

# The `sidenotesplus` package

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Home Page: <https://github.com/anton-vrba/sidenotesplus>

Issues: <https://github.com/anton-vrba/sidenotesplus/issues>

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## Abstract

A package to manage the margin notes, figures, tables and captions. Also body text can be extended into the margin for wide figures, tables and equation. Twoside symmetry is preserved. For biblatex users, routines for side references are included.

**Note:** Margin notes, figures and tables placements require up to three compilations to be as intended.

**Note:** This package is inspired by the package `sidenotes` authored by Andy Thomas and has many features in common. But, compatibility is not maintained between the two.

## 1 Usage

### 1.1 Package options

Below the options that can be passed to the package `sidenotesplus` with the package defaults listed first.

```
mark= alph, Alph, arabic, roman, Roman, fnsymbol
font= rm, sf
size= footnote, normal, small, script
shape= up, it, sl
ragged switches to ragged outer margins
Ragged switches to ragged outer margins but uses ragged2e package
classic switches to a classic look
sepdiff= 1em, or a valid length within reason
alerton switches on the rendering of the margin alerts
per= page, section, chapter, none defaults to counter per page
```

The normal page style is that margin notes are left-right justified with the last line ragged to the outer edge. The option `ragged` or `Ragged` changes this style to ragged-outer, that is the left page's marginal notes are `\raggedleft` and the right page's are `\raggedright`. If you opt to use `Ragged` the package `ragged2e` is loaded and `RaggedLeft/Right` is used instead of `raggedleft/right`. Load package `ragged2e` with required options before `sidenotesplus` is loaded, otherwise `sidenotesplus` loads `ragged2e` without any options.

The marginal note's reference number or mark is placed in the margin separator, that is on the left page the mark is on the right hand side of the note. The option `classic` always places the mark to the left of the marginal note. This requires that the margin separator on the left page is slightly reduced if not enough space is available to the page outer edge.

## 1.2 Modified L<sup>A</sup>T<sub>E</sub>X commands

**\marginpar** The LaTex command `\marginpar{abc}` with only one parameter it is modified to `\marginpar[left styled abc]{right styled abc}` maintaining page symmetry. If called with two parameters nothing is changed

## 1.3 Marginal note commands

All marginal note commands have five options followed by the side note text enclosed in braces. Each option has its own enclosing symbols. The option sequence is fixed but not used options are omitted entirely, including their enclosing sequence. The option sequence is `*`, `||`, `<>`, `()`, `!!` plus `{}`.

<code>*</code>	margin note reference labels is omitted
<code> float offset </code>	floating offset, negative is towards page top
<code>&lt;fixed offset&gt;</code>	fixed offset, negative is towards page top
<code>(custom mark)</code>	any custom mark
<code>!colour!</code>	any valid colour
<code>{content}</code>	margin note content

Note: All marginals placed with a fixed offset, that is with the `<fixed offset>` option can be overwritten by the marginals that float.

**\sidenote** The `\sidenote` has five options `*|offset|<offset>(custom mark)!colour!` all preceding the note `{content}`. The options are defined by their enclosures `*||,<>,(),!!` and must be in the order listed above.  
Example: `\sidenote|10pt|($\bigstar$){text}` is valid  
but `\sidenote($\bigstar$)|10pt|{text}` will give an error

**\sidenotetext** Similar to `\footnotemark` and `\footnotetext` the macros `\sidenotemark`, `\sidenotetext` and `\sidenotetextbefore` are provided, the latter two have the `\sidenotetextbefore` same options as `\sidenote`. This is useful in placing margin notes in environments where the `\sidenote` is not permitted. The margin note is not positioned by the `\sidenotemark`, but rather it is positioned relative to `\sidenotetext` or `\sidenotetextbefore`

**\sidealert** These are temporary margin notes rendered in red or by the user's defined `!colour!`. The package option `alerton` needs to be specified in the document preamble. The alert mark has zero width so it does not alter the main text layout and is also rendered in colour. The alert mark is either numeric arabic (default), or alphabetic if the side note mark is set to arabic

**\sidepar** Starts a new paragraph in the side note, whereas `\\"` begins a new line without indentation.

**\sidecaption** The `\sidecaption*<offset>[short form]{long form}` macro can be used from within figure or table environment and the caption is placed in the margin adjacent to the figure or table. The float `||` is not an option here. Therefore, the caption might overlap with other marginals. Then, these marginals have to be adjusted with offset parameters. The formatting of the caption is done by the `caption` package by defining a `sidecaption` style. Please refer to the documentation of the `caption` package for information on styles. The macro can be starred, which is analog to the regular starred caption (no numbering, no tof entry). Use `\raggedinner` within the figure, or table, environment to place these near the caption.

**\raggedinner** Are raggedleft or raggedright modes depending if document is one or two sided  
**\raggedouter**

and if the page is even or odd.

**marginfigure** (*env.*) The **marginfigure** environment puts a figure and its caption in the margin. Instead of `\begin{figure}[htbp]` use `\begin{marginfigure}|offset|<offset>`. Again, using an offset value switches the behaviour from float to fixed position. The **marginfigure** has its own caption style named *marginfigure*.

**margintable** (*env.*) The **margintable** environment works similar to **marginfigure**, but with table environments. Use `\begin{marginfigure}|offset|<offset>` instead of `\begin{table}[htbp]`, its caption style is named *margintable*.

**\margincaption** The `\margincaption` macro is used only in the two above environments (**marginfigure** and **marginfigure**) and it is not to be confused with `\sidecaption`. It has the same options as `\caption`

**figure\*** (*env.*) The **figure\*** environment is used to position figures across the full page, i.e. the text width plus the margin. The algorithm has to distinguish between recto and verso (left and right) pages and might need up to three L<sup>A</sup>T<sub>E</sub>X runs to provide

**table\*** (*env.*) the desired result. The corresponding caption style is called *widefigure*. The sister environment for tables is **table\***. Use `widetable` to change its caption style.

**text\*** (*env.*) The **text\*** environment is used to render text across up to the full page width. Page breaks are not permitted within this environment. This environment is useful when extra width for equations is required. The environment `\begin{text*}[0.5]` extends the text width by  $0.5 * (\text{\marginparwidth} + \text{\marginparsep})$ , omitting the option is equivalent to specifying the option [1],

**\sidecite** The `\sidecite`, `\sidecitet` and `\sidecitet*` provide citing references in `\sidecitebefore` the margin and uses the package `biblatax` which has to be setup outside the `\sidecitemark` `sitenotesplus` package. Use `sidecitebefore` or `sideciteafter` to place the `\sideciteafter` marginalia reference before or after the `sidenotemark` Example settings in the `\sidecitet` document preamble:

```
\sidecitet*  \usepackage[english]{babel}
             \usepackage[backend=biber,style=nature]{biblatax}
             \addbibresource{mybibfile.bib}
```

The above three cite-commands use the same options as `sidenote` followed by the two options of the `biblatax`'s `\fullcite` command. Margin citations are always with marks, hence the \* takes new meaning here. The command `\sidecite{BibReference}` and `\sidecite*{BibReference}` are equivalent, and both place a side note mark and the citation reference in the side margin. `\sidecitet{BibReference}` renders: Author<sup>a</sup>, where 'a' is side note mark, whereas `\sidecitet*{BibReference}` is the possessive version and renders: Author's<sup>a</sup>.

## 1.4 Packages loaded

**marginnote** supports an alternative to `\marginpar` and creates non floating notes in the margin.

**mparhack** to get `\marginpar` right

**caption** allows to set figure and table captions in the margin and allows easier formatting of these captions. Please refer to the *caption* manual for details on styles.

**xparse** is used to take advantage of the improved L<sup>A</sup>T<sub>E</sub>X3 syntax. All macros and environments are defined using this package.

**l3keys2e** provides a key/value mechanism

**xspace** provides the command \xspace

**changepage** is used to correctly shift figure\* and table\*. It has to use the option [strict] to work properly. This might lead to an option clash, if the same package is loaded without this option.

**ifoddpage** provides the command \ifoddpage

**etoolbox** provides the command \patchcmd

**calc** provides calculation such as adding lengths

**ragged2e** if Ragged option is used, and provides hyphenation to prevent very short lines

## 2 Implementation

```
1 \newcommand \snptest {{\upshape Figure \thefigure:} And some text\xspace}
2
3 \ExplSyntaxOn
4 \DeclareExpandableDocumentCommand{\IfNoValueOrEmptyTF}{ m m m }
5 {
6   \IfNoValueTF{#1}
7   {#2}
8   {\tl_if_empty:nTF {#1} {#2} {#3}}
9 }
10 \setcounter{topnumber}{4}
11 \setcounter{bottomnumber}{4}
12 \setcounter{totalnumber}{8}

\snp@sidenoteformat --
13 \NewDocumentCommand \snp@sidenoteformat {} {%
14   \snp@size\snp@shape\snp@font\leavevmode%
15   \lineskip=0pt \lineskiplimit=0pt %
16   \tolerance=2000 \hyphenpenalty=300 \exhyphenpenalty=300%
17   \doublehyphendemerits=300%
18   \finalhyphendemerits=\doublehyphendemerits
19 }
20 \NewDocumentCommand \snp@sideformat {} {}
21 \NewDocumentCommand \snp@sidecolor {} {}
22

-- 
23 \NewDocumentCommand \snp@symbol {} {\alph}
24 \NewDocumentCommand \snp@alsertsymbol {} {\arabic}
25 \NewDocumentCommand \snp@font {} {}
26 \NewDocumentCommand \snp@shape{} {\itshape}
27 \NewDocumentCommand \snp@size {} {\footnotesize}
28 \NewDocumentCommand \snp@leftmarginstyle{} {}
29 \NewDocumentCommand \snp@rightmarginstyle{} {}
30 %
31 %
32 \bool_new:N \l@snp@margincaption
33 \bool_new:N \l@snp@alerton
34 \bool_new:N \l@snp@alertmarkon
35 \bool_new:N \l@snp@ragged
36 \bool_new:N \l@snp@Ragged
37 \bool_new:N \l@snp@symmetric
38 \bool_new:N \l@snp@page
39 \bool_new:N \l@snp@counterset
```

```

40
41 \bool_set_false:N \l@snp@margincaption
42 \bool_set_false:N \l@snp@alerton
43 \bool_set_false:N \l@snp@alertmarkon
44 \bool_set_false:N \l@snp@ragged
45 \bool_set_false:N \l@snp@Ragged
46 \bool_set_true:N \l@snp@symmetric
47 \bool_set_false:N \l@snp@counterset
48
49
50 %
51 \newlength{\snp@marginsepdiff}
52 \setlength{\snp@marginsepdiff}{1ex}

53 \keys_define:nn { sidenoteplus }
54 {
55   mark .code:n = \str_case:nn {#1}%
56   { {fnssymbol}{\RenewDocumentCommand \snp@symbol {}{\fnssymbol}}%
57     {Alpha}{\RenewDocumentCommand \snp@symbol {}{\Alpha}}%
58     {arabic}{\RenewDocumentCommand \snp@symbol {}{\arabic}}%
59       \RenewDocumentCommand \snp@alertsymbol {} {\alph}%
60     {Roman}{\RenewDocumentCommand \snp@symbol {}{\Roman}}%
61     {roman}{\RenewDocumentCommand \snp@symbol {}{\roman}}%
62     {Other}{} },
63   font .code:n = \str_case:nn {#1}%
64   { {sf}{\RenewDocumentCommand \snp@font {}{\sffamily}}%
65     {Other}{} },
66   size .code:n = \str_case:nn {#1}%
67   { {small}{\RenewDocumentCommand \snp@size {}{\small}}%
68     {script}{\RenewDocumentCommand \snp@size {}{\scriptsize}}%
69     {normal}{\RenewDocumentCommand \snp@size {}{\normalsize}}%
70     {Other}{} },
71   shape .code:n = \str_case:nn {#1}%
72   { {sl}{\RenewDocumentCommand \snp@shape{}{\slshape}}%
73     {up}{\RenewDocumentCommand \snp@shape{}{\upshape}}%
74     {it}{\RenewDocumentCommand \snp@shape{}{\itshape}}%
75     {Other}{} },
76   per .code:n = \str_case:nn {#1}%
77   { {page}{ \newcounter{sidenote}[page] % make a counter%
78         \newcounter{sidealert}[page]
79         \bool_set_true:N \l@snp@counterset } % init the counter%
80       {section}{ \newcounter{sidenote}[section] %
81         \newcounter{sidealert}[section]
82         \bool_set_true:N \l@snp@counterset }%
83       {chapter}{ \newcounter{sidenote}[chapter] %
84         \newcounter{sidealert}[chapter]
85         \bool_set_true:N \l@snp@counterset }%
86       {none}{ \newcounter{sidenote}%
87         \newcounter{sidealert}
88         \bool_set_true:N \l@snp@counterset }%
89       {Other}{} %
90     },
91   sepdiff .code:n = \setlength{\snp@marginsepdiff}{#1},
92   classic .code:n = \bool_set_false:N \l@snp@symmetric,
93   ragged .code:n = { \RenewDocumentCommand \snp@leftmarginstyle {}{\raggedleft}%
94                     \RenewDocumentCommand \snp@rightmarginstyle {}{\raggedright}%
95                     \bool_set_true:N \l@snp@ragged },
96   Ragged .code:n = { \RenewDocumentCommand \snp@leftmarginstyle {}{\RaggedLeft}%
97                     \RenewDocumentCommand \snp@rightmarginstyle {}{\RaggedRight}%
98                     \bool_set_true:N \l@snp@Ragged
99                     \bool_set_true:N \l@snp@ragged },

```

```

100 alerton .code:n = {\bool_set_true:N \l@snp@alerton},
101 }
102 \ProcessKeysOptions { sidenoteplus }
103 \bool_if:NTF \l@snp@Ragged
104   {
105     \@ifpackageloaded{ragged2e}
106     {\relax}{\RequirePackage{ragged2e}}
107   }
108   {\relax}
109 \bool_if:NTF \l@snp@ragged
110   {\setlength{\snp@marginsepdiff}{0pt} \bool_set_false:N \l@snp@symmetric}
111   {\relax}
112 \bool_if:NTF \l@snp@symmetric {\setlength{\snp@marginsepdiff}{0pt}}{\relax}
113
114 \bool_if:NTF \l@snp@counterset
115   {\relax}
116   {\newcounter{sidenote}[page] % make a counter%
117    \newcounter{sidealert}[page]
118    \bool_set_true:N \l@snp@counterset }
119
120 \setcounter{sidenote}{0} % init the counter%
121 \setcounter{sidealert}{0} % init the counter

\snp@putmarkintext -
122 \NewDocumentCommand \snp@putmarkintext { m }
123 {
124   \leavevmode
125   \ifhmode
126     \edef \x@sf {\the \spacefactor }
127     \nobreak
128   \fi
129   \bool_if:NTF \l@snp@alertmarkon
130   {\makebox[0pt]{\raisebox{0.3ex}{\textsuperscript {\normalfont \bf ---{\#1}---\kern-0.6ex}}}
131   {\hbox {\textsuperscript {\normalfont \bf #1 }}}
132   \ifhmode
133     \spacefactor \x@sf
134   \fi
135   \relax
136 }

\snp@multisign -
137 \NewDocumentCommand \snp@multisign { } {3sp}

\snp@mymarker -
138 \NewDocumentCommand \snp@mymarker { }
139 {
140   \kern-\snp@multisign
141   \kern\snp@multisign\relax
142 }

\snp@multichecker -
143 \NewDocumentCommand \snp@multichecker { }
144 {
145   \dim_compare:nNnTF \lastkern = \snp@multisign
146   {\snp@putmarkintext{},{}}
147   {}
148 }

@snp@llr (env.) -

```

```

149 \NewDocumentEnvironment{@snp@llr} {}%
150 {
151   \setlength{\parindent}{0pt}
152   \setlength{\leftskip}{0pt plus 1fil}
153   \setlength{\rightskip}{0pt plus -1fil}
154 }{\par}

\marginpar
155 \let\oldmarginpar\marginpar
156 \renewcommand{\marginpar}[2][]{
157   \if\relax\detokenize{#1}\relax
158     \oldmarginpar[\snp@leftmarginstyle\snp@sidenoteformat{#2}]%
159     [\snp@rightmarginstyle\snp@sidenoteformat{#2}]%
160   \else%two parameters, let them use their styling
161     \oldmarginpar[{#1}]{#2}%
162   \fi%
163 }

\snp@placemarginal -
164 \renewcommand*{\raggedleftmarginnote}{}%
165 \renewcommand*{\raggedrightmarginnote}{}%
166 \renewcommand*{\marginfont}{}%
167
168 \NewDocumentCommand \snp@placemarginal {d!! m m }%
169 {
170   \IfNoValueOrEmptyTF{#1}%
171   {%
172     \if@twoside
173       \snp@isoddpage
174       {%
175         \IfNoValueOrEmptyTF{#2}%
176         {\marginpar{ #3 }}%
177         {\marginnote{\snp@sidenoteformat #3}[#2]}%
178       }
179       {%
180         \bool_if:NTF \l@snp@symmetric
181         {%
182           \IfNoValueOrEmptyTF{#2}%
183           {\marginpar{\begin{@snp@llr} #3\end{@snp@llr}}}%
184           {\marginnote{\begin{@snp@llr}\snp@sidenoteformat #3\end{@snp@llr}}[#2]}%
185         }
186         {%
187           \IfNoValueOrEmptyTF{#2}%
188           {\marginpar{ #3 }}%
189           {\marginnote{\snp@sidenoteformat #3}[#2]}%
190           }
191         }
192       }
193     \else
194       \IfNoValueOrEmptyTF{#2}%
195       {\marginpar{ #3 }}%
196       {\marginnote{\snp@sidenoteformat #3}[#2]}%
197     \fi
198   }
199   {%
200     \if@twoside
201       \snp@isoddpage
202       {%
203         \IfNoValueOrEmptyTF{#2}%
204         {\marginpar{ \textcolor{#1}{#3} }}%

```

```

205         {\marginnote{\snp@sidenoteformat \textcolor{#1}{#3}}[#2]}
206     }
207     {
208     \bool_if:NTF \l@snp@symmetric
209     {
210         \IfNoValueOrEmptyTF{#2}
211         {\marginpar{\begin{@snp@llr} \textcolor{#1}{#3}\end{@snp@llr}}}
212         {\marginnote{\begin{@snp@llr}\snp@sidenoteformat \textcolor{#1}{#3}\end{@snp@llr}}
213     }
214     {
215         \IfNoValueOrEmptyTF{#2}
216         {\marginpar{\textcolor{#1}{#3}}}
217         {\marginnote{ \snp@sidenoteformat \textcolor{#1}{#3}}[#2]}
218     }
219     }
220     \else
221         \IfNoValueOrEmptyTF{#2}
222         {\marginpar{ \textcolor{#1}{#3}}}
223         {\marginnote{ \snp@sidenoteformat \textcolor{#1}{#3}}[#2]}
224     \fi
225 }
226 }

\sidepar -
227 \NewDocumentCommand \sidepar {}
228 {
229   \makebox[1em]{}
230 }

\sidenote -
231 \NewDocumentCommand \ sidenote {s d|| d> d() d!! m }
232 {
233   \IfBooleanTF{#1}
234   { % starred
235     \snp@sidenotemark*(#4)
236     \snp@sidenotetext[*] |#2|<#3>(#4)!#5!{#6}
237   }{ % unstarred
238     \IfNoValueOrEmptyTF{#5} {
239       \snp@sidenotemark(#4)
240       \snp@sidenotetext[] |#2|<#3>(#4)!#5!{#6}
241       \snp@multimarker }
242     {
243       \snp@sidenotemark(#4)!#5!
244       \snp@sidenotetext[] |#2|<#3>(#4)!#5!{#6}
245       \snp@multimarker }
246     }
247   }
248 }

\sidealert -
249 \NewDocumentCommand \sidealert {s d|| d> d() d!! m }
250 {
251   \bool_if:NTF \l@snp@alerton
252   {
253     \bool_set_true:N \l@snp@alertmarkon
254     \IfNoValueOrEmptyTF{#5}
255     {
256       \IfBooleanTF{#1}
257       { % starred
258         \snp@sidenotemark*(#4)

```

```

259          \snp@sidenotetext[*] |#2|<#3>(#4) !Red!{#6}
260      }{ % unstarred
261          \snp@sidenotemark(#4) !Red!{}
262          \snp@sidenotetext[] |#2|<#3>(#4) !Red!{#6}
263          \snp@multimarker
264      }
265  }{ \IfBooleanTF{#1}
266      { % starred
267          \snp@sidenotemark*(#4)
268          \snp@sidenotetext[*] |#2|<#3>(#4) !#5!{#6}
269      }{ % unstarred
270          \snp@sidenotemark(#4) !#5!{}
271          \snp@sidenotetext[] |#2|<#3>(#4) !#5!{#6}
272          \snp@multimarker
273      }
274  }
275 }
276 {\relax
277 \bool_set_false:N \l@snp@alertmarkon
278 }

\sidenotemark -
279 \NewDocumentCommand \sidenotemark {s d() d!! }
280 {
281     \IfBooleanTF{#1}
282     { % starred
283         \relax
284     }% unstarred
285     \IfNoValueOrEmptyTF{#3}
286     { \snp@sidenotemark (#2)}
287     { \snp@sidenotemark !#3!( #2)}
288 }
289 \xspace
290 }

\snp@sidenotemark -
291 \NewDocumentCommand \snp@symbolnoteoralert {}{}
292 \NewDocumentCommand \snp@sidenotemark {s d() d!! }
293 {
294     \IfBooleanTF{#1}
295     { % starred
296         \relax
297     }% unstarred
298     \snp@multichecker
299     \bool_if:NTF \l@snp@alertmarkon
300     { \refstepcounter{sidealert}
301         \RenewDocumentCommand \snp@symbolnoteoralert {}{\snp@alertsymbol{sidealert}} }
302     { \refstepcounter{sidenote}
303         \RenewDocumentCommand \snp@symbolnoteoralert {}{\snp@symbol{sidenote}} }
304     \IfNoValueOrEmptyTF{#3}
305     {
306         \IfNoValueOrEmptyTF{#2}
307         { \snp@putmarkintext{\snp@symbolnoteoralert} }
308         { \snp@putmarkintext{#2} }
309     }{
310         \IfNoValueOrEmptyTF{#2}
311         { \textcolor{#3}{\snp@putmarkintext{\snp@symbolnoteoralert}} }
312         { \textcolor{#3}{\snp@putmarkintext{#2}} }
313     }
314     \snp@multimarker

```

```

315  }
316 }

\snp@onelineup -
317 \NewDocumentCommand{\snp@onelineup}{}{%
318   {\par \vspace*{-1\baselineskip}}%
319 \NewDocumentCommand{\snp@onexlineup}{}{%
320   {\par \vspace*{-1.5\baselineskip}}}

\snp@leftnotelabel -
321 \NewDocumentCommand{\snp@leftnotelabel}{ m }{%
322   {\makebox[0em][l]{\hspace*{0.9ex}\#1}}}

\snp@rightnotelabel -
323 \NewDocumentCommand{\snp@rightnotelabel}{ m }{%
324   {\makebox[0em][r]{\#1\hspace*{0.9ex}}}}}

\snp@justifiedleftnotelabel -
325 \NewDocumentCommand{\snp@justifiedleftnotelabel}{ m }{%
326   {\makebox[0em][l]{\hspace*{\marginparwidth+0.9ex}\#1}}}

\sidenotetext -
327 \NewDocumentCommand{\sidenotetext}{ s d|| d> d() d!! m }{%
328   \IfBooleanTF{\#1}{%
329     {\snp@sidenotetext[*]\#2|<\#3>(\#4)\#5!\{#6\}}%
330     {\snp@sidenotetext[]\#2|<\#3>(\#4)\#5!\{#6\}}%
331   }%
332 }%
333 \refstepcounter{sidenote}%
334 \IfBooleanTF{\#1}{%
335   {\snp@sidenotetext[*]\#2|<\#3>(\#4)\#5!\{#6\}}%
336   {\snp@sidenotetext[]\#2|<\#3>(\#4)\#5!\{#6\}}%
337   \addtocounter{sidenote}{-1}%
338 }%
339 \DeclareExpandableDocumentCommand{\IfsTF}{ m m m }{%
340 {%
341   \IfNoValueTF{\#1}{%
342     {\#2}%
343     {\tl_if_empty:nTF{\#1}{\#2}{\#3}}%
344 }%
345 \newlength{\d@snp@offset}%
346 \NewDocumentCommand{\snp@sidenotesymbol}{\{}{\}}{%
347 \NewDocumentCommand{\snp@sidenotetext}{ o d|| d> d() d!! m }{%
348   \bool_if:NTF{\l@snp@alertmarkon}{%
349   {%
350     \IfNoValueOrEmptyTF{\#4}{%
351       {\RenewDocumentCommand{\snp@sidenotesymbol}{\{}{-`~\snp@alertsymbol{sidealert}`~-}\}}%
352       {\RenewDocumentCommand{\snp@sidenotesymbol}{\{}{-`#\#4`~-}\}}%
353     }%
354   {%
355     \IfNoValueOrEmptyTF{\#4}{%
356       {\RenewDocumentCommand{\snp@sidenotesymbol}{\{}{\snp@symbol{sidenote}}\}}%
357     }%
358   }%
359 }%
360 }%
361 \RenewDocumentCommand{\snp@sidenotesymbol}{\{}{\}}{%
362   {\RenewDocumentCommand{\snp@sidenotesymbol}{\{}{-`~\snp@alertsymbol{sidealert}`~-}\}}%
363   {\RenewDocumentCommand{\snp@sidenotesymbol}{\{}{-`#\#4`~-}\}}%
364 }%
365 }%
366 }%
367 }%
368 }%
369 }%
370 }%
371 }%
372 }%
373 }%
374 }%
375 }%
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357      {\RenewDocumentCommand \snp@sidenotesymbol {}{#4}}
358  }
359  \IfNoValueOrEmptyTF{#2}
360  {
361    {\relax}
362    {\setlength{\d@snp@offset}{#2} \vspace*{ \d@snp@offset }}
363    \bool_if:NTF \l@snp@ragged
364    {
365      \if@twoside
366        \snp@isoddpage
367        {\%odd page
368          {\snp@placemarginal!#5!{#3}%
369            {\normalfont\IfsTF{#1}{\snp@sidenotesymbol}{\relax}}#6}
370          }
371        }
372        {\%even page
373          {\snp@placemarginal!#5!{#3}%
374            {\normalfont\IfsTF{#1}{\snp@sidenotesymbol}{\relax}}%
375            \hspace*{\marginparwidth} \snp@onelineup#6}
376          }
377        }
378      }
379    \else %not twoside
380      {\snp@placemarginal!#5!{#3}%
381        {\snp@rightnotelabel{\normalfont%
382          \IfsTF{#1}{\snp@sidenotesymbol}{\relax}}#6}
383      }
384    \fi % ends if@twoside
385  }
386  {
387    \if@twoside
388      \snp@isoddpage
389      {\%odd page
390        {\snp@placemarginal!#5!{#3}%
391          {\snp@rightnotelabel{\normalfont\IfsTF{#1}{\snp@sidenotesymbol}{\relax}}#6}
392          }
393        }
394      {\%even page
395        \bool_if:NTF \l@snp@symmetric
396        {
397          {\snp@placemarginal!#5!{#3}%
398            {\snp@justifiedleftnotelabel{
399              {\normalfont\IfsTF{#1}{\snp@sidenotesymbol}{\relax}}%
400              \hspace*{\marginparwidth}\snp@onelineup#6}
401            }
402          }
403        }
404      }
405      {
406        {\snp@placemarginal!#5!{#3}%
407          {\snp@rightnotelabel{
408            {\normalfont\IfsTF{#1}{\snp@sidenotesymbol}{\relax}}#6}
409          }
410        }
411      }
412    \else
413      {\snp@placemarginal!#5!{#3}%
414        {\snp@rightnotelabel{
415          {\normalfont\IfsTF{#1}{\snp@sidenotesymbol}{\relax}}#6}
416        }

```

```

417     \fi
418   }
419 \IfNoValueOrEmptyTF{#2}
420   {\relax}
421   { \setlength{\d@snp@offset}{#2 *(-1)} \vspace*{{\d@snp@offset}}}
422 }

\snp@raggedcaption =
423
424 \NewDocumentCommand \snp@raggedcaption {m }
425 {
426   \if@twoside
427     \snp@isoddpage {#1}
428       {\bool_if:NTF \l@snp@symmetric {\begin{@snp@llr}#1\end{@snp@llr}} {#1}}
429   \else #1 \fi
430 }

431 \DeclareCaptionStyle{sidecaption}{font=footnotesize}

\sidecaption =
432 \NewDocumentCommand \snp@entrycap {} {}
433 \NewDocumentCommand \snp@offsetcap {} {}
434 \NewDocumentCommand \sidecaption {s d|| d> d!! o m} {
435   \captionsetup{style=sidecaption}
436   \IfBooleanTF{#1}
437   { %starred
438     \marginnote{\caption*{\snp@raggedcaption{#6}}}
439       [\IfNoValueOrEmptyTF{#3} {Opt} {#3}]
440   }
441   { %unstarred
442     \marginnote{\caption[\IfNoValueOrEmptyTF{#5} {#6} {#5}]
443       {\snp@raggedcaption{#6}}}
444       [\IfNoValueOrEmptyTF{#3} {Opt} {#3}]
445   }
446 }

\istwosided =
447 \NewDocumentCommand \istwosided {m m} {
448 \if@twoside #1 \else #2 \raggedleft \fi
449 }

\raggedinner =
450 \NewDocumentCommand \raggedinner {} {
451 \if@twoside
452   \snp@isoddpage {\raggedleft}{\raggedright}
453 \else
454   \raggedleft
455 \fi
456 }

\raggedouter =
457 \NewDocumentCommand \raggedouter {} {
458 \if@twoside
459   \snp@isoddpage {\raggedright}{\raggedleft}
460 \else
461   \raggedleft
462 \fi
463 }

```

```

\margincaption -
464 \newlength \l@snp@belowcaption
465 \NewDocumentCommand \margincaption {s o m }
466 {
467 \setlength \l@snp@belowcaption \belowcaptionskip
468 \setlength{\belowcaptionskip}{1ex plus 0.3ex minus -0.1ex}
469 \IfBooleanTF{#1}
470 { %starred
471   \if@twoside
472     \snp@isoddpag
473   {
474     \IfNoValueOrEmptyTF{#2} {\caption*{#3}} {\caption*[#2]{#3}}
475   }
476   {
477     \bool_if:NTF \l@snp@symmetric
478   {
479     \IfNoValueOrEmptyTF{#2}
480       {\caption*{#3}{\begin{@snp@llr}#3\end{@snp@llr}}}
481       {\caption*{#2}{\begin{@snp@llr}#3\end{@snp@llr}}}
482   }
483   {
484     \IfNoValueOrEmptyTF{#2} {\caption*{#3}} {\caption*[#2]{#3}}
485   }
486   }
487 \else
488   \IfNoValueOrEmptyTF{#2} {\caption*{#3}} {\caption*[#2]{#3}}
489 \fi
490 }
491 { %unstarred
492   \if@twoside
493     \snp@isoddpag
494   {
495     \IfNoValueOrEmptyTF{#2} {\caption{#3}} {\caption[#2]{#3}}
496   }
497   {
498     \bool_if:NTF \l@snp@symmetric
499   {
500     \IfNoValueOrEmptyTF{#2}
501       {\caption[#3]{\begin{@snp@llr}#3\end{@snp@llr}}}
502       {\caption[#2]{\begin{@snp@llr}#3\end{@snp@llr}}}
503   }
504   {
505     \IfNoValueOrEmptyTF{#2} {\caption{#3}} {\caption[#2]{#3}}
506   }
507   }
508 \else
509   \IfNoValueOrEmptyTF{#2} {\caption{#3}} {\caption[#2]{#3}}
510 \fi
511 }
512 \setlength \belowcaptionskip \l@snp@belowcaption
513 }

514 \newsavebox{\b@snp@marginfigurebox}
515 \DeclareCaptionStyle{marginfigure}{font=footnotesize,skip=1ex}

marginfigure (env.) -
516 \NewDocumentEnvironment{marginfigure} { d | d<> }
517 { % begin{} part
518   \begin{lrbox}{\b@snp@marginfigurebox}
519     \begin{minipage}{\marginparwidth}

```

```

520      \captionsetup{type=figure,style=marginfigure}
521 }

522 { % end{} part
523     \end{minipage}%
524     \end{lrbox}%
525
526     \IfNoValueOrEmptyTF{#1}
527         {\relax}
528         {\setlength{\d@snp@offset}{#1} \vspace*{ \d@snp@offset }}
529     \snp@place marginal{#2}{\usebox{\b@snp@marginfigurebox} }
530     \%~\snp@onelineup \snptest }
531     \IfNoValueOrEmptyTF{#1}
532         {\relax}
533         { \setlength{\d@snp@offset}{#1 *(-1)} \vspace*{ \d@snp@offset } }
534 }

—
Figure
535 \newsavebox{\b@snp@margintablebox}
536 \DeclareCaptionStyle{margitable}{font=footnotesize}

margitable (env.) —
537 \NewDocumentEnvironment{margitable} { d|| d<> d() }
538 { % begin part
539     \begin{lrbox}{\b@snp@margintablebox}
540         \snp@sidenoteformat
541         \begin{minipage}{\marginparwidth}
542             \captionsetup{type=table,style=margitable}
543 }

544 { % end part
545     \end{minipage}
546     \end{lrbox}
547     \IfNoValueOrEmptyTF{#1}
548         {\relax}
549         {\setlength{\d@snp@offset}{#1} \vspace*{ \d@snp@offset }}
550     \snp@place marginal{#2}{\usebox{\b@snp@margitablebox} }
551     \IfNoValueOrEmptyTF{#1}
552         {\relax}
553         {\setlength{\d@snp@offset}{#1 *(-1)} \vspace*{ \d@snp@offset } }
554 %
555
556 %
557 }

—
558 \AtBeginDocument{%
559 \newlength{\d@snp@extrawidth}
560 \setlength{\d@snp@extrawidth}{\marginparwidth}
561 \addtolength{\d@snp@extrawidth}{\marginparsep} }

\snp@isoddpage —
562 \NewDocumentCommand \snp@isoddpage {m m}
563     { \checkoddpage \ifoddpage #1 \else #2 \fi }

@snp@autoadjustwidth (env.) —
564 \NewDocumentEnvironment{@snp@autoadjustwidth}{ m m }%
565 { % begin part
566 \begin{adjustwidth}{0pt}{0pt}

```

```

567  \if@twoside
568      \snp@isoddpage{\begin{adjustwidth}{#1}{-#2}}%
569          {\begin{adjustwidth}{-#2}{#1}}
570  \else
571      \begin{adjustwidth}{#1}{-#2}
572  \fi
573 }

574 { % end part
575     \end{adjustwidth}\end{adjustwidth}
576 }

text* (env.) -
577 \newsavebox{\b@snp@textbox}
578 \NewDocumentEnvironment{text*}{ o }%
579 { % begin part
580 \begin{adjustwidth}{0pt}{0pt}
581 \IfNoValueOrEmptyTF{#1}
582 {
583 \if@twoside
584     \snp@isoddpage{\begin{adjustwidth}{0pt}{-\d@snp@extrawidth}}%
585         {\begin{adjustwidth}{-\d@snp@extrawidth}{0pt}}
586 \else
587     \begin{adjustwidth}{0pt}{-\d@snp@extrawidth}
588 \fi
589 }
590 {
591 \if@twoside
592     \snp@isoddpage{\begin{adjustwidth}{0pt}{-#1\d@snp@extrawidth}}%
593         {\begin{adjustwidth}{-#1\d@snp@extrawidth}{0pt}}
594 \else
595     \begin{adjustwidth}{0pt}{-#1\d@snp@extrawidth}
596 \fi
597 }
598 \begin{lrbox}{\b@snp@textbox}
599 \begin{minipage}[][\linewidth+1ex]
600 }

601 { % end part
602 \end{minipage}
603 \end{lrbox}
604 \usebox{\b@snp@textbox}
605 \end{adjustwidth}\end{adjustwidth} \snp@placemarginal{}{}
606 }

figure* (env.)
607 \RenewDocumentEnvironment{figure*}{ O{htbp} }
608 {
609     \begin{figure}[#1]
610     \begin{@snp@autoadjustwidth}{}{\d@snp@extrawidth}
611     \begin{minipage}[c][\linewidth]
612     \centering
613     \captionsetup{ margin={\d@snp@extrawidth/2,\d@snp@extrawidth/2}}
614     % end part
615     \end{minipage}
616     \end{@snp@autoadjustwidth}
617     \end{figure}
618     \snp@placemarginal{}{}
619 }

table* (env.)

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620 \RenewDocumentEnvironment{table*}{0{htbp} }
621 {
622   \begin{table}[#1]
623   \begin{@snp@autoadjustwidth}{}{\d@snp@extrawidth}
624   \begin{minipage}[c]{\linewidth}
625   \centering
626   \captionsetup{ margin={\d@snp@extrawidth/2,\d@snp@extrawidth/2}}
627 }% end part
628 \end{minipage}
629 \end{@snp@autoadjustwidth}
630 \end{table}
631 }

\sidecite -
632 \NewDocumentCommand \snp@before {} {}
633 \NewDocumentCommand \snp@after {} {}
634 \NewDocumentCommand \sidecite {s d|| d> d() d!! o o m }

635 { \IfNoValueOrEmptyTF{#6}
636   {\RenewDocumentCommand \snp@before {} {}}
637   {\RenewDocumentCommand \snp@before {} {#6}}
638   \IfNoValueOrEmptyTF{#7}
639   { \DeclareDelimFormat{postnotedelim}{\addperiod}
640     \RenewDocumentCommand \snp@after {} {}}
641   { \DeclareDelimFormat{postnotedelim}{\addcomma\space}
642     \RenewDocumentCommand \snp@after {} { #7}}
643   \sidenote{#2|<\#3>(#4)!#5!{\kern-2.3pt\upshape\fullcite[\snp@before][\snp@after]{#8}}
644 }

\sidecitet -
645 \NewDocumentCommand \sidecitet {s d|| d> d() d!! o o m }
646 { \IfNoValueOrEmptyTF{#6}
647   {\RenewDocumentCommand \snp@before {} {}}
648   {\RenewDocumentCommand \snp@before {} {#6}}
649   \IfNoValueOrEmptyTF{#7}
650   { \DeclareDelimFormat{postnotedelim}{\addperiod}
651     \RenewDocumentCommand \snp@after {} {}}
652   { \DeclareDelimFormat{postnotedelim}{\addcomma\space}
653     \RenewDocumentCommand \snp@after {} { #7}}
654   \IfBooleanTF{#1}
655   {
656     \citemuthor{#8}'s\sidenote{#2|<\#3>(#4)!#5!
657       {\kern-2.3pt\upshape\fullcite[\snp@before][\snp@after]{#8}}
658   }
659   {
660     \citemuthor{#8}\sidenote{#2|<\#3>(#4)!#5!
661       {\kern-2.3pt\upshape\fullcite[\snp@before][\snp@after]{#8}}
662   }
663 }

\sidecitebefore -
664 \NewDocumentCommand \sidecitebefore {s d|| d> d() d!! o o m }

665 { \IfNoValueOrEmptyTF{#6}
666   {\RenewDocumentCommand \snp@before {} {}}
667   {\RenewDocumentCommand \snp@before {} {#6}}
668   \IfNoValueOrEmptyTF{#7}
669   { \DeclareDelimFormat{postnotedelim}{\addperiod}
670     \RenewDocumentCommand \snp@after {} {}}
671   { \DeclareDelimFormat{postnotedelim}{\addcomma\space}

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```

672     \RenewDocumentCommand \snp@after {} { #7}
673     \sidenotetextbefore|#2|<#3>(#4) !#5!{\kern-2.3pt\upshape\fullcite[\snp@before]{\snp@after}[\snp@after]#}
674 }

\sideciteafter -
675 \NewDocumentCommand \sideciteafter {s d|| d<> d() d!! o o m }

676 { \IfNoValueOrEmptyTF{#6}
677   {\RenewDocumentCommand \snp@before {} {}}
678   {\RenewDocumentCommand \snp@before {} {#6}}
679   \IfNoValueOrEmptyTF{#7}
680   { \DeclareDelimFormat{postnotedelim}{\addperiod}
681     \RenewDocumentCommand \snp@after {} {}}
682   { \DeclareDelimFormat{postnotedelim}{\addcomma\space}
683     \RenewDocumentCommand \snp@after {} { #7}}
684   \sidenotetext|#2|<#3>(#4) !#5!{\kern-2.3pt\upshape\fullcite[\snp@before]{\snp@after}[\snp@after]{#8}}
685 }

\sidecitemark -
686 \NewDocumentCommand \sidecitemark {s d() d!! }
687 {
688   \IfBooleanTF{#1}
689   { % starred
690     \relax
691   }% unstarred
692   \IfNoValueOrEmptyTF{#3}
693   { \snp@sidenotemark (#2)}
694   { \snp@sidenotemark !#3!( #2)}
695 }
696 \xspace
697 }

698 \newlength\snp@marginparsepodd
699 \newlength\snp@marginparsepeven
700
701
702 \setlength{\snp@marginparsepodd}{\marginparsep}
703 \setlength{\snp@marginparsepeven}{\marginparsep-\snp@marginsepdiff}
704
705 \makeatletter
706 \patchcmd{\@addmarginpar} % In this command
707   {\mph@orig@addmarginpar} % ... replace this...
708   {\if@twoside\ifodd\c@page\relax % ... with this
709     \marginparsep=\snp@marginparsepodd % Page is odd
710   \else
711     \marginparsep=\snp@marginparsepeven % Page is even
712   \fi
713   \else
714     \marginparsep=\snp@marginparsepodd
715   \fi
716   \mph@orig@addmarginpar}
717   {} % success
718   {\message{Error! Couldn't hook into command % failure
719     '\string{@addmarginpar'}}}
720
721 {%% Group to keep patching commands local
722 %
723 % Here we use a little trick to repeatedly patch the \mn@@@marginnote
724 % command, replacing all instances of \kern\marginparsep with a
725 % conditional. We call \patch recursively each time on success, and stop

```

```

726 % when the patch fails (because all instances have been replaced). If the
727 % patch fails the first time, we show an error message.
728 \def\patcherr{%
729   \message{Error! Couldn't hook into command '\string\@mn@@@marginnote'}}
730 \def\patchok{%
731   \let\patcherr\relax % Only display error if first patch fails
732   \patch % Now patch again.
733 }
734 \def\patch{%
735   \patchcmd{\@mn@@@marginnote} % In this command
736     {\kern\marginparsep} % ... replace this...
737     {\ifx\@mn@currpage\relax\else % ... with this
738       \if@twoside\ifodd\@mn@currpage\relax
739         \kern\snp@marginparseodd
740       \else
741         \kern\snp@marginparseeven
742       \fi
743     \else
744       \kern\snp@marginparseodd
745     \fi
746   \fi}
747   {\message{Patched!}\patchok} % success (recurse)
748   {\patcherr} % fail
749 }
750 \message{Patching '\string\@mn@@@marginnote'!}
751 \patch
752 \global\let\@mn@@@marginnote\@mn@@@marginnote % Make patch global
753 }
754 \makeatother
755 \endinput

```

## Change History

		1.04
1.0	General: Initial Release .....	1
1.01	General: Environment text* improved .....	1
1.02	General: added Ragged option ..	1
1.03	General: added commands sidecitebefore, sideciteafter and sicitemark .....	1
		v1.01
		text*: added newsavebox and minipage .....
		15