$1.2°3′4″$ Some text
$4\,\mathrm{m\,Sv^{-1}}$
More text
$4\,\mathrm{m\,Sv^{-1}}$
Still red here! 1, 2, 3 and 4
Still red here!

Unsemantic: $\mathrm{m^2\,s}$
$\mu\mathrm{m}^2$

Semantic again: $0.094\,\pi\,\mathrm{mm\,mrad}$

$0.094\,\frac{1}{3}\,\mathrm{mm\,mrad}$

$0.094\,\pi/\mathrm{mm\,mrad}^3$

1 Numbers

1.1 General

$12\,345.678\,90$
$1 \pm 2\mathrm{i}$
0.3×10^{45}
$1.654 \times 2.34 \times 3.430$
π
2π
$\pi/3$

123
1234
$12\,345$
0.123
0.1234
$0.123\,45$
3.45×10^{-4}
-10^{10}

123×10^4
$123(3) \times 10^4$

123(2)
$123 \pm 2\mathrm{i}$
$123 + 234\mathrm{i}$
$(123 + 234\mathrm{i}) \times 10^3$

$(123(1) + 234(1)\mathrm{i}) \times 10^{3}$
3i
$3\mathrm{i} \times 10^{4}$

Pretty nonsensical stuff? $1.\pi \times 10^{3}$

1234.1234

3ξ
3ξ
3ξ
3ξ
3ξ

1.23(1)
1.23(1)
$1.23(\pi)$

1.2 Parsing numbers

1.2.1 input-digits, input-decimal-markers, input-signs, input-exponent-markers

1.2.2 input-symbols, input-ignore

1.2.3 input-comparators

<10
≤ 0.12

1.2.4 input-open-uncertainty, input-close-uncertainty, input-uncertainty-signs

9.99(9)
9.99(9)
9.99(9)
123.0(45)
12.3(60)

1.2.5 input-complex-roots

$9.99 + 88.8\mathrm{i}$
$9.99 + 88.8\mathrm{i}$

1.2.6 input-protect-tokens

1.2.7 parse-numbers

$\sqrt{2}$

1.3 Post-processing numbers

1.3.1 round-mode, round-precision

1.234 56
14.23
0.123 45(9)
1.235
14.230
0.123 45(9)
1.23
14.2
0.123 45(9)

1.3.2 round-integer-to-decimal

1
1
1.0
1.00

1.3.3 round-minimum

0.01
0.00
0.01
<0.01

1.3.4 round-half

0.06
0.05
0.06
0.04

1.3.5 add-decimal-zero, add-integer-zero

123.0
456

0.789
123.
456
.789

1.3.6 minimum-integer-digits

123
123
123
123
0123

1.3.7 explicit-sign, retain-explicit-plus

345
+345
−345
345

1.3.8 retain-unity-mantissa, retain-zero-exponent

1×10^{4}
10^{4}
444
444×10^{0}

1.3.9 scientific-notation, fixed-exponent

0.001
0.0100
1200
1×10^{-3}
1.00×10^{-2}
1.200×10^{3}
1×10^{-3}
10.0×10^{-3}
1.200×10^{3}
$0.000\,01 \times 10^{2}$
$0.000\,100 \times 10^{2}$
12.00×10^{2}

1.3.10 omit-uncertainty

0.01(2)
0.01

1.4 Printing numbers

1.4.1 group-digits, group-four-digits,group-seperator

12 345.678 90
12345.67890
12345.678 90
12 345.67890

12345.67890
12345.678 90
12 345.67890

1 234 567 890.123 456 789 0
1 234 567 890.123 456 789 0

12 345
12,345
12 345

1.4.2 group-minimum-digits

1234
1 234
1234.5678
1 234.567 8

1.4.3 output-complex-root,output-decimal-marker,copy-complex-root,copy-decimal-marker

1.23
1,23
1 + 2i
$1 + 2i$
1 + 2j
1 + 2j
555,555

1.4.4 complex-root-position

$67 - 0.9\mathrm{i}$
$67 - \mathrm{i}0.9$
$67 - 0.9\mathrm{i}$

1.4.5 exponent-base, exponent-product

1×10^{2}
$1 \cdot 10^{2}$
1×2^{2}

1.4.6 output-exponent-marker

1e2
1E2

1.4.7 separate-uncertainty,uncertainty-separator,output-open-uncertainty,output-close-uncertainty

1.234(5)
1.234(5)
1.234 ± 0.005
1.234 ± 0.005
1.234 [5]
8.2(13)
8.2(13)
8.2 ± 1.3
8.2 ± 1.3

$1.234(5) \times \pi$
$(1.234 \pm 0.005) \times \pi$

1.20(1)
1.20 ± 0.01

1.4.8 bracket-numbers, open-bracket, close-bracket

1×10^{10}
$2\mathrm{i} \times 10^{10}$
$(1 + 2\mathrm{i}) \times 10^{10}$
$1 + 2\mathrm{i} \times 10^{10}$

$\{1 + 2\mathrm{i}\} \times 10^{10}$

1.4.9 negative-color

$-15\,673$
$-15\,673$

1.4.10 bracket-negative-numbers

$-15\,673$
$(15\,673)$

1.5 Multi-part Numbers

1.5.1 input-product,input-quotient

$1 \times 2 \times 3$
$1 \times 10^4 \times 2(3) \times 3/4$
$4 \times 5 \times 6$
$1/(2 \times 10^4)$
$1 \times 10^2/(3 \times 10^4)$

1.5.2 output-product, output-quotient

$4.87 \cdot 5.321 \cdot 6.905\,45$
1 div 2

1.5.3 quotient-mode

$1/(2 \times 10^4)$
$\frac{1}{2 \times 10^4}$

1.5.4 fraction-function

$\frac{1}{1}$
$\frac{1}{2}$
$\frac{1}{4}$

1.6 Lists and ranges of numbers

1.6.1 list-final-separator,list-pair-separator,list-separator

0.1, 0.2 and 0.3
0.1, 0.2 and 0.3
0.1; 0.2 and 0.3
0.1, 0.2, 0.3
0.1 and 0.2 and finally 0.3
0.1 and 0.2
0.1, and 0.2

1.7 range-phrase

5 to 100
5–100
5–100

1.8 Angles

1.8.1 number-angle-product

2.67°
2.67 °

1.8.2 arc-separator

6°7′6.5″
6° 7′ 6.5″

1.8.3 add-arc-degree-zero,add-arc-minute-zero,add-arc-second-zero

−1°
−2′
−3″
−1°
−0°2′
−0°3″
−1°0′
−2′
−0′3″
−1°0″
−2′0″
−3″
45.697°

Table 1: SI base units

Unit	Macro	Symbol
ampere	`\ampere`	A
candela	`\candela`	cd
kelvin	`\kelvin`	K
kilogram	`\kilogram`	kg
metre	`\metre`	m
mole	`\mole`	mol
second	`\second`	s

Table 2: Coherent derived units

Unit	Macro	Symbol	Unit	Macro	Symbol
becquerel	`\becquerel`	Bq	newton	`\newton`	N
degreeCelsius	`\degreeCelsius`	°C	ohm	`\ohm`	Ω
coulomb	`\coulomb`	C	pascal	`\pascal`	Pa
farad	`\farad`	F	radian	`\radian`	rad
gray	`\gray`	Gy	siemens	`\siemens`	S
hertz	`\hertz`	Hz	sievert	`\sievert`	Sv
henry	`\henry`	H	steradian	`\steradian`	sr
joule	`\joule`	J	tesla	`\tesla`	T
katal	`\katal`	kat	volt	`\volt`	V
lumen	`\lumen`	lm	watt	`\watt`	W
lux	`\lux`	lx	weber	`\weber`	Wb

45.697°

1.8.4 angle-symbol-over-decimal

45.697°
6°7′6.5″
45.̊697
6°7′6.″5
6°7′6.″5

2 Units

2.1 Using units

kg kg km kg
a
a
a

Table 3: Non-SI units

Unit	Macro	Symbol
day	`\day`	d
degree	`\degree`	°
hectare	`\hectare`	ha
hour	`\hour`	h
litre	`\litre`	l
liter	`\liter`	L
arcminute	`\arcminute`	′
minute	`\minute`	min
arcsecond	`\arcsecond`	″
tonne	`\tonne`	t

Table 4: Expermental Non-SI units

Unit	Macro	Symbol
astronomicalunit	`\astronomicalunit`	au
atomicmassunit	`\atomicmassunit`	u
bohr	`\bohr`	a_0
clight	`\clight`	c_0
dalton	`\dalton`	Da
electronmass	`\electronmass`	m_e
electronvolt	`\electronvolt`	eV
elementarycharge	`\elementarycharge`	e
hartree	`\hartree`	E_h
planckbar	`\planckbar`	$\hbar$

Table 5: Other non-SI units

Unit	Macro	Symbol
angstrom	`\angstrom`	Å
bar	`\bar`	bar
barn	`\barn`	b
bel	`\bel`	B
decibel	`\decibel`	dB
knot	`\knot`	kn
mmHg	`\mmHg`	mmHg
nauticalmile	`\nauticalmile`	M
neper	`\neper`	Np

Table 6: Other non-SI units

Unit	Macro	Symbol	Power	Unit	Macro	Symbol	Power
yocto	`\yocto`	y	10^{-24}	deca	`\deca`	da	10^{1}
zepto	`\zepto`	z	10^{-21}	hecto	`\hecto`	h	10^{2}
atto	`\atto`	a	10^{-18}	kilo	`\kilo`	k	10^{3}
femto	`\femto`	f	10^{-15}	mega	`\mega`	M	10^{6}
pico	`\pico`	p	10^{-12}	giga	`\giga`	G	10^{9}
nano	`\nano`	n	10^{-9}	tera	`\tera`	T	10^{12}
micro	`\micro`	µ	10^{-6}	peta	`\peta`	P	10^{15}
milli	`\milli`	m	10^{-3}	exa	`\exa`	E	10^{18}
centi	`\centi`	c	10^{-2}	zetta	`\zetta`	Z	10^{21}
deci	`\deci`	d	10^{-1}	yotta	`\yotta`	Y	10^{24}

e
e

a
a

km

kg m s^{-1}
kg m s^{-1}
kg m s^{-1}
kg m s^{-1}
kg m s^{-1}

~~kg~~ m s^{-1}
kg ~~m~~ s^{-1}
kg ~~m~~ s^{-1}
kg m ~~s^{-1}~~
kg m ~~s^{-1}~~

2.1.1 forbid-literal-units, inter-unit-product

F^2 lm cd
$F^2 \cdot lm \cdot cd$
$F^2 \cdot lm \cdot cd$

2.1.2 per-mode, per-symbol, bracket-unit-denominator

J mol^{-1} K^{-1}
m s^{-2}

Table 7: Abbreviated units

Unit	Macro	Symbol
fg	`\fg`	fg
pg	`\pg`	pg
ng	`\ng`	ng
ug	`\ug`	µg
mg	`\mg`	mg
g	`\g`	g
kg	`\kg`	kg
amu	`\amu`	u
pm	`\pm`	pm
nm	`\nm`	nm
um	`\um`	µm
mm	`\mm`	mm
cm	`\cm`	cm
dm	`\dm`	dm
m	`\m`	m
km	`\km`	km
as	`\as`	as
fs	`\fs`	fs
ps	`\ps`	ps
ns	`\ns`	ns
us	`\us`	µs
ms	`\ms`	ms
s	`\s`	s
fmol	`\fmol`	fmol
pmol	`\pmol`	pmol
nmol	`\nmol`	nmol
umol	`\umol`	µmol
mmol	`\mmol`	mmol
mol	`\mol`	mol
kmol	`\kmol`	kmol
pA	`\pA`	pA
nA	`\nA`	nA
uA	`\uA`	µA
mA	`\mA`	mA
A	`\A`	A
kA	`\kA`	kA
ul	`\ul`	µl
ml	`\ml`	ml
l	`\l`	l
hl	`\hl`	hl
uL	`\uL`	µL
mL	`\mL`	mL
L	`\L`	L
hL	`\hL`	hL
mHz	`\mHz`	mHz
Hz	`\Hz`[12]	Hz
kHz	`\kHz`	kHz
MHz	`\MHz`	MHz
GHz	`\GHz`	GHz
THz	`\THz`	THz
mN	`\mN`	mN
N	`\N`	N
kN	`\kN`	kN

Table 8: Binary prefixes

Unit	Macro	Symbol	Power
kibi	`\kibi`		
mebi	`\mebi`		
gibi	`\gibi`		
tebi	`\tebi`		
pebi	`\pebi`		
exbi	`\exbi`		
zebi	`\zebi`		
yobi	`\yobi`		

$\frac{\mathrm{J}}{\mathrm{mol\,K}}$
$\frac{\mathrm{J\,mol^{-1}}}{\mathrm{K}}$
$\frac{\mathrm{m}}{\mathrm{s^2}}$
$\mathrm{A\,mol^{-1}\,s}$
$\mathrm{A\,s\,mol^{-1}}$
$\mathrm{J/(mol\,K)}$
$\mathrm{m/s^2}$
$\mathrm{J\ div\ (mol\,K)}$
$\mathrm{J/mol\,K}$
$\mathrm{J/mol/K}$
$\mathrm{J/(mol\,K)}$

$$\frac{\mathrm{J}}{\mathrm{mol\,K}}$$

$\mathrm{J/(mol\,K)}$
$\frac{\mathrm{J}}{\mathrm{mol\,K}}$

$\mathrm{J/(mol\,K)}$

$\mathrm{J/(mol\,K)}$

2.1.3 sticky-per

$\mathrm{Pa\,Gy^{-1}\,H}$
$\mathrm{Pa\,Gy^{-1}\,H^{-1}}$

2.1.4 power-font

$\mathrm{m\,s^{-2}}$
$\mathrm{m\,s^{-2}}$

2.1.5 literal-superscript-as-power

$\mathrm{m\,s^2}$
$\mathrm{m\,s^2}$

2.1.6 qualifier-mode, qualifier-phrase

$\mathrm{kg^2_{pol}\,mol^{-1}_{cat}\,h^{-1}}$
$\mathrm{kg(pol)^2\,mol(cat)^{-1}\,h^{-1}}$
$\mathrm{kg^2_{pol}\,mol^{-1}_{cat}\,h^{-1}}$
$\mathrm{(kg\ pol)^2\,(mol\ cat)^{-1}\,h^{-1}}$
dBi

$\mathrm{(kgofpol)^2\,(molofcat)^{-1}\,h^{-1}}$
$\mathrm{(kgbypol)^2\,(molbycat)^{-1}\,h^{-1}}$

2.1.7 prefixes-as-symbols

$\mathrm{ml\,mol^{-1}\,dA}$
$\mathrm{10^{-4}\,l\,mol^{-1}\,A}$
$\mathrm{10^{-1}\,kg^2\,s}$
$\mathrm{Mg^2\,ds}$
$\mathrm{10^5\,kg^2\,s}$
$\mathrm{\mu g^2\,ds}$
$\mathrm{10^{-19}\,kg^2\,s}$
$\mathrm{Mg^{-2}\,ds}$
$\mathrm{10^{-7}\,kg^{-2}\,s}$
$\mathrm{\mu g^{-2}\,ds}$
$\mathrm{10^{17}\,kg^{-2}\,s}$

2.1.8 parse-units

2.2 Numbers with units

2.2.1 allow-number-unit-breaks

2.2.2 number-unit-product

$\mathrm{2.67\,F}$
$\mathrm{2.67\ F}$
$\mathrm{2.67F}$
$\mathrm{2.67\,F}$
$\mathrm{2.67\ F}$
$\mathrm{2.67\times F}$

$2.67 \times \mathrm{F}$

2.2.3 multi-part-units

$(12.3 \pm 0.4)\,\mathrm{kg}$
$(12.3 \pm 0.4)\,\mathrm{kg}$
$12.3\,\mathrm{kg} \pm 0.4\,\mathrm{kg}$
$12.3 \pm 0.4\,\mathrm{kg}$

$1.234 \pm 0.005 \times 10^{-4}$
$(1.234 \pm 0.005) \times 10^{-4}\,\mathrm{m}$

2.2.4 product-units

$2\,\mathrm{m} \times 3\,\mathrm{m} \times 4\,\mathrm{m}$
$(2 \times 3 \times 4)\,\mathrm{m}$
$(2 \times 3 \times 4)\,\mathrm{m}^3$
$2 \times 3 \times 4\,\mathrm{m}^3$
$2\,\mathrm{m} \times 3\,\mathrm{m} \times 4\,\mathrm{m}$
$2 \times 3 \times 4\,\mathrm{m}$

2.2.5 list-units,range-units

2 T, 4 T, 6 T and 8 T
(2, 4, 6 and 8) T
2 T, 4 T, 6 T and 8 T
2, 4, 6 and 8 T
2 °C to 4 °C
(2 to 4) °C
2 °C to 4 °C
2 to 4 °C

2.2.6 exponent-to-prefix

1700 g
1.7×10^3 g
1700 g
1.7 kg
1.700×10^3 g
1.7×10^3 g

3 Tabular material

Table 9: Standard behaviour of the `S` column type.

Some Values
2.3456
34.2345
−6.7835
90.473
5642.5
1.2×10^3
10^4

Table 10: Detection of surrounding material in an `S` column.

Some Values
12.34
975.31
44.268[a]

Table 11: Controlling complex alignment with the tablenum macro.

Heading	Heading
Info	More info
Info	More info
12.34	
333.5567	
4563.21	

Heading	Heading
88.999	aaa
	bbb
33.435	ccc
	ddd

Table 12: Units in tables.

Unit
$\mathrm{m^2\,s^{-1}}$
Pa
$\mathrm{m\,s^{-1}}$

Table 13: The `s` column processes everything.

Unit	Unit
m^3	m^3
kg	kg

3.0.1 table-parse-only

Table 14: Parsing without aligning in an `S` column.

Decimal-centred	Simple centring
12.345	12.345
6.78	6.78
−88.8(9)	−88.8(9)
4.5×10^3	4.5×10^3

3.0.2 table-number-alignment

Table 15: Aligning the `S` column.

Some Values	Some Values	Some Values	Some Values
2.3456	2.3456	2.3456	2.3456
34.2345	34.2345	34.2345	34.2345
56.7835	56.7835	56.7835	56.7835
90.473	90.473	90.473	90.473

3.0.3 table-figures-decimal, table-figures-exponent,table-figures-integer,table-figures- uncertainty

Table 16: Reserving space in `S` columns.

Values	Values	Values	Values	Values	Values
2.3	2.3	2.3(5)	2.3 ± 0.5	2.3	2.3×10^8
34.23	34.23	34.23(4)	34.23 ± 0.04	34.23	34.23
56.78	56.78	56.78(3)	56.78 ± 0.03	−56.78	56.78×10^3
3.76	3.76	3.76(2)	3.76 ± 0.02	±3.76	10^6

3.0.4 table-comparator

Table 17: Reserving space for comparators in `S` columns.

Values	Values
2.3	$< 2.3 \times 10^{8}$
34.23	$=34.23$
56.78	$\geq 56.78 \times 10^{3}$
3.76	$\gg 10^{6}$

3.0.5 table-format

Table 18: Using the `table-format` option.

Values	Values	Values	Values	Values
2.3	2.3	2.3(5)	2.3	2.3×10^{8}
34.23	34.23	34.23(4)	34.23	34.23
56.78	56.78	56.78(3)	-56.78	56.78×10^{3}
3.76	3.76	3.76(2)	± 3.76	10^{6}

3.0.6 table-space-text-pre, table-space-text-post

Table 19: Text before and after numbers.

Values
2.3456
34.2345^{a}
56.7835
now 90.473

3.0.7 table-align-comparator, table-align-exponent, table-align-uncertainty

Table 20: The `table-align-exponent` option

Header	Header
1.2×10^{3}	1.2×10^{3}
1.234×10^{56}	1.234×10^{56}

Table 21: The `table-align-uncertainty` option

Header	Header
1.2 ± 0.1	1.2 ± 0.3
1.234 ± 0.005	1.234 ± 0.005

Table 22: The `table-align-comparator` option

Header	Header
> 1.2	>1.2
<12.34	<12.34

3.0.8 table-omit-exponent

Table 23: The `table-omit-exponent` option

Header	Header / 10^3
1.2×10^3	1.2
3×10^2	0.3
1.0×10^4	10

3.0.9 table-align-text-pre,table-align-text-post

3.0.10 table-auto-round

Table 24: The `table-auto-round` option.

Header	Header
1.2	1.200
1.2345	1.235

3.0.11 parse-numbers

Table 25: Aligning without parsing.

Some values	Some values	Some values	Some values
2.35	2.35	2.35	2.35
34.234	34.234	34.234	34.234
56.783	56.783	56.783	56.783
3.762	3.762	3.762	3.762
$\sqrt{2}$	$\sqrt{2}$	$\sqrt{2}$	$\sqrt{2}$

3.0.12 table-text-alignment

Table 26: Aligning text in `S` columns.

Values	Values	Values
992.435	992.435	992.435
7734.2344	7734.2344	7734.2344
56.7834	56.7834	56.7834
3.7462	3.7462	3.7462

3.0.13 table-unit-alignment

Table 27: Alignment options in `s` columns.

Right − aligned	Centredtext	Left − aligned
$\mathrm{m\,s^{-1}}$	$\mathrm{m\,s^{-1}}$	$\mathrm{m\,s^{-1}}$
kg	kg	kg

3.0.14 table-alignment

3.0.15 table-column-width

Table 28: Fixed-width columns.

Flexible	Fixed	Flexible	Fixed
$\mathrm{m\,s^{-1}}$	$\mathrm{m\,s^{-1}}$	1.23	1.23
$\mathrm{kg\,cd}$	$\mathrm{kg\,cd}$	45.6	45.6