WHY THE PLANCK CHARGE IS APPROXIMATELY 11 TIMES THE ELECTRON CHARGE

ABSTRACT

The Planck charge, q_p, and the electron charge, e, can each be quantized based on *$m_{electron}$ = 1, on the deBroglie wavelength of the electron (*=$\lambda_{electron}$ = h/ $m_{electtron}$c) = -1 and on $t_{electron}$ (=$\lambda_{e;lectron}$/c) = $\sqrt{-1}$. When we do this, we see that e^2 equals a bit more than 1/1000 pure number. $2\pi e^2$ thus equals about 7/1000, which equals approximately 1/137. Therefore, the inverse of $2\pi e^2$ = approximately 137, so $(1/2\pi e^2)^{1/2}$ = approximately 11. Now $q_p = [(1/2\pi e^2)(hc)]e$, but similar quantization of hc yields a product of $(-\sqrt{-1})(\sqrt{-1}) = 1$. Therefore, $q_p = [(1/2\pi e^2)^{1/2}(hc)]e = (1/2\pi e^2)^{1/2}e$ = approximately 11 times the electron charge.

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The Planck charge, q_p, is defined as the inverse of the fine-structure constant, square-rooted, times the electron charge, e. I.e., $q_p = 1/(e^2/\text{h-bar } c)^{1/2}e$. Manipulating this, we obtain $q_p = 1/(2\pi e^2/hc)^{1/2} = (hc/2\pi e^2)^{1/2}$. If we set the electron mass to 1, the deBroglie wavelength of the electron (=$\lambda_{electron}$ = h/$m_{electron}$c) to -1, and the time it takes for light to travel $\lambda_{electron}$(= $t_{electron}$ = $\lambda_{electron}$/c) to $\sqrt{-1}$, we obtain imaginary values for h and c as follows:

$c = \lambda_{electron}/t_{electron} = -1/\sqrt{-1} = \sqrt{-1} = t_{electron} = \sqrt{-1}$; and

$h = (m_{electron})(c)(\lambda_{electron}) = (1)(t_{electron})(-1) = -t_{electron} = -\sqrt{-1}$.

Then $(hc/2\pi e^2)^{1/2} = [(-\sqrt{-1})(\sqrt{-1})/ (2\pi e^2)]^{1/2}e = (1/2\pi e^2)^{1/2}e$, and hc vanishes. Next, we quantize e^2 based on the same $m_{electron}$= 1, $\lambda_{electron} = -1$, and $t_{electron} = \sqrt{-1}$. In so doing, $m_{electron}$ = .9109382 X 10^{-27}gm = 1 $\rightarrow$gm = 1.0977693 X 10^{27};

$\lambda_{electron}$ = 2.4263102 X 10^{-10}cm = $-1\rightarrow$cm = -4.1214845 X 10^9;

And = $t_{electron}$ = .8093299 X 10^{-20} sec = $m_{electron}$ $\sqrt{-1}\rightarrow$sec=1.23559 X 10^{20} $t_{electron}$.

Therefore, e^2 = (4.803 X 10^{-10}gm$^{1/2}$cm$^{1\ 1;2}$/sec)$^{2\ =}$

2.3068809 X 10^{-19}gmcm^3/sec^2 =

(2.3068809 X 10^{-19})(1.0977693 X 10^{27})(-4.1214845 X10^{9-})^3/(1.23559 X 10^{20} $t_{e;lectron}$)^2

(Note: $t_{e;lectron}^2$ = –1, cancelling out.) =

1.1613108 x 10^{-3} pure number - - a little more

than 1/1000 =

2(3.1415927)(1.1613108 X 10^{-3}) = 7.296731 x 10^{-3}

=1/(1000/7.296731) = 1/137.04767. Then

=$1/2\pi e^2$ = 137.04767, so $q_p = (1/2\pi e^2)^{1/2}e$

=$(137.04767)^{1/2}e$ = 11.706736e. And that's why the Planck charge is approximately 11 times the electron charge.

If you have any questions or wish to comment, respond in the Disqus comment section on the Abstract page, or send me a personal email at spqrwin@outlook.com.