A few examples and convenience macros in LaTeX

Arturo Popoli

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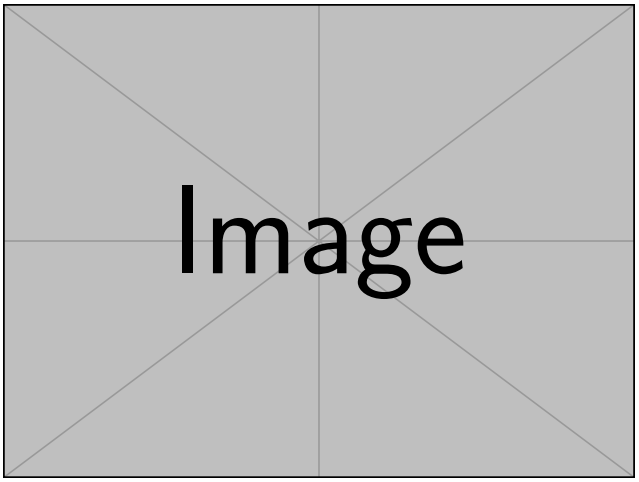
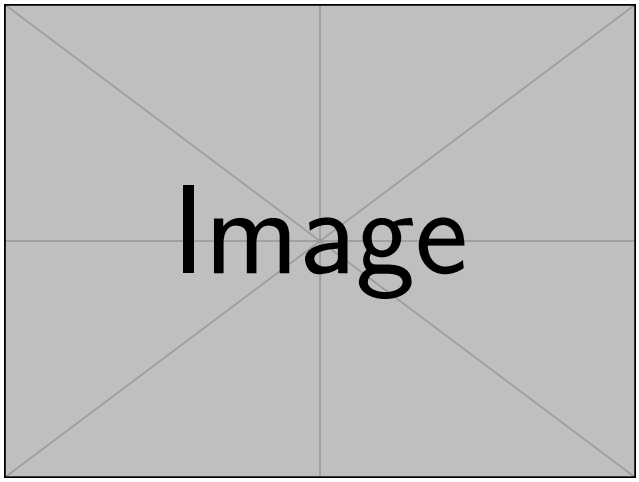
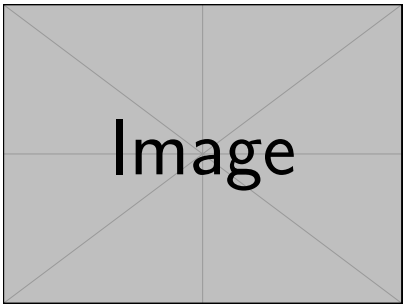


(a) Description of (a)

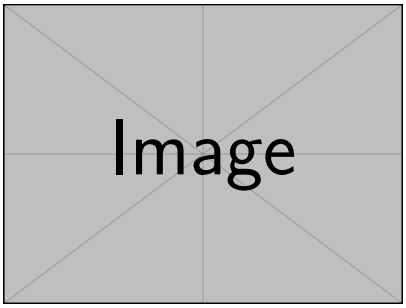


(b) Description of (b)

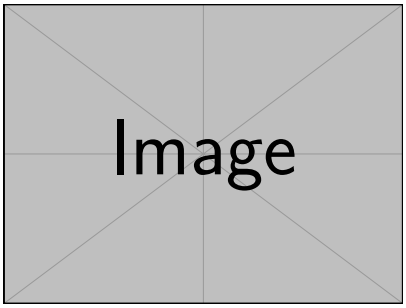
Figure 1: Description of the two images



(a) Descr...



(b) Descr Second image



(c) Third image

Figure 2: Description of the three images

0.1 Two and three figures side by side

As one can see in Figs. 1 and 2...

0.2 Text colors

Text in Red
Text in Blue

0.3 Parenthesis

$$\left(\sum_{a}^{b}\right) \tag{1}$$

$$\left[\sum_{a}^{b}\right] \tag{2}$$

$$\left\{\sum_{a}^{b}\right\} \tag{3}$$

0.4 Vector quantities and operators

Vector Bold $\mathbf{A}$
Bold arrow $\vec{\mathbf{A}}$
Vector unit $\hat{\mathbf{j}}$
Dot product $\cdot$
Cross product $\times$
Divergence: $\boldsymbol{\nabla} \cdot \mathbf{A}$
Curl: $\boldsymbol{\nabla} \times \mathbf{A}$
Gradient: $\boldsymbol{\nabla} A$

0.5 Derivatives

Differential: $\mathrm{d}A$
Derivative: $\frac{\mathrm{d}f}{\mathrm{d}x}$
Partial derivative: $\frac{\partial f}{\partial x}$

0.6 Chemistry

AP macros loads the `mhchem` package

$$\mathrm{Xe} + \mathrm{e^-} \longrightarrow \mathrm{Xe^+} + 2\,\mathrm{e^-} \tag{4}$$

0.7 Numbers

AP macros loads the `sinunitx` package, which allows to specify the desired precision. If `round-precision = 2`, `\num{3,1415926535}` displays 3.14.

Only number: 3.14

Number and units: $6.02 \times 10^{-19}\,\mathrm{N\,m^{-2}}$

Only units: C

0.8 Options for AP macros

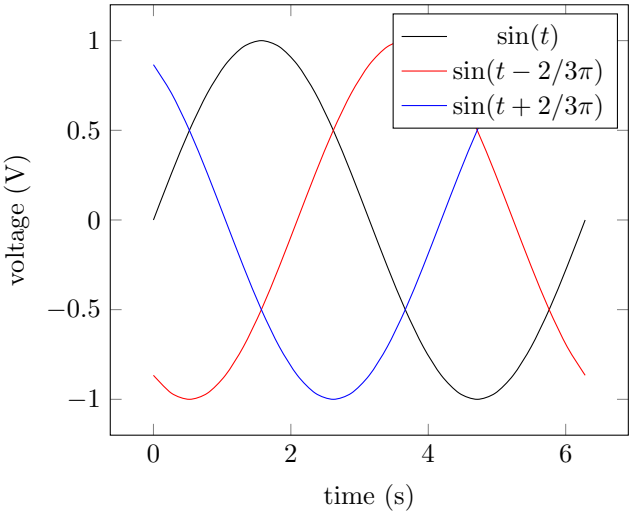
As in Physics package, default options are:

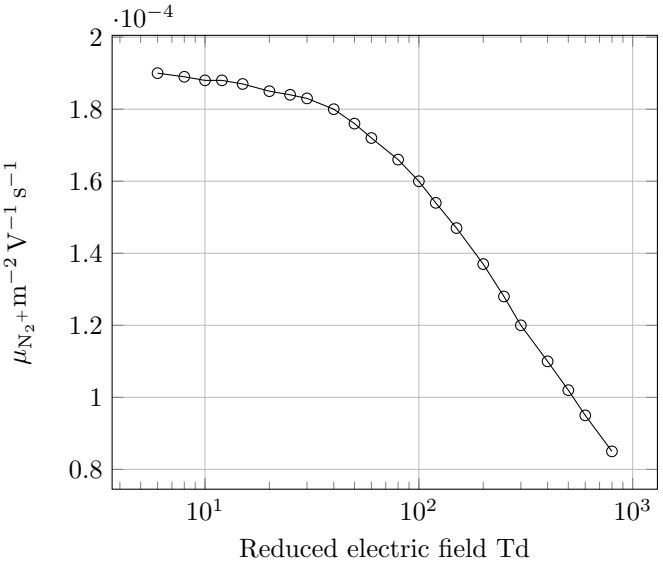
```
\ExecuteOptions{trig, uprightdiff, bolddel}
```

Just remove `bolddel` to get back to non-bold vector operators.

0.9 Plotting analytical functions

0.10 Plotting from tabulated data


sin(t)
sin(t − 2/3π)
sin(t + 2/3π)
voltage (V)
time (s)
1
0.5
0
−0.5
−1
0
2
4
6


·10−4
2
1.8
1.6
1.4
1.2
1
0.8
μN2+ m−2 V−1 s−1
10^1
10^2
10^3
Reduced electric field Td