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Derivation and Inter-relationship of Planck time, the Hubble constant, and Cosmic Microwave Background Radiation from the Neutron and the Quantum Properties of Hydrogen D. W. CHAKERES, Department of Radiology, The Ohio State University, Columbus, OH, 43210, R. VENTO, Retired, S. S. MOSES, J. B. SAUZA, V. M. ANDRIANARIJAONA, Department of Physics, Pacific Union College, Angwin, CA, 94508 — Planck time, t_P, is presently the only fundamental constant that unites the physical domains of c, h, and G, and is therefore a globally defined normalized time constant. This study shows a method to derive t_P, H_0, G, and the Cosmic Microwave Background Radiation (CMBR) peak spectral radiance from the frequency equivalents of the neutron and the quantum properties of hydrogen such as Rydberg's constant, Bohr radius, electron mass and electron charge. All of the derivations are within the experimental ranges, including errors. Moreover, these results exceed what is experimentally possible because the natural unit data are of high precision. The constants are evaluated within a combined classic integer and harmonic fraction, power law relationship. The logarithmic base of the annihilation frequency of the neutron, approximately $2.27\ 10^{23}$ Hz, scales the independent axis to an integer and partial harmonic fraction system. The dependent axis is scaled by the properties of hydrogen. On the line that defines Planck time squared, t_P^2, there exist unique points directly related to H_0, and the CMBR. Therefore these three fundamental cosmic constants are mathematically and conceptually closely inter-related, and each derivable from the others.

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