

spbmark – Superscript and subscript of text

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Abstract

spbmark provides three commands `\super`, `\sub` and `\supersub` to improve the layout of superscripts and subscripts which can be adjusted the relative position and format, and can be used in text and math mode.

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1 Macro package options

`ctex`

New: 2021-06-26

This option works with the C_T_EX document class used by simplified Chinese users, there's actually no functional change. Adding path `style` to `\ctexset` command, which is equivalent to using `\spbset`.

*<https://github.com/tex13/spbmark>

2 User commands

<code>\super</code>	<code>\super*[\vertical shift](\format code){\content}[\horizontal shift]</code>
<code>\sub</code>	<code>\sub*[\vertical shift](\format code){\content}[\horizontal shift]</code>
<code>\supersub</code>	<code>\supersub*[\script sep][\script align](\super format code)</code>
<code>\textsuperscript</code>	<code>{\super content}{\sub content}</code>
<code>\textsubscript</code>	<code>[\horizontal shift](\sub format code)</code>

New: 2021-06-26

`\super` command is used to output superscripts, `\sub` command is used to output subscripts, `\supersub` command is used to output both superscripts and subscripts.

They match the corresponding pattern depending on whether they are currently in text mode or mathematical mode, or they can use an asterisk variant to force the mathematical pattern. The vertical shift and horizontal shift are both Opt, and the parameters of `\script align` are the same as the `supersubalign`.

The `\format code` is used to format superscripts and subscripts, and can insert commands such as fonts or colors. The last command in the code can take an argument, which is either a superscript or a subscript.

The `\textsuperscript` and `\textsubscript` commands have been redefined to be equivalent to `\super` and `\sub` respectively, if you need to use their original definitions, then `\spb@textsuperscript@save` and `\spb@textsubscript@save` will be available.

3 Global control interface

<code>\spbset</code>	<code>\spbset{\key-value list}</code>
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New: 2021-06-26

`spbmark` uses the `\spbset` command to control the global default format of superscripts and subscripts. The values set by it will be overwritten by the optional parameters of the superscript and other commands. The list of key values it has is as follows:

<code>super-vshift</code>	<code>super-vshift = \fixed length</code>
<code>super-hshift</code>	<code>super-hshift = \fixed length</code>
<code>sub-vshift</code>	<code>sub-vshift = \fixed length</code>
<code>sub-hshift</code>	<code>sub-hshift = \fixed length</code>
<code>supersubsep</code>	<code>supersubsep = \fixed length</code>
<code>supersubalign</code>	<code>supersubalign = \horizontal alignment</code>

`super-vshift` Extra vertical shift of the superscripts.

`super-hshift` Extra horizontal shift of the superscripts.

`sub-vshift` Extra vertical shift of the subscripts.

`sub-hshift` Extra horizontal shift of the subscripts.

`supersubsep` The distance between superscript and subscript when using `\supersub`, its default value is 0.3ex.

`supersubalign` The alignment of superscript and subscript when using `\supersub`, which contains l, c, and r parameters respectively for left, center, and right alignment.

4 Examples of use

Here is a list of the three commands, please pay attention to the delimiter and usage of optional parameters:

```
A\super[0.2ex](\color{red}){exam}[0.2em]B
$A\sub(\mathsf){exam}B$
A\supersub[0.3ex][c]{examsuper}{examsub}B
A examB
AexamB
AexamsuperexamsubB
```

`spbmark` also patches the standard document class and the footer markers for KOMA-Script. You can format the footer markers by redefining the `\fnmarkfont` command. Note that extra horizontal shift does not work with footnote markers.

5 Known issues

At present, the vertical and horizontal offsets are effective for the unit commands in the text mode of the `siunitx` macro package. `\super` and `\sub` can also be used normally in its unit commands, but when the unit is output in the math mode, `\supersub` command cannot be used.

References

- [1] WILL ROBERTSON. *The realscripts package* [CP/OL]. version 0.3d, (2016-02-13)
<https://ctan.org/pkg/realscripts>

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The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

C		
<code>ctex</code>	<i>1</i>	<code>sub-hshift</code> (option) <i>2</i>
		<code>sub-hshift</code> <i>2</i>
		<code>sub-vshift</code> (option) <i>2</i>
		<code>sub-vshift</code> <i>2</i>
		<code>\super</code> <i>1</i>
options:		<code>super-hshift</code> (option) <i>2</i>
		<code>super-hshift</code> <i>2</i>
		<code>super-vshift</code> (option) <i>2</i>
		<code>super-vshift</code> <i>2</i>
		<code>\supersub</code> <i>1</i>
		<code>supersubalign</code> (option) <i>2</i>
		<code>supersubalign</code> <i>2</i>
		<code>supersubsep</code> (option) <i>2</i>
		<code>supersubsep</code> <i>2</i>
		<code>\spbset</code> <i>2</i>
		<code>\sub</code> <i>1</i>

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T_EX and L^AT_EX 2_ε commands:

<code>\ctexset</code>	<i>1</i>	<code>\super</code>	<i>1, 2</i>
<code>\fnmarkfont</code>	<i>2</i>	<code>\super*</code>	<i>1</i>
<code>\spb@textsubscript@save</code>	<i>1</i>	<code>\supersub</code>	<i>1, 2</i>
<code>\spb@textsuperscript@save</code>	<i>1</i>	<code>\supersub*</code>	<i>1</i>
<code>\spbset</code>	<i>1, 2</i>	<code>\textsubscript</code>	<i>1</i>
<code>\sub</code>	<i>1, 2</i>	<code>\textsuperscript</code>	<i>1</i>
<code>\sub*</code>	<i>1</i>	<code>\textsubscript</code>	<i>1</i>
		<code>\textsuperscript</code>	<i>1</i>