

The `physunits` package^{*}

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January 26, 2020

1 Introduction

This package consists of several macros that are shorthand for a variety of physical units that are commonly used in introductory level physics and astronomy classes.

2 Naming Convention

most macros consist of just the commonly used letter or unit, e.g. `\m` for meters. In cases where the simple form of the unit conflicts with an existing `LATEX` macro, then the full word is used, starting with a upper-case letter, e.g. `\Coulomb`.

One notable exception to the above naming convention is the use of `\gm` for grams, instead of `\g` or `\Gram`.

3 Base and Prefixes

Most units are in the base unit only, but some very commonly used prefixes are available as part of the macro, e.g. `\kg` for kilogram, `\cm` for centimeter. For base units, each macro accepts one option that can be used to specify the prefix, for example `\m[n]` will result in nm. The macros enforce math mode, so `\m[\micro]` will result in μm .

^{*}This document corresponds to `physunits v1.0`, dated 2020/01/26.

4 Macro Usage

4.1 Special Macros

`\units@separator` `\units@separator` is a special macro used to set the spacing between a quantity and the associated units.

`\micro` `\micro` is a special macro that can be used for the prefix μ (micro-). Internally it just uses `\mu`.

4.2 Electricity & Magnetism

`\V` `\V` is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Volt` `\Volt` is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Coulomb` `\Coulomb` is a macro for Coulombs (C). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\esu` `\esu` is a macro for electrostatic units (esu), the units of charge in Gaussian cgs.

`\Ohm` `\Ohm` is a macro for Ohms (Ω). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Amp` `\Amp` is a macro for Amperes (A). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Farad` `\Farad` is a macro for Farads (F). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Tesla` `\Tesla` is a macro for Teslas (T). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Gauss` `\Gauss` is a macro for Gauss (G), the units for magnetic field strength in Gaussian cgs. This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Henry` `\Henry` is a macro for Henrys (H). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

4.3 Energy

- `\eV` `\eV` is a macro for electron Volts (eV). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\keV` `\keV` is a macro for kilo-electron Volts (keV).
- `\MeV` `\MeV` is a macro for mega-electron Volts (MeV).
- `\J` `\J` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\Joule` `\Joule` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\erg` `\erg` is a macro for ergs (erg), the unit of energy in cgs.
- `\kcal` `\kcal` is a macro for kilo-calories (kcal).
- `\Cal` `\Cal` is a macro for kilo=calories (Cal).
- `\calorie` `\calorie` is a macro for calories (cal). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\BTU` `\BTU` is a macro for British Thermal Units (BTU).
- `\tnt` `\tnt` is a macro for tons of TNT.

4.4 Power

- `\Watt` `\Watt` is a macro for Watts (W). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\hpi` `\hpi` is a macro for Imperial Horsepower (hp(I)).
- `\hpi` `\hpi` is a macro for Metric Horsepower (hp(M)).
- `\hp` `\hp` is a macro for Horsepower (hp).

4.5 Distance

- `\meter` `\meter` is a macro for meters (m). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\m` `\m` is a macro for meters (m). This macro accepts an optional argument for a

prefix. If no option is supplied, no prefix will be prepended.

`\km` `\km` is a macro for kilometers (km).

`\au` `\au` is a macro for astronomical units (au).

`\pc` `\pc` is a macro for parsecs (pc). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\ly` `\ly` is a macro for light-years (ly). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\cm` `\cm` is a macro for centimeters (cm).

`\nm` `\nm` is a macro for nanometers (nm).

`\ft` `\ft` is a macro for feet (ft).

`\inch` `\inch` is a macro for inches (in).

`\mi` `\mi` is a macro for miles (mi).

4.6 Time

`\s` `\s` is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Sec` `\Sec` is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Min` `\Min` is a macro for minutes (m).

`\h` `\h` is a macro for hours (h).

`\y` `\y` is a macro for years (y). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Day` `\Day` is a macro for days (d).

4.7 Mass

`\gm` `\gm` is a macro for grams (g). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\kg` `\kg` is a macro for kilograms (kg).

`\lb` `\lb` is a macro for pounds (weight) (lb).

`\amu` `\amu` is a macro for atomic mass units (amu).

4.8 Force

`\N` `\N` is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Newton` `\Newton` is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\dyne` `\dyne` is a macro for dynes (dyn). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\lbf` `\lbf` is a macro for pounds of force (lbf).

4.9 Velocity

`\kmps` `\kmps` is a macro for kilometers per second (km s^{-1}).

`\kmph` `\kmph` is a macro for kilometers per hour (km h^{-1}).

`\mps` `\mps` is a macro for meters per second (m s^{-1}). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\miph` `\miph` is a macro for miles per hour (mi h^{-1}).

`\kts` `\kts` is a macro for knots (kts), i.e. nautical miles per hour

4.10 Acceleration

`\mpss` `\mpss` is a macro for acceleration in meters per second squared (m s^{-2}). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\gacc` `\gacc` is a macro for acceleration due to gravity (g).

`\ftpss` `\ftpss` is a macro for acceleration in feet per second squared (ft s^{-2}).

4.11 Temperature

- `\K` `\K` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\Kelvin` `\Kelvin` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\Celcius` `\Celcius` is a macro for degrees Celcius ($^{\circ}$ C).
- `\Rankine` `\Rankine` is a macro for degrees Rankine ($^{\circ}$ R).
- `\Fahrenheit` `\Fahrenheit` is a macro for degrees Fahrenheit ($^{\circ}$ F).

4.12 Angular Velocity

- `\rpm` `\rpm` is a macro for revolutions per minute (rev min^{-1}).

4.13 Frequency

- `\Hz` `\Hz` is a macro for Hertz (Hz). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

4.14 Pressure

- `\barP` `\barP` is a macro for bar (bar). (The use of `\barP` instead of just `\bar` is due the L^AT_EX command `\bar`.) This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\atm` `\atm` is a macro for atmosphere (atm).
- `\Pa` `\Pa` is a macro for Pascals (Pa). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.
- `\mmHg` `\mmHg` is a macro for millimeters of mercury (mmHg).
- `\inHg` `\inHg` is a macro for inches of mercury (inHg).
- `\lbsi` `\lbsi` is a macro for pounds per square inch (psi). (Note that `\psi` is a latex command for the greek letter ψ).
- `\lbsf` `\lbsf` is a macro for pounds per square foot (psf).

`\Ba` `\Ba` is a macro for Barre (Ba). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

`\Torr` `\Torr` is a macro for Torr (Torr). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

4.15 Other

`\mol` `\mol` is a macro for moles (mol).

5 Implementation

5.1 Special

`\units@separator` `\units@separator` is a special macro used to set the spacing between a quantity and the associated units.

```
1 \DeclareRobustCommand{\units@separator}{\,}
```

`\units@separator` `\units@separator` is a special macro used to set the spacing between a quantity and the associated units.

```
2 \DeclareRobustCommand{\micro}{\ensuremath{%
3 \mu}}
```

5.2 Electricity & Magnetism

`\V` `\V` is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
4 \DeclareRobustCommand{\V}[1][ ]{\ensuremath{%
5 \expandafter\units@separator\mathrm{#1V}}}
```

`\Volt` `\Volt` is a macro for Volts (V). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
6 \DeclareRobustCommand{\Volt}[1][ ]{\ensuremath{%
7 \expandafter\units@separator\mathrm{#1V}}}
```

\Coulomb **\Coulomb** is a macro for Coulombs (C). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
8 \DeclareRobustCommand{\Coulomb}[1][ ]{\ensuremath{%
9 \expandafter\units@separator\mathrm{#1C}}}
```

\esu **\esu** is a macro for electrostatic units (esu).

```
10 \DeclareRobustCommand{\esu}{\ensuremath{%
11 \expandafter\units@separator\mathrm{esu}}}
```

\Ohm **\Ohm** is a macro for Ohms (Ω). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
12 \DeclareRobustCommand{\Ohm}[1][ ]{\ensuremath{%
13 \expandafter\units@separator\mathrm{#1\Omega}}}
```

\Amp **\Amp** is a macro for Amperes (A). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
14 \DeclareRobustCommand{\Amp}[1][ ]{\ensuremath{%
15 \expandafter\units@separator\mathrm{#1A}}}
```

\Farad **\Farad** is a macro for Farads (F). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
16 \DeclareRobustCommand{\Farad}[1][ ]{\ensuremath{%
17 \expandafter\units@separator\mathrm{#1F}}}
```

\Tesla **\Tesla** is a macro for Teslas (T). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
18 \DeclareRobustCommand{\Tesla}[1][ ]{\ensuremath{%
19 \expandafter\units@separator\mathrm{#1T}}}
```

\Gauss **\Gauss** is a macro for Gauss (G). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
20 \DeclareRobustCommand{\Gauss}[1][ ]{\ensuremath{%
21 \expandafter\units@separator\mathrm{#1G}}}
```

`\Henry` `\Henry` is a macro for Henrys (H). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
22 \DeclareRobustCommand{\Henry}[1][ ]{\ensuremath{%
23 \expandafter\units@separator\mathrm{#1H}}}
```

5.3 Energy

`\eV` `\eV` is a macro for electron Volts (eV). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
24 \DeclareRobustCommand{\eV}[1][ ]{\ensuremath{%
25 \expandafter\units@separator\mathrm{#1eV}}}
```

`\keV` `\keV` is a macro for kilo-electron Volts (keV).

```
26 \DeclareRobustCommand{\keV}{\ensuremath{%
27 \expandafter\units@separator\mathrm{keV}}}
```

`\MeV` `\MeV` is a macro for mega-electron Volts (MeV).

```
28 \DeclareRobustCommand{\MeV}{\ensuremath{%
29 \expandafter\units@separator\mathrm{MeV}}}
```

`\J` `\J` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
30 \DeclareRobustCommand{\J}[1][ ]{\ensuremath{%
31 \expandafter\units@separator\mathrm{#1J}}}
```

`\Joule` `\Joule` is a macro for Joules (J). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
32 \DeclareRobustCommand{\Joule}[1][ ]{\ensuremath{%
33 \expandafter\units@separator\mathrm{#1J}}}
```

`\erg` `\erg` is a macro for ergs (erg).

```
34 \DeclareRobustCommand{\erg}{\ensuremath{%
35 \expandafter\units@separator\mathrm{erg}}}
```

`\kcal` `\kcal` is a macro for kilo-calories (kcal).

```
36 \DeclareRobustCommand{\kcal}[1]{\ensuremath{%
37 \expandafter\units@separator\mathrm{kcal}}}
```

`\Cal` `\Cal` is a macro for kilo=calories (Cal).

```
38 \DeclareRobustCommand{\Cal}{\ensuremath{%
39 \expandafter\units@separator\mathrm{Cal}}}
```

`\calorie` `\calorie` is a macro for calories (cal). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
40 \DeclareRobustCommand{\calorie}[1][ ]{\ensuremath{%
41 \expandafter\units@separator\mathrm{#1cal}}}
```

`\BTU` `\BTU` is a macro for British Thermal Units (BTU).

```
43 \DeclareRobustCommand{\BTU}{\ensuremath{%
44 \expandafter\units@separator\mathrm{BTU}}}
```

`\tnt` `\tnt` is a macro for tons of TNT).

```
45 \DeclareRobustCommand{\tnt}{\ensuremath{%
46 \expandafter\units@separator\mathrm{ton%
47 \expandafter\units@separator of%
48 \expandafter\units@separator TNT}}}
```

5.4 Power

`\Watt` `\Watt` is a macro for Watts (W). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
49 \DeclareRobustCommand{\Watt}[1][ ]{\ensuremath{%
50 \expandafter\units@separator\mathrm{#1W}}}
```

`\hpi` `\hpi` is a macro for Imperial Horsepower (hp(I)).

```
51 \DeclareRobustCommand{\hpi}{\ensuremath{%
52 \expandafter\units@separator\mathrm{hp(I)}}}
```

`\hpi` `\hpi` is a macro for Metric Horsepower (hp(M)).

```
53 \DeclareRobustCommand{\hpm}{\ensuremath{%
54 \expandafter\units@separator\mathrm{hp(M)}}}
```

`\hp` `\hp` is a macro for Horsepower (hp).

```
55 \DeclareRobustCommand{\hp}{\ensuremath{%
56 \expandafter\units@separator\mathrm{hp}}}
```

5.5 Distance

`\meter` `\meter` is a macro for meters (m). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
57 \DeclareRobustCommand{\meter}[1][ ]{\ensuremath{%
58 \expandafter\units@separator\mathrm{#1m}}}
```

`\m` `\m` is a macro for meters (m). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
59 \DeclareRobustCommand{\m}[1][ ]{\ensuremath{%
60 \expandafter\units@separator\mathrm{#1m}}}
```

`\km` `\km` is a macro for kilometers (km).

```
61 \DeclareRobustCommand{\km}{\ensuremath{%
62 \expandafter\units@separator\mathrm{km}}}
```

`\au` `\au` is a macro for astronomical units (au).

```
63 \DeclareRobustCommand{\au}{\ensuremath{%
64 \expandafter\units@separator\mathrm{au}}}
```

`\pc` `\pc` is a macro for parsecs (pc). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
65 \DeclareRobustCommand{\pc}[1][ ]{\ensuremath{%
66 \expandafter\units@separator\mathrm{#1pc}}}
```

`\ly` `\ly` is a macro for light-years (ly). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
67 \DeclareRobustCommand{\ly}[1][ ]{\ensuremath{%  
68 \expandafter\units@separator\mathrm{#1ly}}}
```

`\cm` `\cm` is a macro for centimeters (cm).

```
69 \DeclareRobustCommand{\cm}{\ensuremath{%  
70 \expandafter\units@separator\mathrm{cm}}}
```

`\nm` `\nm` is a macro for nanometers (nm).

```
71 \DeclareRobustCommand{\nm}{\ensuremath{%  
72 \expandafter\units@separator\mathrm{nm}}}
```

`\ft` `\ft` is a macro for feet (ft).

```
73 \DeclareRobustCommand{\ft}{\ensuremath{%  
74 \expandafter\units@separator\mathrm{ft}}}
```

`\inch` `\inch` is a macro for inches (in).

```
75 \DeclareRobustCommand{\inch}{\ensuremath{%  
76 \expandafter\units@separator\mathrm{in}}}
```

`\mi` `\mi` is a macro for miles (mi).

```
77 \DeclareRobustCommand{\mi}{\ensuremath{%  
78 \expandafter\units@separator\mathrm{mi}}}
```

5.6 Time

`\s` `\s` is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
79 \DeclareRobustCommand{\s}[1][ ]{\ensuremath{%  
80 \expandafter\units@separator\mathrm{#1s}}}
```

`\Sec` `\Sec` is a macro for seconds (s). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

81 \DeclareRobustCommand{\Sec}[1][ ]{\ensuremath{%
82 \expandafter\units@separator\mathrm{#1s}}}

```

`\Min` `\Min` is a macro for minutes (m).

```

83 \DeclareRobustCommand{\Min}{\ensuremath{%
84 \expandafter\units@separator\mathrm{min}}}

```

`\h` `\h` is a macro for hours (h).

```

85 \DeclareRobustCommand{\h}{\ensuremath{%
86 \expandafter\units@separator\mathrm{h}}}

```

`\y` `\y` is a macro for years (y). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

87 \DeclareRobustCommand{\y}[1][ ]{\ensuremath{%
88 \expandafter\units@separator\mathrm{#1y}}}

```

`\Day` `\Day` is a macro for days (d).

```

89 \DeclareRobustCommand{\Day}{\ensuremath{%
90 \expandafter\units@separator\mathrm{d}}}

```

5.7 Mass

`\gm` `\gm` is a macro for grams (g). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

91
92 \DeclareRobustCommand{\gm}[1][ ]{\ensuremath{%
93 \expandafter\units@separator\mathrm{#1g}}}

```

`\kg` `\kg` is a macro for kilograms (kg).

```

94 \DeclareRobustCommand{\kg}{\ensuremath{%
95 \expandafter\units@separator\mathrm{kg}}}

```

`\lb` `\lb` is a macro for pounds (weight) (lb).

```

96 \DeclareRobustCommand{\lb}{\ensuremath{%
97 \expandafter\units@separator\mathrm{lb}}}

```

`\amu` `\amu` is a macro for atomic mass units (amu).

```
98 \DeclareRobustCommand{\amu}{\ensuremath{%
99 \expandafter\units@separator\mathrm{amu}}}
```

5.8 Force

`\N` `\N` is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
100 \DeclareRobustCommand{\N}[1][ ]{\ensuremath{%
101 \expandafter\units@separator\mathrm{#1N}}}
```

`\Newton` `\Newton` is a macro for Newtons (N). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
102 \DeclareRobustCommand{\Newton}[1][ ]{\ensuremath{%
103 \expandafter\units@separator\mathrm{#1N}}}
```

`\dyne` `\dyne` is a macro for dynes (dyn). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
104 \DeclareRobustCommand{\dyne}[1][ ]{\ensuremath{%
105 \expandafter\units@separator\mathrm{#1dyn}}}
```

`\lbf` `\lbf` is a macro for pounds of force (lbf).

```
106 \DeclareRobustCommand{\lbf}{\ensuremath{%
107 \expandafter\units@separator\mathrm{lbf}}}
```

5.9 Velocity

`\kmps` `\kmps` is a macro for kilometers per second (km s^{-1}).

```
108 \DeclareRobustCommand{\kmps}{\ensuremath{%
109 \expandafter\units@separator\mathrm{km}%
110 \expandafter\units@separator\mathrm{s}^{-1}}}
```

`\kmph` `\kmph` is a macro for kilometers per hour (km h^{-1}).

```

111 \DeclareRobustCommand{\kmph}{\ensuremath{%
112 \expandafter\units@separator\mathrm{km}%
113 \expandafter\units@separator\mathrm{h}^{-1}}}}

```

`\mps` `\mps` is a macro for meters per second (m s^{-1}). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

114 \DeclareRobustCommand{\mps}[1][ ]{\ensuremath{%
115 \expandafter\units@separator\mathrm{#1m}%
116 \expandafter\units@separator\mathrm{s}^{-1}}}}

```

`\miph` `\miph` is a macro for miles per hour (mi h^{-1}).

```

117 \DeclareRobustCommand{\miph}{\ensuremath{%
118 \expandafter\units@separator\mathrm{mi}%
119 \expandafter\units@separator\mathrm{h}^{-1}}}}

```

`\kts` `\kts` is a macro for knots (kts).

```

120 \DeclareRobustCommand{\kts}{\ensuremath{%
121 \expandafter\units@separator\mathrm{kts}}}}

```

5.10 Acceleration

`\mpss` `\mpss` is a macro for acceleration in meters per second squared (m s^{-2}). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```

122
123 \DeclareRobustCommand{\mpss}[1][ ]{\ensuremath{%
124 \expandafter\units@separator\mathrm{#1m}%
125 \expandafter\units@separator\mathrm{s}^{-2}}}}

```

`\gacc` `\gacc` is a macro for acceleration due to gravity (g).

```

126 \DeclareRobustCommand{\gacc}{\ensuremath{%
127 \expandafter\units@separator\mathrm{g}}}}

```

`\ftpss` `\ftpss` is a macro for acceleration in feet per second squared (ft s^{-2}).

```

128 \DeclareRobustCommand{\ftpss}{\ensuremath{%
129 \expandafter\units@separator\mathrm{ft}%
130 \expandafter\units@separator\mathrm{s}^{-2}}}}

```

5.11 Temperature

`\K` `\K` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
131 \DeclareRobustCommand{\K}[1][ ]{\ensuremath{%
132 \expandafter\units@separator\mathrm{#1K}}}
```

`\Kelvin` `\Kelvin` is a macro for Kelvin (K). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
133 \DeclareRobustCommand{\Kelvin}[1][ ]{\ensuremath{%
134 \expandafter\units@separator\mathrm{#1K}}}
```

`\Celcius` `\Celcius` is a macro for degrees Celcius ($^{\circ}\text{C}$).

```
135 \DeclareRobustCommand{\Celcius}{\circ\ensuremath{%
136 \expandafter\units@separator\mathrm{C}}}
```

`\Rankine` `\Rankine` is a macro for degrees Rankine ($^{\circ}\text{R}$).

```
137 \DeclareRobustCommand{\Rankine}{\circ\ensuremath{%
138 \expandafter\units@separator\mathrm{R}}}
```

`\Fahrenheit` `\Fahrenheit` is a macro for degrees Fahrenheit ($^{\circ}\text{F}$).

```
139 \DeclareRobustCommand{\Fahrenheit}{\circ\ensuremath{%
140 \expandafter\units@separator\mathrm{F}}}
```

5.12 Angular Velocity

`\rpm` `\rpm` is a macro for revolutions per minute (rev min^{-1}).

```
141
142 \DeclareRobustCommand{\rpm}{\ensuremath{%
143 \expandafter\units@separator\mathrm{rev}}%
144 \expandafter\units@separator\Min^{-1}}}
```

5.13 Frequency

`\Hz` `\Hz` is a macro for Hertz (Hz). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
145
146 \DeclareRobustCommand{\Hz}[1][ ]{\ensuremath{%
147 \expandafter\units@separator\mathrm{#1Hz}}}
```

5.14 Pressure

`\barP` `\barP` is a macro for bar (bar). (The use of `barP` instead of just `bar` is due the \LaTeX command `\bar`.) This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
148 \DeclareRobustCommand{\barP}[1][ ]{\ensuremath{%
149 \expandafter\units@separator\mathrm{#1bar}}}
```

`\atm` `\atm` is a macro for atmosphere (atm).

```
150 \DeclareRobustCommand{\atm}{\ensuremath{%
151 \expandafter\units@separator\mathrm{atm}}}
```

`\Pa` `\Pa` is a macro for Pascals (Pa). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
152 \DeclareRobustCommand{\Pa}[1][ ]{\ensuremath{%
153 \expandafter\units@separator\mathrm{#1Pa}}}
```

`\mmHg` `\mmHg` is a macro for millimeters of mercury (mmHg).

```
154 \DeclareRobustCommand{\mmHg}{\ensuremath{%
155 \expandafter\units@separator\mathrm{mmHg}}}
```

`\inHg` `\inHg` is a macro for inches of mercury (inHg).

```
156 \DeclareRobustCommand{\inHg}{\ensuremath{%
157 \expandafter\units@separator\mathrm{inHg}}}
```

`\lpsi` `\lpsi` is a macro for pounds per square inch (psi). (Note that `\psi` is a latex command for the greek letter ψ).

```
158 \DeclareRobustCommand{\lpsi}{\ensuremath{%
159 \expandafter\units@separator\mathrm{psi}}}
```

`\lpsf` `\lpsf` is a macro for pounds per square foot (psf).

```
160 \DeclareRobustCommand{\lpsf}{\ensuremath{%
161 \expandafter\units@separator\mathrm{psf}}}
```

`\Ba` `\Ba` is a macro for Barre (Ba). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
162 \DeclareRobustCommand{\Ba}[1][ ]{\ensuremath{%
163 \expandafter\units@separator\mathrm{#1Ba}}}
```

`\Torr` `\Torr` is a macro for Torr (Torr). This macro accepts an optional argument for a prefix. If no option is supplied, no prefix will be prepended.

```
164 \DeclareRobustCommand{\Torr}[1][ ]{\ensuremath{%
165 \expandafter\units@separator\mathrm{#1Torr}}}
```

5.15 Other

`\mol` `\mol` is a macro for moles (mol).

```
166 \DeclareRobustCommand{\mol}{\ensuremath{%
167 \expandafter\units@separator\mathrm{mol}}}
```

Change History

v1.0		v1.0.2	
General: Initial version	1	General: External changes in	
		makefile	1
v1.0.1		v1.0.3	
General: Clean up formatting, fix		General: External changes in	
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