Utilizing the Speed of Light (c) Value as the Ratio of the Reduced Planck Constant, h-bar (ħ), Divided by the Product of the Planck Mass (mp) and the Planck Length (lp)

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$$c = \frac{\hbar}{mp * lp}$$

(Note: Twelve digit calculation required)

where: $\hbar$ = 1.05457162017 x10^{-34} J s (reduced Planck constant (h/2π))

m_p = 2.17653297327 x10^{-8} kg (Planck mass)

l_p = 1.61618148047 x10^{-35} m (Planck length)

c = 299792458 (speed of light in vacuum)

(within 2006 Nist CODATA uncertainty limits)

Absract

The speed of light (exact value) equation as a mechanism to improve the lesser known values of the Planck mass and Planck length.

Discussion

To the best of my knowledge, there is no known equation or relationships of constants that produce the numerical value that is the exact value of the speed of light, and enhance lesser known constants values.

At times a ground breaking paper will elucidate errors in a contemporary theory. It is the contention of the author, that there are errors in some of the 2010 and 2014 CODATA uncertainty limits. The 2006 CODATA values are correct within their respective uncertainty limits. A letter sent to the National Institute of Standards and Technology, below.

NIST Letter

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Director et al,

Please be advised, that after careful review of the 2010 CODATA values, gross inaccuracies have been found in a number of the fundamental constants values. The most egregious being the fine structure constant. Consequently, the constants dependent upon the fine structure constant value have been adversely affected.

The 2006 CODATA values are correct within their respective standard uncertainty.

adversely affected constants (2010) (partial list)

	2010	U-t calculations	2006
Fine structure:	$7.2973525698(24) \times 10^{-3}$	$7.2973525415 \times 10^{-3}$	$7.2973525376(50) \times 10^{-3}$
Elementary charge:	$1.602176565(35) \times 10^{-19}$	$1.602176511 \times 10^{-19}$	$1.602176487(40) \times 10^{-19}$ C
Planck, h:	$6.62606957(29) \times 10^{-34}$	$6.626068909 \times 10^{-34}$	$6.62606896(33) \times 10^{-34}$ J s
Hartree energy:	$4.35974434(19) \times 10^{-18}$	$4.359743906 \times 10^{-18}$	$4.35974394(22) \times 10^{-18}$ J
Bohr radius:	$0.52917721092(17) \times 10^{-10}$	$0.529177208871 \times 10^{-10}$	$0.52917720859(36) \times 10^{-10}$ m
Bohr Magneton:	$927.400968(20) \times 10^{-26}$	$927.4009296353 \times 10^{-26}$	$927.400915(23) \times 10^{-26}$ J T^{-1}
Compton wave l:	$2.4263102389(16) \times 10^{-12}$	$2.4263102201275 \times 10^{-12}$	$2.4263102175(33) \times 10^{-12}$ m

correct approximations (2010)

	2010	U-t calculations	2006
Planck length:	$1.616199(97) \times 10^{-35}$	$1.6161814804\overline{7550} \times 10^{-35}$	$1.616252(81) \times 10^{-35}$ m
Rydberg:	$10973731.568539(55)$	$10973731.5685479918\overline{130}$	$10973731.568527(73)$ m^{-1}
Gravitation:	$6.67384(80) \times 10^{-11}$	$6.6736938662948 \times 10^{-11}$	$6.67428(67) \times 10^{-11}$ m^3 kg^{-1} s^{-2}
Planck mass:	$2.17651(13) \times 10^{-8}$	$2.1765329732787 \times 10^{-8}$	$2.17644(11) \times 10^{-8}$ kg
Planck time:	$5.39106(32) \times 10^{-44}$	$5.3910011321082 \ 10^{-44}$	$5.39124(27) \times 10^{-44}$ s

(Please note: the bar above the last digit of the Planck length and Rydberg constants represent rational, terminating decimals, via U-theory calculations)

Thank You,

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Conclusion

If the math works, an investigation is warranted.

References

The National Institute of Standards and Technology, 2006 CODATA values
The National Institute of Standards and Technology, 2010 CODATA values
The National Institute of Standards and Technology, 2014 CODATA values
Vito R. D'Angelo, High Energy Particle Physics, Vixra: 1505.0090