

The upgreek package for L^AT_EX 2_ε

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(v1.0 – 2001/05/28)

The default CM math fonts used by T_EX do not include upright lowercase Greek characters, and most alternative math font sets don't, either. (There are math fonts providing *only* an upright Greek alphabet, but that's a different story.) However, mathematical constants such as $\pi = 3.14\dots$ are sometimes required to be typeset in roman (i.e., upright) style, or one may need upright Greek to designate elementary particles.

As a workaround, the L^AT_EX package upgreek makes the upright Greek characters from the 'Euler' or 'Adobe Symbol' typefaces available as math symbols. The lowercase letters are named `\upalpha`, `\upbeta` etc., whereas `\Updelta`, `\Upsilon` etc. create upper case.

At first sight, providing also the uppercase letters seems pointless, since `\Delta`, `\Gamma`, etc. are also upright by default. However, it may be useful to have all upright Greek letters available in the same style. Note that the uppercase letters were intentionally *not* named `\upDelta` etc., so as not to clash with other existent macro packages.

The typeface can be selected by loading the package with the option `[Euler]` (default) or `[Symbol]`, depending on what blends best with the other fonts used in your document.

Just like `\alpha`, `\beta` etc., these symbols work only in math mode, and their size is properly adjusted, when they are used in superscripts, subscripts or fractions.

Note that `\upmu` should normally *not* be used as the prefix for physical units, meaning 10^{-6} . The mu symbol to be used there is to be taken from the *text* font, and most Latin text fonts do actually include a suitable Greek mu, which can be accessed as `\textmu`. Most likely – depending on the encoding of your text fonts – you need to load the package `textcomp` for this purpose. In math mode, the same symbol is available as `\tcmu`, if the `mathcomp` package is loaded. If, however, there is no mu in your text fonts, using `\upmu` for that purpose is still better than nothing; this holds, e.g., for the 'traditional' CM fonts, as opposed to EC/TC.

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