

Clock by Rydberg

| | Units | | | | | | | | | |
|--|----------------------------------|------------------|-----------|------------------|-----------------------|-----------------|------------|-------|--------------|----------------------|
| | Item | Unit Symbol | Raw Value | Power | Unit Value | suffix <i>h</i> | difference | digit | Decimal | |
| Local Time | s | | | | | | | | | |
| Length | m | 9.1210202711E-08 | 6 | 2.7235220593E-01 | | error/year | | -3 | 272.352206 | mm |
| Time | s | 3.0424448740E-16 | 14 | 3.9062511511E-01 | | 9.2995 seconds | | -3 | 390.625115 | ms |
| Energy | J | 3.4661985464E-19 | 16 | 6.4084554944E-02 | | | | -3 | 64.084555 | mJ |
| Temperature | K | 2.5105582603E+04 | -8 | 5.8387561230E-05 | | | | -6 | 58.387561 | μK |
| Amount of substance | mol | 1.6605390404E-24 | 24 | 1.3200761837E+02 | | | | 0 | 132.007618 | mol |
| Mass | g | 3.8566660070E-36 | 32 | 1.3182928708E-01 | | | | -3 | 131.829287 | g |
| Power | W | 1.1392806411E-03 | 2 | 1.6405641231E-01 | | | | -3 | 164.056412 | mW |
| Force | N | 3.8002311621E-12 | 10 | 2.3530029700E-01 | | | | -3 | 235.300297 | mN |
| Pressure | P | 4.567962635E+02 | -2 | 3.1722008774E+00 | | | | 0 | 3.172201 | Pa |
| Charge | C | 1.8755460226E-18 | 15 | 2.8896578034E-02 | | | | -3 | 28.896578 | mC |
| Electric current | A | 6.1646014973E-03 | 1 | 7.3975217968E-02 | | | | -3 | 73.975218 | mA |
| Field Strength | O | 6.7586753610E+04 | -5 | 2.7161600441E-01 | | | | -3 | 271.616004 | mA/m |
| Flux density | G | 2.2544514315E-04 | 3 | 3.8956920377E-01 | | | | -3 | 389.569207 | mC/m ² |
| Impedance | Ω/sr | 2.9979245800E+01 | 0 | 2.9979245800E+01 | | | | 0 | 29.979246 | Ω |
| Electric potential difference | ΩA | 1.8481010355E-01 | 1 | 2.2177212426E+00 | | | | 0 | 2.217721 | V |
| Electric capacitance | s/Ω | 1.0148503716E-17 | 14 | 1.3029851308E-02 | | | | -3 | 13.029851 | mF |
| Magnetic flux | ΩC | 5.6227455221E-17 | 15 | 8.6629761567E-01 | | | | 0 | 0.866298 | Wb |
| Magnetic flux density | ΩG | 6.7586753610E-03 | 3 | 1.1678991024E+01 | | | | 0 | 11.678991 | T |
| Inductance | sΩ | 9.1210202711E-15 | 14 | 1.1710646342E+01 | | | | 0 | 11.710646 | H |
| Frequency | Ω_1/s | 3.2868303006E+15 | -14 | 2.559992456E+00 | | | | 0 | 2.559999 | Hz |
| Luminous flux | W_e | 8.0324451322E-01 | 2 | 1.1566720990E+02 | | | | 0 | 115.667210 | lm |
| Luminous intensity | W_e/sr | 8.0324451322E-01 | 2 | 1.1566720990E+02 | | | | 0 | 115.667210 | cd |
| | W_e/Ω_2 | 6.3920167395E-02 | 2 | 9.2045041049E+00 | | | | 0 | 9.204504 | cd |
| Illuminance and luminous emittance | W_e/m ² | 9.6551922526E+13 | -10 | 1.5593674527E+03 | | | | 3 | 1.559367 | klx |
| Catalytic activity | mol/s | 5.4579100335E-09 | 10 | 3.3793940344E+02 | | | | 0 | 337.939403 | kat |
| Radio activity | mol_n/s | 3.2868303006E+15 | -14 | 2.559992456E+00 | | | | 0 | 2.559999 | Bq |
| Absorbed radiation dose | J/g | 8.9875517874E+16 | -16 | 4.8611773880E-01 | | | | 0 | 0.486118 | Gy |
| Equivalent dose | J_e/g | 8.9875517874E+16 | -16 | 4.8611773880E-01 | | | | 0 | 0.486118 | Sv |
| | Constants | | | | | | | | | |
| | Item | Unit Symbol | Raw Value | Precision | Value/Unit | Dozenal | difference | | 0123456789XE | Prefix |
| Fine Structure Constant | - | 7.2973525664E-03 | 9 | 7.2973525664E-03 | 1;073994049 | 5.082% | | -2 | 1.050819 | centy |
| Avogadro constant | 1/mol | 6.0221408570E+23 | 7 | 7.9496847203E+25 | 1;0000000 | 0.000% | | 24 | 1.000000 | tri-cosmic |
| Rydberg constant | Ω_1/m | 1.0973731569E+07 | 12 | 2.9887200000E+06 | 1;00170000000 | 0.092% | | 6 | 1.000916 | cosmic centy |
| Speed of light in vacuum | m/s | 2.9979245800E+08 | 12 | 4.2998169600E+08 | 1;000000000000 | 0.000% | | 8 | 1.000000 | cosmic |
| Quantum of action | Js | 1.0545718000E-34 | 7 | 4.2127202331E-33 | 1;0000000 | 0.000% | | -30 | 1.000000 | tetra-atomic hecty |
| Boltzmann constant | J/K | 1.3806485200E-23 | 6 | 1.2579115212E-26 | 1;000000 | 0.000% | | -24 | 1.000000 | tri-atomic |
| Gas constant | J/(mol K) | 8.3144598614E+00 | 6 | 1.0000000000E+00 | 1;000000 | 0.000% | | 0 | 1.000000 | |
| Unified atomic mass unit | kg | 1.6605390400E-27 | 7 | 1.2596131533E-26 | 1;0024073 | 0.135% | | -24 | 1.001353 | tri-atomic |
| Bohr Radius | m | 5.2917721067E-11 | 9 | 1.9429885242E-10 | 1;00447X740 | 0.254% | | -9 | 1.002539 | atomic dour |
| Elementary electric charge | C | 1.6021766207E-19 | 9 | 5.5445202502E-18 | 1;0374439E2 | 2.509% | | -16 | 1.025095 | di-atomic |
| Electron mass | kg | 9.1093835600E-31 | 7 | 6.9099846943E-30 | 0;E48324X | -5.077% | | -27 | 0.949228 | tri-atomic milly |
| Proton mass | kg | 1.6726218973E-27 | 7 | 1.2687786867E-26 | 1;012E181 | 0.864% | | -24 | 1.008639 | tri-atomic |
| Newtonian constant of gravitation | (m/s) ⁴ /N | 6.6740800000E-11 | 4 | 6.6455502348E-11 | 4;1463 | 2.869% | | -10 | 4.114750 | atomic centy |
| Planck force | N | 1.2102954584E+44 | 4 | 5.1436206152E+44 | 2;XEE5 | -0.011% | 1 | 41 | 2.916338 | penta-cosmic dirac |
| Gravitic meter | m | 9.5617360022E-35 | 4 | 3.5107980747E-34 | 1;0001 | 0.006% | | -31 | 1.000056 | tetra-atomic dirac |
| Planck length | m | 1.6162283730E-35 | 4 | 5.9343318606E-35 | 2;0413 | 1.424% | | -32 | 2.028485 | tetra-atomic |
| Adjusted Planck length | m | 1.8919953377E-34 | 4 | 6.9468698856E-34 | 1;E8E5 | -1.059% | | -31 | 1.978827 | tetra-atomic dirac |
| Stefan-Boltzmann constant | W/m ² /K ⁴ | 5.6703668183E-08 | 6 | 2.9796213807E-25 | 1;E82E28 | -1.304% | | -23 | 1.973921 | tri-atomic dirac |
| Black-body radiation at the ice point | W/m ² | 3.1565739919E+02 | 6 | 1.4271990844E+02 | 0;EX8780 | -0.889% | | 2 | 0.991110 | hecty |
| Temperature of the triple point of water | K | 2.7316000000E+02 | 6 | 4.6783937237E+06 | 1;6974X2 | | | 6 | 1.566785 | cosmic centy |
| Molar volume of an ideal gas | m ³ /mol | 2.2413962000E-02 | 6 | 1.4646199160E+02 | 1;025664 | 1.710% | | 2 | 1.017097 | hecty |
| -log(Sqrt([H+][OH-])/(mol/m ³)) | log(12) | 1.0039920318E-04 | 4 | 7.2401888623E+00 | 7;2X71 | | | 0 | 7.240189 | |
| Maximum density of water | kg/m ³ | 9.9997200000E+02 | 6 | 1.5323875955E+02 | 1;092X47 | 6.416% | | 2 | 1.064158 | hecty |
| Density of ice at the ice point | kg/m ³ | 9.1680000000E+02 | 4 | 1.4049322857E+02 | 0;E85E | -2.435% | | 2 | 0.975647 | hecty |
| Specific heat of water | J/kg/K | 4.1840000000E+03 | 4 | 5.0253989247E-01 | 6;0448 | 0.508% | | -1 | 6.030479 | dour |
| Surface tension of water at 25°C | N/m | 7.1970000000E-02 | 4 | 8.3302862389E-02 | 0;EEE4 | -0.037% | | -1 | 0.999634 | dour |
| photon energy at 540THz | J | 3.5780778211E-19 | 7 | 5.5833700089E-18 | 1;0479373 | 3.228% | | -16 | 1.032277 | di-atomic |
| (according to the definition of candela) | cΩA | 2.232605375E+00 | 7 | 1.0070068747E+00 | 1;0101365 | 0.701% | | 0 | 1.007007 | (1:00 for 536.24THz) |
| Buoyancy of saltwater (1.024) | P/m | 1.0041728424E+04 | 6 | 8.6214177263E+02 | 5;EX184 | -0.215% | | 2 | 5.987096 | hecty |
| Sea depth at standard atmosphere | m | 1.0090394375E+01 | 6 | 3.7049064245E+01 | 3;107095 | 0.133% | 1 | 1 | 3.087422 | dirac |
| Standard atmosphere | P | 1.0132500000E+05 | 6 | 3.1941545922E+04 | 1;659967 | -0.083% | 2 | 4 | 1.540391 | super |
| Standard gravitational acceleration | m/s ² | 9.8066500000E+00 | 7 | 5.4942713403E+00 | 5;5E21264 | -8.429% | 0 | 0 | 5.494271 | |
| Gravitational radius of the Earth | m | 4.4350280391E-03 | 10 | 1.6284164191E-02 | 2;4180306534 | | | -2 | 2.344920 | centy |
| Equatorial radius of the Earth | m | 6.3781400000E+06 | 7 | 2.3418719809E+07 | 0;7X145E | | | 7 | 0.653573 | cosmic dour |
| Meridian length of the Earth / 4 | m | 1.0001965000E+07 | 7 | 3.6724376679E+07 | 1;0370649 | 2.491% | | 7 | 1.024910 | cosmic dour |
| Gravitational radius of the Sun | m | 1.4766250158E+03 | 8 | 5.4217479559E+03 | 3;1798E857 | | | 3 | 3.137586 | kily |
| The diameter of the solar mass black hole | m | 5.9065000632E+11 | 8 | 2.1686991824E+04 | 1;0672EX9X | | | 4 | 1.045862 | super |
| Astronomical unit | m | 1.4959787000E+11 | 9 | 5.4928091912E+11 | 8;X55509X33 | | | 10 | 8.871194 | cosmic hecty |
| Astronomical unit / c0 | s | 4.9900478150E-02 | 9 | 1.2774518642E+03 | 8;X55509X33 | | | 2 | 8.871194 | hecty |
| Astronomical unit / c0 / (12 ⁽⁻³⁾ day ⁻¹) | - | 9.9800956300E+00 | 9 | 9.9800956300E+00 | 9;E91731X53 | | | 0 | 9.980096 | |

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| Item | Precision | Raw Value | | Dozenal | | Power | Decimal | Prefix |
|--------------------------------|-----------|------------------|-----------------------|---------|--|-------|------------|--------------------|
| | | | | | | | | |
| α | 9 | 7.2973525664E-03 | 1;073994049 | | | -2 | 1.050819 | centy |
| $1/\alpha$ | 9 | 1.3703599914E+02 | 0;E5052258X | | | 2 | 0.951639 | hecty |
| | 9 | 1.3703599914E+02 | B5;052258X26 | | | 0 | 137.035999 | |
| $\alpha^{0.5}$ | 9 | 8.5424543115E-02 | 1;0374439E2 | | | -1 | 1.025095 | dour |
| $(1/\alpha)^{0.5}$ | 9 | 1.1706237617E+01 | 0;E85846628 | | | 1 | 0.975520 | dirac |
| 4π | 12 | 1.2566370614E+01 | 1;0696831713E1 | | | 1 | 1.047198 | dirac |
| $1/4\pi$ | 12 | 7.9577471546E-02 | 0;E5615082189E | | | -1 | 0.954930 | dour |
| | 9 | 7.9577471546E-02 | B5;61508218X | | | -3 | 137.509871 | milly |
| $4\pi/\alpha$ | 9 | 1.7220451527E+03 | 0;EE6066035 | | | 3 | 0.996554 | kily |
| $\alpha/4\pi$ | 9 | 5.8070486621E-04 | 1;005E85686 | | | -3 | 1.003458 | milly |
| $4\pi/\alpha^2$ | 9 | 2.3598217806E+05 | 0;E46922178 | | | 5 | 0.948359 | cosmic milly |
| $\alpha^2/4\pi$ | 9 | 4.2376081458E-06 | 1;07X1163X8 | | | -5 | 1.054453 | atomic kily |
| μ | 11 | 1.8361526725E+03 | 1;09019E9995E | | | 3 | 1.062588 | kily |
| $\mu^9 \times \alpha^{(-11)}$ | 11 | 7.5920748047E+52 | 1;001XXX0E449 | | | 49 | 1.001105 | sixty-cosmic dirac |
| $2^{\wedge}43$ | 12 | 8.7960930222E+12 | 0;EX08X990X0X8 | | | 12 | 0.986540 | cosmic super |
| $12^{\wedge}16 / 2^{\wedge}48$ | 12 | 6.5684083557E+02 | 4;68X10E696900 | | | 2 | 4.561395 | hecty |
| $2^{\wedge}(-17)$ circle / rad | 12 | 4.7936899621E-05 | 0;EE17EX582521 | | | -4 | 0.994020 | sub |

| | | | | | | | | | |
|-----------------------------|--------------|------------------|----|------------------|-----------------------|--|----|----------|-----------------|
| Rydberg constant for H | Ω 1/m | 1.0967758341E+07 | 12 | 2.9870931782E+06 | 1;000785217E43 | | 6 | 1.000371 | cosmic centy |
| μ (Reduced mass) | | 0.999455679 | | | | | | | |
| $1W/W_e$ | | 9.6873201750E-01 | 7 | 9.6873201750E-01 | 0;E75E764 | | 0 | 0.968732 | |
| 540THz | | 5.4000000000E+14 | 7 | 2.1093756216E+14 | 1;E7X9143 | | 13 | 1.971504 | di-cosmic milly |
| 2:di-cosmic milly cycle / s | | 5.4780505011E+14 | | 2.1398641076E+14 | | | 13 | | |

| Solar luminosity | | | | | | | | | |
|------------------------|--|-------------|---|------------------|-----------------|--|-----|----------|--------------|
| apparent magnitude 0.0 | | 2.57505E-06 | 6 | 1.6513395069E-09 | 8;62E613 | | -9 | 8.520549 | atomic dour |
| Brite scale 0.0 | | 7.81361E-09 | 6 | 5.0107534753E-12 | 3;881495 | | -11 | 3.723032 | atomic milly |
| apparent magnitude 6.0 | | 1.02514E-08 | 6 | 6.5741009870E-12 | 4;X74739 | | -11 | 4.884612 | atomic milly |
| apparent magnitude 5.0 | | 2.57505E-08 | 6 | 1.6513395069E-11 | 1;0329X3 | | -10 | 1.022466 | atomic centy |

| Earth gravity | | | | | | | | | |
|---------------|--|------------------|---|------------------|------------------|--|---|----------|--|
| g_E | | 9.8312076425E+00 | 7 | 5.5080299991E+00 | 5;611X615 | | 0 | 5.508030 | |

| Earth rotation | | | | | | | | | |
|----------------|--|--|----|------------------|-----------------------|--|---|----------|--|
| year/day | | | 9 | 1.0020361797E+00 | 1;003628000 | | 0 | 1.002036 | |
| s_h / s_e | | | 12 | 1.0000002947E+00 | 1;000000X68658 | | 0 | 1.000000 | |
| s_e / s_h | | | 12 | 9.9999970531E-01 | 0;EEEEEE153565 | | 0 | 1.000000 | |

| factor 1.025 | | | | | | | | | |
|--|--|------------------|---|------------------|--------------------|--|-----|----------|--------------|
| 10^7 km / factor | | 1.0000000000E+07 | 9 | 3.5821621226E+07 | 0;EEE613129 | | 7 | 0.999716 | cosmic dour |
| 10^9 s / factor | | 1.0000000000E+05 | 9 | 2.4975602396E+05 | 1;006500355 | | 5 | 1.003713 | cosmic milly |
| electron / factor | | 1.6021766207E-19 | 9 | 5.4092880489E-18 | 1;0001XE416 | | -16 | 1.000092 | di-atomic |
| Density of ice at the ice point * factor | | 9.1680000000E+02 | 9 | 1.4400555928E+02 | 1;00009733E | | 2 | 1.000039 | hecty |

| Temperature 0° S -74.360439 | | | | | | | | | |
|-----------------------------------|------------|-------------|---|-----------|---------------------|--|---|-----------|-------|
| absolute zero | 0K | -273.150000 | 9 | -164.1906 | -1;182354000 | | 2 | 1.140212 | hecty |
| coldest air recorded on the Earth | -89.4°C | -89.400000 | 9 | -12.4220 | -1;05091705X | | 1 | 1.035163 | dirac |
| | -78°C | -78.000000 | 9 | -3.0061 | -3;00X663053 | | 0 | 3.006102 | |
| | -55°C | -55.000000 | 9 | 15.9908 | 1;3EX80EE74 | | 1 | 1.332566 | dirac |
| | -32°C | -32.000000 | 9 | 34.9877 | 2;XEX286232 | | 1 | 2.915640 | dirac |
| | 0°F | -17.800000 | 9 | 46.7162 | 3;X87170018 | | 1 | 3.893016 | dirac |
| | -9°C | -9.000000 | 9 | 53.9846 | 4;5E99404XE | | 1 | 4.498714 | dirac |
| melting point of ice | 0°C | 0.000000 | 9 | 61.4181 | 5;150265551 | | 1 | 5.118178 | dirac |
| melting point of ice(VSMOW) | 0.000089°C | 0.000089 | 9 | 61.4182 | 5;15027E8E1 | | 1 | 5.118184 | dirac |
| triple point of water | 0.1°C | 0.010000 | 9 | 61.4264 | 5;151498827 | | 1 | 5.118866 | dirac |
| maximum density point of water | 3.98°C | 3.980000 | 9 | 64.7054 | 5;4856E7X8E | | 1 | 5.392119 | dirac |
| | 14°C | 14.000000 | 9 | 72.9815 | 6;0E93E6769 | | 1 | 6.081788 | dirac |
| | 15°C | 15.000000 | 9 | 73.8074 | 6;198325X35 | | 1 | 6.150618 | dirac |
| | 20°C | 20.000000 | 9 | 77.9372 | 6;5E2E51EXX | | 1 | 6.494764 | dirac |
| | 25.5°C | 25.500000 | 9 | 82.4799 | 6;X591338X7 | | 1 | 6.873325 | dirac |
| | 37°C | 37.000000 | 9 | 91.9784 | 7;7E8X70X26 | | 1 | 7.664863 | dirac |
| | 100°F | 37.800000 | 9 | 92.6391 | 7;878047523 | | 1 | 7.719926 | dirac |
| hottest air recorded on the Earth | 58.8°C | 58.800000 | 9 | 109.9841 | 9;1E9863248 | | 1 | 9.165342 | dirac |
| | 60°C | 60.000000 | 9 | 110.9752 | 9;2E85270X3 | | 1 | 9.247937 | dirac |
| | 83°C | 83.000000 | 9 | 129.9721 | X;9E7EX1361 | | 1 | 10.831011 | dirac |
| boiling point of water(ITS-90) | 99.974°C | 99.974000 | 9 | 143.9918 | 0;EEEX9X867 | | 2 | 0.999943 | hecty |
| boiling point of water(VSMOW) | 99.9839°C | 99.983900 | 9 | 144.0000 | 1;000000329 | | 2 | 1.000000 | hecty |
| | 100°C | 100.000000 | 9 | 144.0133 | 1;0001E001X | | 2 | 1.000092 | hecty |

| | | | | | | | | | |
|-----------------------|--|---------------|----|----------|--|--|--|--|--|
| | | -1.570180E-05 | | | | | | | |
| 61° S | | 14.022447 | | 73.0000 | | | | | |
| 78° S | | 37.026212 | | 92.0000 | | | | | |
| 100° S | | 99.983884 | | 144.0000 | | | | | |
| 3000; SK _h | | 6003.25 | °C | | | | | | |