

# Package hvfloat

## Rotating and scaling of objects and captions ver 2.25

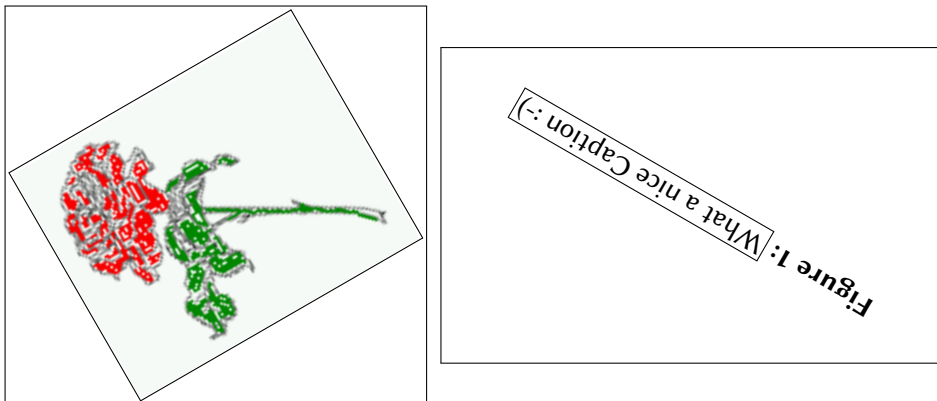
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The package hvfloat defines a macro to place objects and captions of floats in different positions with different rotating angles.

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  $\text{\LaTeX}$  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 <b>(l)</b> 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}
```

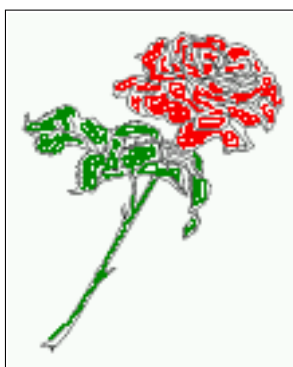


Fig. 2

**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.

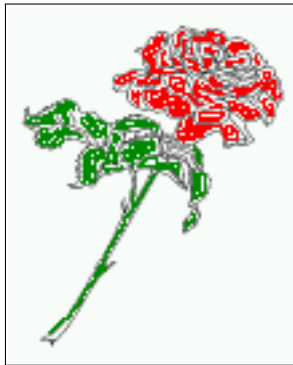
## 4 Caption width

### 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}
```

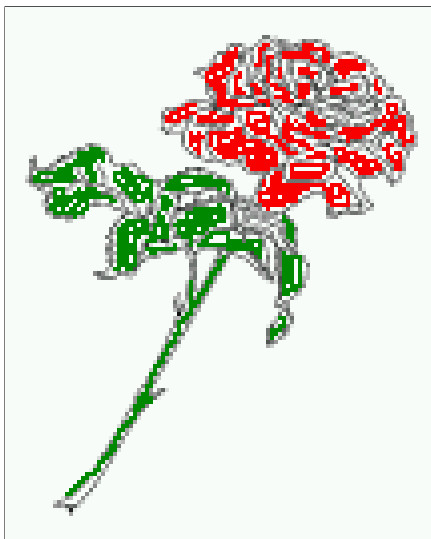
Fig. 9 For the following examples the package option fbox is disabled. All frames are now set with the macro \frame or the optional keyword objectFrame.



**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

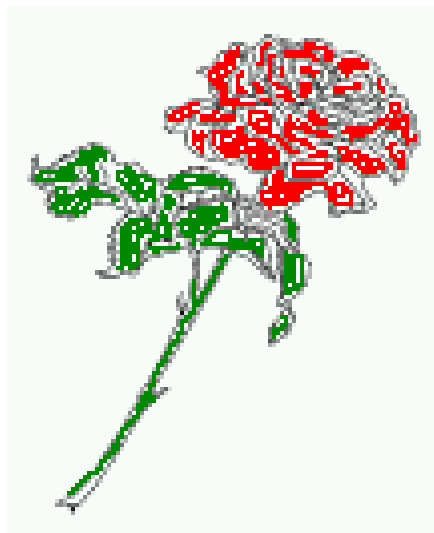


**Figure 5:** Caption below with a width of 0.9 of the current line width (column width), which is in this special case 376.4258pt. Divide it by 28.82 to get cm.

If such a value like  $0.9\text{\linewidth}$  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

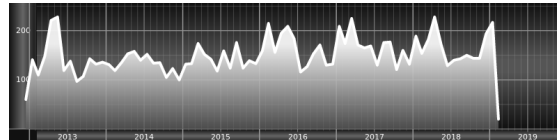


**Figure 6:** Caption right beside with a width setting of  $0.9\text{\linewidth}$  which is too big for this example and therefore corrected by the macro to the maximal width.

### 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 vertically centered right beside the float with a natural caption width (the default). 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.

### 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.

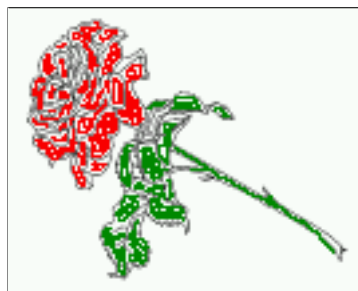
**Figure 10:** Caption vertically centered left beside the float with a caption width of `capWidth=h`, which is the height of the object.



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 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 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. 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 oneside document *inner* is the same as *left* and *outer* is the same as *right*. We show only

## 6 Caption inner or outer

the code for the first image with the setting `capPos=inner` , whereas the second one chooses only `capPos=outer` .

Code for figure 12:

```
\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:** Caption set with the parameter setting `capPos=inner`, which will be a caption on the right side for an even page and on the left side for an odd page.

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 We have an even 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:



**Figure 13:** Caption set with the parameter setting `capPos=outer`, which will be a caption on the right side for an even page and on the left side for an odd page.



**Figure 14:** Caption at the bottom right beside the float with a caption width of `0.5\columnwidth` and `capPos=outer`.

```
\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:** Caption vertically centered right beside the float with a caption width of `0.5\columnwidth` and `capPos=outer`



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



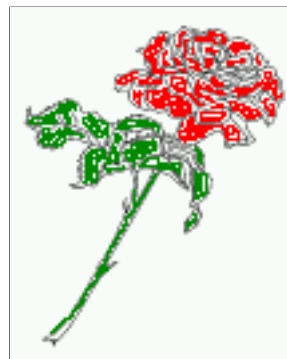
**Figure 16:** Caption at bottom right beside the float

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

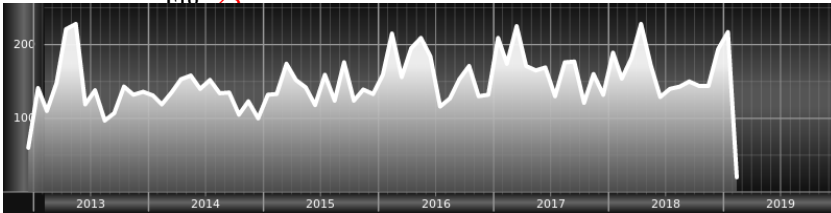
With the optional argument `wide` the width of the defined `\marginparwidth` is added to the allowed horizontal width of the float.

## 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



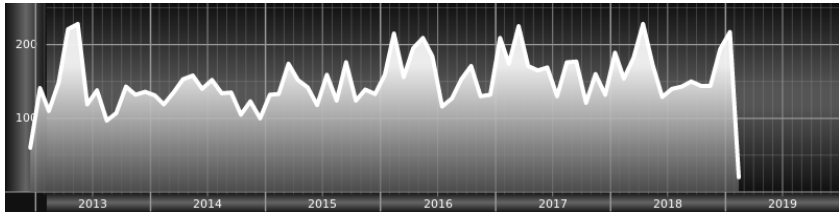
**Figure 23:** Caption at top right beside the float and object position left and the option wide.

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.



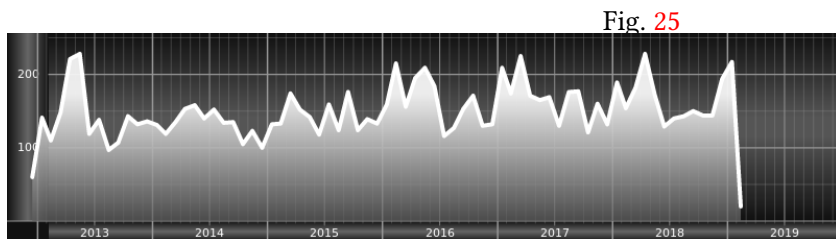
For a twosided document it will place the object always in the margin.

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.

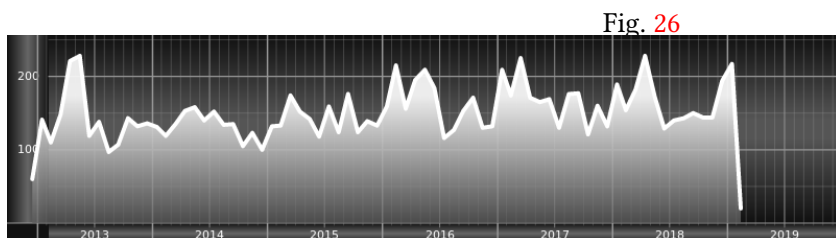


Now we set the same image with the same setting on the next page. The caption will change its side due to the setting `capPos=outer`.

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.



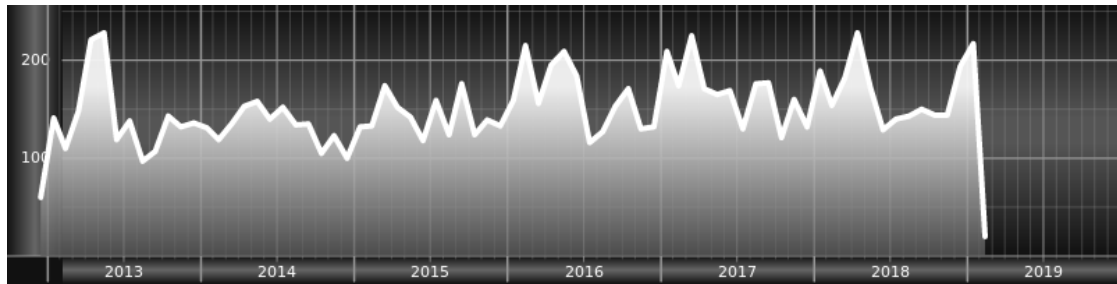
The caption can be typeset completely into the margin with:

```
\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.

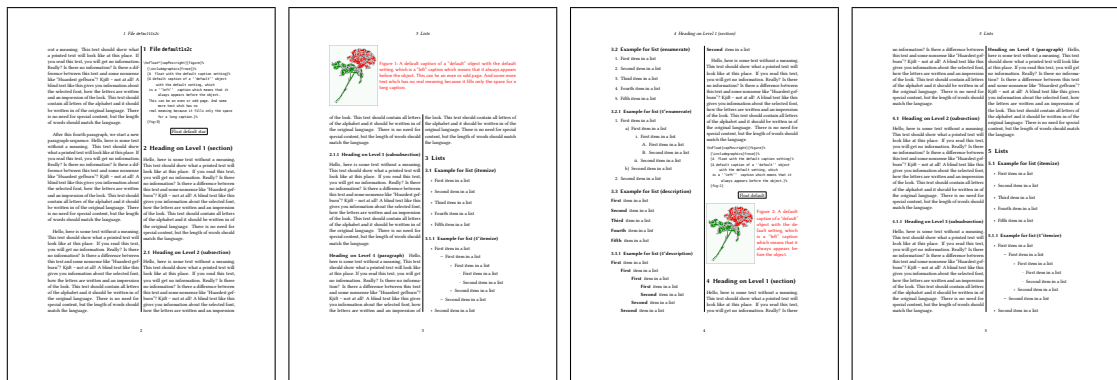


## 11 The star version \hvFloat\*

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:

```

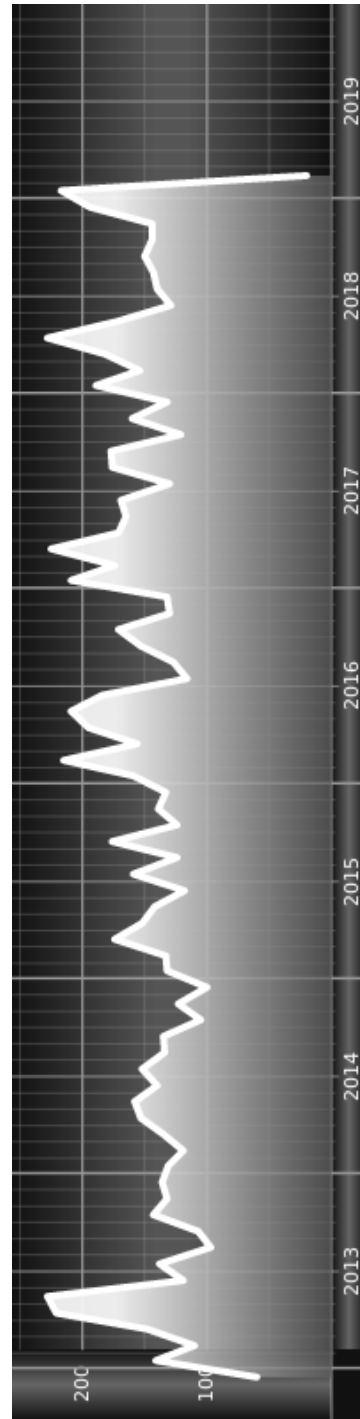
\hvFloat[%
    floatPos=p,
    capWidth=h,
    capPos=right,
    objectAngle=90,
    capAngle=-90,
    objectPos=left,
]{figure}{\includegraphics[width=\textheight]{images/CTAN}}%
    [Rotated Caption in Landscape]{%
    Caption right beside the float and object position left. The caption rotated by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

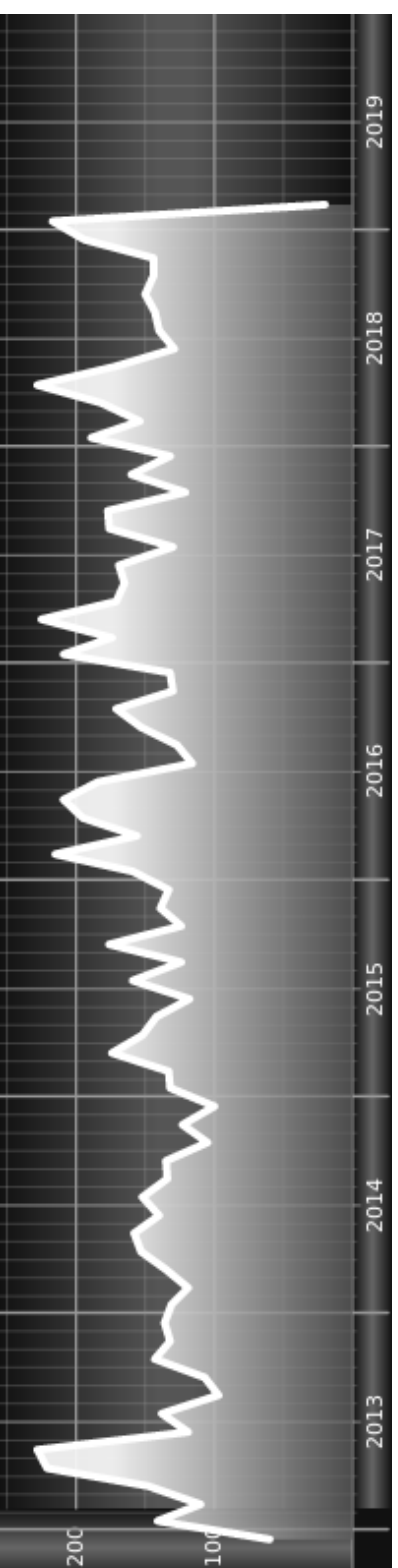
Fig. 30

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: Caption and object in landscape mode.** 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 30:** Caption right beside the float and object position left. The caption rotated by  $-90$  degrees. 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.



## 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.

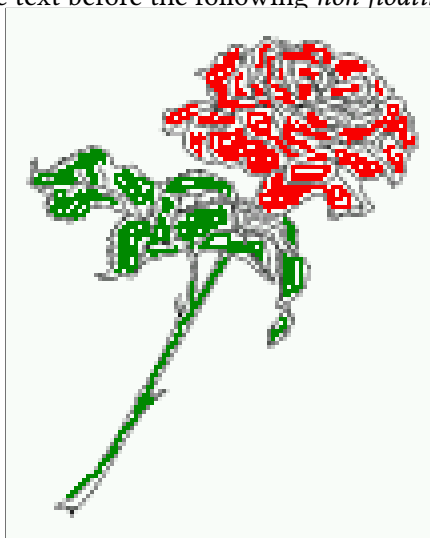
Some nonsense text before the following `\emph{non floating}` object.

```
\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.

The code for figure 15:

`\hvFloat[%`

**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

```

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

```

## 17 Full page objects in onecolumn mode

```
left & center & right \\
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]{%           \define@key{Gin}{FullPage}[true]{%
  \def\Gin@ewidth{\columnwidth}%             \def\Gin@ewidth{\textwidth}%
  \def\Gin@eheight{\textheight}%             \def\Gin@eheight{\textheight}%
  \Gin@boolkey{false}{iso}%                   \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 `\incluographics[...]{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.

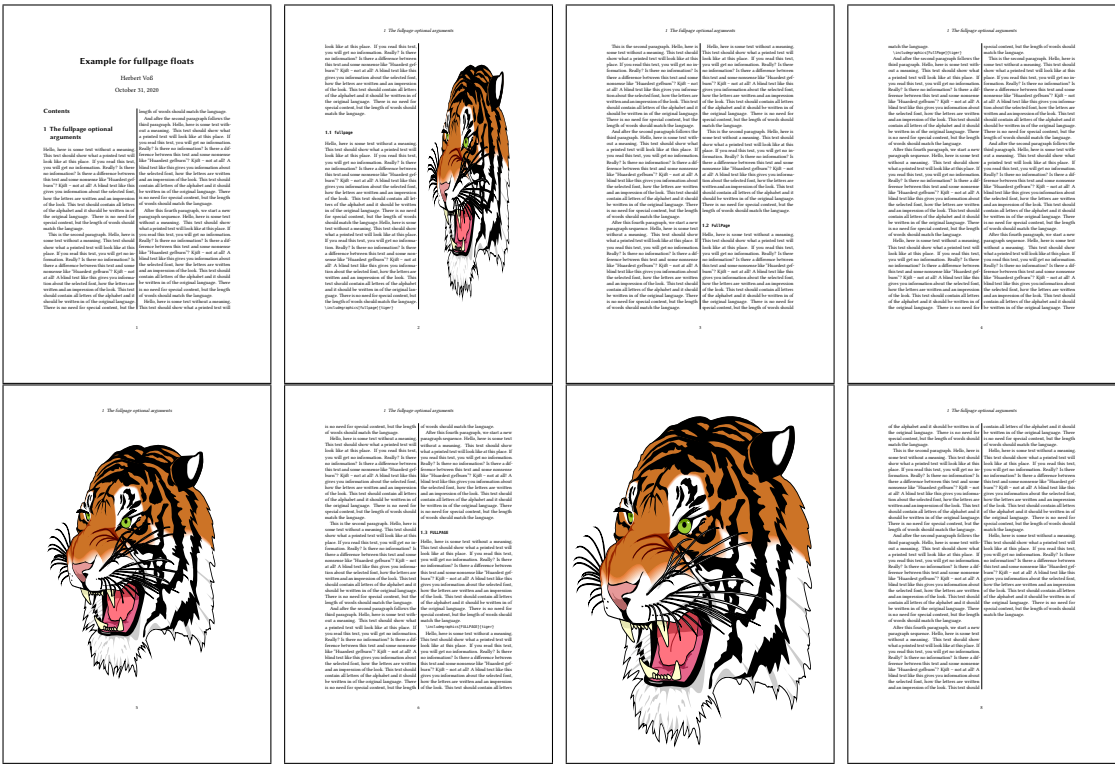


Figure 32: Output of fullpage1s2c (pages 1–8)

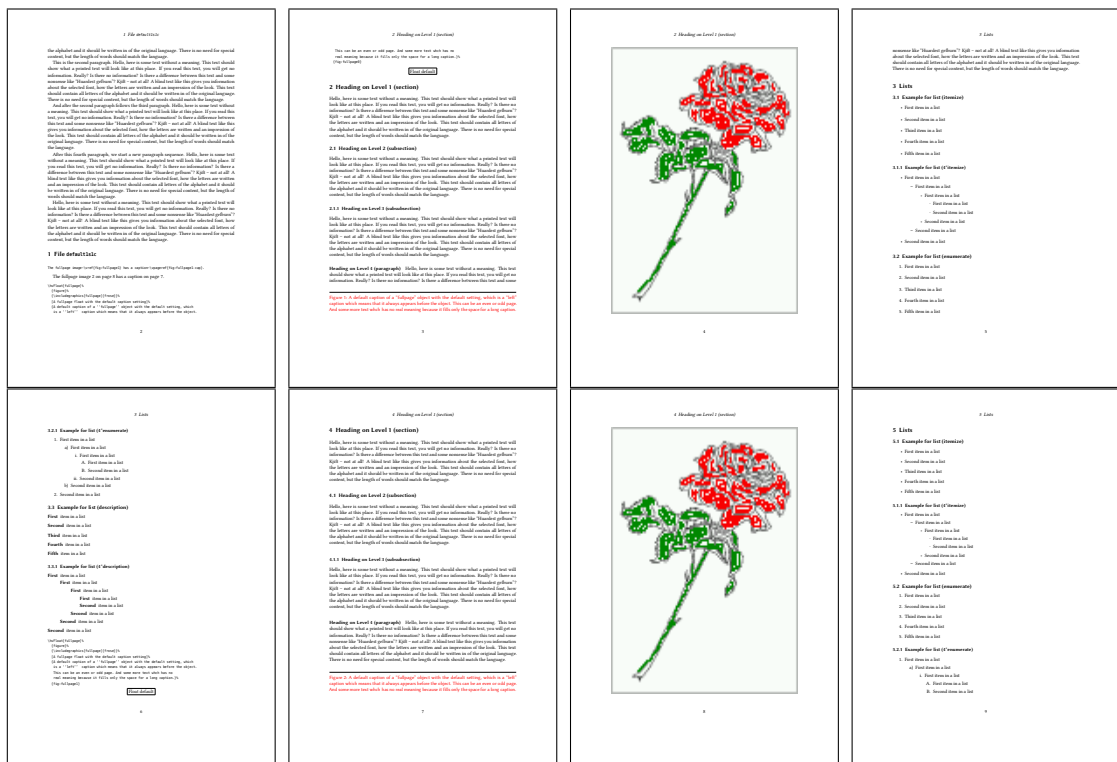
```
\hvFloat[fullpage]%  
{figure}%  
{\includegraphics[fullpage]{images/froze}}%  
[A fullpage float with the default caption setting]%  
{A default caption of a “fullpage” object with the default setting, which  
is a “left” caption which means that it always appears “before” the object.  
This can 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 pagestyle 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 fullpage.
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}
```

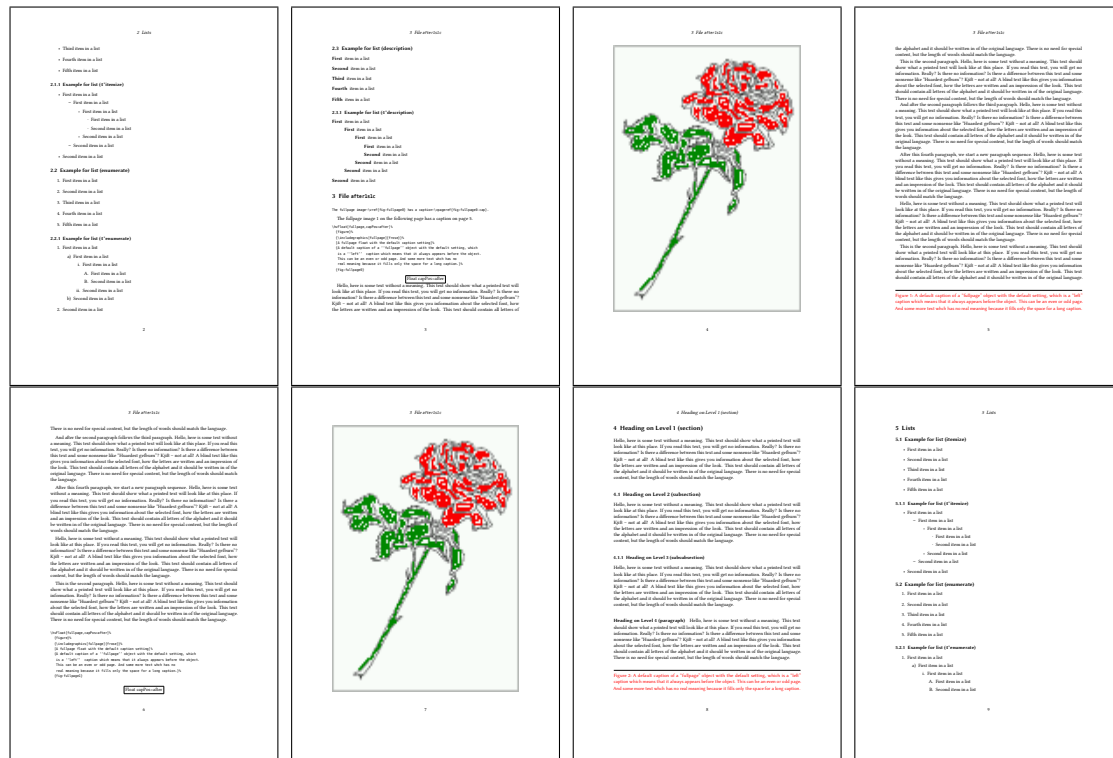


Figure 34: Output of after1s1c (pages 2–9)

## 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}
```

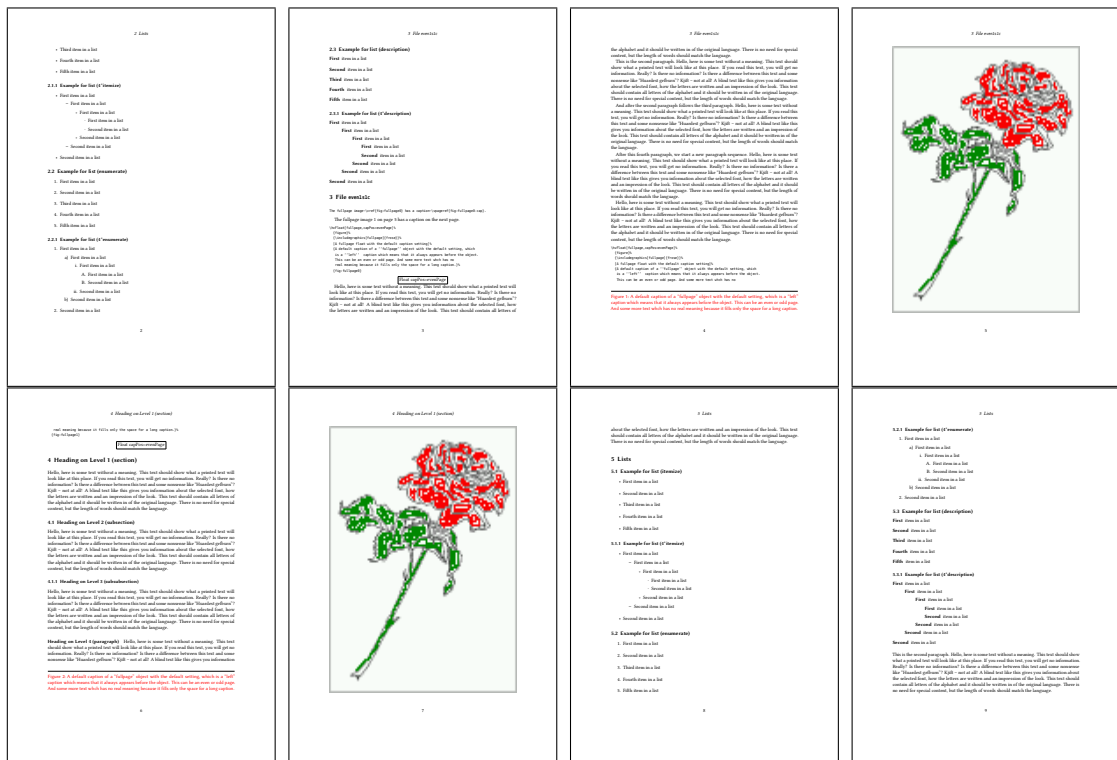


Figure 35: Output of even1s1c (pages 2–9)

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}
```

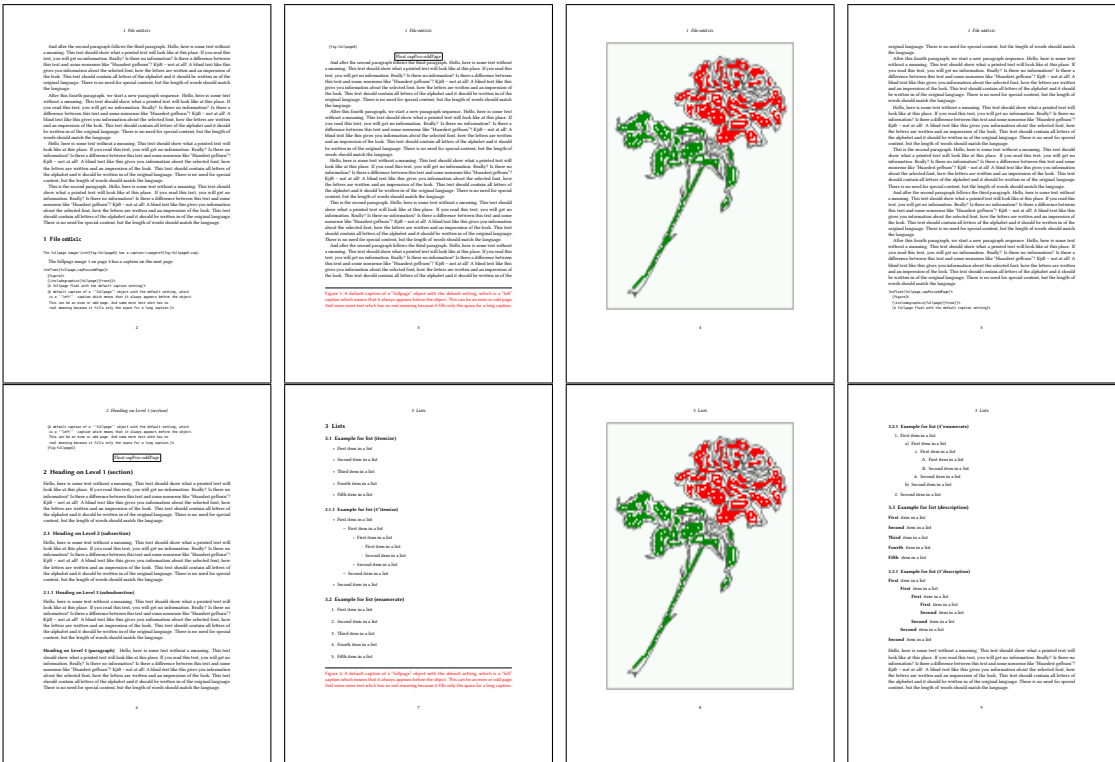


Figure 36: Output of odd1s1c (pages 2–9)

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}
```

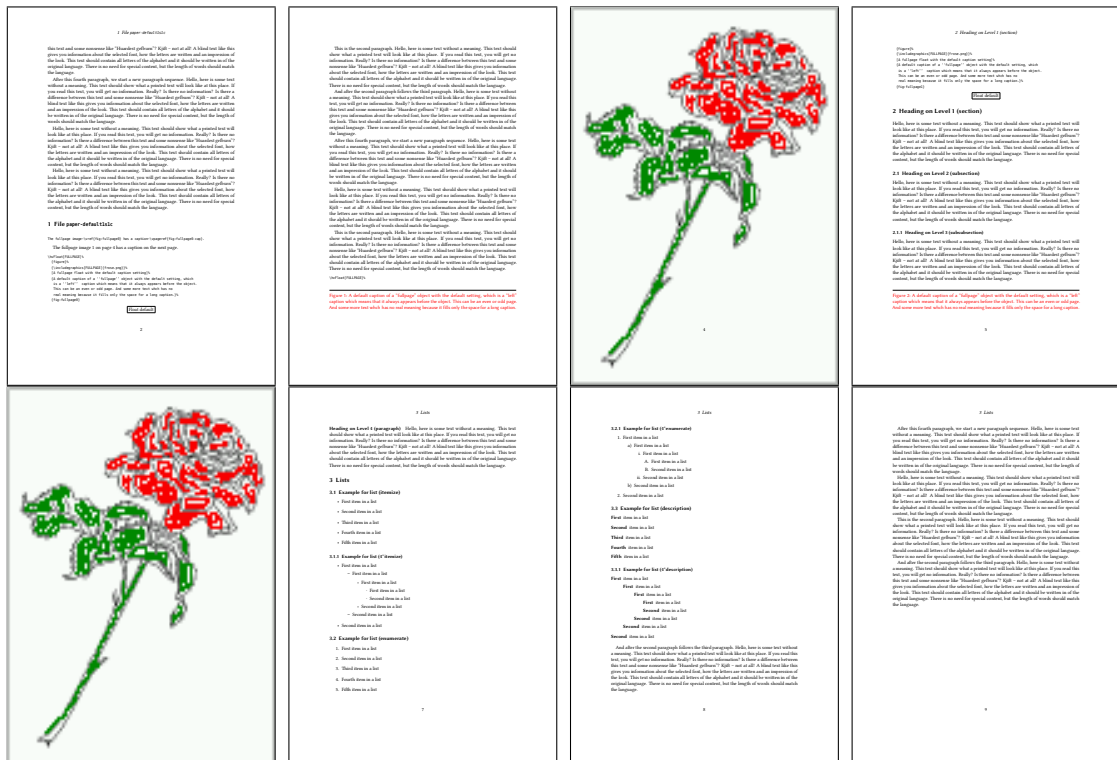
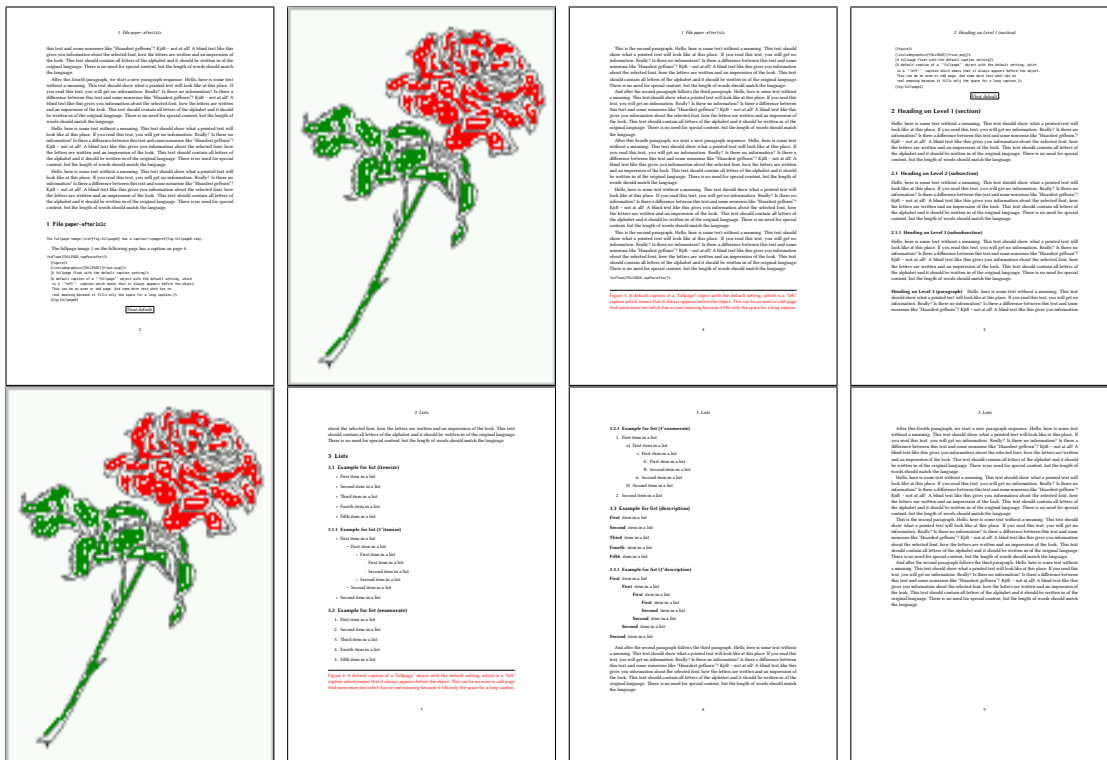


Figure 37: Output of paper-default1s1c (pages 2–9)

### 17.3 Multifloats



**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.}%


```

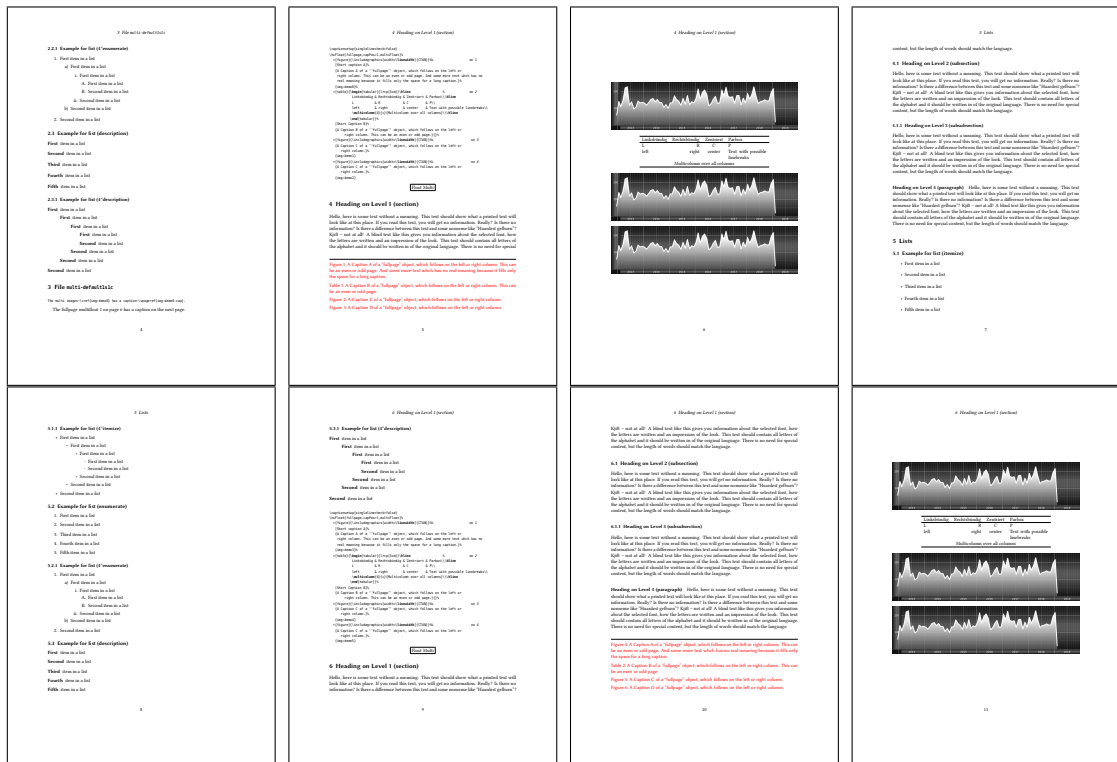


Figure 39: Output of multi-default1s1c (pages 4–11)

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

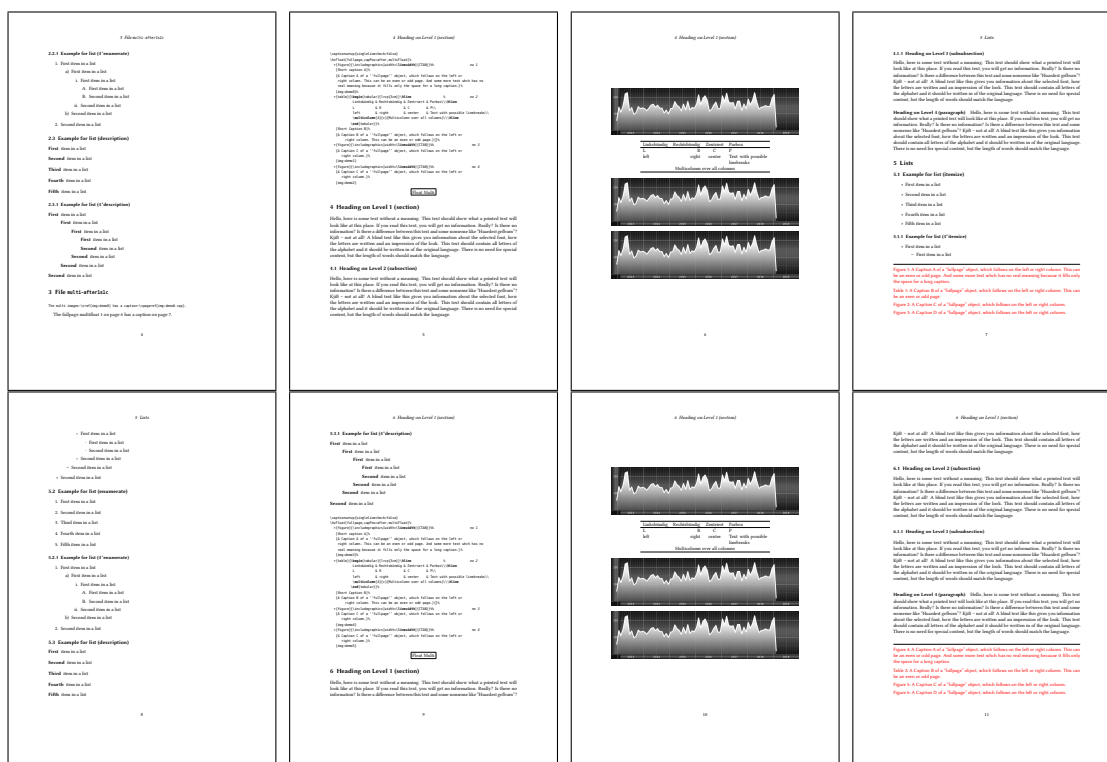


Figure 40: Output of multi-after1s1c (pages 4–11)

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]`.

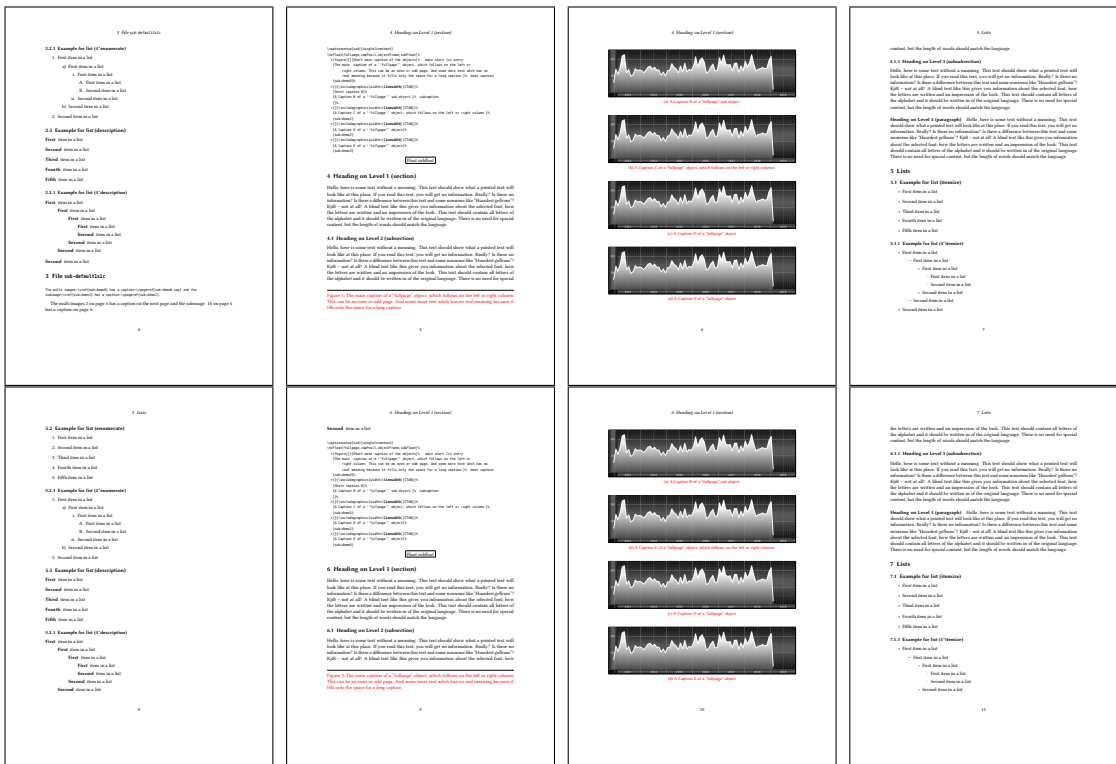


Figure 41: Output of sub-default1s1c (pages 4–11)

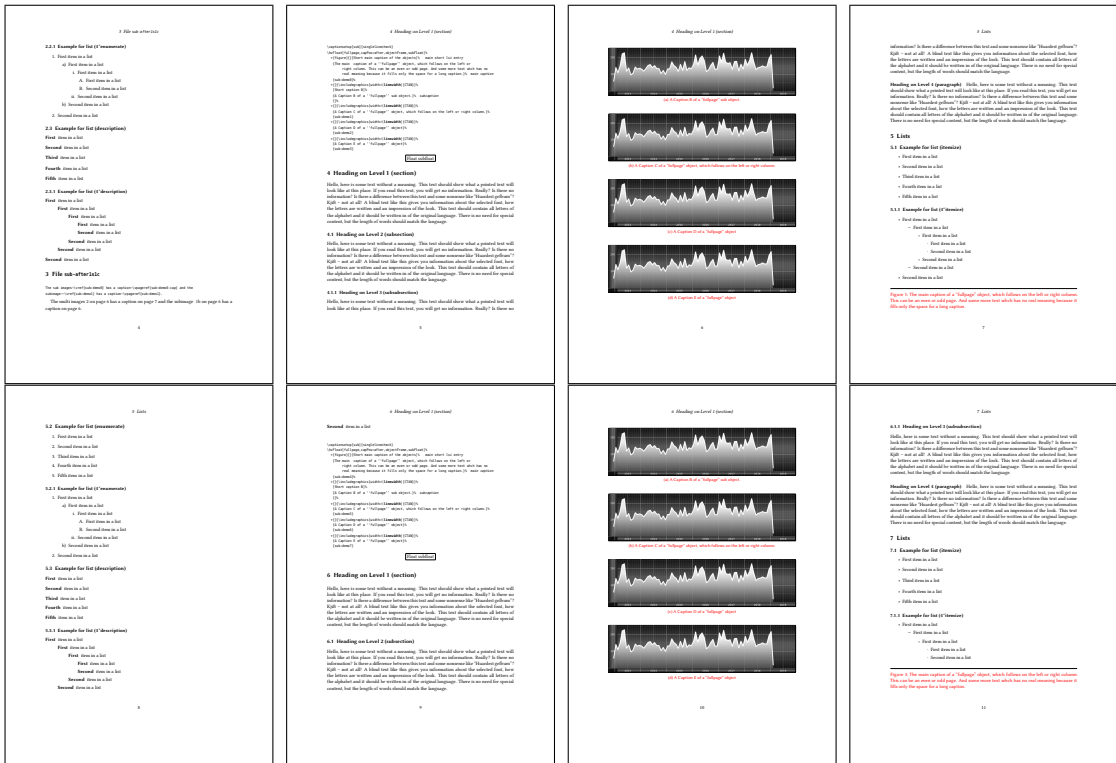


Figure 42: Output of sub-after1s1c (pages 4–11)

## 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).

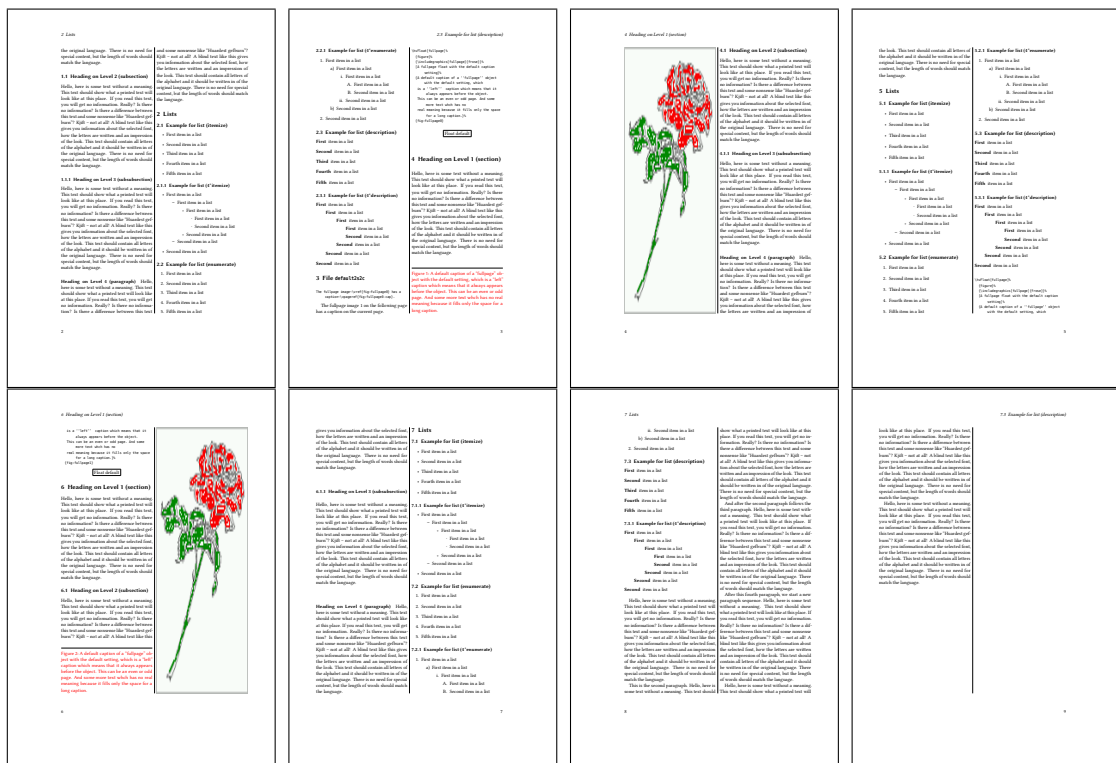


Figure 43: Output of default2s2c (pages 2–9)

```
\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).

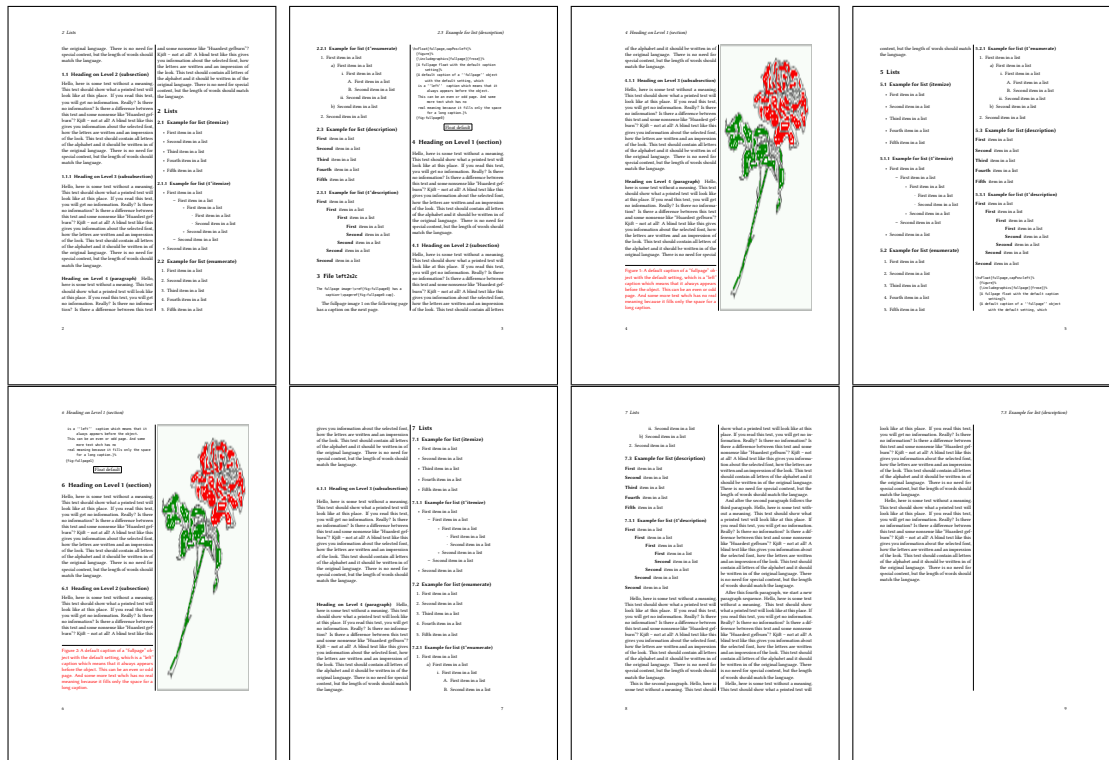


Figure 44: Output of left2s2c (pages 2–9)

### 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}

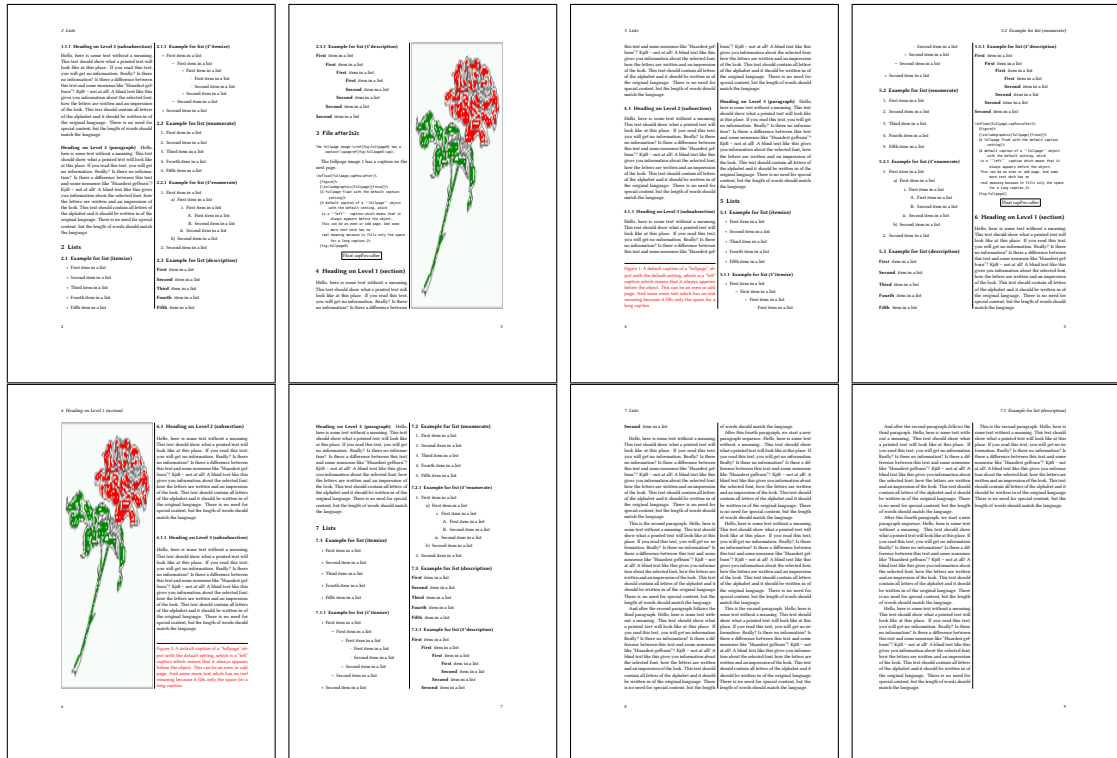


Figure 45: Output of after2s2c (pages 2–9)

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`.

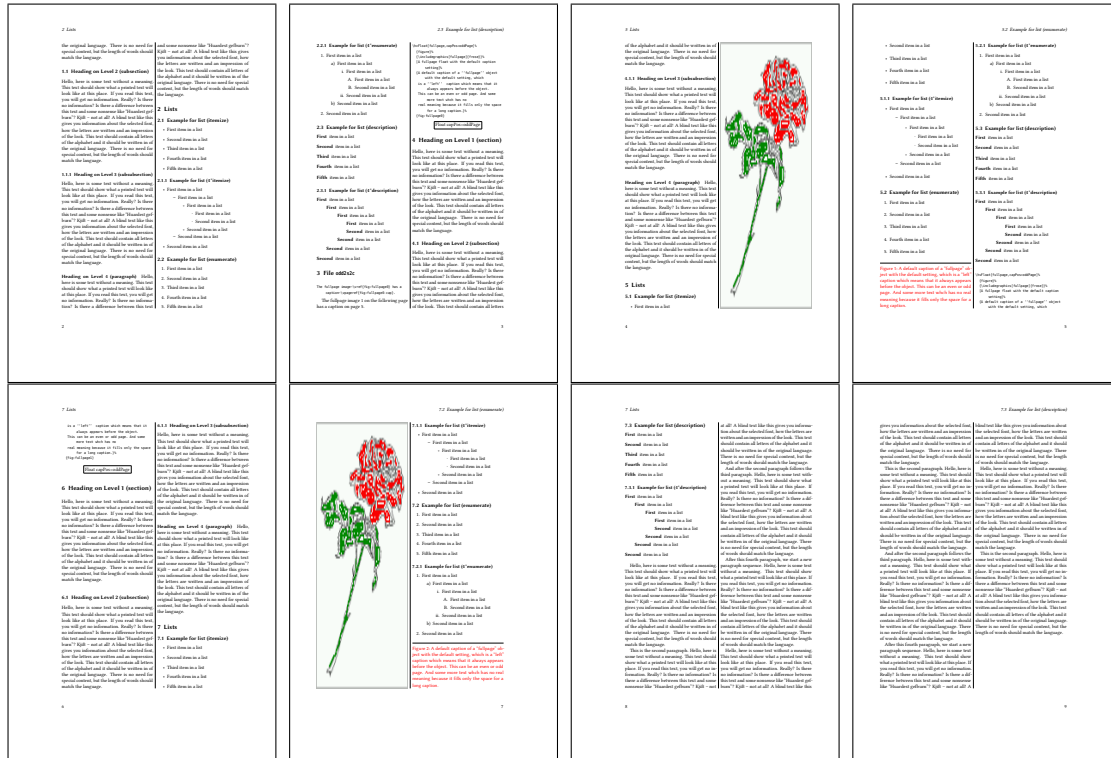


Figure 48: Output of odd2s2c (pages 2–9)

## 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}
```

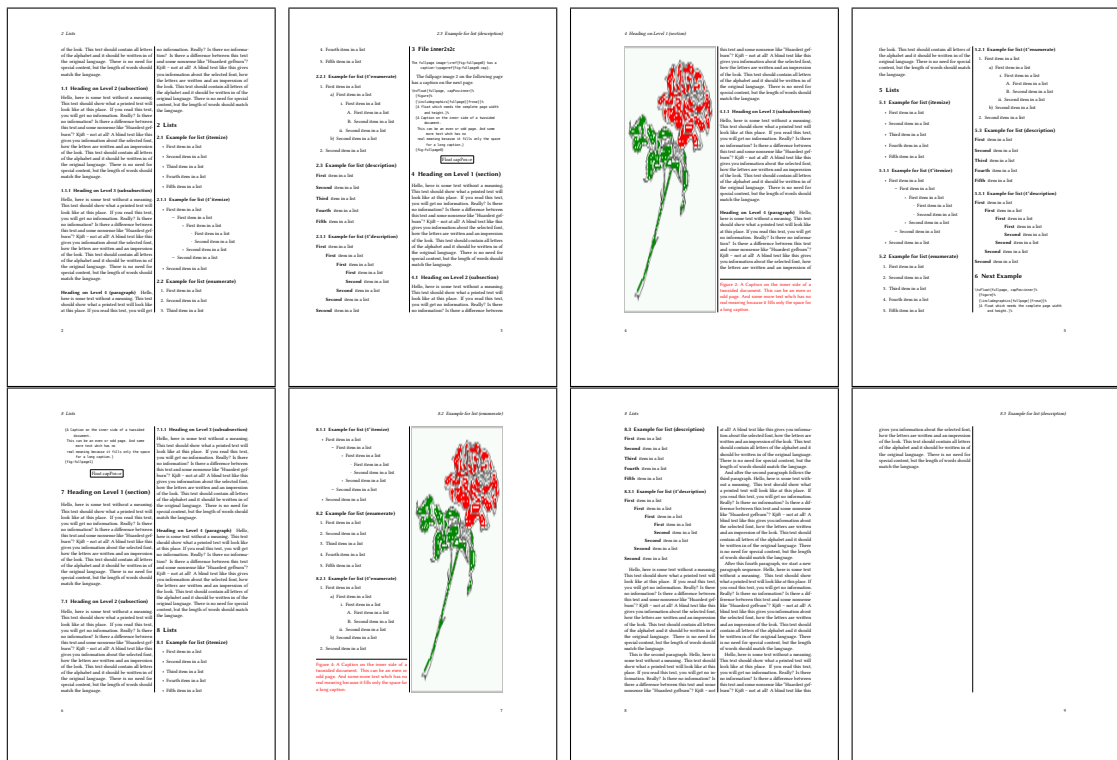


Figure 49: Output of inner2s2c (pages 2–9)

### 19.1.5 Using capPos=outer — caption on the outer column

The caption will be printed on the left column on 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}
```

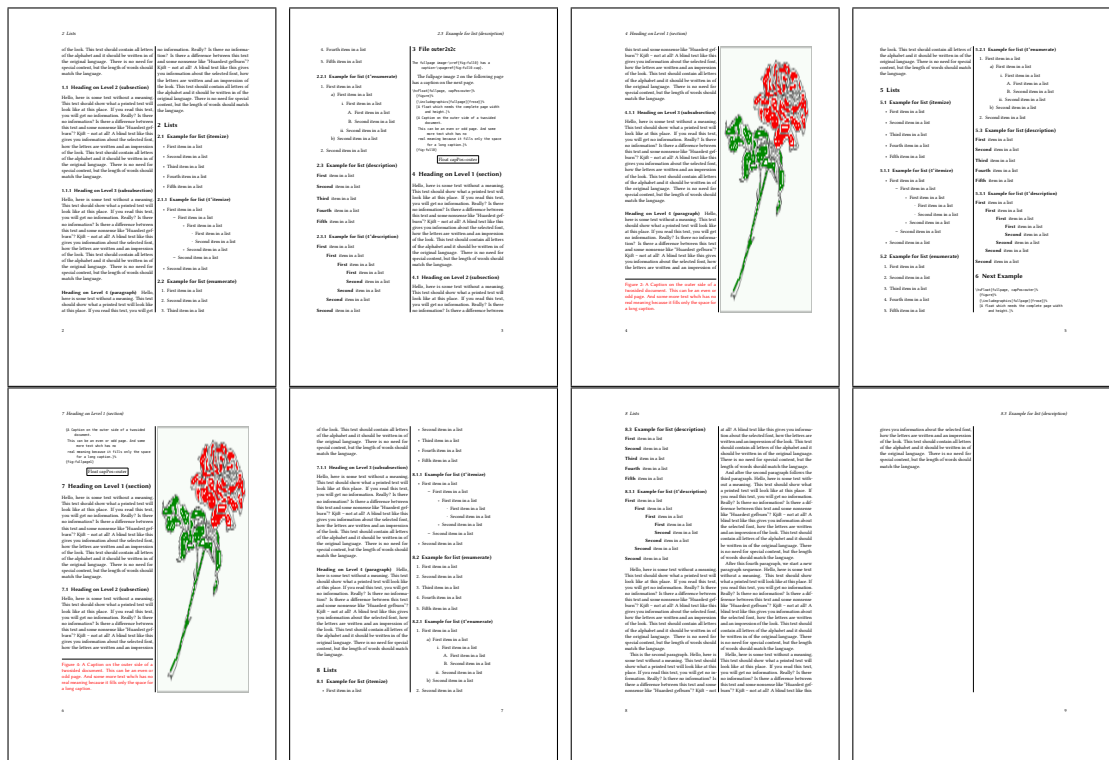


Figure 50: Output of outer2s2c (pages 2–9)

## 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}
```

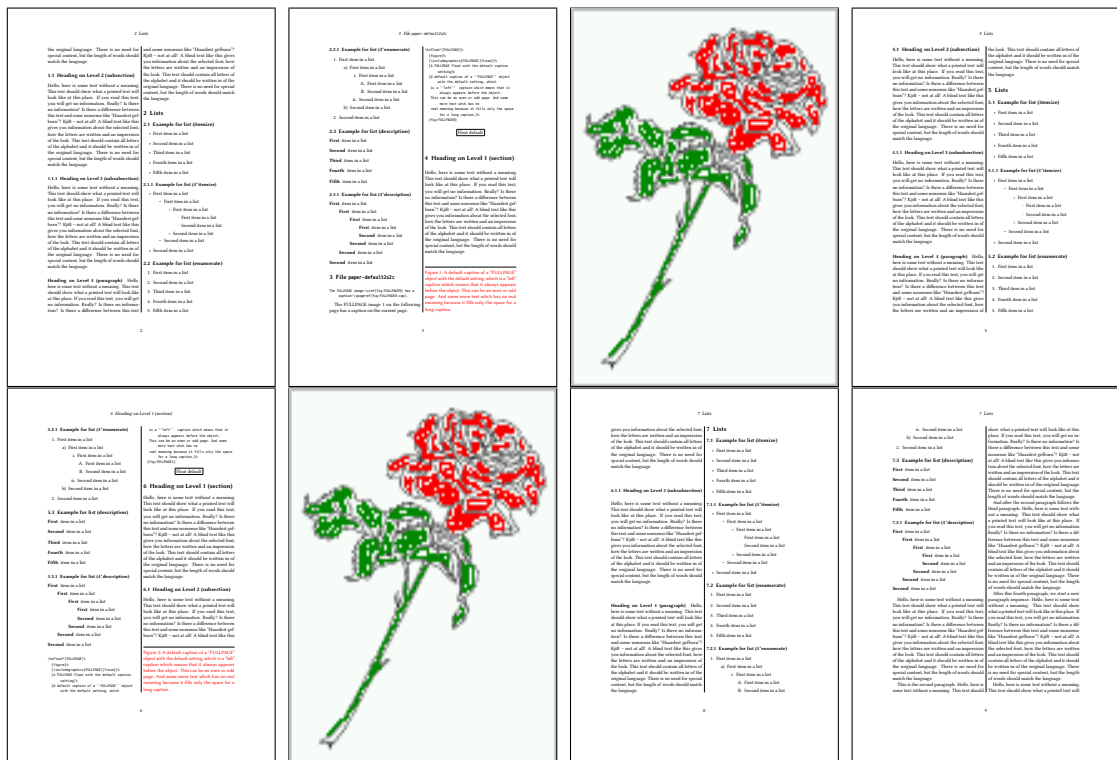


Figure 51: Output of paper-default2s2c (pages 2–9)

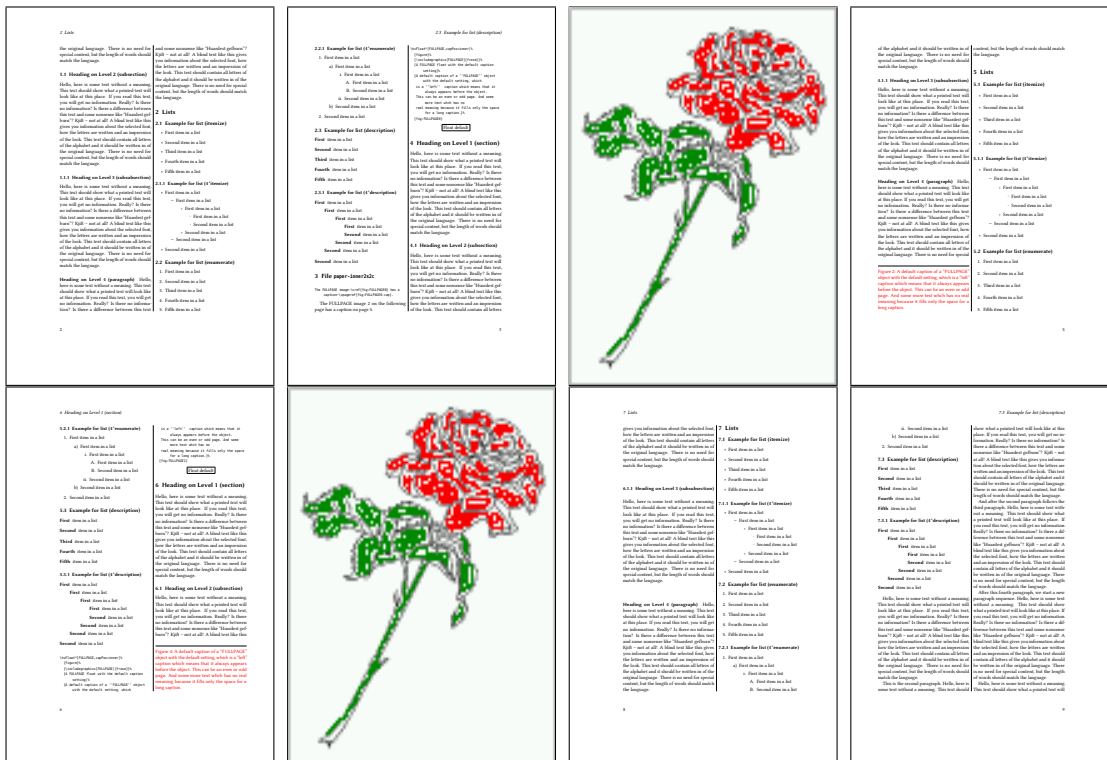


Figure 52: Output of paper-inner2s2c (pages 2–9)

## 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:demo}%
+{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.

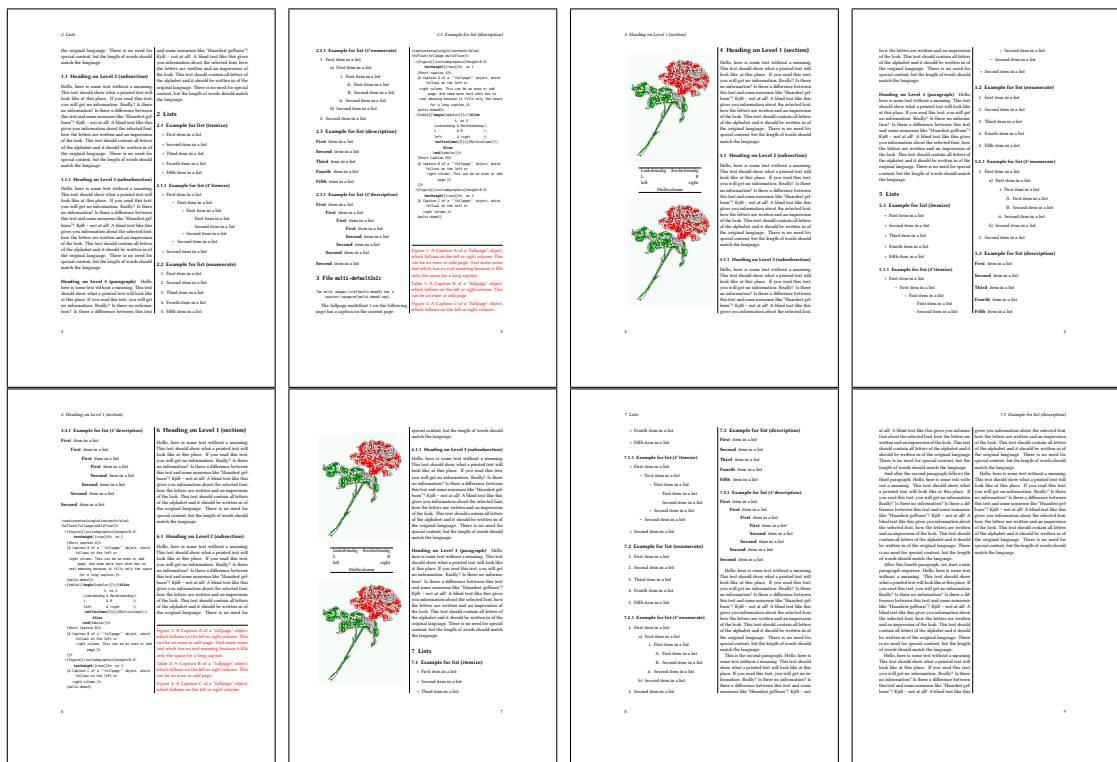


Figure 53: Output of multi-default2s2c (pages 2-9)

## 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.

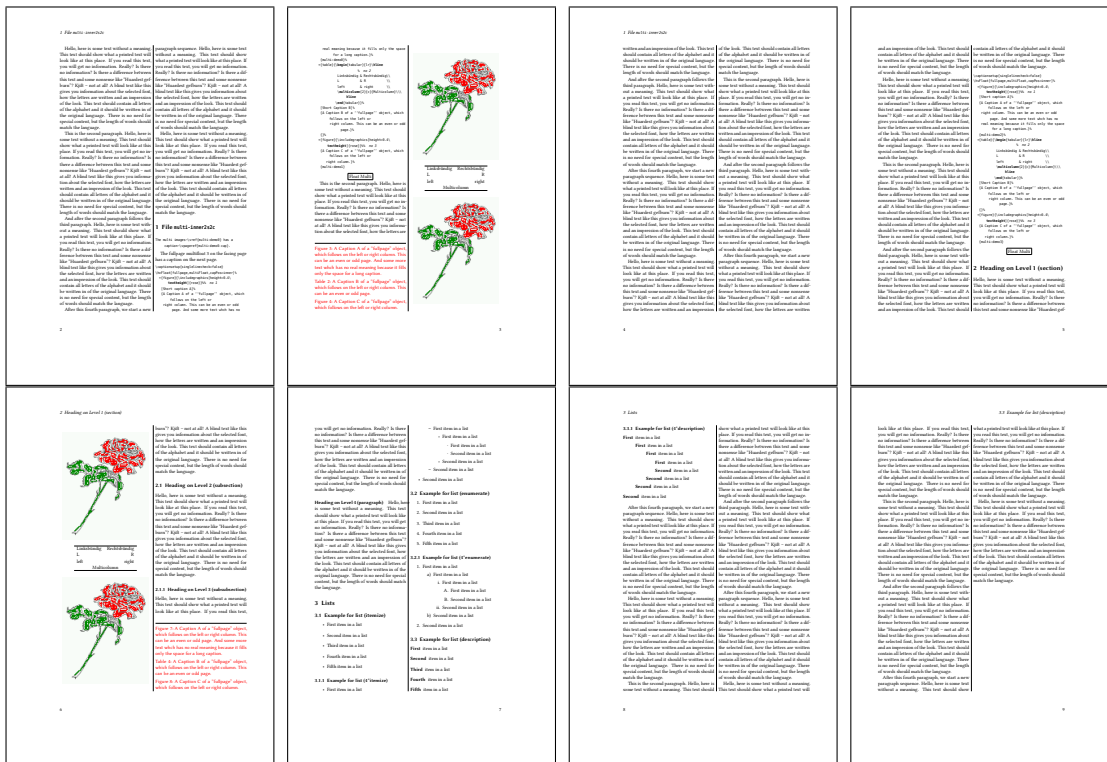


Figure 54: Output of multi-inner2s2c (pages 2-9)

```
\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

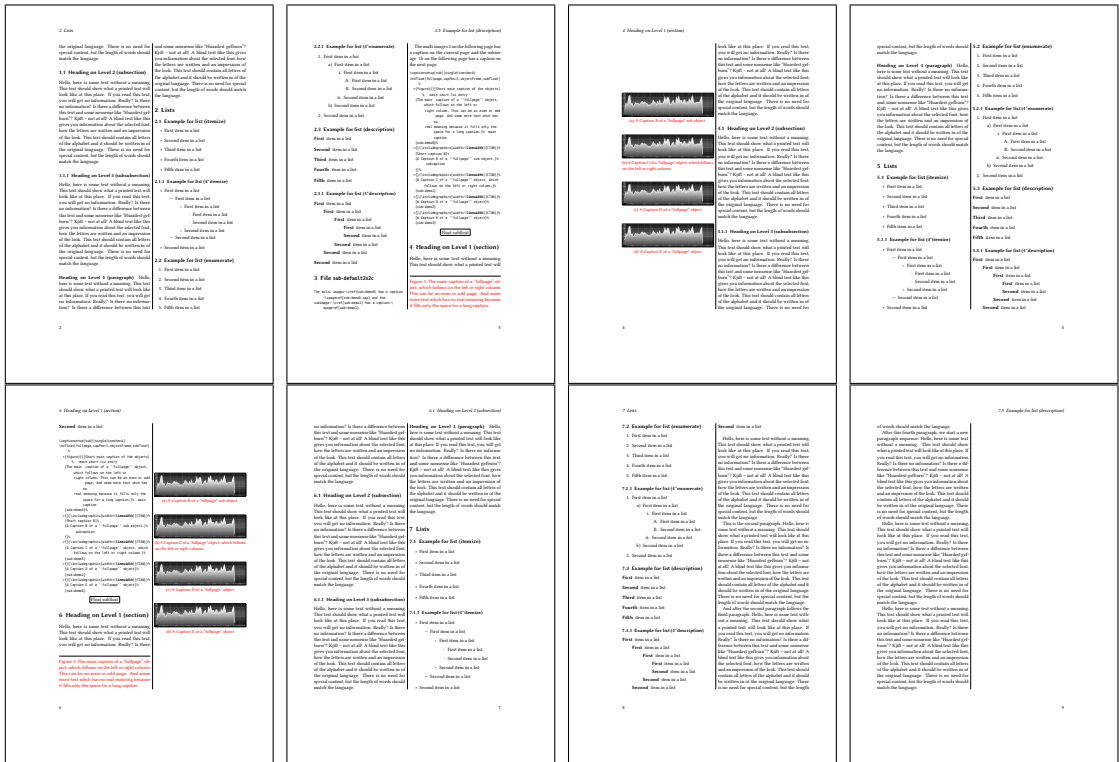


Figure 55: Output of sub-default2s2c (pages 2-9)

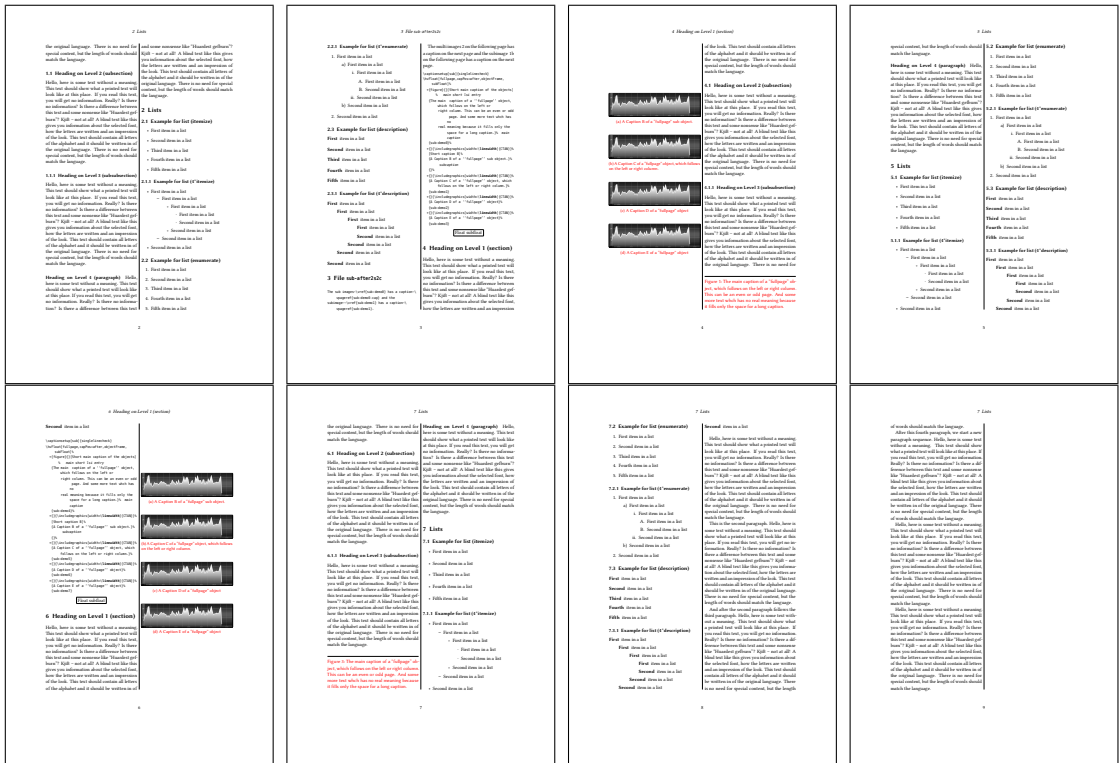


Figure 56: Output of sub-after2s2c (pages 2-9)

## 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 left 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.

```
\hvFloat[doubleFULLPAGE,capPos=right,capAngle=90]%
{figure}%
{\includegraphics[angle=90,width=2\paperwidth]{images/r+j}}%
[A doublepage image with a caption on the image.]%
{A caption for a double-sided image that will be placed below the right-hand
part of the illustration. The illustration begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doubleFULLPAGE}}%
{fig:doubleFULLPAGE0}
```

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





## 21 Doublepage objects – images and/or tabulars

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.

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## 21 Doublepage objects – images and/or tabulars

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It is also possible to take a bind correction into account with e.g. `binCorr=5mm`, which reserves whitespace of 5mm in the inner margin on both pages.

```
\hvFloat[doubleFULLPAGE,capPos=right,bindCorr=5mm]%
{figure}%
{\includegraphics[angle=90,width=2\paperwidth]{images/r+j}}}%
[A doublepage image with a caption on the image.]%
{A caption for a double-sided image that will be placed below the right-hand
part of the illustration. The illustration begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doubleFULLPAGE}}}%
{fig:doubleFULLPAGE0a}
```

**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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## 21 Doublepage objects – images and/or tabulars

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```
\hvFloat[doubleFULLPAGE,capPos=right]%  
{figure}%  
{\includegraphics[height=\paperheight]{images/rheinsberg}}%  
{A caption for a double-sided image that will be placed on the right-hand  
part of the illustration. The illustration begins on the left edge of the paper.  
No further text is placed on the pages. A short form is used for the LOF.  
The parameter is \texttt{doubleFULLPAGE}}%  
{fig:doubleFULLPAGE1}
```

**Fig. 59** 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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**Figure 59:** A caption for a double-sided image that will be placed on the right-hand part of the illustration. The illustration begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE

Placing the caption on the image itself is not the best solution. With the optional arguments before and after for capPos, the caption can be placed on the bottom of the preceding or following page of the doublepage object. A given label, e.g. foo will always point to the page with the left part of the object. Internally are two additional labels defined: foo-cap points to the caption and foo-2 points to the right part of the doublepage object.

In the following example 60 the caption is on page 71, the left image part on page 72 and the right part on page 73. In the following example 61 the caption is on page 78, the left image part on page 76 and the right part on page 77. All three labels point to the same figure or table number:

```
\ref{foo} | \ref{foo-cap} | \ref{foo-2} → 60 | 60 | 60
\pageref{foo} | \pageref{foo-cap} | \pageref{foo-2} → 72 | 71 | 73

\hvFloat[doubleFULLPAGE,capPos=before]%
{figure}%
{\includegraphics[height=\paperheight,width=2\paperwidth,
  keepaspectratio=false]{images/rheinsberg}}%
{A caption for a double-sided image that will be placed before
the image. The image begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doubleFULLPAGE}}%
{foo}
```

**Fig. 60** 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 60:** A caption for a double-sided image that will be placed before the image. The image begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE





## 21 Doublepage objects – images and/or tabulars

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```
\hvFloat[doubleFULLPAGE,capPos=after]%  
{figure}%  
{\includegraphics[height=\paperheight,width=2\paperwidth,  
  keepaspectratio=false]{images/rheinsberg}}%  
{A caption for a double-sided image that will be placed after  
  the image. The image begins on the left edge of the paper.  
  No further text is placed on the pages. A short form is used for the LOF.  
  The parameter is \texttt{doubleFULLPAGE}}%  
{foo}
```

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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.

```
\hvFloat[doublePAGE]%
{figure}%
{\includegraphics[width=\dimexpr2\textwidth+2in]{images/seiser}}%
[A doublepage image with a caption below the right part.]%
{A caption for a double-sided image that will be placed below the right-hand
part of the illustration. The illustration begins on the left edge of the paper.
No further text is placed on the pages. A short form is used for the LOF.
The parameter is \texttt{doublePAGE}}%
{fig:doublePAGE0}
```

**Fig. 62** 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

---

**Figure 61:** A caption for a double-sided image that will be placed after the image. The image begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is doubleFULLPAGE

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.

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**Figure 62:** A caption for a double-sided image that will be placed below the right-hand part of the illustration. The illustration begins on the left edge of the paper. No further text is placed on the pages. A short form is used for the LOF. The parameter is 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.

```
\hvFloat[doublePage,capWidth=n,capPos=right]%
{figure}%
{\includegraphics[width=2\textwidth]{images/sonne-meer}}%
[A doublepage image with a caption on the right side of the right part.]%
[A caption for a double-sided image that will be placed on the right side of the
right-hand part of the illustration. The illustration begins on the left edge of
the paper. A short form is used for the LOF.
The parameter is \texttt{doublePage}}%
{fig:doublePage0}
```

**Fig. 63** 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 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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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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There is no need for special content, but the length of words should match the language.

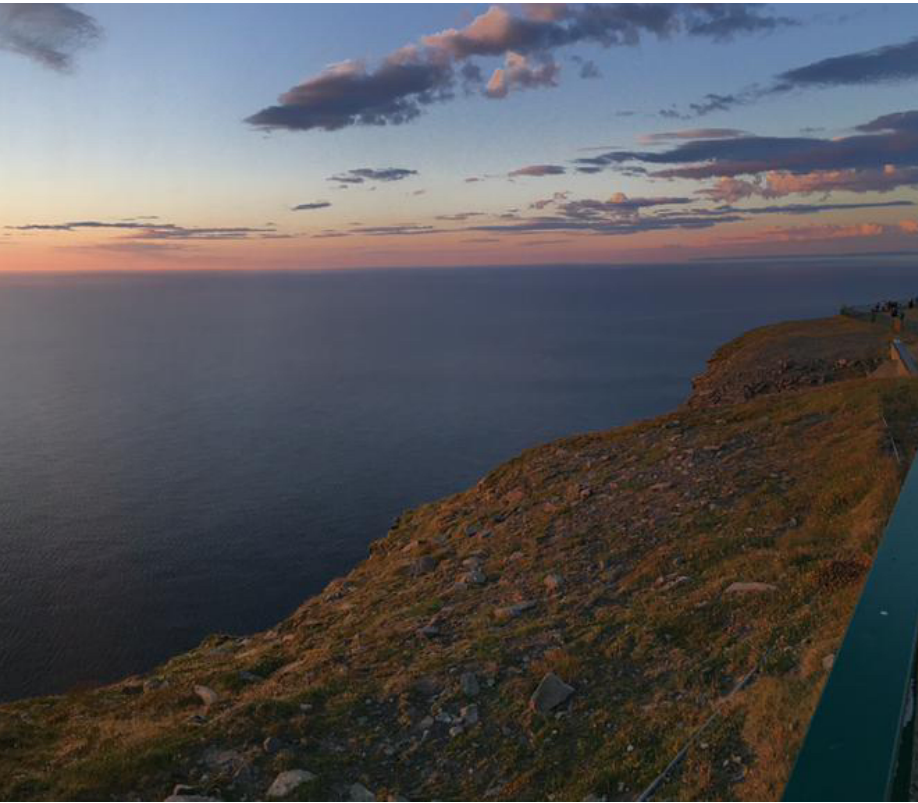
Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! 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.

## 21.4 Tabulars

In General there is no difference in an image 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.

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}
```



**Figure 63:** A caption for a double-sided image that will be placed on the right side of the right-hand part of the illustration. The illustration begins on the left edge of the paper. A short form is used for the LOF. The parameter is doublePage

```
& \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\\addlinespace[3pt]
Zeile 2 & 1 & 1 & 3 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 2 & 1 & 3 & 4 & 4 & 6 & 4 & 2\\addlinespace[3pt]
Zeile 3 & 2 & 1 & 2 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 5 & 3 & 1 & 7 & 7 & 3\\addlinespace[3pt]
Zeile 4 & 1 & 0 & 5 & 1 & 2 & 0 & 0 & 0 & 0 & 0 & 2 & 1 & 0 & 1 & 0 & 3 & 7 & 2 & 1\\addlinespace[3pt]
Zeile 6 & 2 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 2 & 0 & 5 & 2 & 2 & 5 & 4 & 2\\addlinespace[3pt]
Zeile 5 & 0 & 0 & 4 & 2 & 1 & 2 & 2 & 1 & 0 & 0 & 0 & 1 & 1 & 0 & 2 & 5 & 4 & 3\\addlinespace[3pt]
Zeile 8 & 0 & 1 & 1 & 0 & 0 & 0 & 1 & 1 & 0 & 3 & 2 & 1 & 2 & 1 & 3 & 5 & 3 & 4\\addlinespace[3pt]
Zeile 9 & 0 & 0 & 0 & 0 & 0 & 1 & 2 & 1 & 0 & 0 & 0 & 0 & 4 & 2 & 1 & 4 & 5 & 2\\addlinespace[3pt]
Zeile10 & 0 & 1 & 3 & 0 & 1 & 0 & 1 & 0 & 0 & 1 & 1 & 0 & 1 & 1 & 1 & 4 & 4 & 1\\addlinespace[3pt]
Zeile11 & 0 & 2 & 2 & 1 & 1 & 0 & 1 & 0 & 0 & 0 & 0 & 2 & 6 & 1 & 0 & 2 & 1 & 1 \\addlinespace[3pt]
Zeile12 & 2 & 0 & 2 & 4 & 1 & 0 & 4 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 3\\addlinespace[3pt]
Lärm & 2 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 2 & 0 & 0 & 2 & 2 & 2\\addlinespace[3pt]
Zeile13 & 0 & 1 & 0 & 0 & 1 & 0 & 3 & 0 & 0 & 0 & 0 & 2 & 0 & 1 & 3 & 0 & 2\\addlinespace[3pt]
Zeile14 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 3 & 2 & 1 & 1 & 0\\addlinespace[3pt]
Zeile15 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 4 & 0 & 0 & 3 & 1 & 1\\addlinespace[3pt]
Zeile16 & 0 & 0 & 0 & 0 & 0 & 1 & 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}
```

## 21 Doublepage objects – images and/or tabulars

\Blindtext

```
\hvFloat[doublePage,capWidth=n,capPos=right]%  
{table}%  
{\usebox\hv0Box}%%%%%%%%%%%%%  
[A doublepage tabular with a caption on the right side of the right part.]%  
{A caption for a double-sided tabular that will be placed on the right side of the  
right-hand part of the illustration. The illustration begins on the left edge of  
the paper. A short form is used for the LOF.  
The parameter is \texttt{doublePage}}%  
{tab:doublePage3}
```

Tab. 9

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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## 22 References to the page

	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

## 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

```
\hvfFloatSetDefaults
\hvfFloat[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}.

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:** A caption for a double-sided tabular that will be placed on the right side of the right-hand part of the illustration. The illustration begins on the left edge of the paper. A short form is used for the LOF. The parameter is doublePage

The caption of figure 65 is on page 91, but the image itself is on page 92. With package varioref it is:

```
Whith the package \pack{varioref} (\url{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 65 on page 92, which uses a correct page number of the floating object and not the caption pagenumber which is on page 91. The figure 65 is on page 92 and the caption on page 91

## 23 Defining a style

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

## 24 Global float setting

```
\hvDefFloatStyle{name}{setting}
```

For example:

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

```
\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}
```



**Figure 64:** Caption at bottom right beside the float with a caption width of  $0.5\backslash\text{columnwidth}$ .

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 `hvfloat-fps`. It allows optional package options to set the global placement:

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

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 65:** 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



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## 25 The Package Source

```
1 %% $Id: hvfloat.sty 91 2021-05-18 06:48:42Z 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{2.25}
19 \def\filedate{2021/05/13}
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 \newif\ifhv@stfloats \hv@stfloatsfalse
27
28 \DeclareOption{fbox}{\hv@fboxtrue\setlength{\fboxsep}{1pt}}
29 \DeclareOption{hyperref}{\hv@hyperreftrue}
30 \DeclareOption{stfloats}{\hv@stfloatstrue}
31
32 \ProcessOptions
33
34 \PassOptionsToPackage{hypcap}{caption}
35 \RequirePackage{caption}
36 \PassOptionsToPackage{hypcap}{subcaption}
37 \RequirePackage{subcaption}
38 \RequirePackage{picture,trimclip}
39
40 \RequirePackage{expl3,multido}
41 \RequirePackage{graphicx}
42
43 \RequirePackage{xkeyval}
44 \RequirePackage{ifoddpage}
45 \RequirePackage{afterpage}
46
47 \ifhv@hyperref
48   \RequirePackage{hyperref}
49 \fi
50 \ifhv@stfloats
51   \RequirePackage{stfloats}% for bottom floats in a twocolumn mode
```

## 25 The Package Source

```

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

```

```

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

```

## 25 The Package Source

```

155 \define@boolkey{hvSet}[hv@]{onlyText}[true]{}% Write the caption only as text
156 \define@boolkey{hvSet}[hv@]{wide}[true]{}% Write the caption only as text
157 \define@boolkey{hvSet}[hv@]{twoColumnCaption}[true]{}% Write the caption only as text
158 % \ifhv@stfloats
159 % \global\@nameuse{hv@twoColumnCaption#1}%
160 % \else
161 % \PackageWarning{hvfloating}{Please use the package option stfloats!}%
162 % \global\hv@twoColumnCaptionfalse
163 % \fi
164 }
165 \define@boolkey{hvSet}[hv@]{Debug}[true]{}% give more infos in the terminal
166
167 \newcommand\hv@typeout[1]{\ifhv@Debug\typeout{#1}\fi}
168
169 \newif\ifhv@fullpage
170 \newif\ifhv@FULLPAGE
171 \newif\ifhv@doubleFULLPAGE
172 \newif\ifhv@doublePAGE
173 \newif\ifhv@doublePage
174 \newif\ifhv@setObjectLabel
175
176 \newlength\hvSet@bindCorrection
177 \newlength\hvSet@sepLineskip
178 \newlength\hv@leftPageObjectWidth% for doublepage images
179 \newlength\hv@tempWidthA
180 \newlength\hv@tempWidthB
181
182 \define@key{hvSet}{fullpage}[true]{\global\@nameuse{hv@fullpage#1}}%
183 \define@key{hvSet}{FULLPAGE}[true]{\global\@nameuse{hv@FULLPAGE#1}}
184 \define@key{hvSet}{doubleFULLPAGE}[true]{\global\@nameuse{hv@doubleFULLPAGE#1}\hv@doublePagefalse\
    hv@doublePAGEfalse}
185 \define@key{hvSet}{doublePAGE}[true]{\global\@nameuse{hv@doublePAGE#1}\hv@doublePagefalse\
    hv@doubleFULLPAGEfalse}
186 \define@key{hvSet}{doublePage}[true]{\global\@nameuse{hv@doublePage#1}\hv@doublePAGEfalse\
    hv@doubleFULLPAGEfalse}
187 \define@key{hvSet}{bindCorr}[z@]{\setlength\hvSet@bindCorrection{#1}}% for doublepage objects
188
189 \define@boolkey{hvSet}[hv@]{subFloat}[true]{}% typeset values as subfloats
190 \ifhv@subFloat\setkeys{hvSet}{multiFloat=false}\fi%
191 }%
192 \define@boolkey{hvSet}[hv@]{multiFloat}[true]{}% typeset values as continous floats
193 \ifhv@multiFloat\setkeys{hvSet}{subFloat=false}\fi%
194 }%
195 \define@boolkey{hvSet}[hv@]{separatorLine}[true]{}% separator line for caption of a full page float
196 \define@key{hvSet}{sepLineskip}{\def\hv@sepLineskip{#1}}%
197 \define@boolkey{hvSet}[hv@]{objectFrame}[true]{}% a frame around the object with no separation
198 \define@key{hvSet}{style}{}%
199 \@ifundefined{hv@#1}%
200 {\errmessage{Custom style '#1' undefined}}%
201 {\beginingroup
202 \edef\x{\endgroup\noexpand\setkeys{hvSet}{\@nameuse{hv@#1}}}\x}% use a defined style
203 }
204 \define@key{hvSet}{capFormat}{\def\hv@caption@format{#1}}%

```

```

205 \define@key{hvSet}{subcapFormat}{\def\hv@subcaption@format{#1}}%
206
207 \def\hv@set#1{\begingroup\edef\x{\endgroup\noexpand\setkeys{hvSet}{#1}}\x}
208 \let\hvFloatSet\hv@set
209 %
210 \def\defhvhstyle#1#2{\@namedef{hv@#1}{#2}}
211 \let\hvDefFloatStyle\defhvhstyle % better name
212 %
213 \newcommand\setDefaults{%
214   \hv@set{%
215     floatPos=, rotAngle=0, capWidth=n, capAngle=0,
216     capPos=bottom, capVPos=center, objectPos=center, objectAngle=0,
217     floatCapSep=5pt, useOBox=false, nonFloat=false,
218     onlyText=false, wide=false, fullpage=false, FULLPAGE=false,
219     doubleFULLPAGE=false, doublePage=false, doublePAGE=false,
220     multiFloat=false, subFloat=false,
221     separatorLine, objectFrame=false, multiFloatSkip=\normalbaselineskip,
222     capFormat={}, subcapFormat={}, twoColumnCaption=false,
223     % floatRef=object,
224     bindCorr=\z@, sepLineskip=0pt,
225   }%
226 }
227
228 \let\hvFloatSetDefaults\setDefaults
229
230 \newcommand\reset@special@float{%
231   \hv@set{subFloat=false,%fullpage=false,
232     multiFloat=false,%FULLPAGE=false
233   }}
234
235 \def\hv@vskip{\vspace{\hvMultiFloatSkip}}
236
237 %
238 \newlength\hvAboveCaptionSkip
239 \newlength\hvBelowCaptionSkip
240 \newcount\hv@@capPos
241
242 \newlength\fbboxlinewidth
243 \AtBeginDocument{%
244   \setlength\fbboxlinewidth{\dimexpr\linewidth-2\fbboxrule-2\fbboxsep}%
245 }
246 \setlength\belowcaptionskip{\abovecaptionskip}% it is in latex.ltx = 0pt
247 \newcommand\saveCaptionSkip{%
248   \setlength{\hvAboveCaptionSkip}{\abovecaptionskip}%
249   \setlength{\hvBelowCaptionSkip}{\belowcaptionskip}%
250   \setlength{\abovecaptionskip}{0pt}%
251   \setlength{\belowcaptionskip}{0pt}%
252 }
253 \newcommand\restoreCaptionSkip{%
254   \setlength\abovecaptionskip{\hvAboveCaptionSkip}%
255   \setlength\belowcaptionskip{\hvBelowCaptionSkip}%
256 }
257 %

```

## 25 The Package Source

```

258 \newcommand\figcaption[2][{}]{%
259   \def\@captype{figure}%
260   \beginingroup
261   \ifx\relax\hv\@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv\@caption@format}\fi
262   \if$#1$ \caption{#2}\else\caption[#1]{#2}\fi
263   \endgroup}
264 \newcommand\tabcaption[2][{}]{\def\@captype{table}%
265   \beginingroup
266   \ifx\relax\hv\@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv\@caption@format}\fi
267   \ifx\relax#1\relax \caption{#2}\else\caption[#1]{#2}\fi
268   \endgroup}
269 %
270 \newlength\hv@maxImageWidth
271 \AtBeginDocument{\hv@maxImageWidth=\columnwidth}
272
273 \define@key{Gin}{fullpage}[true]{%
274   \def\Gin@ewidth{\columnwidth}%
275   \def\Gin@eheight{\textheight}%
276   \Gin@boolkey{false}{iso}%
277 }
278 \define@key{Gin}{FullPage}[true]{%
279   \def\Gin@ewidth{\textwidth}%
280   \def\Gin@eheight{\textheight}%
281   \Gin@boolkey{false}{iso}%
282 }
283 \define@key{Gin}{FULLPAGE}[true]{%
284   \def\Gin@ewidth{\paperwidth}%
285   \def\Gin@eheight{\paperheight}%
286   \Gin@boolkey{false}{iso}%
287 }
288 \define@key{Gin}{doubleFULLPAGE}[true]{%
289   \def\Gin@ewidth{2\paperwidth}%
290   \def\Gin@eheight{\paperheight}%
291   \Gin@boolkey{false}{iso}%
292 }
293 \define@key{Gin}{doubleFULLPAGEbindCorr}[true]{%
294   \def\Gin@ewidth{\the\dimexpr2\paperwidth-2\hvSet@bindCorrection}%
295   \def\Gin@eheight{\paperheight}%
296   \Gin@boolkey{false}{iso}%
297 }
298
299 \newcommand\IncludeGraphics[2][{}]{%
300   \vspace*{\the\dimexpr-1in-\voffset+\topskip-\headheight-0.5\baselineskip}%
301   \leavevmode\checkoddpage
302   \ifoddpage
303     \hspace*{\dimexpr-\oddsidemargin-\parindent-1in}%
304   \else
305     \hspace*{\dimexpr-\evensidemargin-\parindent-1in}%
306   \fi\noindent
307   \includegraphics[#1,width=\paperwidth,height=\paperheight,keepaspectratio=false]{#2}%
308 }
309
310 \newcommand\put@CaptionBox[1][0]{%

```

```

311 \ifcase#1
312   \ifhv@fbox
313     \fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
314   \else
315     \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}%
316   \fi
317 \or
318   \ifhv@fbox
319     \fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
320   \else
321     \raisebox{-\height}{\usebox{\hvCaptionBox}}%
322   \fi
323 \or
324   \ifhv@fbox\fbox{\usebox{\hvCaptionBox}}\else\usebox{\hvCaptionBox}\fi
325 \fi
326 }
327
328 \newcommand\put@ObjectBox[1][0]{%
329   \ifcase#1
330     \ifhv@fbox
331       \fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}%
332     \else
333       \parbox{\wd\hvObjectBox}{\ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi}%
334     \fi
335   \or
336     \ifhv@fbox
337       \fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
338     \else
339       \raisebox{-\height}{\ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi}%
340     \fi
341   \or
342     \ifhv@fbox
343       \fbox{\usebox{\hvObjectBox}}%
344     \else
345       \ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi%
346     \fi
347   \fi
348 }
349
350 \newif\ifhv@star
351 \newif\if@hvsustar
352 \setDefaults
353
354 \def\hvFloat{\@ifnextchar*%      Main macro
355   {\global\hv@startrue\hv@maxImageWidth=\textwidth\hvFloat@i}%
356   {\global\hv@starfals\hv@maxImageWidth=\columnwidth\hvFloat@i*}%
357 }
358
359 %\newcommand*{\hvFloat}[5][+]{%
360 %  [#1]: keyvalues
361 %  #2: type figure | table | ...
362 %  #3: float contents
363 %  [#4]: short caption

```

## 25 The Package Source

```

364 % #5: caption
365 % #6: label
366 %
367 \def\hvFloat@i*{\@ifnextchar[{\do@hvFloat}{\do@hvFloat[]}}
368 \def\do@hvFloat[#1]{%
369   \begin{group}
370     \setlength\hvWideWidth{\dimexpr\textwidth+\marginparwidth+\marginparsep}%
371     % \setlength\hvWideWidth{\dimexpr\linewidth+\marginparwidth}%
372     \hv@maxImageWidth=\textwidth
373     \reset@special@float
374     \setcounter{hv@pfigure}{\value{figure}}%
375     \setcounter{hv@ptable}{\value{table}}%
376     \gdef\hv@save@setting{#1}%
377     \ifx\relax#1\relax\else\setkeys{hvSet}{#1}\fi
378     \gdef\hv@floatType{figure}%
379     \@ifnextchar+{\do@multiFloat}{\hvFloat@ii[#1]}%
380   }
381
382 \ExplSyntaxOn
383
384 \def\do@multiFloat+#1#2{%
385   \clist_set:Nn\l_clist_Type{#1}%
386   \clist_set:Nn\l_clist_Object{#2}%
387   \@ifnextchar[{\do@multiFloat@i}{\do@multiFloat@i[]}%
388 }
389 \def\do@multiFloat@i[#1]#2#3{% lof-caption, caption, label
390   \ifx\relax#1\relax
391     \clist_set:Nn\l_clist_LofCaption{}%
392   \else
393     \clist_set:Nn\l_clist_LofCaption{#1}%
394   \fi
395   \clist_set:Nn\l_clist_Caption{#2}%
396   \ifx\relax#3\relax
397     \clist_set:Nn\l_clist_Label{}%
398   \else
399     \clist_set:Nn\l_clist_Label{#3}%
400   \fi
401   \@ifnextchar+{\do@multiFloat@ii}{}%
402 }
403 \def\do@multiFloat@ii+#1#2{%
404   \clist_put_right:Nn\l_clist_Type{#1}%
405   \clist_put_right:Nn\l_clist_Object{#2}%
406   \@ifnextchar[{\do@multiFloat@iii}{\do@multiFloat@iii[]}%
407 }
408
409 \def\do@multiFloat@iii[#1]#2#3{% lof-caption, caption, label
410   \ifx\relax#1\relax
411     \clist_put_right:Nn\l_clist_LofCaption{}%
412   \else
413     \clist_put_right:Nn\l_clist_LofCaption{#1}%
414   \fi
415   \clist_put_right:Nn\l_clist_Caption{#2}%
416   \ifx\relax#3\relax

```

```

417 \clist_put_right:Nn\l_clist_Label{}}}%
418 \else
419 \clist_put_right:Nn\l_clist_Label{#{3}}}%
420 \fi
421 \@ifnextchar+\do@multiFloat@ii%
422 {\def\hvSet@CapWidth{n}%
423 \do@@@hvFloat}%
424 }
425 \ExplSyntaxOff
426
427
428 \newcounter{hv@tempCNTa}\setcounter{hv@tempCNTa}{0}% defined after \refstepcounter{figure}
429 \newcounter{hv@tempCNTb}\setcounter{hv@tempCNTb}{0}% defined before \refstepcounter{figure}
430 \def\thehv@tempCNTa{\arabic{figure}}
431 \def\thehv@tempCNTb{\the\numexpr\arabic{figure}+1}
432 \newcounter{hv@pfigure}
433 \newcounter{hv@ptable}
434 \newcounter{subhv@pfigure}
435 \newcounter{subhv@ptable}
436
437 \def\drawSepLine{%
438 \par\noindent
439 \if@twocolumn
440 \ifhv@twoColumnCaption
441 \rule{\linewidth}{0.4pt}\[-2.5ex]
442 \else
443 \rule{\columnwidth}{0.4pt}\[-2.5ex]
444 \fi
445 \else
446 \rule{\linewidth}{0.4pt}\[-2.5ex]
447 \fi
448 \vspace{hv@sepLineskip}%
449 }
450
451 \newcount\hv@cna
452 \newcount\hv@cna
453
454 \def\hvFloat@ii[#1]#2#3{% #1: key/value, #2: floattype, #3: object
455 \hv@maxImageWidth=\textwidth
456 \ifx\relax#1\relax\else\setkeys{hvSet}{#1}\fi
457 \gdef\hv@floatType{#2}%
458 \xdef\hv@floatListOfExt{\@nameuse{ext@hv@floatType}}%
459 \ifx\relax#2\relax \setkeys{hvSet}{nonFloat=true}\fi
460 \gdef\hv@floatObject{#3}%
461 \@ifnextchar[{\do@hvFloat}{\do@@hvFloat[]}%
462 }
463
464 \def\do@@hvFloat[#1]#2#3{% #1: listof caption, #2. long caption #3: label
465 \gdef\hv@shortCap{#1}%
466 \gdef\hv@longCap{#2}%
467 \gdef\hv@label{#3}%
468 \ifhv@capbeside\def\@temp{1}\else\def\@temp{0}\fi
469 \ifhv@fullpage

```

## 25 The Package Source

```

470     \def\hvSet@CapWidth{n}% relative value
471     \do@@@hvFloat% fullpage with caption on other page
472 \else
473     \ifhv@FULLPAGE
474     \def\hvSet@CapWidth{n}% relative value
475     \do@@@hvFloat% fullpage with caption on other page
476 \else
477     \ifhv@doubleFULLPAGE
478     \setlength\hvCapWidth{\textheight}%
479     \expandafter\do@hvFloat@doubleFULLPAGE\@temp% fullpage with caption rotated or under on an odd page
480 \else
481     \ifhv@doublePAGE
482     \expandafter\do@hvFloat@doublePAGE\@temp% fullpage with caption rotated or under on an odd page
483 \else
484     \ifhv@doublePage
485     \expandafter\do@hvFloat@doublePage\@temp% fullpage with caption rotated or under on an odd page
486 \else
487     \do@@@hvFloat
488 \fi
489 \fi
490 \fi
491 \fi
492 \fi
493 % \global\hv@capbesidefalse
494 }
495 %
496 \def\do@@@hvFloat{% no special float page, caption and image on top of each other or side by side
497 \def\@tempa{90}%
498 \ifx\hvSet@rotAngle\@tempa
499     \setlength\hvMaxCapWidth{\textheight}%
500 \else
501     \setlength\hvMaxCapWidth{\hvWideWidth}%
502 \fi
503 %
504 % First we save the object in \hvObjectBox
505 %
506 \ifx\hvSet@objectAngle\hv@Zero% rotate the object?
507     \savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
508 \else
509     \savebox{\hvObjectBox}{%
510         \rotatebox{\hvSet@objectAngle}{%
511             \ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi
512         }%
513     }%
514 \fi
515 \setlength\hvObjectWidth{\wd\hvObjectBox}%
516 %
517 % Now we save the caption with its defined \hvCapWidth
518 %
519 \ifx\hvSet@capWidth\hv@Width% captionwidth=objectwidth
520     \setlength\hvCapWidth{\hvObjectWidth}%
521 \else
522     \ifx\hvSet@capWidth\hv@Height% captionwidth=objectheight

```

```

523 \setlength\hvCapWidth{\ht\hvObjectBox}%
524 \else
525 \ifx\hvSet@capWidth\hv@Natural% captionwidth=\linewidth-\objectwidth-separation
526 \ifhv@capbeside
527 \ifhv@wide
528 \setlength\hvCapWidth{\the\dimexpr\hvWideWidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
529 \else
530 \ifhv@star
531 \setlength\hvCapWidth{\the\dimexpr\textwidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
532 \else
533 \setlength\hvCapWidth{\the\dimexpr\linewidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
534 \fi
535 \fi
536 \else
537 \setlength\hvCapWidth{\columnwidth}%
538 \fi
539 \else
540 \ifhv@capbeside
541 \ifhv@wide
542 \setlength\hvCapWidth{\hvSet@capWidth\hvWideWidth}%
543 \setlength\@tempdima{\the\dimexpr\hvWideWidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
544 \else
545 \setlength\hvCapWidth{\hvSet@capWidth\columnwidth}%
546 \setlength\@tempdima{\the\dimexpr\columnwidth-\hvObjectWidth-\hvSet@floatCapSep\relax}%
547 \fi
548 \ifdim\hvCapWidth>\@tempdima
549 \setlength\hvCapWidth{\@tempdima}%
550 \fi
551 \else
552 \ifhv@wide
553 \setlength\hvCapWidth{\hvSet@capWidth\hvWideWidth}%
554 \else
555 \setlength\hvCapWidth{\hvSet@capWidth\columnwidth}%
556 \fi
557 \fi
558 \fi
559 \fi
560 \fi
561 \saveCaptionSkip% we put this space ourselves
562 \ifx\hvSet@capAngle\hv@Zero% need rotation?
563 \savebox\hvCaptionBox{% NO rotation
564 \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation
565 \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
566 \ifhv@nonFloat
567 \ifhv@onlyText
568 \hv@longCap
569 \else
570 \ifx\hv@floatType\hv@figure
571 \ifx\relax\hv@shortCap\relax
572 \figcaption{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
573 \else
574 \figcaption[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
575 \fi

```

```

576     \else
577     \ifx\relax\hv@shortCap\relax
578     \tabcaption{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
579     \else
580     \tabcaption[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
581     \fi
582 \fi
583 \fi
584 \else
585 \ifhv@onlyText
586 \hv@longCap
587 \else
588 \let\@capytype\hv@floatType
589 \expandafter\ifx\expandafter\relax\hv@shortCap\relax
590 \caption{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
591 \else
592 \caption[\hv@shortCap]{\hv@longCap\expandafter\label\expandafter{\hv@label}}%
593 \fi
594 % \fi
595 \fi
596 \fi
597 % \expandafter\label\expandafter{\hv@label}% 2.17 put label into the caption argument
598 \end{minipage}%
599 }%
600 \else
601 \savebox\hvCaptionBox{% Rotation
602 \rotatebox{\hvSet@capAngle}{%
603 \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation
604 \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
605 \ifhv@nonFloat
606 \ifhv@onlyText
607 \hv@longCap
608 \else
609 \ifx\hv@floatType\hv@figure
610 \ifx\relax\hv@shortCap\relax \figcaption{\hv@longCap}\else\figcaption[\hv@shortCap]{\hv@longCap}\fi
611 \else
612 \ifx\relax\hv@shortCap\relax \tabcaption{\hv@longCap}\else\tabcaption[\hv@shortCap]{\hv@longCap}\fi
613 \fi
614 \fi
615 \else
616 \ifhv@onlyText
617 \hv@longCap
618 \else
619 \let\@capytype\hv@floatType
620 \expandafter\ifx\expandafter\relax\hv@shortCap\relax
621 \caption{\hv@longCap}\else\caption[\hv@shortCap]{\hv@longCap}%
622 \fi
623 \fi
624 \fi
625 \label{\hv@label}%
626 \end{minipage}%

```

```

627     }% rotatebox
628     }% \sbox
629     \fi
630 %
631 % now we have the object and the caption with the right
632 % rotated angles saved in different boxes
633 %%
634 \restoreCaptionSkip% save old values
635 % \def\fps@figure{\hvSet@floatPos}%
636 \ifx\hvSet@floatPos\@empty % use type default
637 \else
638 \namedef{fps@\hv@floatType}{\hvSet@floatPos}%
639 \fi
640 \ifhv@nonFloat
641 \beginingroup% Start the nonfloat part
642 \else
643 \ifhv@star
644 \nameuse{\hv@floatType}% Start the floating environment *****
645 \else
646 \begin{\hv@floatType}% Start the floating environment
647 \fi
648 \fi
649 \checkoddpage
650 \ifx\hvSet@objectPos\hv@Right\raggedleft\fi
651 \ifx\hvSet@objectPos\hv@Center
652 \ifhv@nonFloat\hspace*{\fill}\else\centering\fi
653 \fi
654 \ifx\hvSet@objectPos\hv@Outer
655 \ifoddpage\raggedleft\fi
656 \fi
657 \ifx\hvSet@objectPos\hv@Inner
658 \ifoddpage\else\raggedleft\fi
659 \fi
660 %
661 % to rotate object and caption together, we save all in another box
662 % the caption comes first, if its on the left or the top
663 % 0 caption left, inner and odd page, oneside inner
664 % 1 caption top
665 % 2 caption right, inner and even page, oneside outer
666 % 3 caption bottom
667 %
668 \ifx\hvSet@capPos\hv@Left
669 \hv@@capPos=0
670 \else
671 \ifx\hvSet@capPos\hv@Top
672 \hv@@capPos=1
673 \else
674 \ifx\hvSet@capPos\hv@Right
675 \hv@@capPos=2
676 \else
677 \ifx\hvSet@capPos\hv@Bottom
678 \hv@@capPos=3
679 \else

```

## 25 The Package Source

```

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

```

```

733     \ifx\hvSet@capVPos\hv@Center
734     \put@ObjectBox
735     \hspace{\hvSet@floatCapSep}%
736     \put@CaptionBox
737     \else
738     \ifx\hvSet@capVPos\hv@Top
739     \put@ObjectBox[1]%
740     \hspace{\hvSet@floatCapSep}% capfloatsep
741     \put@CaptionBox[1]%
742     \else
743     \put@ObjectBox[2]%
744     \hspace{\hvSet@floatCapSep}% capfloatsep
745     \put@CaptionBox[2]%
746     \fi
747     \fi
748     \or%3 bottom
749     \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
750     \begin{minipage}{\wd\hvCaptionBox}%
751     \else
752     \begin{minipage}{\wd\hvObjectBox}%
753     \fi
754     \centering
755     \ifhv@fbox
756     \fbox{\usebox{\hvObjectBox}}\[\hvAboveCaptionSkip]%
757     \fbox{\usebox{\hvCaptionBox}}%
758     \else
759     \ifhv@objectFrame\frame{\usebox{\hvObjectBox}}\else\usebox{\hvObjectBox}\fi\[\hvAboveCaptionSkip]%
760     \usebox{\hvCaptionBox}%
761     \fi
762     \end{minipage}%
763     \fi% \ifcase\the\hv@capPos
764 }% End savebox Object and caption %%%%%%%%% @tempboxa
765 %
766 % now we rotate the object and caption, if needed
767 %
768 \ifhv@wide
769 \ifoddpagoroneside\else\ifoddpag\else\hspace*{\dimexpr-\marginparwidth-\marginparsep}\fi\fi% <- for
    wide and left page
770 \fi
771 \ifx\hvSet@rotAngle\hv@Zero
772 \usebox{\@tempboxa}%
773 \else
774 \rotatebox{\hvSet@rotAngle}{\usebox{\@tempboxa}}%
775 \fi
776 \ifhv@nonFloat
777 \ifx\hvSet@objectPos\hv@Center
778 \ifhv@nonFloat
779 \hspace{\fill}%
780 \fi
781 \fi
782 \endgroup% End the nonfloat part
783 \else
784 \ifhv@star

```

## 25 The Package Source

```

785     \@nameuse{end\hv@floatType*}% End the floating environment
786     \else
787     \end{\hv@floatType}% End the floating environment
788     \fi
789 \fi
790 \endgroup% startet at main \hvFloat
791 }
792 %
793 \newenvironment{hvFloatEnv}[1][\textwidth]
794   {\minipage{#1}\center}
795   {\endcenter\endminipage}
796 %
797
798 \ExplSyntaxOn
799 \let\clist@item@Nn\clist_item:Nn
800 \let\l@clist@Type\l_clist_Type
801 \let\l@clist@LofCaption\l_clist_LofCaption
802 \let\l@clist@Label\l_clist_Label
803 \let\clist@count@N\clist_count:N
804 \ExplSyntaxOff
805
806 \def\do@@@hvFloat{% special float page: caption <-> fullpage image
807   \ifx\hvSet@capPos\hv@After \hv@@capPos=1
808   \else
809     \ifx\hvSet@capPos\hv@Even \hv@@capPos=2
810     \else
811       \ifx\hvSet@capPos\hv@Odd \hv@@capPos=3
812       \else
813         \ifx\hvSet@capPos\hv@Inner \hv@@capPos=4
814         \else
815           \ifx\hvSet@capPos\hv@Outer \hv@@capPos=5
816           \else
817             \ifx\hvSet@capPos\hv@Right \hv@@capPos=6% only for twocolumn mode
818             \else
819               \ifx\hvSet@capPos\hv@Left \hv@@capPos=7% only for twocolumn mode
820               \else
821                 \hv@@capPos=0
822               \fi
823             \fi
824           \fi
825         \fi
826       \fi
827     \fi
828   \fi
829   \checkoddpage
830   \set@caption@object% set caption and object into a box
831   \ifcase\hv@@capPos% caption before object 0-> _always_ left
832     \setBottomCaption\setPageObject
833   \or% caption after object 1-> _always_ right
834     \setPageObject\setBottomCaption
835   \or% caption on even page 2-> left page
836     \ifoddpage
837       \afterpage{\setBottomCaption\setPageObject}%

```

```

838 \else% we are on an even page
839 % \zsavaposy{hv@currentPos}%
840 % \ifdim\the\dimexpr\zposy{hv@currentPos}sp-\hv@BottomSpace-1cm>\ht\TBox % enough space*
841 \setBottomCaption\setPageObject
842 % \else
843 % \afterpage{\afterpage{\setBottomCaption\setPageObject}}%
844 % \fi
845 \fi
846 \or% caption on odd page 3->right page
847 \if@twoside
848 \if@twocolumn
849 \ifoddpage
850 \if@firstcolumn% on right side
851 \setBottomCaption\setPageObject
852 \else
853 \afterpage{\setPageObject\setBottomCaption}% start next column
854 \fi
855 \else% left (even) page
856 \if@firstcolumn
857 \afterpage{\setPageObject\setBottomCaption}% start next column
858 \else
859 \setPageObject\setBottomCaption
860 \fi
861 \fi
862 \else% onecolumn
863 \ifoddpage
864 \setPageObject\setBottomCaption
865 \else% even page
866 \afterpage{\setPageObject\setBottomCaption}%
867 \fi
868 \fi
869 \else% oneside
870 \if@twocolumn
871 \ifoddpage
872 \if@firstcolumn% on right side
873 \setBottomCaption\setPageObject
874 \else
875 \setPageObject\setBottomCaption
876 \fi
877 \else
878 \if@firstcolumn% on left side
879 \afterpage{\setPageObject\setBottomCaption}%
880 \else
881 \setPageObject\setBottomCaption
882 \fi
883 \fi
884 \else % onecolumn
885 \ifoddpage
886 \setBottomCaption\setPageObject
887 \else
888 \afterpage{\setBottomCaption\setPageObject}%
889 \fi
890 \fi

```

## 25 The Package Source

```

891 \fi
892 \or% caption on the inner column 4->inner
893 \set@caption@object
894 \if@twocolumn
895 \ifoddpage
896 \if@firstcolumn% on right side
897 \setBottomCaption\setPageObject
898 \else % right column on right side
899 \setPageObject\setBottomCaption% start next firstcolumn next page
900 \fi
901 \else
902 \if@firstcolumn% on left side
903 \afterpage{\afterpage{\setBottomCaption\setPageObject}}% start next page/first column
904 \else% left page/column
905 \setBottomCaption\setPageObject% start on same page/column
906 \fi
907 \fi
908 \else% onecolumn
909 \setBottomCaption\setPageObject
910 \fi
911 \or% caption on the outer column 5->outer
912 \set@caption@object
913 \if@twocolumn
914 \ifoddpage
915 \if@firstcolumn
916 \afterpage{\afterpage{\setBottomCaption\setPageObject}}%
917 \else
918 \afterpage{\setBottomCaption\setPageObject}%
919 \fi
920 \else% even page (left)
921 \if@firstcolumn
922 \setBottomCaption\setPageObject
923 \else
924 %%% !!!! to-do: !!!!
925 \fi
926 \fi
927 \else% onecolumn
928 \setBottomCaption\setPageObject
929 \fi
930 \or% caption after object on same page 6->right for twocolumn
931 \if@twocolumn
932 \if@firstcolumn
933 \afterpage{\setPageObject\setBottomCaption}%
934 \else
935 \setPageObject\setBottomCaption
936 \fi
937 \else% always caption _after_ object for onecolumn
938 \setPageObject\setBottomCaption
939 \fi
940 \or% caption before object on same page 7->left for twocolumn
941 \if@twocolumn
942 \if@firstcolumn
943 \setBottomCaption\setPageObject

```

```

944     \else
945     \afterpage{\setBottomCaption\setPageObject}%
946     \fi
947     \else%          onecolumn -> same as before
948     \setBottomCaption\setPageObject
949     \fi
950 \fi
951 \endgroup% startet at main \hvFloat
952 }
953 %
954 %% ----- the doublepage obejcts -----
955 %% ||lin+evenside --- |lin+oddside ---||
956 %
957 \def\do@hvFloat@doublePage#1{% image on left and right page with caption on the right page
958 % #1-> 0/1 caption under/right
959 \global\setlength\hv@leftPageObjectWidth{\dimexpr\paperwidth-lin-\evensidemargin-\hvSet@bindCorrection}%
960 % \global\setlength\hv@tempWidthA{\the\dimexpr-\oddsidemargin-lin-\parindent+\hvSet@bindCorrection}% the
width of the right side offset
961 \global\setlength\hv@tempWidthA{\the\dimexpr-lin-\oddsidemargin+\hvSet@bindCorrection}%
962 \checkoddpag
963 \ifoddpage
964 \if@twocolumn
965 \if@firstcolumn
966 \afterpage{\do@hvFloat@doublePageCaptionRight{#1}}%
967 \else
968 \do@hvFloat@doublePageCaptionRight{#1}%
969 \fi
970 \else
971 \do@hvFloat@doublePageCaptionRight{#1}%
972 \fi
973 \else
974 \if@twocolumn
975 \if@firstcolumn
976 \afterpage{\afterpage{\do@hvFloat@doublePageCaptionRight{#1}}}%
977 \else
978 \afterpage{\do@hvFloat@doublePageCaptionRight{#1}}%
979 \fi
980 \else
981 \afterpage{\do@hvFloat@doublePageCaptionRight{#1}}%
982 \fi
983 \fi
984 \endgroup% started at main macro \hvFloat
985 }
986 %
987 \def\do@hvFloat@doublePageCaptionRight#1{% image on left and right page with caption on the right page
-----
988 \afterpage{%
989 \let\hv@fptop\c@fptop
990 \global\setlength{\@fptop}{0pt}%
991 \let\hv@c@topnumber\c@topnumber
992 \setcounter{topnumber}{1}%
993 \begin{\hv@floatType*}[t]
994 \global\savebox{\hv0objectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%

```

## 25 The Package Source

```

995     \clipbox*{0 -\depth{} \hv@leftPageObjectWidth{} \height}{\usebox\hvObjectBox}%
996 \end{\hv@floatType*}%
997 \begin{\hv@floatType*}[t]
998   \global\savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}%
999   \hspace*{\hv@tempWidthA}%
1000   \noindent
1001   \clipbox*{\hv@leftPageObjectWidth{} -\depth{} \width{} \height}{\usebox\hvObjectBox}%
1002   \ifnum#1>0
1003     \medskip
1004     \ifdim\dp\hvObjectBox > \z@
1005       \rotatebox[origin=c]{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
1006         \ifx\hv@shortCap\@empty
1007           \captionof{\hv@floatType}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\global\
1008             \expandafter\label\expandafter{\hv@label}\fi}%
1009         \else
1010           \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\
1011             \global\expandafter\label\expandafter{\hv@label}\fi}%
1012         \fi
1013       }}%
1014     \else
1015       \rotatebox{90}{\parbox{\the\dimexpr\ht\hvObjectBox+\dp\hvObjectBox}{%
1016         \ifx\hv@shortCap\@empty
1017           \captionof{\hv@floatType}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\global\
1018             \expandafter\label\expandafter{\hv@label}\fi}%
1019         \else
1020           \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\
1021             \global\expandafter\label\expandafter{\hv@label}\fi}%
1022         \fi
1023       }}%
1024     \fi
1025     \ifx\hv@shortCap\@empty
1026       \captionof{\hv@floatType}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\global\expandafter\
1027         \label\expandafter{\hv@label}\fi}%
1028     \else
1029       \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\global\
1030         \expandafter\label\expandafter{\hv@label}\fi}%
1031     \fi
1032   \end{\hv@floatType*}%
1033   \let\c@topnumber\hv@c@topnumber
1034   \let\c@fptop\hv@fptop
1035 }%
1036 %
1037 \newsavebox\hv@boxLeftPage
1038 \newsavebox\hv@boxRightPage
1039 %
1040 %% ||lin+evenside --- |lin+oddside --- ||
1041 %
1042 \newif\ifhv@save@twocolumn
1043
1044 \def\do@hvFloat@doublePAGE#1{% image on left and right page with caption on the right

```

```

-----
1042 % #1-> 0/1 caption under/right
1043 \global\setlength\hv@tempWidthA{\the\dimexprlin+\oddsidemargin-\hvSet@bindCorrection+\parindent}%
1044 \global\setlength\hv@leftPageObjectWidth{\the\dimexpr\paperwidth-lin-\evensidemargin-\hvSet@bindCorrection}
1045 %
1046 \expandafter\global\expandafter\savebox\expandafter\hvObjectBox\expandafter{\ifhv@use0Box\usebox{\hv0Box}\
1047     else\hv@floatObject\fi}%
1048 \expandafter\global\expandafter\savebox\expandafter\hv@boxLeftPage\expandafter{\clipbox*{0 -\depth} \
1049     hv@leftPageObjectWidth{ } \height}{\usebox\hvObjectBox}}%
1050 \expandafter\global\expandafter\savebox\expandafter\hv@boxRightPage\expandafter{\clipbox*{\
1051     hv@leftPageObjectWidth{ } -\depth{ } \width{ } \height{ }\usebox\hvObjectBox}}%
1052 \checkoddpage
1053 \ifoddpage
1054     \if@twocolumn
1055         \if@firstcolumn
1056             \afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}%
1057         \fi
1058     \else
1059         \do@hvFloat@doublePAGECaptionRight{#1}%
1060     \fi
1061 \else
1062     \if@twocolumn
1063         \if@firstcolumn
1064             \afterpage{\afterpage{\afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}}}%
1065         \else
1066             \afterpage{\afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}}%
1067         \fi
1068     \else
1069         \afterpage{\do@hvFloat@doublePAGECaptionRight{#1}}%
1070     \fi
1071 \endgroup
1072 }
1073 %
1074 \def\do@hvFloat@doublePAGECaptionRight#1{% image on left and right page with caption on the right
1075     -----
1076     % #1-> 0/1 caption under/right
1077     \afterpage{%
1078         \noindent
1079         \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1080         \null
1081         \global\savebox\hv@boxLeftPage{\clipbox*{0 -\depth} \hv@leftPageObjectWidth{ } \height}{\usebox\
1082             hvObjectBox}}%
1083         \usebox\hv@boxLeftPage
1084         \newpage\if@twocolumn\null\newpage\fi
1085         \expandafter\global\expandafter\savebox\expandafter\hvObjectBox\expandafter{\ifhv@use0Box\usebox{\
1086             hv0Box}\else\hv@floatObject\fi}%
1087         \hspace*{-\dimexpr\hv@tempWidthA}%
1088         \noindent
1089         \usebox\hv@boxRightPage
1090         \clipbox*{\the\hv@leftPageObjectWidth{ } -\depth{ } \width{ } \height{ }}{\usebox\hvObjectBox}%
1091         \ifnum#1>0
1092             \medskip

```

## 25 The Package Source

```

1087 \ifdim\dp\hv0bjectBox > \z@
1088 \rotatebox[origin=c]{90}{\parbox{\the\dimexpr\ht\hv0bjectBox+\dp\hv0bjectBox}{%
1089 \ifx\hv@shortCap\@empty
1090 \captionof{\hv@floatType}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\global\
1091 \expandafter\label\expandafter{\hv@label}\fi}%
1092 \else
1093 \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\
1094 \global\expandafter\label\expandafter{\hv@label}\fi}%
1095 \fi
1096 }}%
1097 \else
1098 \rotatebox{90}{\parbox{\the\dimexpr\ht\hv0bjectBox+\dp\hv0bjectBox}{%
1099 \ifx\hv@shortCap\@empty
1100 \captionof{\hv@floatType}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\global\
1101 \expandafter\label\expandafter{\hv@label}\fi}%
1102 \else
1103 \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\ifx\hv@label\@empty\else\expandafter\
1104 \global\expandafter\label\expandafter{\hv@label}\fi}%
1105 \fi
1106 }}%
1107 \fi
1108 \newpage\if@twocolumn\null\newpage\fi
1109 }%
1110 }
1111 %
1112 %% ||lin+evenside --- |lin+oddside ---||
1113 %
1114 \def\do@hvFloat@doubleFULLPAGE#1{% image on left and right page with caption before/below/right/after
1115 % #1-> 0/1 caption under/right
1116 \ifx\hvSet@capPos\hv@After \hv@@capPos=1
1117 \else
1118 \ifx\hvSet@capPos\hv@Before \hv@@capPos=0
1119 \else
1120 \hv@@capPos=2 % other caption type
1121 \fi\fi
1122 \checkoddpage
1123 \global\savebox{\hv0bjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@float0bject\fi}%
1124 \global\setlength\hv@tempWidthA{\the\dimexpr-\oddsidemargin-lin-\parindent+\hvSet@bindCorrection}% the
1125 width of the right side offset
1126 \global\setlength\hv@leftPage0bjectWidth{\the\dimexpr\paperwidth-\hvSet@bindCorrection}%
1127 \expandafter\captionsetup\expandafter{\hv@caption@format}%
1128 \ifoddpage
1129 \ifcase\hv@@capPos % =0 Caption before
1130 \if@twocolumn

```

```

1133     \if@firstcolumn
1134         \ifhv@twoColumnCaption
1135             \set@Normal@Bottom@Caption*
1136             \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionBefore}%
1137         \else
1138             \afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore}%
1139         \fi
1140     \else
1141         \set@Normal@Bottom@Caption
1142         \do@hvFloat@doubleFULLPAGE@CaptionBefore
1143     \fi
1144 \else
1145     \set@Normal@Bottom@Caption
1146     \do@hvFloat@doubleFULLPAGE@CaptionBefore
1147 \fi
1148 \or % =1 Caption after
1149     \ifhv@twoColumnCaption
1150         \do@hvFloat@doubleFULLPAGE@CaptionAfterTwoCol
1151     \else
1152         \do@hvFloat@doubleFULLPAGE@CaptionAfter
1153     \fi
1154 \else% >1 all other Captions
1155     \if@twocolumn
1156     \if@firstcolumn
1157 %         \global\setlength\hv@tempWidthA{\the\dimexpr-\evensidemargin-1in-\parindent+\hvSet@bindCorrection
1158     }%
1159     \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}%
1160     \else
1161         \do@hvFloat@doubleFULLPAGE@CaptionOther{#1}%
1162     \fi
1163     \else % >1 Caption right/bottom
1164         \do@hvFloat@doubleFULLPAGE@CaptionOther{#1}%
1165     \fi
1166 \fi% \ifcase
1167 \else% we have an even page
1168 \ifcase\hv@capPos% Before
1169     \if@twocolumn
1170         \if@firstcolumn
1171             \ifhv@twoColumnCaption
1172                 \afterpage{\afterpage\set@Normal@Bottom@Caption*\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionBefore{#1}}}%
1173             \else
1174                 \afterpage{\afterpage{\afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore{#1}}}%
1175                 \fi
1176             \afterpage{\afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore{#1}}}%
1177         \fi
1178     \else
1179         \afterpage{\set@Normal@Bottom@Caption\do@hvFloat@doubleFULLPAGE@CaptionBefore}%
1180     \fi
1181 \or % capPos after
1182     \if@twocolumn

```

## 25 The Package Source

```

1183     \if@firstcolumn
1184       \afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfter{#1}}}%
1185     \else
1186       \afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfter{#1}}}%
1187     \fi
1188   \else
1189     \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionAfter}%
1190   \fi
1191 \else % Any other caption
1192   \if@twocolumn
1193     \if@firstcolumn
1194       \afterpage{\afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}}}%
1195     \else
1196       \afterpage{\afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}}%
1197     \fi
1198   \else
1199     \afterpage{\do@hvFloat@doubleFULLPAGE@CaptionOther{#1}}%
1200   \fi
1201   \fi% \ifcase
1202 \fi% main ifoddpge
1203 \endgroup% started at main macro \hvFloat
1204 }
1205
1206 \def\set@Normal@Bottom@Caption{\@ifnextchar*\set@Normal@Bottom@CaptionStar\set@Normal@Bottom@Caption@}
1207 \def\set@Normal@Bottom@Caption@{%
1208   \begin{\hv@floatType}[!b]
1209     \ifhv@separatorLine\drawSepLine\fi
1210     \expandafter\captionsetup\expandafter{\hv@caption@format}%
1211     \ifx\hv@shortCap\@empty
1212       \captionof{\hv@floatType}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1213     \else
1214       \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1215     \fi
1216   \end{\hv@floatType}%
1217 }
1218 \def\set@Normal@Bottom@CaptionStar*{%
1219   \begin{\hv@floatType*}[!b]
1220     \ifhv@separatorLine\drawSepLine\fi
1221     \expandafter\captionsetup\expandafter{\hv@caption@format}%
1222     \ifx\hv@shortCap\@empty
1223       \captionof{\hv@floatType}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1224     \else
1225       \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label-
1226         cap}}%
1227     \fi
1228   \end{\hv@floatType*}%
1229 }
1230 \def\do@hvFloat@doubleFULLPAGE@CaptionBefore{%
1231   \afterpage{%
1232     \global\savebox{\hv@objectBox}{\ifhv@useOBox\usebox{\hv@OBox}\else\hv@floatObject\fi}%
1233     \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% no
       interlineskip

```

```

1234 \hspace*{\the\dimexpr-\evensidemargin-\parindent-lin}%
1235 \thispagestyle{empty}%
1236 \refstepcounter{hv@tempCNTa}%
1237 \expandafter\label\expandafter{\hv@label}%
1238 %% \global\addtocounter{\hv@floatType}{-1}% to get the same <object>-ref as "label"-cap
1239 \clipbox*{0 0 \the\hv@leftPageObjectWidth{} \height}{\usebox\hvObjectBox}%
1240 \afterpage{%
1241 \if@twocolumn\newpage\null\newpage\fi
1242 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1243 \thispagestyle{empty}%
1244 \vspace*{\the\dimexpr-lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
    paperheight+0.5\ht\hvObjectBox
1245 \hspace*{\hv@tempwidthA}%
1246 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1247 \clipbox*{\the\hv@leftPageObjectWidth{} \dp\hvObjectBox{} \wd\hvObjectBox{} \ht\hvObjectBox}{\usebox\
    hvObjectBox}%
1248 \refstepcounter{hv@tempCNTa}%
1249 \expandafter\label\expandafter{\hv@label-2}%
1250 \newpage\if@twocolumn\null\newpage\fi
1251 }}%
1252 }
1253
1254 \newif\ifhv@temp
1255
1256 \def\do@hvFloat@doubleFULLPAGE@CaptionAfter{%
1257 \afterpage{%
1258 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1259 \vspace*{\the\dimexpr-lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% no
    interlineskip
1260 \hspace*{\the\dimexpr-\evensidemargin-\parindent-lin}%
1261 \thispagestyle{empty}%
1262 \refstepcounter{hv@tempCNTb}%
1263 \expandafter\label\expandafter{\hv@label}%
1264 \clipbox*{0 0 \the\hv@leftPageObjectWidth{} \height}{\usebox\hvObjectBox}%
1265 \afterpage{%
1266 \newpage\if@twocolumn\null\newpage\fi
1267 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1268 \thispagestyle{empty}%
1269 \vspace*{\the\dimexpr-lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
    paperheight+0.5\ht\hvObjectBox
1270 \hspace*{\hv@tempwidthA}%
1271 \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1272 \clipbox*{\the\hv@leftPageObjectWidth{} \dp\hvObjectBox{} \wd\hvObjectBox{} \ht\hvObjectBox}{\usebox\
    hvObjectBox}%
1273 \refstepcounter{hv@tempCNTb}%
1274 \expandafter\label\expandafter{\hv@label-2}%
1275 \newpage\if@twocolumn\null\newpage\fi
1276 \begin{\hv@floatType}[b]
1277 \ifhv@separatorLine\drawSepLine\fi
1278 \expandafter\captionsetup\expandafter{\hv@caption@format}%
1279 \ifx\hv@shortCap@empty
1280 \captionof{\hv@floatType}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1281 \else

```

## 25 The Package Source

```

1282         \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1283         \fi
1284     \end{\hv@floatType}%
1285 }}%
1286 }
1287
1288 \def\do@hvFloat@doubleFULLPAGE@CaptionAfterTwoCol{%
1289     \afterpage{%
1290         \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1291         \vspace*{\the\dimexpr-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% no
            interlineskip
1292         \hspace*{\the\dimexpr-\evensidemargin-\parindent-lin}%
1293         \thispagestyle{empty}%
1294         \refstepcounter{hv@tempCNTb}%
1295         \expandafter\label\expandafter{\hv@label}%
1296         \clipbox*{0 0 \the\hv@leftPageObjectWidth{ } \height}{\usebox{\hvObjectBox}%
1297     \afterpage{%
1298         \newpage\if@twocolumn\null\newpage\fi
1299         \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1300         \thispagestyle{empty}%
1301         \vspace*{\the\dimexpr-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
            paperheight+0.5\ht{\hvObjectBox}
1302         \hspace*{\hv@tempWidthA}%
1303         \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1304         \clipbox*{\the\hv@leftPageObjectWidth{ } \dp{\hvObjectBox} \wd{\hvObjectBox} \ht{\hvObjectBox}{\usebox\
            hvObjectBox}%
1305         \refstepcounter{hv@tempCNTb}%
1306         \expandafter\label\expandafter{\hv@label-2}%
1307         \newpage\if@twocolumn\null\newpage\fi
1308         \begin{\hv@floatType*}[b]
1309             \hv@twoColumnCaptiontrue
1310             \ifhv@separatorLine\drawSepLine\fi
1311             \expandafter\captionsetup\expandafter{\hv@caption@format}%
1312             \ifx\hv@shortCap@empty
1313                 \captionof{\hv@floatType}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1314             \else
1315                 \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1316             \fi
1317         \end{\hv@floatType*}%
1318     }}%
1319 }
1320
1321 \def\do@hvFloat@doubleFULLPAGE@CaptionOther#1{%
1322     \afterpage{%
1323         \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1324         \thispagestyle{empty}%
1325         \vspace*{\the\dimexpr-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
            paperheight+0.5\ht{\hvObjectBox}
1326         \hspace*{\the\dimexpr-\evensidemargin-\parindent-lin}%
1327         \global\savebox{\hvObjectBox}{\ifhv@use0Box\usebox{\hv0Box}\else\hv@floatObject\fi}%
1328         \clipbox*{0 0 \the\hv@leftPageObjectWidth{ } \height}{\usebox{\hvObjectBox}%
1329         \refstepcounter{hv@tempCNTb}
1330         \expandafter\label\expandafter{\hv@label}%

```

```

1331 \afterpage{%
1332   \if@twocolumn\newpage\if@firstcolumn\else\null\newpage\fi\fi
1333   \global\savebox{\hvObjectBox}{\ifhv@useObject\usebox{\hvObject}\else\hv@floatObject\fi}%
1334   \thispagestyle{empty}%
1335   \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep-\baselineskip+2\lineskip}% -0.5\
        paperheight+0.5\ht\hvObjectBox
1336   \hspace*{\hv@tempWidthA}%
1337   \clipbox*{\the\hv@leftPageObjectWidth{} \dp\hvObjectBox{} \wd\hvObjectBox{} \ht\hvObjectBox}{\usebox\
        hvObjectBox}%
1338   \refstepcounter{hv@tempCNTb}%
1339   \expandafter\label\expandafter{\hv@label-2}%
1340   \savebox\hvCaptionBox{\parbox{0.9\ht\hvObjectBox}{\captionof*{\hv@floatType}{\hv@longCap}}}%
1341   \ifnum#1 > 0\relax % rotation with 90°
1342     \setlength\hv@tempWidthA{\dimexpr\ht\hvCaptionBox+\wd\hvObjectBox+2\hv@set@bindCorrection}%
1343     \ifdim\hv@tempWidthA < 2\paperwidth
1344       \rotatebox{90}{\quad\parbox{0.9\ht\hvObjectBox}{%
1345         \expandafter\captionsetup\expandafter{\hv@caption@format}%
1346         \ifx\hv@shortCap\@empty
1347           \captionof{\hv@floatType}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1348         \else
1349           \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}
        }}}%
1350       \fi
1351     }% rotatebox
1352   \else% ifdim: no space left on page
1353     \put(-\ht\hvCaptionBox,0.5\ht\hvObjectBox){\makebox(0,0){\rotatebox{90}{\minipage{\textwidth}\
        centering
1354         \parbox{0.8\textwidth}{%
1355           \ifx\hv@shortCap\@empty
1356             \captionof{\hv@floatType}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1357           \else
1358             \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label-
        cap}}}%
1359         \fi
1360       }%
1361     \endminipage}}}%
1362   \fi
1363   \else% ifnum, caption not rotated, under or over the right page
1364     \setlength\hv@tempWidthA{\dimexpr\paperheight-\ht\hvObjectBox}%
1365     \ifdim\hv@tempWidthA > \ht\hvCaptionBox
1366     \else
1367       % \refstepcounter{hv@temp}%
1368       \put(\the\dimexpr-\textwidth-2in-\oddsidemargin,\the\dimexpr\ht\hvCaptionBox+\abovecaptionskip+\
        belowcaptionskip){\makebox[0pt][l]{\parbox{\textwidth}{%
1369         \expandafter\captionsetup\expandafter{\hv@caption@format}%
1370         \ifx\hv@shortCap\@empty
1371           \captionof{\hv@floatType}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}}%
1372         \else
1373           \captionof{\hv@floatType}{\hv@shortCap}{\hv@longCap\expandafter\label\expandafter{\hv@label-cap}
        }}}%
1374       \fi
1375     }%
1376   \fi

```

## 25 The Package Source

```

1377     \fi% end \ifnum#1>0
1378     \newpage\if@twocolumn\null\newpage\fi
1379   }%
1380 }%
1381 }
1382
1383
1384 \def\setBottomCaption{%
1385   \begin{\hv@floatType}[!b]%
1386   \ifhv@separatorLine\drawSepLine\fi
1387   \par
1388   \usebox\hvCaptionBox
1389   \end{\hv@floatType}%
1390 }
1391
1392 \def\setPageObject{%
1393   \ifhv@star
1394     \begin{\hv@floatType*}[p]%
1395   \else
1396     \begin{\hv@floatType}[p]%
1397   \fi
1398   \ifhv@FULLPAGE
1399     \vspace*{\the\dimexpr-\lin-\voffset-\topmargin-\headheight-\headsep}%-0.5\baselineskip%
1400     \checkoddpage
1401     \if@twoside
1402       \ifoddpage
1403         \hspace*{\the\dimexpr-\oddsidemargin-\parindent-\lin}%
1404       \else
1405         \hspace*{\the\dimexpr-\evensidemargin-\parindent-\lin}%
1406       \fi
1407     \else
1408       \hspace*{\the\dimexpr-\oddsidemargin-\parindent-\lin}%
1409     \fi
1410     %\put(0,0){%
1411     \AtBeginShipoutNext{\thispagestyle{empty}}%
1412     \usebox\hvObjectBox}%
1413   \else
1414     \usebox\hvObjectBox
1415   \fi
1416   \ifhv@star
1417     \end{\hv@floatType*}%
1418   \else
1419     \end{\hv@floatType}%
1420   \fi
1421 }
1422
1423 \ExplSyntaxOn
1424
1425 \def\getMultiCaptionAndLabel{%
1426   \global\sbox\hvCaptionBox{\minipage[b]{\linewidth}%
1427     \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1428     \setlength\belowcaptionskip{5pt}%
1429     \setlength\abovecaptionskip{0pt}%

```

```

1430 \hv@cntb=\clist_count:N\l_clist_Type
1431 \advance\hv@cntb by \@ne
1432 \hv@canta=1
1433 \loop
1434 \edef\@capytype{\clist_item:Nn\l_clist_Type{\hv@canta}}%
1435 \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{\hv@canta}}%
1436 \ifx\@tempa\@empty
1437 \caption{\clist_item:Nn\l_clist_Caption{\hv@canta}}%
1438 \else
1439 \expandafter\caption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{\hv@canta}}%
1440 \fi
1441 \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@canta}}%
1442 \ifx\@tempa\@empty
1443 \else
1444 \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@canta}-cap}\fi
1445 \advance\hv@canta by \@ne
1446 \ifnum\hv@canta<\hv@cntb
1447 \repeat
1448 \endminipage}%
1449 }
1450 \def\getMultiObjectAndLabel{%
1451 \global\sbox\hvObjectBox{\minipage{\linewidth}%
1452 \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1453 \ifx\hvSet@objectPos\hv@Right\raggedleft\else
1454 \ifx\hvSet@objectPos\hv@Left\raggedleft\else
1455 \ifx\hvSet@objectPos\hv@Center\centering
1456 \fi\fi\fi
1457 \hv@cntb=\clist_count:N\l_clist_Type
1458 \advance\hv@cntb by \@ne
1459 \hv@canta=1
1460 \loop
1461 \def\@temp{\clist_item:Nn\l_clist_Object{\hv@canta}}%
1462 \ifhv@objectFrame\frame{\@temp}\else\@temp\fi
1463 \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@canta}}%
1464 \ifx\@tempa\@empty
1465 \else
1466 \refstepcounter{\@capytype}%
1467 \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@canta}}%
1468 \fi
1469 \ifnum\hv@canta<\clist_count:N\l_clist_Type\par\hv@vskip\fi
1470 \advance\hv@canta by \@ne
1471 \ifnum\hv@canta<\hv@cntb
1472 \repeat
1473 \endminipage}%
1474 }
1475
1476 \def\getMultiSubCaptionAndLabel{%
1477 \global\sbox\hvCaptionBox{\minipage{\linewidth}%
1478 \ifx\hv@caption@format\@empty\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1479 \setlength\belowcaptionskip{5pt}%
1480 \setlength\abovecaptionskip{0pt}%
1481 \xdef\@capytype{\clist_item:Nn\l_clist_Type{1}}% the same for all subfloats
1482 \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{1}}%

```

```

1483 \ifx\@tempa\@empty
1484 \caption{\clist_item:Nn\l_clist_Caption{1}}%
1485 \else
1486 \expandafter\caption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{1}}%
1487 \fi
1488 \edef\@tempa{\clist_item:Nn\l_clist_Label{1}}%
1489 \ifx\@tempa\@empty\else\expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{1}-cap}\fi
1490 \endminipage}%
1491 }
1492
1493 \def\getMultiSubObjectAndLabel{%
1494 \global\sbox\hvObjectBox{\minipage{\linewidth}%
1495 \ifx\hv@subcaption@format\@empty\else
1496 \expandafter
1497 \captionsetup\expandafter\expandafter s\expandafter u\expandafter b\expandafter\expandafter
1498 {\hv@subcaption@format}%
1499 \fi
1500 \ifx\hvSet@objectPos\hv@Right\raggedleft\else
1501 \ifx\hvSet@objectPos\hv@Left\raggedleft\else
1502 \ifx\hvSet@objectPos\hv@Center\centering
1503 \fi\fi\fi
1504 \hv@cntb=\clist_count:N\l_clist_Caption
1505 \advance\hv@cntb by \@ne
1506 \hv@cmta=2
1507 \xdef\@captive{\clist_item:Nn\l_clist_Type{1}}% the same for all subfloats
1508 \loop
1509 \def\@temp{\clist_item:Nn\l_clist_Object{\hv@cmta}}%
1510 \ifhv@objectFrame\frame{\@temp}\else\@temp\fi
1511 \begingroup
1512 \edef\@tempa{\clist_item:Nn\l_clist_LofCaption{\hv@cmta}}%
1513 \ifx\@tempa\@empty
1514 \subcaption{\clist_item:Nn\l_clist_Caption{\hv@cmta}}%
1515 \else
1516 \expandafter\subcaption\expandafter[\@tempa]{\clist_item:Nn\l_clist_Caption{\hv@cmta}}%
1517 \fi
1518 \edef\@tempa{\clist_item:Nn\l_clist_Label{\hv@cmta}}%
1519 \ifx\@tempa\@empty
1520 \else
1521 \expandafter\label\expandafter{\clist_item:Nn\l_clist_Label{\hv@cmta}}%
1522 \fi
1523 \endgroup
1524 \ifnum\hv@cmta<\clist_count:N\l_clist_Type\par\hv@vskip\fi
1525 \advance\hv@cmta by \@ne
1526 \ifnum\hv@cmta<\hv@cntb
1527 \repeat
1528 \edef\@tempa{\clist_item:Nn\l_clist_Label{1}}% the main label at the end
1529 \ifx\@tempa\@empty
1530 \else
1531 \addtocounter{\@captive}{-1}% to get the same <object>-ref as "label"-cap
1532 \refstepcounter{\@captive}%
1533 \expandafter\label\expandafter[\@tempa}%
1534 \fi
1535 \endminipage}%

```

```

1536 }
1537 \ExplSyntaxOff
1538
1539 \def\getSingleCaptionAndLabel{%
1540   \global\sbox\hvCaptionBox{\minipage{\linewidth}%
1541     \ifx\relax\hv@caption@format\relax\else\expandafter\captionsetup\expandafter{\hv@caption@format}\fi
1542     \setlength\belowcaptionskip{5pt}%
1543     \setlength\abovecaptionskip{0pt}%
1544     \edef\@capttype{\hv@floatType}%
1545     \expandafter\ifx\expandafter\relax\hv@shortCap\relax
1546       \caption{\hv@longCap}%
1547     \else
1548       \caption[\hv@shortCap]{\hv@longCap}%
1549     \fi
1550   \expandafter\ifx\expandafter\relax\hv@label\relax\else\label{\hv@label-cap}\fi
1551   \endminipage}%
1552 }
1553
1554 \def\set@caption@object{% first caption, then object
1555   \ifhv@multiFloat
1556     \getMultiCaptionAndLabel
1557   \else
1558     \ifhv@subFloat
1559       \getMultiSubCaptionAndLabel
1560     \else
1561       \getSingleCaptionAndLabel
1562     \fi
1563   \fi
1564   \edef\@capttype{\hv@p\hv@floatType}%
1565   \ifhv@multiFloat
1566     \getMultiObjectAndLabel
1567   \else
1568     \ifhv@subFloat
1569       \getMultiSubObjectAndLabel
1570     \else
1571       \global\sbox\hvObjectBox{%
1572         \refstepcounter{\@capttype}%
1573         \ifhv@objectFrame\frame{\hv@floatObject}\else\hv@floatObject\fi
1574         \expandafter\ifx\expandafter\relax\hv@label\relax
1575           \else
1576             \expandafter\label\expandafter{\hv@label}%
1577           \fi
1578       }%
1579     \fi
1580   \fi
1581 }
1582 %
1583 \endinput

```