The **longtwocolumn** Package

Markus Kohm[*]

Version 2025-07-21 v0.1

Package **longtwocolumn** provides `\longtwocolumn` as variant of LaTeX's `\twocolumn` that allowes the optional argument to span several pages on one column.

Contents

1 How to use longtwocolumn?

First of all, you need to load the package, so you should add

```
\usepackage{longtwocolumn}
```

somewhere in your document preamble. Theoretically you would even be able to do a

```
\RequirePackage{longtwocolumn}
```

before `\documentclass`. However users should not need to do so and therefore it is not recommended unless you know what you are doing.

Now you can use `\longtwocolumn[`⟨*single column content*⟩`]`. The command works similar to LaTeX's `\twocolumn`, but if the ⟨*single column content*⟩ is higher than one page, it is automatically split to several pages. Note, that currently `\newpage` or `\clearpage` inside ⟨*single column content*⟩ is not supported. In my opinion such a support is not needed, because each `\longtwocolumn` starts a new page, so instead of adding `\newpage` inside the optional argument of `\longtwocolumn` you simply can use several `\longtwocolumn`.

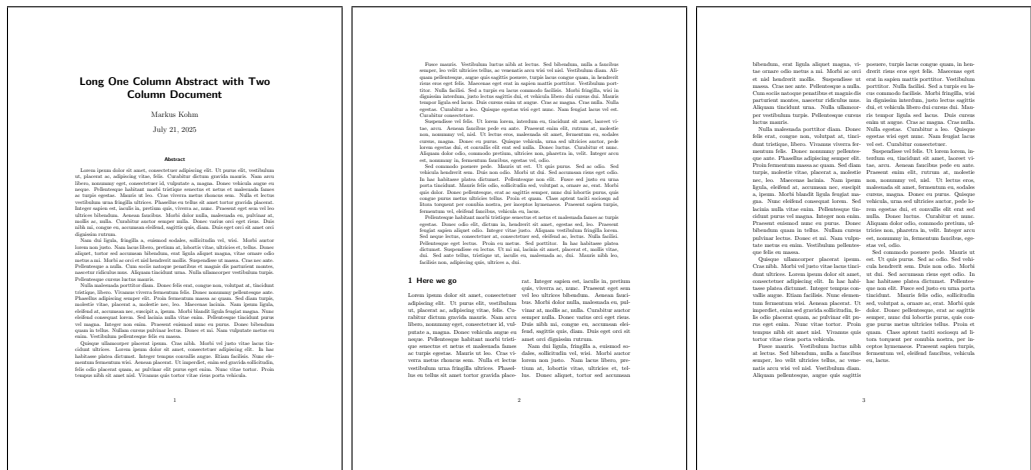**Note:** This is an early experimental package. So it may fail in all cases except the one shown in the example.

---

[*]Repository and bug reports: https://gitlab.com/latex9343737/packages/longtwocolumn

2 Example

Often `\longtwocolumn` is used for title + abstract in a two column document, if the abstract needs more than one page:

```
1 \documentclass[twocolumn,abstract]{scrartcl}
2 \usepackage{longtwocolumn}
3 \usepackage{lipsum}
4 \begin{document}
5
6 \title{Long One Column Abstract with Two Column Document}
7 \author{Markus Kohm}
8
9 \longtwocolumn[{
10   \maketitle
11   \begin{abstract}
12   \lipsum[1-8]
13   \end{abstract}
14   \vskip\baselineskip
15 }]
16 \section{Here we go}
17 \lipsum[1-7]
18 \end{document}
```

Results in:

It results also in the warning message:

```
Package longtwocolumn Warning: \clearpage inside optional argument of
(longtwocolumn)                 \longtwocolumn ignored on input line 37.
```

because the `\maketitle` in the optional argument of `\longtwocolumn` runs `\clearpage` at the very beginning. But in this case this is not really a problem, because `\longtwocolumn` runs `\onecolumn` at the very beginning and this also runs `\clearpage`.

3 Implementation

`\longtwocolumn` Internal box register used by `\longtwocolumn`.

`\longtwocolumn@box` *(intern)*

```
19 \newsavebox\longtwocolumn@box
```

```
20 \NewDocumentCommand{\longtwocolumn}{+o}{%
21   \IfValueTF{#1}{%
```

Switch to one column, because everything, which is longer than one page, should be output in one column mode.

```
22     \onecolumn
```

We start a new group to allow local changes, e.g., of `\clearpage` and `\newpage`, while we collect the content.

```
23     \begingroup
24       \renewcommand*{\cleardoublepage}{%
25         \PackageWarning{longtwocolumn}{\string\cleardoublepage\space inside
26           optional argument of\MessageBreak \string\longtwocolumn\space
27           ignored}%
28       }%
29       \renewcommand*{\clearpage}{%
30         \PackageWarning{longtwocolumn}{\string\clearpage\space inside optional
31           argument of\MessageBreak \string\longtwocolumn\space ignored}%
32       }%
33       \renewcommand*{\newpage}{%
34         \PackageWarning{longtwocolumn}{\string\newpage\space inside optional
35           argument of\MessageBreak \string\longtwocolumn\space ignored}%
36       }
37       \global\setbox\longtwocolumn@box\color@vbox
38         \normalcolor
39         \@parboxrestore
40         #1%
41         \par
42       \color@endbox
43     \endgroup
```

Now we can split the box using the same parameters that would be used for normal page splitting.

```
44 ⟨*trace⟩
45     \typeout{^^J%
46       TRACE: Initial height=\the\ht\longtwocolumn@box,
47             depth=\the\dp\longtwocolumn@box}%
48 ⟨/trace⟩
49     \@whiledim \textheight<\ht\longtwocolumn@box\do {%
50 ⟨*trace⟩
51       \typeout{TRACE: Split of \the\textheight\space from
52         \the\ht\longtwocolumn@box}%
53 ⟨/trace⟩
54       \splittopskip\topskip
55       \splitmaxdepth\maxdepth
56       \vsplit\longtwocolumn@box to \textheight\clearpage
57     }%
58 ⟨*trace⟩
```

3

```
59    \typeout{TRACE: Final height=\the\ht\longtwocolumn@box,
60        depth=\the\dp\longtwocolumn@box}%
61 ⟨/trace⟩
```

Before we run `\twocolumn` to output the last part of the box, we need to deactivate the `\normalcolor` at the beginning of `\@topnewpage` to avoid resetting the color.

```
62    \let\longtwocolumn@normalcolor\normalcolor
63    \def\normalcolor{\let\normalcolor\longtwocolumn@normalcolor}%
64    \twocolumn[\unvbox\longtwocolumn@box]%
65    \let\normalcolor\longtwocolumn@normalcolor
66  }{\twocolumn}%
67 }
```

Change History