Expressions For The Fine Structure Constant and Boltzman's Constant

As I have shown previously in [1], the **electron mass** may be expressed in Mev/c^2 as follows:

$$m_e = \frac{1}{10}\left[\left(\frac{15}{8}\right) + \frac{486}{25}\left(\frac{1}{4000}\right)\right]e \quad , \text{ (where: } e \text{ is the base of the natural logarithm)}$$

$$= 0.510998927804702077614439000 5897$$

The currently accepted experimental value[2]:

$$0.510998928(11)$$

Perhaps it seem unusual that such an expression may show up for a quantity in Mev/c^2 units. On the other hand, any equivalent measure of units differs merely by a conversion factor. Apparently Mev/c^2 was a fortuitous choice for mass/energy.

Similarly, other fundamental constants may be expressed in terms of a small number of notable irrational numbers and integers.

Boltzman's Constant may be expressed in $\mu eV/K$ ($\mu eV = 10^{-6} eV$) as follows:

$$k = 10\left[e + \frac{494}{5}\left(\frac{1}{4000}\right)\right]\pi \quad , \text{ (where: } e \text{ is the base of the natural logarithm)}$$

$$= 8.617331561217234958453578161 1136$$

The currently accepted experimental value[2]:

$$8.6173324(78)$$

An interesting similarity in form to the above expression for m_e .

the **fine structure constant** may be expressed as follows:

$$1/\alpha = \left(\frac{126 - \frac{3}{200}}{1 - \frac{5}{2\pi^3}}\right) + \left(\frac{1}{10}\left[\frac{1}{2} - \left(\frac{1}{5}\right)^2\right]\right)^2 + \left[\frac{1}{2}\left(\frac{1}{5}\right)^4\right]^2$$

$$= 137.035999085516463082556738759 96$$

The currently accepted experimental value[2]:

$$137.035999074(44)$$

References

[1] Cassano, Claude.Michael ; "All Fermion Masses and Charges Are Determined By Two Calculated Numbers", http://vixra.org/abs/1311.0182

[2] ”Fundamental Physical Constants — Complete Listing”, http://physics.nist.gov/cuu/Constants/Table/allascii.txt

http://www.amazon.com/Claude-Michael-Cassano/e/B008MD6CVS/ref=ntt_athr_dp_pel_1

http://www.barnesandnoble.com/s/claude-michael-cassano?keyword=claude+michael+cassano&store=allproducts