

## THIS IS THE TITLE

This file shows the basics of Latex. Using Latex is simple. The text is simply typed in, no matter if you break the lines in the source file. Lines are automatically indented, like this:

It is possible to force Latex not to indent a new line. To do this you need to type the right command in the source file, and the result is the following:

Note that latex commands are typically denoted with a backslash.

This is how to quote a book[1] or paper[2] from your bibliography.

Here are few examples of symbols: lower and upper case greek letters are  $\alpha$ ,  $\gamma$ ,  $\Gamma$ ,  $\lambda$ ,  $\Lambda$ ; superscripts and subscripts are  $a^2 = b_0$ ,  $S_{ijk}$  and  $\rho_p$ ; boldface symbols for vectors are  $\mathbf{A}$ ,  $\mathbf{r}_p$ ,  $\hat{\mathbf{a}}$ ,  $\hat{\mathbf{A}}$ . We have also  $dy/dx = x^3 - 1$ ,  $d\mathbf{r}_p/dt$ ,  $\infty$ ,  $t \rightarrow \infty$ ,  $\forall$ ,  $\exists$ ,  $\hbar$ ,  $\leftarrow$ ,  $\rightarrow$ ,  $\leftleftarrows$ ,  $|\leftarrow$ ,  $\leftrightarrow$ ,  $\ell$ ,  $\Re$ ,  $\Im$ ,  $\Delta$ ,  $\circ$ ,  $\bullet$ ,  $\star$ ,  $\nabla$ ,  $\nabla^2$ ,  $\sum$ ,  $\int$ ,  $\oint$ ,  $\prod$ ,  $\pm$ ,  $\mp$ ,  $\cdot$ ,  $\times$ ,  $\wedge$ ,  $\approx$ ,  $\equiv$ ,  $\sim$ ,  $\simeq$ ,  $\neq$ ,  $\ll$ ,  $\gg$ ,  $\perp$ ,  $\sqrt{2}$ ,  $\sqrt[3]{2}$ ,  $\in$ ,  $\ni$ ,  $\leq$ ,  $\geq$ . Other symbols are  $\#$ ,  $\$$ ,  $\&$ ,  $\{$ . Examples of functions are  $\sin \theta$ ,  $\cos(\theta)$ ,  $\exp(x)$ . Examples of accents are: *mathématique*, *algèbre* and Schrödinger.

Examples of numbered equations are:

$$\frac{du}{dt} = -u, \tag{1}$$

and

$$\frac{d\mathbf{u}_p}{dt} = \frac{1}{\tau}(\mathbf{v}_n - \mathbf{u}_p), \tag{2}$$

We can refer to a numbered equation in the following way: Eq. (2).

To avoid numbering an equation do the following:

$$\frac{D\mathbf{v}}{Dt} = \frac{\partial \mathbf{v}}{\partial t} + (\mathbf{v} \cdot \nabla)\mathbf{v},$$

Here are more symbols:  $C_k = \sum_{i=0}^{\infty} A_{ki}B_i$ . You can force a big space between one line and the next in this way:

or a medium space

or a small space

A very big space is done like this:

More formulae:  $f_3 \approx f_1 \gg f_2$  and

$$\int_a^b f(x)dx = \oint_C f(x)dx = K, \tag{3}$$

Here are the symbols which I defined before the begin document command:  $\rho_s$ ,  $\boldsymbol{\omega}$  and  $\mathbf{v}_n$ .

The following are multi-line formulae; the first is numbered and the second is not:

$$\left| \frac{1}{\zeta - 1} \right| = \left( \frac{f(x)}{g(x)} \right), \quad (4)$$

$$c = d, \quad (5)$$

$$a = b,$$

$$c = d,$$

Note also the size of the brackets in the first expression.

We can have *italics* and roman characters. Compare  $L \approx 10^4 \text{ cm}^{-2}$  with  $L \approx 10^4 \text{ cm}^{-2}$ .

Now force a page break.

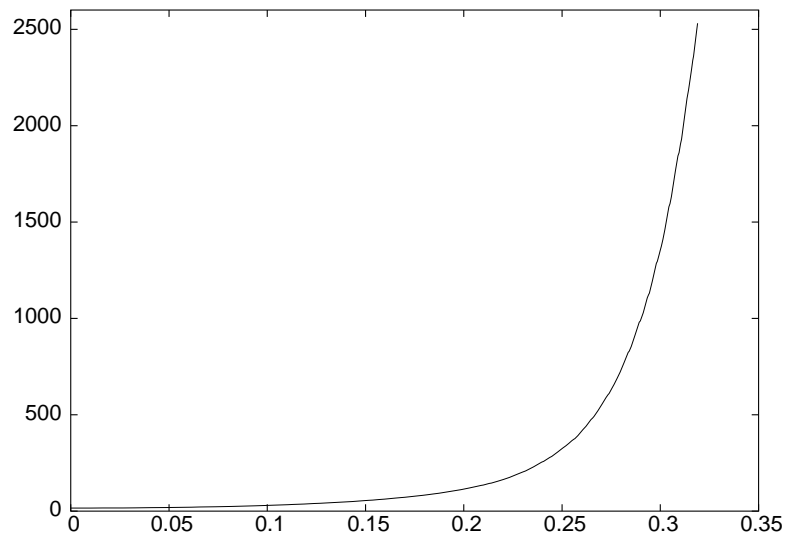


Figure 1: Vortex line density  $L$  vs time  $t$ .

Here is how to insert a figure:

This is how to make a list:

1. apples
2. oranges

Another way is the following:

- banans
- cherries

## References

- [1] D.R. Poole, C.F. Barenghi, Y.A. Sergeev and W.F. Vinen, *Instability of particle paths*, Elsdon University Press (2004).
- [2] T. R. Auton, J. C. R. Hunt and M. Prud'homme, *J. Fluid Mech.* **197**, 241 (1988).