New representation method of three physical equations

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Abstract: The new explanation of electronic stationary quality and basic charges, then Schrödinger equation, Einstein equation, and black radiation formula will have a new representation method.

Key words: Schrödinger equation, Einstein equation, black body radiation formula.

About a year ago, I think this may be the most basic physical equality, that is,

$$\begin{cases} \dfrac{(m_e)(R_\infty)(G_N)}{(a_0)} = 2\pi(m_e)[\alpha_o](c) \ , \\ \dfrac{(e_o)(R_\infty)}{4\pi(\varepsilon_0)(a_0)} = (c) \ , \\ \dfrac{1}{2}(m_e)[\alpha_o]^2(c)^2 = \dfrac{(m_{atom})(c)^2}{2\pi(R_\infty)} \ , \end{cases}$$

Maybe you have to add these, that is,

$$\begin{cases} \dfrac{(e_o)^2(R_\infty)}{4\pi(\varepsilon_0)(a_0)} = \dfrac{(m_e)(R_\infty)(G_N)}{(K_B)} \ , \\ 2\pi(\mu_B)(m_e) = (m_e)(R_\infty)^2(G_N) * (m_e)(R_\infty)^2(G_N) \ , \end{cases}$$

Don't doubt the formula of my copy book, there is no such thing in the book, and don't look at it because the dimension is not right, let's assume that they are right, then see what it can be derived, don't say anything The value is equipped, because it is self-contained in the existing physical system, if you don't have a curiosity, physical is not suitable for you, go to sell bakes.Then, I have recently found that there may be the most essential physical equation because it can be represented by the least physical constant, that is,

$$\begin{cases} \dfrac{(m_{atom})(c)^2}{(r_{atom})} = \dfrac{[\alpha_o](c)(r_e)(2\pi)^4}{(a_0)} \ , \\ \dfrac{(e_o)}{2(r_{atom})} = (R_\infty)^3(a_0)^3(2)^3(2\pi)^6 \ , \\ \dfrac{(m_e)[\alpha_o]^2(c)^2}{2(r_e)} = (c)2(r_{atom})(2\pi)^4 \ , \end{cases}$$

Some people may say, although it looks beautiful, the dimension is not right. However, it is right, we take the exchange rate as an example, then the distance radius and time here are gold in exchange rates, they are general equivalents in physics, you are not right, just because you will not convert exchange rates.

If you still don't believe, I bring the above physical exchange rate into the equation so you can understand the meaning of physical equations.

First of all, let's make examples of Schrödinger square, that is,

$$\frac{-(\hbar)^2}{2(m_x)}\nabla^2\Psi + U\Psi = E\Psi, \qquad i(\hbar)\frac{\partial}{\partial t}|\psi>= \hat{H}|\psi>,$$

So now they can be equal,

$$\frac{(\mu_B)(m_e)}{4\pi(R_\infty)^2(m_x)}\nabla^2\Psi + U\Psi = E\Psi, \qquad (m_e)(R_\infty)(G_N)\frac{\partial}{\partial t}|\psi>= -2\pi i\hat{H}|\psi>,$$

Then, Einstein equations and black-body radiation formulas can then be connected together.

Einstein equation is, $(G_{đb}) = (\check{R}_{đb}) - \frac{1}{2}(g_{đb})(\check{R}) = \frac{8\pi(G_N)}{(c)^4}(\check{T}_{đb})$,

The Black-body radiation formula is, $I_\nu(\nu,T) = \frac{2(h)(\nu)^3}{(c)^2\left(e^{\frac{(h)(\nu)}{(T)(K_B)}}-1\right)}$, $\upsilon_\nu(\nu,T) =$

$$\frac{8\pi(h)(\nu)^3}{(c)^3\left(e^{\frac{(h)(\nu)}{(T)(K_B)}}-1\right)} = \frac{8\pi(G_N)(R_\infty)(m_e)(\nu)^3}{(c)^3\left(e^{\frac{(e_o)(c)(\nu)}{(T)}}-1\right)} = \frac{8\pi(G_N)(R_\infty)(m_e)(\nu)^3}{(c)^3\left(e^{\frac{(R_\infty)(m_e)[\alpha_o]^2(c)^2(\nu)}{(T)}}-1\right)}.$$

So, they link together, there can be, $\Longrightarrow \left\{\frac{(R_\infty)(m_e)(\nu)^3(c)^4}{(c)^3\left(e^{\frac{(R_\infty)(m_e)[\alpha_o]^2(c)^2(\nu)}{(T)}}-1\right)}\right\}(G_{đb}) =$

$$\left\{\frac{(e_o)(c)^2(\nu)^3}{[\alpha_o]^2(c)^2\left(e^{\frac{(R_\infty)(m_e)[\alpha_o]^2(c)^2(\nu)}{(T)}}-1\right)}\right\}(G_{đb}) = \left\{\frac{(e_o)(c)^2(\nu)^3}{[\alpha_o]^2(c)^2\left(e^{\frac{(R_\infty)(m_e)[\alpha_o]^2(c)^2(\nu)}{(T)}}-1\right)}\right\}\{(\check{R}_{đb}) - \frac{1}{2}(g_{đb})(\check{R})\} = \{\upsilon_\nu(\nu,T)\}(\check{T}_{đb}).$$

Finally, let's talk about basic charges, if, $Q = \int\frac{d^3p}{(2\pi)^3}\Sigma_s\left(a_p^{s\dagger}a_p^s - b_p^{s\dagger}b_p^s\right) = (e_o)$,

So, according to the above statement, you can have, $\Longrightarrow \frac{(m_{atom})(G_N)}{(a_0)^2} =$ $\int d^3p\,\Sigma_s\left(a_p^{s\dagger}a_p^s - b_p^{s\dagger}b_p^s\right)$, or, $\Longrightarrow (R_\infty)^3(a_0)^3(2)^3(2\pi)^9 = \int\frac{d^3p}{2(r_{atom})}\Sigma_s\left(a_p^{s\dagger}a_p^s - b_p^{s\dagger}b_p^s\right)$.

Where (c) is the Speed of light, (e_o) is the Elementary charge, $[\alpha_o]$ is the Fine structure constant, (R_∞) is the Rydberg constant, (a_o) is the Bohr radius, (m_{atom}) is the Basic atomic mass, (m_e) is the Electron rest mass, (G_N) is the Gravitational constant, (r_e) is the Radius of electron, (r_{am}) is the Radius of proton.

Reference: 1, https://doi.org/10.5281/zenodo.4779601,
2, https://doi.org/10.5281/zenodo.5059941,
3, https://doi.org/10.5281/zenodo.4518870.