double page. The user has to scale the image to be sure that the object will not be greater than $2\backslash\text{paperwidth}$. A caption will be rotated and written *over* the object, or if possible, at the right. The user has to take care for a correct text color.

21.1 doubleFULLPAGE

The scaling of the image is leave to the user. If the proportion of the object doesn't fit $2*\text{paperwidth}/\text{paperheight}$, then there can be a white part on the top or bottom of the object. A pagenumber will not be printed. In this documentation you'll find a marginnote where the following full doublepage image is defined. It appears on the the next following even page and following text will be placed *before* the object.

`\Blindtext`

```
\hvFloat[doubleFULLPAGE,capPos=right,capAngle=90]%
{figure}%
{\includegraphics[angle=90,width=2\paperwidth]{images/r+j}}%
[Eine doppelseitige Abbildung mit Caption auf der Abbildung]%
{Eine Beschriftung einer doppelseitigen Abbildung, die ÜBER den rechten
Teil der Abbildung platziert wird. Die Abbildung beginnt am linken
Papierrand. Auf den Seiten wird kein weiterer Text
platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter
ist \texttt{doubleFULLPAGE}}%
{fig:doubleFULLPAGE0}
```

`\Blindtext`

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”?

Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fig. 57

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this

text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of





Figure 57: Eine Beschriftung einer doppelseitigen Abbildung, die ÜBER den rechten Teil der Abbildung platziert wird. Die Abbildung beginnt am linken Paperrand. Auf den Seiten wird kein weiterer Text platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter ist doubleFULLPAGE

words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

`\Blindtext`

```
\hvFloat[doubleFULLPAGE,capPos=right]%
{figure}%
{\includegraphics[height=\paperheight]{images/rheinsberg}}%
{Eine Beschriftung einer doppelseitigen Abbildung, die ÜBER den rechten
Teil der Abbildung platziert wird. Die Abbildung beginnt am linken
Papierrand. Auf den Seiten wird kein weiterer Text
platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter
ist \texttt{doubleFULLPAGE}}%
{fig:doubleFULLPAGE1}
```

`\Blindtext \Blindtext`

Fig. 58 After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Figure 58: Eine Beschriftung einer doppelseitigen Abbildung, die ÜBER den rechten Teil der Abbildung platziert wird. Die Abbildung beginnt am linken Papierrand. Auf den Seiten wird kein weiterer Text platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter ist doubleFULLPAGE

21 Doublepage objects – images and/or tabulars

There is no need for special content, but the length of words should match the language.

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21.2 doublePAGE

With this option the object also starts at the left paper margin but on the top of the text area. There will be pagenumbers and a caption can be rotated on the right of the object or under it.

`\Blindtext`

```
\hvFloat[doublePAGE]%
{figure}%
{\includegraphics[width=2\paperwidth]{images/seiser}}%
[Eine doppelseitige Abbildung mit Caption unterhalb der rechten Abbildung]%
{Eine Beschriftung einer doppelseitigen Abbildung, die unterhalb der rechten
Teils der Abbildung platziert wird. Die Abbildung beginnt am linken
Papierrand. Auf den Seiten wird kein weiterer Text
platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter
ist \texttt{doublePAGE}}%
{fig:doublePAGE0}
```

`\Blindtext`

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no

information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Fig. 59

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Figure 59: Eine Beschriftung einer doppelseitigen Abbildung, die unterhalb der rechten Teils der Abbildung platziert wird. Die Abbildung beginnt am linken Papierrand. Auf den Seiten wird kein weiterer Text platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter ist doublePAGE

21.3 doublePage

With this option the object also starts at the left top of the text area. There will be pagenumbers and a caption can be rotated on the right of the object or under it and the rest of the text area is filled with text.

\Blindtext

```
\hvFloat[doublePage,capWidth=n,capPos=right]%  
  {figure}%  
  {\includegraphics[width=2\textwidth]{images/sonne-meer}}%  
  [Eine doppelseitige Abbildung mit rechtsseitiger Caption unterhalb]%  
  [Eine Beschriftung einer doppelseitigen Abbildung, die unterhalb des rechten  
  Teils der Abbildung platziert wird. Die Abbildung beginnt am linken  
  Textrand. Auf den Seiten wird ansonsten weiterer Text  
  platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter  
  ist \texttt{doublePage}}%  
  {fig:doublePage0}
```

\Blindtext

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After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text

Fig. 60



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21.4 Tabulars

In General there is no difference in an imgage or tabular or simple text. The object will be saved in a box and then clipped. If the object is a tabular one might modify the tabular if it will be split in the middle of a column. In such a case one can insert some additional horizontal space for this coloumn.

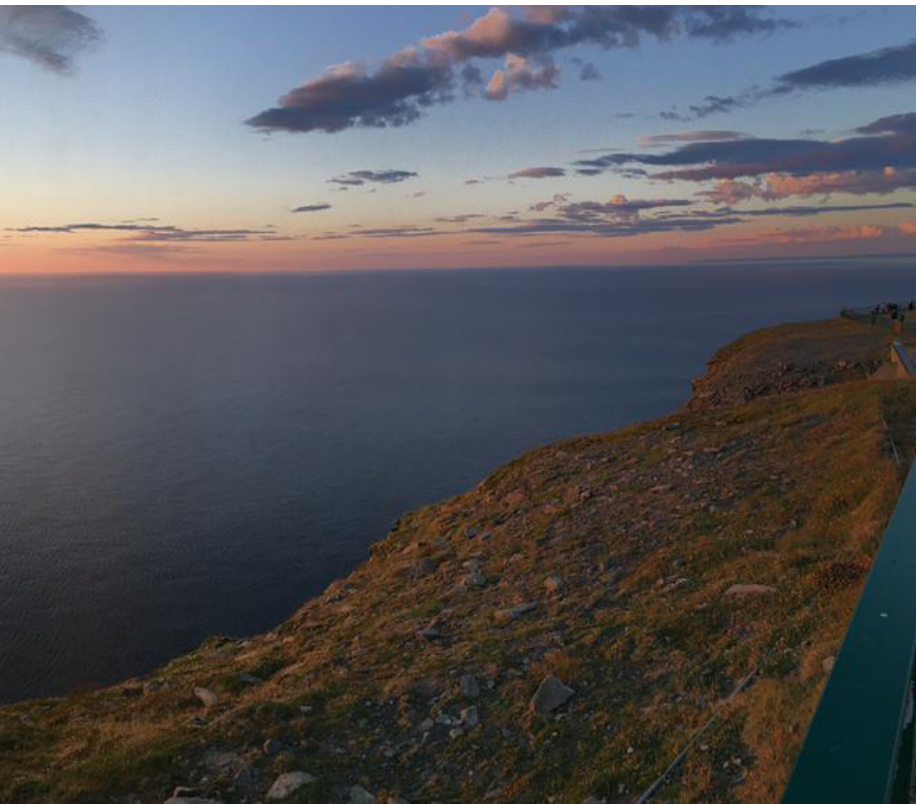


Figure 60: Eine Beschriftung einer doppelseitigen Abbildung, die unterhalb des rechten Teils der Abbildung platziert wird. Die Abbildung beginnt am linken Textrand. Auf den Seiten wird ansonsten weiterer Text platziert. Für das LOF wird dabei eine Kurzform berücksichtigt. Parameter ist doublePage

The tabular itself can be saved into the internal box \hv0Box or put directly as parameter into the macro.

```
\global\savebox\hv0Box{%
\begin{tabular}{l*{18}r} \toprule
& \textbf{1972} & \textbf{1973} & \textbf{1974} & \textbf{1975} & \textbf{1976} \\
& \textbf{1977} & \textbf{1978} & \textbf{1979} & \textbf{1980} & \textbf{1981} & \textbf{1982} & \textbf{1983} & \textbf{1984} & \textbf{1985} \\
& \textbf{1986} & \textbf{1987} & \textbf{1988} & \textbf{1989} \\
\\ \midrule
\addlinespace[3pt]
Zeile 1 & 1 & 3 & 1 & 1 & 1 & 0 & 1 & 1 & 0 & 0 & 0 & 0 & 20 & 0 & 2 & 2 & 2 & 1 \\
Zeile 2 & 1 & 1 & 3 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 2 & 1 & 3 & 4 & 4 & 6 & 4 & 2 \\
Zeile 3 & 2 & 1 & 2 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 5 & 3 & 1 & 7 & 7 & 3 \\
Zeile 4 & 1 & 0 & 5 & 1 & 2 & 0 & 0 & 0 & 0 & 2 & 1 & 0 & 1 & 0 & 3 & 7 & 2 & 1 \\
Zeile 6 & 2 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 2 & 0 & 5 & 2 & 2 & 5 & 4 & 2 \\
Zeile 5 & 0 & 0 & 4 & 2 & 1 & 2 & 2 & 1 & 0 & 0 & 0 & 1 & 1 & 0 & 2 & 5 & 4 & 3 \\
Zeile 8 & 0 & 1 & 1 & 0 & 0 & 0 & 1 & 1 & 0 & 3 & 2 & 1 & 2 & 1 & 3 & 5 & 3 & 4 \\
Zeile 9 & 0 & 0 & 0 & 0 & 0 & 1 & 2 & 1 & 0 & 0 & 0 & 0 & 4 & 2 & 1 & 4 & 5 & 2 \\
Zeile10 & 0 & 1 & 3 & 0 & 1 & 0 & 1 & 0 & 0 & 1 & 1 & 0 & 1 & 1 & 1 & 4 & 4 & 1 \\
Zeile11 & 0 & 2 & 2 & 1 & 1 & 0 & 1 & 0 & 0 & 0 & 0 & 2 & 6 & 1 & 0 & 2 & 1 & 1 \\
Zeile12 & 2 & 0 & 2 & 4 & 1 & 0 & 4 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 3 \\
Lärm & 2 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 2 & 0 & 0 & 2 & 2 & 2 \\
Zeile13 & 0 & 1 & 0 & 0 & 1 & 0 & 3 & 0 & 0 & 0 & 0 & 2 & 0 & 1 & 3 & 0 & 2 \\
Zeile14 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 2 & 1 & 1 & 0 \\
Zeile15 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 4 & 0 & 0 & 3 & 1 & 1 \\
\addlinespace[3pt]
```

21 Doublepage objects – images and/or tabulars

```
Zeile16 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 5 & 0 & 1\\addlinespace[3pt]\midrule
Artikel gesamt & 2 & 6 & 13 & 8 & 4 & 3 & 5 & 4 & 0 & 6 & 3 & 5 & 23 & 10 & 8 & 15 & 13 & 1 \\
\bottomrule
\end{tabular}}
```

```
\hvFloat[doublePage,capWidth=n,capPos=right]%
{table}%
{\usebox\hv0Box}%%%%%%%%%%
[Eine doppelseitige Tabelle mit rechtsseitiger Caption unterhalb]%
[Eine Beschriftung einer doppelseitigen Tabelle, die unterhalb des rechten
Teils der Abbildung platziert wird. Die Tabelle beginnt am linken
Textrand. Auf den Seiten wird ansonsten weiterer Text
platziert. Für das LOT wird dabei eine Kurzform berücksichtigt. Parameter
ist \texttt{doublePage}}%
{tab:doublePage3}
```

\Blindtext

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Tab. 9

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Zeile 1	1	3	1	1	1	0	1	1	0	0	0	0
Zeile 2	1	1	3	1	0	0	0	0	0	0	2	1
Zeile 3	2	1	2	1	0	0	0	0	0	0	0	1
Zeile 4	1	0	5	1	2	0	0	0	0	2	1	0
Zeile 6	2	1	1	0	0	0	0	0	0	1	2	0
Zeile 5	0	0	4	2	1	2	2	1	0	0	0	1
Zeile 8	0	1	1	0	0	0	1	1	0	3	2	1
Zeile 9	0	0	0	0	0	1	2	1	0	0	0	0
Zeile10	0	1	3	0	1	0	1	0	0	1	1	0
Zeile11	0	2	2	1	1	0	1	0	0	0	0	2
Zeile12	2	0	2	4	1	0	4	0	0	0	0	0
Lärm	2	3	0	0	0	0	0	0	0	0	1	0
Zeile13	0	1	0	0	1	0	3	0	0	0	0	0
Zeile14	0	1	0	0	0	0	0	0	0	0	0	0
Zeile15	0	0	0	0	0	0	0	0	0	1	0	0
Zeile16	0	0	0	0	0	1	0	0	0	0	0	0
Artikel gesamt	2	6	13	8	4	3	5	4	0	6	3	5

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Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no

1984	1985	1986	1987	1988	1989
20	0	2	2	2	1
3	4	4	6	4	2
5	3	1	7	7	3
1	0	3	7	2	1
5	2	2	5	4	2
1	0	2	5	4	3
2	1	3	5	3	4
4	2	1	4	5	2
1	1	1	4	4	1
6	1	0	2	1	1
0	0	0	1	0	3
2	0	0	2	2	2
2	0	1	3	0	2
3	3	2	1	1	0
4	0	0	3	1	1
0	0	3	5	0	1
23	10	8	15	13	1

Table 9: Eine Beschriftung einer doppelseitigen Tabelle, die unterhalb des rechten Teils der Abbildung platziert wird. Die Tabelle beginnt am linken Textrand. Auf den Seiten wird ansonsten weiterer Text platziert. Für das L^OT wird dabei eine Kurzform berücksichtigt. Parameter ist doublePage

information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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22 References to the page

With the command `\pageref` one can have a reference to the page number of a caption. For the `fullpage` option this can be the wrong page if someone wants a reference to the page where the object is set. Let's assume that we use something like

```
\hvFloatSetDefaults
\hvFloat[fullpage,capPos=evenPage]{figure}%
  {\IncludeGraphics{images/frose}}%
  [A float which needs the complete paper width and height.]%
  {A Caption of a "fullpage" object, which follows on the next page.
   This can be an even or odd page. The object uses the complete paper dimensions}%
  {demo:fullpage}
```

The label `demo:fullpage` is used for the *image* and not for the caption! Internally another label called `demo:fullpage-cap` is set on the caption page which can be before or behind the object (depending to the optional argument of `capPos`). For example:

The caption of figure~\ref{demo:fullpage-cap} is on page~\pageref{demo:fullpage-cap}, but the image itself is on page~\pageref{demo:fullpage}.

The caption of figure 62 is on page 80, but the image itself is on page 81. With package `varioref` it is:

Whith the package `\pack{varioref}` ([\url{https://ctan.org/pkg/varioref}](https://ctan.org/pkg/varioref)) one can get something like: see figure~\vref{demo:fullpage}, which uses a correct page number of the floatinmg object and not the caption page number which is~\vpageref{demo:fullpage-cap}. The figure~\ref{demo:fullpage} is on page~\pageref{demo:fullpage} and the caption on page~\pageref{demo:fullpage-cap}

Whith the package `varioref` (<https://ctan.org/pkg/varioref>) one can get something like: see figure 62 on page 81, which uses a correct page number of the floating object and not the caption pagenumber which is on page 80. The figure 62 is on page 81 and the caption on page 80

23 Defining a style

With `\hvDefFloatStyle` one can define a special style to get rid of the individual setting:

`\hvDefFloatStyle{name}{setting}`

For example:

```
\hvDefFloatStyle{RightCaption}{floatPos=htb, capWidth=0.5, capPos=after, capVPos=bottom, objectPos=center}
```



Figure 61: Caption at bottom right beside the float with a caption width of 0.5\columnwidth .

```
\hvFloat[style=RightCaption]{figure}{\includegraphics{images/rose}}%
{Caption vertically centered right beside the float with a caption width of
\texttt{0.5\textbackslash columnwidth}.}{fig:style}
```

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

24 Global float setting

Instead of writing the following sequence into the preamble:

```
\makeatletter
\renewcommand\fps@figure{tb}
\renewcommand\fps@table{t}
\makeatother
```

you can change the global setting of floats by loading the package `hvfloating-fps`. It allows optional package options to set the global placement:

```
\usepackage[figure=tb,table=t]{hvfloating-fps}
```

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no

Figure 62: A Caption of a “fullpage” object, which follows on the next page. This can be an even or odd page. The object uses the complete paper dimensions



information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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25 The Package Source

```

1  %% $Id: hvfloat.sty 73 2021-05-03 07:38:13Z herbert $
2  %%
3  %%
4  %% IMPORTANT NOTICE:
5  %%
6  %% This is file 'hvfloat.sty',
7  %%
8  %% Herbert Voss <hvoss@tug.org>
9  %%
10 %% This program can be redistributed and/or modified under the terms
11 %% of the LaTeX Project Public License Distributed from CTAN archives
12 %% in directory macros/latex/base/lppl.txt.
13 %%
14 %% DESCRIPTION:
15 %% 'hvfloat' offers rotating of captions and objects for floats
16 %%
17 \NeedsTeXFormat{LaTeX2e}
18 \def\fileversion{2.21}
19 \def\filedate{2021/05/04}
20 \message{'hvfloat' v\fileversion, \filedate\space (Herbert Voss)}
21 \ProvidesPackage{hvfloat}[\filedate\ rotating of floating objects]
22 \let\hvFloatFileVersion\fileversion
23 %
24 \newif\ifhv@fbox \hv@fboxfalse
25 \newif\ifhv@hyperref \hv@hyperreffalse
26 \DeclareOption{fbox}{\hv@fboxtrue\setlength{\fboxsep}{1pt}}
27 \DeclareOption{hyperref}{\hv@hyperreftrue}
28
29 \ProcessOptions
30
31 \PassOptionsToPackage{hypcap}{caption}
32 \RequirePackage{caption}
33 \PassOptionsToPackage{hypcap}{subcaption}
34 \RequirePackage{subcaption}
35 \RequirePackage{atbegshi,picture,trimclip}
36
37 \RequirePackage{expl3,multido}
38 \RequirePackage{graphicx}
39
40 \RequirePackage{xkeyval}
41 \RequirePackage{ifoddpage}
42 \RequirePackage{afterpage}
43 %\RequirePackage{zref-abspos}
44
45 \ifhv@hyperref
46   \RequirePackage{hyperref}
47   % \RequirePackage{hypcap}
48 \fi
49 %
50 %\unitlength=1cm
51 \providecommand*{\LenToUnit[1]{\strip@pt\dimexpr#1*\p@/\unitlength}

```

```

52
53 \newlength\hvObjectWidth
54 \newlength\hvCapWidth
55 \newlength\hvWideWidth
56 \newlength\hvMultiFloatSkip
57 \newlength\hvMaxCapWidth
58 %\newlength\hv@BottomSpace
59 %\AtBeginDocument{%
60 % \setlength\hv@BottomSpace{\dimexpr\paperheight-1in-\topmargin-\headheight-\headsep-\textheight}}
61
62 \newsavebox\hvObjectBox
63 \newsavebox\hvCaptionBox
64 \newsavebox\hvOBox
65 \newsavebox\@tempbox
66 \newsavebox\hv@caption@box
67 \newsavebox\hv@leftBox
68 \newsavebox\hv@rightBox
69
70 \newif\ifhv@capbeside \hv@capbesidefalse
71
72 \def\hv@Top{top}
73 \def\hv@Bottom{bottom}
74 \def\hv@After{after}
75 \def\hv@Before{before}
76 \def\hv@Right{right}
77 \def\hv@Left{left}
78 \def\hv@Center{center}
79 \def\hv@Outer{outer}
80 \def\hv@Inner{inner}
81 \def\hv@Even{evenPage}
82 \def\hv@Odd{oddPage}
83 \def\hv@Natural{n}
84 \def\hv@Width{w}
85 \def\hv@Height{h}
86 \def\hv@Zero{0}
87 %
88 \def\hv@figure{figure}
89 %
90 \define@key{hvSet}{floatPos}{tbp}{% LaTeX's position parameters http
91 \def\hvSet@floatPos{#1}%
92 }
93 \define@key{hvSet}{rotAngle}{0}{% rotates caption AND image together
94 \def\hvSet@rotAngle{#1}%
95 }
96 \define@key{hvSet}{capWidth}{n}{% (n)atural width|object (w)idth|object (h)eight|<scale of \columnwidth
97 >
98 \def\hvSet@capWidth{#1}%
99 }
100 \define@key{hvSet}{capAngle}{0}{% -360...+360
101 \def\hvSet@capAngle{#1}%
102 }
103

```

25 The Package Source

```

104 \define@choicekey*+{hvSet}{capPos}{\val\nr}{bottom,top,left,before,right,after,inner,outer,even,odd}[bottom]{
105     %
106     \def\hvSet@capPos{#1}%           it is relativ to the object, (e),(d) only valid for fullpage float
107     \ifcase\nr\relax
108     \hv@capbesidefalse
109     \or
110     \hv@capbesidefalse
111     \else
112     \hv@capbesidetrue
113     \fi
114 }{\PackageWarning{hvfloa}{erroneous input (#1) for capPos ignored. Using bottom.}}%
115 \def\hvSet@capPos{bottom}%           it is relativ to the object, (e),(d) only valid for fullpage float
116 \hv@capbesidefalse
117 }
118 \define@choicekey*+{hvSet}{capVPos}{\val\nr}{bottom,center,top}[center]{%
119     \def\hvSet@capVPos{#1}%           it is relativ to the object
120 }{\PackageWarning{hvfloa}{erroneous input (#1) for capVPos ignored. Using bottom.}}%
121 \def\hvSet@capVPos{center}%           it is relativ to the object
122 }
123 }
124 \define@choicekey*+{hvSet}{objectPos}{\val\nr}{left,center,right,inner,outer}[center]{%
125     \def\hvSet@objectPos{#1}%           it is relativ to the object
126 }{\PackageWarning{hvfloa}{erroneous input (#1) for objectPos ignored. Using center.}}%
127 \def\hvSet@objectPos{center}%           it is relativ to the object
128 }
129 }
130 \newif\ifhv@floatRefToObject
131 \define@choicekey*+{hvSet}{floatRef}{\val\nr}{caption,object}[object]{% where the LOF entry should point to
132     \ifcase\nr\relax
133     \hv@floatRefToObjectfalse
134     \else
135     \hv@floatRefToObjecttrue
136     \fi
137 }{\PackageWarning{hvfloa}{erroneous input (#1) for floatRef ignored. Using option object.}}%
138 \hv@floatRefToObjecttrue
139 }
140 }
141 \define@key{hvSet}{objectAngle}[0]{% -360..+360
142     \def\hvSet@objectAngle{#1}%
143 }
144 \define@key{hvSet}{floatCapSep}[5pt]{% a width with the unit pt
145     \def\hvSet@floatCapSep{#1}%
146 }
147 \define@key{hvSet}{multiFloatSkip}{\normalbaselineskip}{% a width with the unit pt
148     \setlength\hvMultiFloatSkip{#1}%
149 }
150 \define@boolkey{hvSet}[hv@]{useOBox}[true]{}% use of the hvOBox contents
151 \define@boolkey{hvSet}[hv@]{nonFloat}[true]{}% Do not use float environment
152 \define@boolkey{hvSet}[hv@]{onlyText}[true]{}% Write the caption only as text
153 \define@boolkey{hvSet}[hv@]{wide}[true]{}% Write the caption only as text
154
155

```

```

156 \newif\ifhv@fullpage
157 \newif\ifhv@FULLPAGE
158 \newif\ifhv@doubleFULLPAGE
159 \newif\ifhv@doublePAGE
160 \newif\ifhv@doublePage
161
162 \define@key{hvSet}{fullpage}[true]{\global\@nameuse{hv@fullpage#1}}% wegen \afterpage problem
163 \define@key{hvSet}{FULLPAGE}[true]{\global\@nameuse{hv@FULLPAGE#1}}
164 \define@key{hvSet}{doubleFULLPAGE}[true]{\global\@nameuse{hv@doubleFULLPAGE#1}\hv@doublePagefalse\
    hv@doublePAGEfalse}
165 \define@key{hvSet}{doublePAGE}[true]{\global\@nameuse{hv@doublePAGE#1}\hv@doublePagefalse\
    hv@doubleFULLPAGEfalse}
166 \define@key{hvSet}{doublePage}[true]{\global\@nameuse{hv@doublePage#1}\hv@doublePAGEfalse\
    hv@doubleFULLPAGEfalse}
167
168 \define@boolkey{hvSet}[hv@]{subFloat}[true]{%      typeset values as subfloats
169     \ifhv@subFloat\setkeys{hvSet}{multiFloat=false}\fi%
170 }%
171 \define@boolkey{hvSet}[hv@]{multiFloat}[true]{%      typeset values as continous floats
172     \ifhv@multiFloat\setkeys{hvSet}{subFloat=false}\fi%
173 }%
174 \define@boolkey{hvSet}[hv@]{separatorLine}[true]{}% separator line for caption of a full page float
175 \define@boolkey{hvSet}[hv@]{objectFrame}[true]{}% a frame around the object with no separation
176 \define@key{hvSet}{style}{%
177     \@ifundefined{hv@#1}%
178     {\errmessage{Custom style '#1' undefined}}%
179     {\beginingroup
180         \edef\x{\endgroup\noexpand\setkeys{hvSet}{\@nameuse{hv@#1}}}\x}% use a defined style
181     }
182 \define@key{hvSet}{capFormat}[]{\def\hv@caption@format{#1}}%
183 \define@key{hvSet}{subcapFormat}[]{\def\hv@subcaption@format{#1}}%
184
185 \def\hv@set#1{\beginingroup\edef\x{\endgroup\noexpand\setkeys{hvSet}{#1}}\x}
186 \let\hvFloatSet\hv@set
187 %
188 \def\defhvhstyle#1#2{\@namedef{hv@#1}{#2}}
189 \let\hvDefFloatStyle\defhvhstyle % better name
190 %
191 \newcommand{\setDefaults}{%
192     \hv@set{%
193         floatPos=htbp, rotAngle=0, capWidth=n, capAngle=0,
194         capPos=bottom, capVPos=center, objectPos=center, objectAngle=0,
195         floatCapSep=5pt, useOBox=false, nonFloat=false,
196         onlyText=false, wide=false, fullpage=false, FULLPAGE=false,
197         doubleFULLPAGE=false, doublePage=false, doublePAGE=false,
198         multiFloat=false, subFloat=false,
199         separatorLine, objectFrame=false, multiFloatSkip=\normalbaselineskip,
200         capFormat={}, subcapFormat={},
201         floatRef=object,
202     }%
203 }
204
205 \let\hvFloatSetDefaults\setDefaults

```

25 The Package Source

```

206
207 \newcommand\reset@special@float{%
208   \hv@set{subFloat=false,%fullpage=false,
209     multiFloat=false,%FULLPAGE=false
210   }}
211
212 \def\hv@vskip{\vspace{\hvMultiFloatSkip}}
213
214 %
215 \newlength\hvAboveCaptionSkip
216 \newlength\hvBelowCaptionSkip
217 \newcount\hv@capPos
218
219 \newlength\fbboxlinewidth
220 \AtBeginDocument{%
221   \setlength\fbboxlinewidth{\dimexpr\linewidth-2\fbboxrule-2\fbboxsep}%
222 }
223 \setlength\belowcaptionskip{\abovecaptionskip}% it is in latex.ltx = 0pt
224 \newcommand\saveCaptionSkip{%
225   \setlength{\hvAboveCaptionSkip}{\abovecaptionskip}%
226   \setlength{\hvBelowCaptionSkip}{\belowcaptionskip}%
227   \setlength{\abovecaptionskip}{0pt}%
228   \setlength{\belowcaptionskip}{0pt}%
229 }
230 \newcommand\restoreCaptionSkip{%
231   \setlength\abovecaptionskip{\hvAboveCaptionSkip}%
232   \setlength\belowcaptionskip{\hvBelowCaptionSkip}%
233 }
234 %
235 \newcommand\figcaption[2][{}]{\def\@captive{figure}%
236   \begingroup
237   \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
238   \ifx\relax#1\relax \caption{#2}\else\caption[#1]{#2}\fi
239   \endgroup}
240 \newcommand\tabcaption[2][{}]{\def\@captive{table}%
241   \begingroup
242   \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
243   \ifx\relax#1\relax \caption{#2}\else\caption[#1]{#2}\fi
244   \endgroup}
245 %
246 \newlength\hv@maxImageWidth
247 \AtBeginDocument{\hv@maxImageWidth=\columnwidth}
248
249 \define@key{Gin}{fullpage}[true]{%
250   \def\Gin@ewidth{\columnwidth}%
251   \def\Gin@eheight{\textheight}%
252   \Gin@boolkey{false}{iso}%
253 }
254 \define@key{Gin}{FullPage}[true]{%
255   \def\Gin@ewidth{\textwidth}%
256   \def\Gin@eheight{\textheight}%
257   \Gin@boolkey{false}{iso}%
258 }

```

```

259 \define@key{Gin}{FULLPAGE}[true]{%
260   \def\Gin@ewidth{\paperwidth}%
261   \def\Gin@eheight{\paperheight}%
262   \Gin@boolkey{false}{iso}%
263 }
264 \newcommand\IncludeGraphics[2][0]{%
265   \vspace*{\the\dimexpr-\lin-\voffset+\topskip-\headheight-0.5\baselineskip}%
266   \leavevmode\checkoddpages
267   \ifoddpages
268     \hspace*{\dimexpr-\oddsidemargin-\parindent-\lin}%
269   \else
270     \hspace*{\dimexpr-\evensidemargin-\parindent-\lin}%
271   \fi\noindent
272   \includegraphics[#1,width=\paperwidth,height=\paperheight,keepaspectratio=false]{#2}%
273 }
274
275 \newcommand\put@CaptionBox[1][0]{%
276   \ifcase#1
277     \ifhv@fbox
278       \fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
279     \else
280       \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}%
281     \fi
282   \or
283     \ifhv@fbox
284       \fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
285     \else
286       \raisebox{-\height}{\usebox{\hvCaptionBox}}%
287     \fi
288   \or
289     \ifhv@fbox\fbox{\usebox{\hvCaptionBox}}\else\usebox{\hvCaptionBox}\fi
290   \fi
291 }
292
293 \newcommand\put@ObjectBox[1][0]{%
294   \ifcase#1
295     \ifhv@fbox
296       \fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}%
297     \else
298       \parbox{\wd\hvObjectBox}{\ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi}%
299     \fi
300   \or
301     \ifhv@fbox
302       \fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
303     \else
304       \raisebox{-\height}{\ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi}%
305     \fi
306   \or
307     \ifhv@fbox
308       \fbox{\usebox{\hvObjectBox}}%
309     \else
310       \ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi%
311     \fi

```

25 The Package Source

```

312   \fi
313 }
314
315 \newif\ifhvvstar
316 \newif\ifhvvsubstar
317 \setDefault
318
319 \def\hvFloat{\@ifnextchar*%      Main macro
320   {\global\hv@starttrue\hv@maxImageWidth=\textwidth\hvFloat@i}%
321   {\global\hv@startfalse\hv@maxImageWidth=\columnwidth\hvFloat@i*}%
322 }
323
324 %\newcommand*{\hvFloat}[5][{}]{%
325 % #1: keyvalues
326 % #2: type figure | table | ...
327 % #3: float contents
328 % #4: short caption
329 % #5: caption
330 % #6: label
331 %
332 \def\hvFloat@i*{\@ifnextchar[{\do@hvFloat}{\do@hvFloat[]}}
333 \def\do@hvFloat[#1]{%
334   \begingroup
335   \setlength\hvWideWidth{\dimexpr\textwidth+\marginparwidth+\marginparsep}%
336   % \setlength\hvWideWidth{\dimexpr\linewidth+\marginparwidth}%
337   \hv@maxImageWidth=\textwidth
338   \reset@special@float
339   \setcounter{hv@pfigure}{\value{figure}}%
340   \setcounter{hv@ptable}{\value{table}}%
341   \gdef\hv@save@setting{#1}%
342   \ifx\relax#1\relax\else\setkeys{hvSet}{#1}\fi
343   \gdef\hv@floatType{figure}%
344   \@ifnextchar+{\do@multiFloat}{\hvFloat@ii[#1]}%
345 }
346
347 \ExplSyntaxOn
348
349 \def\do@multiFloat+#1#2{%
350   \clist_set:Nn\l_clist_Type{#1}%
351   \clist_set:Nn\l_clist_Object{#2}%
352   \@ifnextchar[\do@multiFloat@i{\do@multiFloat@i[]}%
353 }
354 \def\do@multiFloat@i[#1]#2#3{% lof-caption, caption, label
355   \ifx\relax#1\relax
356     \clist_set:Nn\l_clist_LofCaption{{}}%
357   \else
358     \clist_set:Nn\l_clist_LofCaption{{#1}}%
359   \fi
360   \clist_set:Nn\l_clist_Caption{{#2}}%
361   \ifx\relax#3\relax
362     \clist_set:Nn\l_clist_Label{{}}%
363   \else
364     \clist_set:Nn\l_clist_Label{{#3}}%

```



```

365 \fi
366 \@ifnextchar+{\do@multiFloat@ii}{}%
367 }
368 \def\do@multiFloat@ii+#1#2{%
369 \clist_put_right:Nn\l_clist_Type{#1}%
370 \clist_put_right:Nn\l_clist_Object{#2}%
371 \@ifnextchar[\do@multiFloat@iii{\do@multiFloat@iii[]}%
372 }
373
374 \def\do@multiFloat@iii[#1]#2#3{% \lof-caption, caption, label
375 \ifx\relax#1\relax
376 \clist_put_right:Nn\l_clist_LofCaption{}}%
377 \else
378 \clist_put_right:Nn\l_clist_LofCaption{#1}%
379 \fi
380 \clist_put_right:Nn\l_clist_Caption{#2}%
381 \ifx\relax#3\relax
382 \clist_put_right:Nn\l_clist_Label{}}%
383 \else
384 \clist_put_right:Nn\l_clist_Label{#3}%
385 \fi
386 \@ifnextchar+{\do@multiFloat@ii%
387 {\def\hvSet@CapWidth{n}%
388 \do@@@hvFloat}%
389 }
390 \ExplSyntaxOff
391
392
393 \newcounter{hv@pfigure}
394 \newcounter{hv@ptable}
395 \newcounter{subhv@pfigure}
396 \newcounter{subhv@ptable}
397
398 \def\drawSepLine{%
399 \par\noindent
400 \if@twocolumn\rule{\columnwidth}{0.4pt}\else\rule{\linewidth}{0.4pt}\fi
401 \vspace{0pt}%
402 }
403
404 \newcount\hv@cna
405 \newcount\hv@cna
406
407 \def\hvFloat@ii[#1]#2{% #1: key/value, #2: floattype
408 \@ifnextchar[{\hvFloat@iii[#1]#2}{\hvFloat@iii[#1]#2[]}%
409 }
410
411 \def\hvFloat@iii[#1]#2[#3]#4{% #1: key/value, #2: floattype, #3: ListOfExt, #4: object
412 \hv@maxImageWidth=\textwidth
413 \ifx\relax#1\relax\else\setkeys{hvSet}{#1}\fi
414 \gdef\hv@floatType{#2}%
415 \ifx\relax#3\relax
416 \ifx\hv@floatType\hv@figure
417 \gdef\hv@floatListOfExt{lof}%

```

25 The Package Source

```

418     \else
419         \gdef\hv@floatListOfExt{lot}%
420     \fi
421 \else
422     \gdef\hv@floatListOfExt{#3}%
423 \fi
424 \ifx\relax#2\relax \setkeys{hvSet}{nonFloat=true}\fi
425 \gdef\hv@floatObject{#4}%
426 \@ifnextchar[{\do@hvFloat}{\do@hvFloat[]}%
427 }
428
429 \def\do@hvFloat[#1]#2#3{%
430     \gdef\hv@shortCap{#1}%
431     \gdef\hv@longCap{#2}%
432     \gdef\hv@label{#3}%
433     \ifhv@capbeside\def\@temp{1}\else\def\@temp{0}\fi
434     \ifhv@fullpage
435         \def\hvSet@CapWidth{n}% relative value
436         \do@@@hvFloat% fullpage with caption on other page
437     \else
438         \ifhv@FULLPAGE
439             \def\hvSet@CapWidth{n}% relative value
440             \do@@@hvFloat% fullpage with caption on other page
441         \else
442             \ifhv@doubleFULLPAGE
443                 \setlength\hvCapWidth{\textheight}%
444                 \expandafter\do@hvFloat@doubleFULLPAGE\@temp% fullpage with caption rotated or under on an odd page
445             \else
446                 \ifhv@doublePAGE
447                     \expandafter\do@hvFloat@doublePAGE\@temp% fullpage with caption rotated or under on an odd page
448                 \else
449                     \ifhv@doublePage
450                         \expandafter\do@hvFloat@doublePage\@temp% fullpage with caption rotated or under on an odd page
451                     \else
452                         \do@@@hvFloat
453                     \fi
454                 \fi
455             \fi
456         \fi
457     \fi
458 % \global\hv@capbesidefalse
459 }
460 %
461 \def\do@@@hvFloat{% no special float page
462     \def\@tempa{90}%
463     \ifx\hvSet@rotAngle\@tempa
464         \setlength\hvMaxCapWidth{\textheight}%
465     \else
466         \setlength\hvMaxCapWidth{\hvWideWidth}%
467     \fi
468 %
469 % First we save the object in \hvObjectBox
470 %

```

```

471 \ifx\hvSet@objectAngle\hv@Zero% rotate the object?
472 \savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
473 \else
474 \savebox{\hvObjectBox}{%
475 \rotatebox{\hvSet@objectAngle}{%
476 \ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi
477 }%
478 }%
479 \fi
480 \setlength\hvObjectWidth{\wd\hvObjectBox}%
481 %
482 % Now we save the caption with its defined \hvCapWidth
483 %
484 \ifx\hvSet@capWidth\hv@Width% captionwidth=objectwidth
485 \setlength\hvCapWidth{\hvObjectWidth}%
486 \else
487 \ifx\hvSet@capWidth\hv@Height% captionwidth=objectheight
488 \setlength\hvCapWidth{\ht\hvObjectBox}%
489 \else
490 \ifx\hvSet@capWidth\hv@Natural% captionwidth=\linewidth-\objectwidth-separation
491 \ifhv@capbeside
492 \ifhv@wide
493 \setlength\hvCapWidth{\the\dimexpr\hvWideWidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
494 \else
495 \ifhv@star
496 \setlength\hvCapWidth{\the\dimexpr\textwidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
497 \else
498 \setlength\hvCapWidth{\the\dimexpr\linewidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
499 \fi
500 \fi
501 \else
502 \setlength\hvCapWidth{\columnwidth}%
503 \fi
504 \else
505 \ifhv@capbeside
506 \ifhv@wide
507 \setlength\hvCapWidth{\hvSet@capWidth\hvWideWidth}%
508 \setlength\@tempdima{\the\dimexpr\hvWideWidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
509 \else
510 \setlength\hvCapWidth{\hvSet@capWidth\columnwidth}%
511 \setlength\@tempdima{\the\dimexpr\columnwidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
512 \fi
513 \ifdim\hvCapWidth>\@tempdima
514 \setlength\hvCapWidth{\@tempdima}%
515 \fi
516 \else
517 \ifhv@wide
518 \setlength\hvCapWidth{\hvSet@capWidth\hvWideWidth}%
519 \else
520 \setlength\hvCapWidth{\hvSet@capWidth\columnwidth}%
521 \fi
522 \fi
523 \fi

```

25 The Package Source

```

524   \fi
525 \fi
526 \saveCaptionSkip% we put this space ourselve
527 \ifx\hvSet@capAngle\hv@Zero% need rotation?
528   \savebox\hvCaptionBox{% NO rotation
529     \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation
530     \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
531     \ifhv@nonFloat
532     \ifhv@onlyText
533     \hv@longCap
534   \else
535     \ifx\hv@floatType\hv@figure
536     \ifx\relax\hv@shortCap\relax
537       \figcaption{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
538     \else
539       \figcaption[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
540     \fi
541   \else
542     \ifx\relax\hv@shortCap\relax
543       \tabcaption{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
544     \else
545       \tabcaption[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
546     \fi
547   \fi
548 \fi
549 \else
550   \ifhv@onlyText
551   \hv@longCap
552 \else
553   \let\@capttype\hv@floatType
554   \ifhv@floatRefToObject
555     \expandafter\ifx\expandafter\relax\hv@shortCap\relax
556       \caption[]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
557       \addcontentsline{\hv@floatListOfExt}{\hv@floatType}{\protect\numberline{\csname the\hv@floatType\endcsname}{\ignorespaces\hv@longCap}}%
558     \else
559       \caption[]{\hv@shortCap\expandafter\label\expandafter{\hv@label}}%
560       \addcontentsline{\hv@floatListOfExt}{\hv@floatType}{\protect\numberline{\csname the\hv@floatType\endcsname}{\ignorespaces\hv@shortCap}}%
561     \fi
562   \else
563     \expandafter\ifx\expandafter\relax\hv@shortCap\relax
564       \caption{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
565     \else
566       \caption[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
567     \fi
568   \fi
569 \fi
570 \fi
571 % \expandafter\label\expandafter{\hv@label}% 2.17 put label into the caption argument
572 \end{minipage}%
573 }%
574 \else

```

```

575 \savebox\hvCaptionBox{% Rotation
576 \rotatebox{\hvSet@capAngle}{%
577 \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation
578 \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
579 \ifhv@nonFloat
580 \ifhv@onlyText
581 \hv@longCap
582 \else
583 \ifx\hv@floatType\hv@figure
584 \ifx\relax\hv@shortCap\relax \figcaption{\hv@longCap}\else\figcaption[\hv@shortCap]{\hv@longCap}\fi
585 \else
586 \ifx\relax\hv@shortCap\relax \tabcaption{\hv@longCap}\else\tabcaption[\hv@shortCap]{\hv@longCap}\fi
587 \fi
588 \fi
589 \else
590 \ifhv@onlyText
591 \hv@longCap
592 \else
593 \let\@captype\hv@floatType
594 \ifhv@floatRefToObject
595 \expandafter\ifx\expandafter\relax\hv@shortCap\relax
596 \caption[]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
597 \addcontentsline{\hv@floatListOfExt}{\hv@floatType}{\protect\numberline{\csname the\hv@floatType\endcsname}{\ignorespaces\hv@longCap}}%
598 \else
599 \caption[]{\hv@shortCap\expandafter\label\expandafter{\hv@label}}%
600 \addcontentsline{\hv@floatListOfExt}{\hv@floatType}{\protect\numberline{\csname the\hv@floatType\endcsname}{\ignorespaces\hv@shortCap}}%
601 \fi
602 \else
603 \expandafter\ifx\expandafter\relax\hv@shortCap\relax
604 \caption{\hv@longCap}\else\caption[\hv@shortCap]{\hv@longCap}%
605 \fi
606 \fi
607 % \expandafter\ifx\expandafter\relax\hv@shortCap\relax \caption{\hv@longCap}\else\caption[\hv@shortCap]{\hv@longCap}\fi
608 \fi
609 \fi
610 \label{\hv@label}%
611 \end{minipage}%
612 }% rotatebox
613 }% \sbox
614 \fi
615 %
616 % now we have the object and the caption with the right
617 % rotated angles saved in different boxes
618 %%
619 \restoreCaptionSkip% save old values
620 \def\fps@figure{\hvSet@floatPos}%
621 \ifhv@nonFloat
622 \begin{group} Start the nonfloat part

```

25 The Package Source

```

623 \else
624   \ifhv@star
625     \@nameuse{\hv@floatType*}%   Start the floating environment *****
626   \else
627     \begin{\hv@floatType}%   Start the floating environment
628   \fi
629 \fi
630 \checkoddpage
631 \ifx\hvSet@objectPos\hv@Right\raggedleft\fi
632 \ifx\hvSet@objectPos\hv@Center
633   \ifhv@nonFloat\hspace*{\fill}\else\centering\fi
634 \fi
635 \ifx\hvSet@objectPos\hv@Outer
636   \ifoddpage\raggedleft\fi
637 \fi
638 \ifx\hvSet@objectPos\hv@Inner
639   \ifoddpage\else\raggedleft\fi
640 \fi
641 %
642 % to rotate object and caption together, we save all in another box
643 % the caption comes first, if its on the left or the top
644 % 0 caption left, inner and odd page, oneside inner
645 % 1 caption top
646 % 2 caption right, inner and even page, oneside outer
647 % 3 caption bottom
648 %
649 \ifx\hvSet@capPos\hv@Left
650   \hv@@capPos=0
651 \else
652   \ifx\hvSet@capPos\hv@Top
653     \hv@@capPos=1
654   \else
655     \ifx\hvSet@capPos\hv@Right
656       \hv@@capPos=2
657     \else
658       \ifx\hvSet@capPos\hv@Bottom
659         \hv@@capPos=3
660       \else
661         \ifx\hvSet@capPos\hv@Inner
662           \ifoddpageoroneside\hv@@capPos=0\else\hv@@capPos=2\fi
663         \else
664           \ifx\hvSet@capPos\hv@Outer
665             \ifoddpageoroneside\hv@@capPos=2\else\hv@@capPos=0\fi
666           \else
667             \ifx\hvSet@capPos\hv@Before
668               \hv@@capPos=0% same as cappos=right
669             \else
670               \ifx\hvSet@capPos\hv@After
671                 \hv@@capPos=2% same as cappos=right
672               \fi
673             \fi
674           \fi
675         \fi

```

```

676     \fi
677     \fi
678     \fi
679     \fi
680     %%%
681     \savebox{\@tempboxa}{%          ***** @tempbox  start
682     \expandafter\ifcase\the\hv@capPos% 0 is LEFT    START \ifcase
683     \ifx\hvSet@capVPos\hv@Center
684     \put@CaptionBox
685     \hspace{\hvSet@floatCapSep}% capfloatsep
686     \put@ObjectBox
687     \else
688     \ifx\hvSet@capVPos\hv@Top% caption and object at top aligned
689     \put@CaptionBox[1]%
690     \hspace{\hvSet@floatCapSep}% capfloatsep
691     \put@ObjectBox[1]%
692     \else% caption on bottom
693     \put@CaptionBox[2]%
694     \hspace{\hvSet@floatCapSep}% capfloatsep
695     \put@ObjectBox[2]%
696     \fi
697     \fi% end caption left
698     \or%1 is top
699     \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
700     \begin{minipage}{\wd\hvCaptionBox}%
701     \else
702     \begin{minipage}{\wd\hvObjectBox}%
703     \fi
704     \centering
705     \ifhv@fbox
706     \fbox{\usebox{\hvCaptionBox}}\[\hvBelowCaptionSkip]%
707     \fbox{\usebox{\hvObjectBox}}%
708     \else
709     \usebox{\hvCaptionBox}\[\hvBelowCaptionSkip]%
710     \usebox{\hvObjectBox}%
711     \fi
712     \end{minipage}%
713     \or%2 is right
714     \ifx\hvSet@capVPos\hv@Center
715     \put@ObjectBox
716     \hspace{\hvSet@floatCapSep}%
717     \put@CaptionBox
718     \else
719     \ifx\hvSet@capVPos\hv@Top
720     \put@ObjectBox[1]%
721     \hspace{\hvSet@floatCapSep}% capfloatsep
722     \put@CaptionBox[1]%
723     \else
724     \put@ObjectBox[2]%
725     \hspace{\hvSet@floatCapSep}% capfloatsep
726     \put@CaptionBox[2]%
727     \fi
728     \fi

```


25 The Package Source

```

729 \or%3 bottom
730 \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
731 \begin{minipage}{\wd\hvCaptionBox}%
732 \else
733 \begin{minipage}{\wd\hvObjectBox}%
734 \fi
735 \centering
736 \ifhv@fbox
737 \fbox{\usebox{\hvObjectBox}}\[\hvAboveCaptionSkip]%
738 \fbox{\usebox{\hvCaptionBox}}%
739 \else
740 \ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi\[\hvAboveCaptionSkip]%
741 \usebox{\hvCaptionBox}%
742 \fi
743 \end{minipage}%
744 \fi% \ifcase\the\hv@capPos
745 }% End savebox Object and caption %%%%%%%%% @tempboxa
746 %
747 % now we rotate the object and caption, if needed
748 %
749 \ifhv@wide
750 \ifoddpageoroneside\else\ifoddpage\else\hspace*{\dimexpr-\marginparwidth-\marginparsep}\fi\fi <- for
    wide and left page
751 \fi
752 \ifx\hvSet@rotAngle\hv@Zero
753 \usebox{@tempboxa}%
754 \else
755 \rotatebox{\hvSet@rotAngle}{\usebox{@tempboxa}}%
756 \fi
757 \ifhv@nonFloat
758 \ifx\hvSet@objectPos\hv@Center
759 \ifhv@nonFloat
760 \hspace{\fill}%
761 \fi
762 \fi
763 \endgroup% End the nonfloat part
764 \else
765 \ifhv@star
766 \@nameuse{end\hv@floatType}% End the floating environment
767 \else
768 \end{\hv@floatType}% End the floating environment
769 \fi
770 \fi
771 \endgroup% startet at main \hvFloat
772 }
773 %
774 \newenvironment{hvFloatEnv}[1][\textwidth]
775 {\minipage{#1}\center}
776 {\endcenter\endminipage}
777 %
778
779 \ExplSyntaxOn
780 \let\clist@item@Nn\clist_item:Nn

```

```

781 \let\l@clist@Type\l_clist_Type
782 \let\l@clist@LofCaption\l_clist_LofCaption
783 \let\l@clist@Label\l_clist_Label
784 \let\clist@count@N\clist_count:N
785 \ExplSyntaxOff
786
787 \def\do@@@hvFloat{% special float page: caption <-> fullpage image
788 \ifx\hvSet@capPos\hv@After \hv@capPos=1
789 \else
790 \ifx\hvSet@capPos\hv@Even \hv@capPos=2
791 \else
792 \ifx\hvSet@capPos\hv@Odd \hv@capPos=3
793 \else
794 \ifx\hvSet@capPos\hv@Inner \hv@capPos=4
795 \else
796 \ifx\hvSet@capPos\hv@Outer \hv@capPos=5
797 \else
798 \ifx\hvSet@capPos\hv@Right \hv@capPos=6% only for twocolumn mode
799 \else
800 \ifx\hvSet@capPos\hv@Left \hv@capPos=7% only for twocolumn mode
801 \else
802 \hv@capPos=0
803 \fi
804 \fi
805 \fi
806 \fi
807 \fi
808 \fi
809 \fi
810 \checkoddpage
811 \set@caption@object% set caption and object into a box
812 \ifcase\hv@capPos% caption before object 0-> _always_ left
813 \setBottomCaption\setPageObject
814 \or% caption after object 1-> _always_ right
815 \setPageObject\setBottomCaption
816 \or% caption on even page 2-> left page
817 \ifoddpage
818 \afterpage{\setBottomCaption\setPageObject}%
819 \else% we are on an even page
820 % \zsaveposy{hv@currentPos}%
821 % \ifdim\the\dimexpr\zposy{hv@currentPos}sp-\hv@BottomSpace-1cm>\ht\TBox % enough space*
822 \setBottomCaption\setPageObject
823 % \else
824 % \afterpage{\afterpage{\setBottomCaption\setPageObject}}%
825 % \fi
826 \fi
827 \or% caption on odd page 3->right page
828 \if@twoside
829 \if@twocolumn
830 \ifoddpage
831 \if@firstcolumn% on right side
832 \setBottomCaption\setPageObject
833 \else

```

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```

834         \afterpage{\setPageObject\setBottomCaption}% start next column
835     \fi
836 \else% left (even) page
837     \if@firstcolumn
838         \afterpage{\setPageObject\setBottomCaption}% start next column
839     \else
840         \setPageObject\setBottomCaption
841     \fi
842 \fi
843 \else% onecolumn
844     \ifoddpage
845         \setPageObject\setBottomCaption
846     \else% even page
847         \afterpage{\setPageObject\setBottomCaption}%
848     \fi
849 \fi
850 \else% oneside
851     \if@twocolumn
852         \ifoddpage
853             \if@firstcolumn% on right side
854                 \setBottomCaption\setPageObject
855             \else
856                 \setPageObject\setBottomCaption
857             \fi
858         \else
859             \if@firstcolumn% on left side
860                 \afterpage{\setPageObject\setBottomCaption}%
861             \else
862                 \setPageObject\setBottomCaption
863             \fi
864         \fi
865     \else % onecolumn
866         \ifoddpage
867             \setBottomCaption\setPageObject
868         \else
869             \afterpage{\setBottomCaption\setPageObject}%
870         \fi
871     \fi
872 \fi
873 \or% caption on the inner column 4->inner
874 \set@caption@object
875 \if@twocolumn
876     \ifoddpage
877         \if@firstcolumn% on right side
878         \setBottomCaption\setPageObject
879         \else % right column on right side
880             \setPageObject\setBottomCaption% start next firstcolumn next page
881         \fi
882     \else
883         \if@firstcolumn% on left side
884             \afterpage{\afterpage{\setBottomCaption\setPageObject}}% start next page/first column
885         \else% left page/column
886             \setBottomCaption\setPageObject% start on same page/column

```

```

887     \fi
888     \fi
889     \else% onecolumn
890         \setBottomCaption\setPageObject
891     \fi
892 \or%           caption on the outer column 5->outer
893     \set@caption@object
894     \if@twocolumn
895         \ifoddpage
896             \if@firstcolumn
897                 \afterpage{\setBottomCaption\setPageObject}%
898             \else
899                 \afterpage{\setBottomCaption\setPageObject}%
900             \fi
901         \else% even page (left)
902             \if@firstcolumn
903                 \setBottomCaption\setPageObject
904             \else
905 %%           !!!! to-do: !!!!
906             \fi
907             \fi
908         \else% onecolumn
909             \setBottomCaption\setPageObject
910         \fi
911 \or%           caption after object on same page 6->right for twocolumn
912     \if@twocolumn
913         \if@firstcolumn
914             \afterpage{\setPageObject\setBottomCaption}%
915         \else
916             \setPageObject\setBottomCaption
917         \fi
918     \else% always caption _after_ object for onecolumn
919         \setPageObject\setBottomCaption
920     \fi
921 \or%           caption before object on same page 7->left for twocolumn
922     \if@twocolumn
923         \if@firstcolumn
924             \setBottomCaption\setPageObject
925         \else
926             \afterpage{\setBottomCaption\setPageObject}%
927         \fi
928     \else%           onecolumn -> same as before
929         \setBottomCaption\setPageObject
930     \fi
931 \fi
932 \endgroup% startet at main \hvFloat
933 }
934 %
935 %
936 \def\do@hvFloat@doublePage#1{% image on left and right page with caption on the right
-----
937 % #1-> 0/1 caption under/right
938 \checkoddpage

```

```

939 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
940 \ifoddpage
941 \afterpage{%
942   \noindent
943   \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
944   \global\@tempdima=\dimexpr\paperwidth-lin-\evensidemargin\relax
945   \clipbox*{0 -\depth}{\@tempdima}{\height}{\usebox{\hvObjectBox}%
946   \par\bigskip
947   \afterpage{%
948     \newpage
949     \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
950     \hspace*{\dimexpr-lin-\oddsidemargin-\parindent}%
951     \clipbox*{\@tempdima}{-\depth}{\width}{\height}}{\usebox{\hvObjectBox}%
952     \ifnum#1>0
953       \medskip
954       \ifdim\dp\hvObjectBox > \z@
955         \rotatebox[origin=c]{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
956           \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}
957         %
958       \else
959         \rotatebox{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
960           \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}
961         %
962       \fi
963     \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}%
964   }%
965 }%
966 \else
967   \afterpage{%
968     \afterpage{%
969       \newpage
970       %
971       \noindent\null
972       \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
973       \global\@tempdima=\dimexpr\paperwidth-lin-\evensidemargin\relax{}
974       \hspace*{\@tempdima}%
975       \clipbox*{0 -\depth}{\@tempdima}{\height}{\usebox{\hvObjectBox}%
976       \par\bigskip
977       \afterpage{%
978         \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
979         \noindent
980         \hspace*{\dimexpr-lin-\marginparwidth}%
981         \clipbox*{\@tempdima}{-\depth}{\width}{\height}}{\usebox{\hvObjectBox}%
982         \ifnum#1>0
983           \medskip
984           \ifdim\dp\hvObjectBox > \z@
985             \rotatebox[origin=c]{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
986               \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}
987             %
988           \else
989             \rotatebox{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
990               \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}

```

```

%
989     \fi
990   \else
991     \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
992   \fi
993 }}}}
994 \fi
995 \endgroup
996 }
997
998 \def\do@hvFloat@doublePAGE#1{% image on left and right page with caption on the right
-----
999 % #1-> 0/1 caption under/right
1000 \checkoddp
1001 \ifoddp
1002   \afterpage{%
1003     \newpage
1004     \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1005     \hspace*{\the\dimexpr-\evensidemargin-\parindent-1in}%
1006     \clipbox*{0 -\depth{} \paperwidth{} \height}{\usebox{\hvObjectBox}}%
1007     \newpage
1008     \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1009     \hspace*{\the\dimexpr-\oddsidemargin-\parindent-1in}%
1010     \clipbox*{\paperwidth{} -\depth{} \width{} \height}{\usebox{\hvObjectBox}}%
1011     \ifnum#1>0
1012       \medskip
1013       \ifdim\dp{\hvObjectBox} > \z@
1014         \rotatebox[origin=c]{90}{\parbox{\the\dimexpr\ht{\hvObjectBox}+\dp{\hvObjectBox}{%
1015           \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}%
1016         %
1017       \else
1018         \rotatebox{90}{\parbox{\the\dimexpr\ht{\hvObjectBox}+\dp{\hvObjectBox}{%
1019           \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}%
1020         %
1021       \fi
1022     \else
1023       \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
1024     \fi
1025   \newpage
1026 }%
1027 \else
1028   \afterpage{%
1029     \AddToHookNext{shipout/before}{%
1030       %
1031       \newpage
1032       \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1033       \hspace*{\dimexpr-\evensidemargin-1in-\parindent}%
1034       \clipbox*{0 -\depth{} \paperwidth{} \height}{\usebox{\hvObjectBox}}%
1035       \newpage
1036       \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1037       \hspace*{\the\dimexpr-1in-\oddsidemargin-\parindent\relax}%
1038       \clipbox*{\paperwidth{} -\depth{} \width{} \height}{\usebox{\hvObjectBox}}%
1039       \ifnum#1>0 % caption right and rotated
1040         \medskip

```

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```

1038         \ifdim\dp\hvObjectBox > \z@
1039         \rotatebox[origin=c]{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
1040         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}
1041         %
1042         \else
1043         \rotatebox{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
1044         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}
1045         %
1046         \fi
1047         \else
1048         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
1049         \fi
1050         \newpage
1051     }}%
1052 \fi
1053 \endgroup
1054 }
1055 %
1056 \def\doHvFloat@doubleFULLPAGE#1{% image on left and right page with caption on the right
1057 -----
1058 % #1-> 0/1 caption under/right
1059 \checkoddpage
1060 \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1061 \ifoddpage
1062     \afterpage{%
1063         \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
1064         \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip}% +0.5\paperheight
1065         -0.5\ht\hvObjectBox
1066         \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1067         \AtBeginShipoutNext{\thispagestyle{empty}}%
1068         \clipbox*{0 0 \paperwidth{ \height}{\usebox\hvObjectBox}%
1069         \newpage
1070         \AtBeginShipoutNext{\thispagestyle{empty}}%
1071         \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\normalbaselineskip}% -0.5\
1072         paperheight+0.5\ht\hvObjectBox
1073         \hspace*{\the\dimexpr-\oddsidemargin-\parindent-\lin}%
1074         \clipbox*{\paperwidth{ \wd\hvObjectBox{ \paperheight{}}{\usebox\hvObjectBox}%
1075         \savebox\hvCaptionBox{\parbox{0.9\ht\hvObjectBox}{%
1076         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label}}}}}%
1077         \ifnum#1>0
1078         \ifdim\dimexpr\ht\hvCaptionBox+\wd\hvObjectBox\relax < 2\paperwidth
1079         \rotatebox{90}{\qqquad\parbox{0.9\ht\hvObjectBox}{%
1080         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label
1081         }}}}%
1082         \else
1083         \put(-\ht\hvCaptionBox,0.5\ht\hvObjectBox){\makebox(0,0){\rotatebox{90}{\minipage{\textwidth}\
1084         centering
1085         \parbox{0.8\textwidth}{%
1086         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label
1087         }}}}\endminipage
1088         }}}}%
1089         \fi
1090         \else

```



```

1083     \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}%
1084     \fi
1085     \newpage
1086 }%
1087 \else
1088     \afterpage{%
1089         \AddToHookNext{shipout/before}{%
1090             \newpage
1091             \AddToHook{begin/page}{\thispagestyle{empty}}
1092             \global\savebox{\hv0objectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1093             \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip}% +0.5\paperheight
1094                 -0.5\ht\hv0objectBox
1095             \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1096             \AtBeginShipoutNext{\thispagestyle{empty}}%
1097             \clipbox*{0 0 \paperwidth{} \paperheight}{\usebox\hv0objectBox}%
1098             \newpage
1099             \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\normalbaselineskip}% -0.5\
1100                 paperheight+0.5\ht\hv0objectBox
1101             \hspace*{\the\dimexpr-\oddsidemargin-\parindent-\lin}%
1102             \clipbox*{\paperwidth{} 0 \wd\hv0objectBox{} \paperheight}{\usebox\hv0objectBox}%
1103             \AtBeginShipoutNext{\thispagestyle{empty}}%
1104             \savebox\hvCaptionBox{\parbox{0.9\ht\hv0objectBox}{%
1105                 \captionof*{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}%
1106             }}
1107             \ifnum#1>0
1108                 \ifdim\dimexpr\ht\hvCaptionBox+\wd\hv0objectBox\relax < 2\paperwidth
1109                     \rotatebox{90}{\minipage{\the\ht\hv0objectBox}\centering\parbox{0.75\textwidth}{%
1110                         \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}%
1111                         }%
1112                     \endminipage}%
1113                 \else
1114                     no space on the right, put it over the imag
1115                     \put(-\ht\hvCaptionBox,0.5\ht\hv0objectBox){\makebox(0,0){\rotatebox{90}{\minipage{\the\dimexpr\ht
1116                         \hv0objectBox}%
1117                         \centering\parbox{0.8\textwidth}{%
1118                             \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label
1119                                 }}}\endminipage}}}%
1120                 \fi
1121             \else
1122                 \captionof{\hv@floatType}[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}}%
1123             \fi
1124             \newpage
1125         }%
1126     }%
1127 \fi
1128 \endgroup
1129 }
1130
1131 \def\setBottomCaption{%
1132     \begin{\hv@floatType}[!b]%
1133     \ifhv@separatorLine\drawSepLine\fi
1134     \par
1135     \usebox\hvCaptionBox
1136     \end{\hv@floatType}%
1137 }

```

```

1131
1132 \def\setPageObject{%
1133   \ifhv@star
1134     \begin{\hv@floatType*}[p]%
1135   \else
1136     \begin{\hv@floatType}[p]%
1137   \fi
1138   \ifhv@FULLPAGE
1139     \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep}%-0.5\baselineskip}%
1140     \checkoddpage
1141     \if@twoside
1142       \ifoddpage
1143         \hspace*{\the\dimexpr-\oddsidemargin-\parindent-\lin}%
1144       \else
1145         \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1146       \fi
1147     \else
1148       \hspace*{\the\dimexpr-\oddsidemargin-\parindent-\lin}%
1149     \fi
1150     %\put(0,0){%
1151     \AtBeginShipoutNext{\thispagestyle{empty}}%
1152     \usebox\hvObjectBox}%
1153   \else
1154     \usebox\hvObjectBox
1155   \fi
1156   \ifhv@star
1157     \end{\hv@floatType*}%
1158   \else
1159     \end{\hv@floatType}%
1160   \fi
1161 }
1162
1163 \ExplSyntaxOn
1164
1165 \def\getMultiCaptionAndLabel{%
1166   \global\sbox\hvCaptionBox{\minipage[b]{\linewidth}%
1167     \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1168     \setlength\belowcaptionskip{5pt}%
1169     \setlength\abovecaptionskip{0pt}%
1170     \hv@cntb=\clist_count:N\l_clist_Type
1171     \advance\hv@cntb by \@ne
1172     \hv@cmta=1
1173     \loop
1174       \edef\@capytype{\clist_item:Nn\l_clist_Type{\hv@cmta}}%
1175       \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{\hv@cmta}}%
1176       \ifx\@tempa\@empty
1177         \caption{\clist_item:Nn\l_clist_Caption{\hv@cmta}}%
1178       \else
1179         \expandafter\caption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{\hv@cmta}}%
1180       \fi
1181       \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@cmta}}%
1182       \ifx\@tempa\@empty
1183     \else

```

```

1184     \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@cнта}-cap}\fi
1185     \advance\hv@cнта by \@ne
1186     \ifnum\hv@cнта<\hv@cntb
1187     \repeat
1188 \endminipage}%
1189 }
1190 \def\getMultiObjectAndLabel{%
1191 \global\sbox\hvObjectBox{\minipage{\linewidth}%
1192 \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1193 \ifx\hvSet@objectPos\hv@Right\raggedleft\else
1194 \ifx\hvSet@objectPos\hv@Left\raggedleft\else
1195 \ifx\hvSet@objectPos\hv@Center\centering
1196 \fi\fi\fi
1197 \hv@cntb=\clist_count:N\l_clist_Type
1198 \advance\hv@cntb by \@ne
1199 \hv@cнта=1
1200 \loop
1201 \def\@temp{\clist_item:Nn\l_clist_Object{\hv@cнта}}%
1202 \ifhv@objectFrame\frame{\@temp}\else\@temp\fi
1203 \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@cнта}}%
1204 \ifx\@tempa\@empty
1205 \else
1206 \refstepcounter{\@cptype}%
1207 \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@cнта}}%
1208 \fi
1209 \ifnum\hv@cнта<\clist_count:N\l_clist_Type\par\hv@vskip\fi
1210 \advance\hv@cнта by \@ne
1211 \ifnum\hv@cнта<\hv@cntb
1212 \repeat
1213 \endminipage}%
1214 }
1215
1216 \def\getMultiSubCaptionAndLabel{%
1217 \global\sbox\hvCaptionBox{\minipage{\linewidth}%
1218 \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1219 \setlength\belowcaptionskip{5pt}%
1220 \setlength\abovecaptionskip{0pt}%
1221 \xdef\@cptype{\clist_item:Nn\l_clist_Type{1}}% the same for all subfloats
1222 \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{1}}%
1223 \ifx\@tempa\@empty
1224 \caption{\clist_item:Nn\l_clist_Caption{1}}%
1225 \else
1226 \expandafter\caption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{1}}%
1227 \fi
1228 \edef\@tempa{\clist_item:Nn\l_clist_Label{1}}%
1229 \ifx\@tempa\@empty\else\expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{1}-cap}\fi
1230 \endminipage}%
1231 }
1232
1233 \def\getMultiSubObjectAndLabel{%
1234 \global\sbox\hvObjectBox{\minipage{\linewidth}%
1235 \ifx\relax\hv@subcaption@format\relax\else\captionsetup[sub]{\hv@subcaption@format}\fi
1236 \ifx\hvSet@objectPos\hv@Right\raggedleft\else

```

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```

1237     \ifx\hvSet@objectPos\hv@Left\raggedleft\else
1238     \ifx\hvSet@objectPos\hv@Center\centering
1239     \fi\fi\fi
1240     \hv@cntb=\clist_count:N\l_clist_Caption
1241     \advance\hv@cntb by \@ne
1242     \hv@cmta=2
1243     \xdef\@captype{\clist_item:Nn\l_clist_Type{1}}% the same for all subfloats
1244     \loop
1245     \def\@tempa{\clist_item:Nn\l_clist_Object{\hv@cmta}}%
1246     \ifhv@objectFrame\frame{\@tempa}\else\@tempa\fi
1247     \begingroup
1248     \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{\hv@cmta}}%
1249     \ifx\@tempa\@empty
1250     \subcaption{\clist_item:Nn\l_clist_Caption{\hv@cmta}}%
1251     \else
1252     \expandafter\subcaption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{\hv@cmta}}%
1253     \fi
1254     \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@cmta}}%
1255     \ifx\@tempa\@empty
1256     \else
1257     \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@cmta}}%
1258     \fi
1259     \endgroup
1260     \ifnum\hv@cmta<\clist_count:N\l_clist_Type\par\hv@vskip\fi
1261     \advance\hv@cmta by \@ne
1262     \ifnum\hv@cmta<\hv@cntb
1263     \repeat
1264     \edef\@tempa{\clist_item:Nn\l_clist_Label{1}}% the main label at the end
1265     \ifx\@tempa\@empty
1266     \else
1267     \refstepcounter{\@captype}
1268     \expandafter\label\expandafter{\@tempa}%
1269     \fi
1270     \endminipage}%
1271 }
1272 \ExplSyntaxOff
1273
1274 \def\getSingleCaptionAndLabel{%
1275   \global\sbox\hvCaptionBox{\minipage{\linewidth}%
1276     \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1277     \setlength\belowcaptionskip{5pt}%
1278     \setlength\abovecaptionskip{0pt}%
1279     \edef\@captype{\hv@floatType}%
1280     \expandafter\ifx\expandafter\relax\hv@shortCap\relax
1281     \caption{\hv@longCap}%
1282     \else
1283     \caption[\hv@shortCap]{\hv@longCap}%
1284     \fi
1285     \expandafter\ifx\expandafter\relax\hv@label\relax\else\label{\hv@label-cap}\fi
1286     \endminipage}%
1287 }
1288
1289 \def\set@caption@object{% first caption, then object

```

```

1290 \ifhv@multiFloat
1291 \getMultiCaptionAndLabel
1292 \else
1293 \ifhv@subFloat
1294 \getMultiSubCaptionAndLabel
1295 \else
1296 \getSingleCaptionAndLabel
1297 \fi
1298 \fi
1299 \edef\@capttype{hv@p\hv@floatType}%
1300 \ifhv@multiFloat
1301 \getMultiObjectAndLabel
1302 \else
1303 \ifhv@subFloat
1304 \getMultiSubObjectAndLabel
1305 \else
1306 \global\sbox\hvObjectBox{%
1307 \refstepcounter{\@capttype}%
1308 \ifhv@objectFrame\frame{\hv@floatObject}\else\hv@floatObject\fi
1309 \expandafter\ifx\expandafter\relax\hv@label\relax
1310 \else
1311 \expandafter\label\expandafter{\hv@label}%
1312 \fi
1313 }%
1314 \fi
1315 \fi
1316 }
1317 %
1318 \endinput

```