units that are created by means of new defining constants.

Finally, there remains the problem of how many integer powers of $10_{(12)}$ to append as a factor to give the base unit an appropriate. Concerning this problem, for $c_0 = 10^P_{(12)}\mathrm{m}_u/\mathrm{s}_u$, $e \approx 10^Q_{(12)}\mathrm{C}_u$,$u = 10^R_{(12)}\mathrm{g}_u$, we adopt the approach of selecting the multiple of integer powers of $10_{(12)}$ so as to make the greatest common divisor of P, Q, and R as large as possible. Currently, the greatest common divisor is 8, and as far as selecting a base unit of appropriate scale is concerned, this seems to be the maximum value (because of the relationship $e = \sqrt{\frac{\alpha\hbar}{\Omega_n}}$, there are surprisingly large restrictions on selecting an appropriate scale. See Table 2's comment column).

## 3.4 Derived units of dynamical quantities

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Derived units of mass | $(\mathrm{g}_u$ | $=$ | $\mathrm{J}_u\mathrm{s}_u^2/\mathrm{m}_u^2$ | $=$ | 131.950228g | $=$ | $19.000833\mathrm{kg}/12^2_{(10)})$ |
| Derived unit of work | $(\mathrm{W}_u$ | $=$ | $\mathrm{J}_u/\mathrm{s}_u$ | $=$ | 164.357378mW | $=$ | 112.256089lm ) |
| Derived unit of force | $(\mathrm{N}_u$ | $=$ | $\mathrm{J}_u/\mathrm{m}_u$ | $=$ | 235.731961mN | $=$ | 24.037970gf ) |
| Derived unit of pressure | $(\mathrm{P}_u$ | $=$ | $\mathrm{J}_u/\mathrm{m}_u^3$ | $=$ | 3.18384692Pa | $=$ | $\mathrm{atm}/1\_6500_{(12)})$ |

Derived units that have no characteristic symbol (example)

Torque ($\mathrm{J}_u/\mathrm{rad} = 64.1433465\mathrm{mN}\cdot\mathrm{m}/\mathrm{rad}$)

Taking a quantity of the dimension energy as a base unit, there is probably no objection to the selection of these units. As we can see, the unit of mass is $\mathrm{g}_u = 131.950228\mathrm{g}$. On the other hand, the relationship between the unit of 'amount of substance' of the International System of Units, mole (from the measured value of the Avogadro constant), and the supplementary constant, $\mathrm{mol}_u$, of the Universal System of Units Standard is $\mathrm{mol}_u = 132.007729\mathrm{mol}$. It would be surprising if this were a completely accidental coincidence. This represents the fact that the atomic mass unit can be approximated with good accuracy at an appropriate scale.

## 3.5 Derived units of electromechanical quantities

| | | | | | | |
|---|---|---|---|---|---|---|
| Derived unit of electrical quantity | $(\mathrm{C}_u$ | $=$ | $\sqrt{\mathrm{J}_u\mathrm{s}_u\Omega_n^{-1}}$ | $=$ | 28.8965943mC | ) |
| Derived unit of electrical current | $(\mathrm{A}_u$ | $=$ | $\sqrt{\mathrm{J}_u\mathrm{s}_u^{-1}\Omega_n^{-1}}$ | $=$ | 74.0430416mA | ) |
| Derived unit of field strength | $(\mathrm{O}_u$ | $=$ | $\mathrm{A}_u/\mathrm{m}_u$ | $=$ | $272.114137\mathrm{mA}/\mathrm{m}$ | ) |
| Derived unit of flux density | $(\mathrm{G}_u$ | $=$ | $\mathrm{C}_u/\mathrm{m}_u^2$ | $=$ | $390.283662\mathrm{mC}/\mathrm{m}^2$ | ) |

Derived units that have no characteristic symbol (examples)