

The `fixmath` package for L^AT_EX 2_ε

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L^AT_EX's default style of typesetting mathematics does unfortunately not comply with the International Standards ISO31-0:1992 to ISO31-13:1992, as summarized, e. g., in <http://physics.nist.gov/Document/typefaces.pdf>:

- Uppercase Greek letters are always typeset upright, as opposed to italic, even though they are usually to represent variables.
- There is no obvious way to typeset variables in a bold italic style, even though the required fonts are available. (The `bm` package is overly complex and not always reliable.)

If you are using the default Computer Modern math fonts, this can be fixed by loading the package `fixmath`:

- Uppercase Greek will be typeset in italic style then.
- Upright Δ and Ω symbols are still available through the commands `\upDelta` and `\upOmega`.
- A new math alphabet `\mathbold` will provide bold italic letters.

The `fixmath` package should be used *only* in conjunction with the CM math fonts; most likely, it will not work with others. Many packages for using alternative math fonts, such as `mathpazo` (for Palatino), provide the `\mathbold` alphabet already and can be loaded with an option `slantedGreek` to make the uppercase Greek letters cursive.

The package code

Save uppercase Δ and Ω :

```
1 (*package)
2 \let\upOmega\Omega
3 \let\upDelta\Delta
```

Provide italic uppercase Greek:

```
4 \DeclareMathSymbol{\Gamma}{\mathalpha}{letters}{0}
5 \DeclareMathSymbol{\Delta}{\mathalpha}{letters}{1}
6 \DeclareMathSymbol{\Theta}{\mathalpha}{letters}{2}
7 \DeclareMathSymbol{\Lambda}{\mathalpha}{letters}{3}
8 \DeclareMathSymbol{\Xi}{\mathalpha}{letters}{4}
```

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```

9 \DeclareMathSymbol{\Pi}{\mathalpha}{letters}{5}
10 \DeclareMathSymbol{\Sigma}{\mathalpha}{letters}{6}
11 \DeclareMathSymbol{\Upsilon}{\mathalpha}{letters}{7}
12 \DeclareMathSymbol{\Phi}{\mathalpha}{letters}{8}
13 \DeclareMathSymbol{\Psi}{\mathalpha}{letters}{9}
14 \DeclareMathSymbol{\Omega}{\mathalpha}{letters}{10}
Prepare lowercase Greek for \mathbold:
15 \DeclareMathSymbol{\alpha}{\mathalpha}{letters}{11}
16 \DeclareMathSymbol{\beta}{\mathalpha}{letters}{12}
17 \DeclareMathSymbol{\gamma}{\mathalpha}{letters}{13}
18 \DeclareMathSymbol{\delta}{\mathalpha}{letters}{14}
19 \DeclareMathSymbol{\epsilon}{\mathalpha}{letters}{15}
20 \DeclareMathSymbol{\zeta}{\mathalpha}{letters}{16}
21 \DeclareMathSymbol{\eta}{\mathalpha}{letters}{17}
22 \DeclareMathSymbol{\theta}{\mathalpha}{letters}{18}
23 \DeclareMathSymbol{\iota}{\mathalpha}{letters}{19}
24 \DeclareMathSymbol{\kappa}{\mathalpha}{letters}{20}
25 \DeclareMathSymbol{\lambda}{\mathalpha}{letters}{21}
26 \DeclareMathSymbol{\mu}{\mathalpha}{letters}{22}
27 \DeclareMathSymbol{\nu}{\mathalpha}{letters}{23}
28 \DeclareMathSymbol{\xi}{\mathalpha}{letters}{24}
29 \DeclareMathSymbol{\pi}{\mathalpha}{letters}{25}
30 \DeclareMathSymbol{\rho}{\mathalpha}{letters}{26}
31 \DeclareMathSymbol{\sigma}{\mathalpha}{letters}{27}
32 \DeclareMathSymbol{\tau}{\mathalpha}{letters}{28}
33 \DeclareMathSymbol{\upsilon}{\mathalpha}{letters}{29}
34 \DeclareMathSymbol{\phi}{\mathalpha}{letters}{30}
35 \DeclareMathSymbol{\chi}{\mathalpha}{letters}{31}
36 \DeclareMathSymbol{\psi}{\mathalpha}{letters}{32}
37 \DeclareMathSymbol{\omega}{\mathalpha}{letters}{33}
38 \DeclareMathSymbol{\varepsilon}{\mathalpha}{letters}{34}
39 \DeclareMathSymbol{\vartheta}{\mathalpha}{letters}{35}
40 \DeclareMathSymbol{\varpi}{\mathalpha}{letters}{36}
41 \DeclareMathSymbol{\varphi}{\mathalpha}{letters}{39}
42 \DeclareMathSymbol{\varrho}{\mathalpha}{letters}{37}
43 \DeclareMathSymbol{\varsigma}{\mathalpha}{letters}{38}
Define \mathbold:
44 \DeclareMathAlphabet{\mathbold}{OML}{cmm}{b}{it}
45 \endpackage

```

The next line of code prevents DocStrip from adding the character table to all modules:

```
46 \endinput
```