Use	Example	Result
Shorthand Vector	`\v{b}`	$\mathbf{b}$
Shorthand Unit Vector	`\uv{x}`	$\hat{\mathbf{x}}$
Shorthand Absolute	`\abs{k}`	$\lvert k \rvert$
Time-average	`\avg{S}`	$\langle S \rangle$
Gradient	`\grad`	$\boldsymbol{\nabla}$
Divergence	`\div`	$\boldsymbol{\nabla}\cdot$
Curl	`\curl`	$\boldsymbol{\nabla}\times$
Shorthand Derivative	`\d{y}{x}`	$\frac{\mathrm{d}y}{\mathrm{d}x}$
Second Derivative	`\dd{y}{x}`	$\frac{\mathrm{d}^2y}{\mathrm{d}x^2}$
Partial Derivative	`\pd{y}{x}`	$\frac{\partial y}{\partial x}$
Second Partial Derivative	`\pdd{y}{x}`	$\frac{\partial^2 y}{\partial x^2}$
Third Partial Derivative	`\pddd{y}{x}`	$\frac{\partial^3 y}{\partial x^3}$
Thermo Partial Derivative	`\pdc{U}{T}{P}`	$\left(\frac{\partial U}{\partial T}\right)_P$
Bras	`\bra{v}`	$\langle v \rvert$
Kets	`\ket{v}`	$\lvert v \rangle$
Braket	`\braket{v_1}{v_2}`	$\langle v_1 \rvert\, v_2 \rangle$
Expectation Value	`\expect{\hat{X}}`	$\left\langle \hat{X} \right\rangle$
Matrix Element	`\matrixel{v_1}{\hat{P}}{v_2}`	$\left\langle v_1 \middle\rvert \hat{P} \middle\lvert v_2 \right\rangle$
Generic Matrix	`\mx{1 & 2 \\ 3 &  4}`	$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$
Square Matrix	`\sqmx{1 & 2 \\ 3 &  4}`	$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$
Determinant Matrix	`\detmx{1 & 2 \\ 3 &  4}`	$\begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix}$
Infinite lim integral	`\infint x`	$\int_{-\infty}^{\infty} x$
Magnitude squared	`\magsq{E}`	$\lvert E \rvert^2$

Table 1: Examples of commands included in header