Cosmo-logical origin of electromagnetic and strong interactions

U. V. S. Seshavatharam
Honorary faculty, I-SERVE
Alakapuri, Hyderabad-35, India
e-mail: gews4u@gmail.com

Prof. S. Lakshminarayana
Dept. of Nuclear Physics, Andhra University
Visakhapatnam-03, India
e-mail: lnsrirama@yahoo.com

January 25, 2012

Abstract: If mass of the present universe is, $M_0 \cong \frac{c^3}{2GH_0} \cong 9 \times 10^{52}$ Kg and (m_e & m_p) represents the rest masses of electron and proton, it is noticed that $\hbar \cong \frac{Gm_p\sqrt{M_0 m_e}}{c}$. Considering the integral nature of number of protons in the nucleus, integral nature of $\hbar$ can be understood. With reference to the classical force limt $\frac{c^4}{G}$, minimum distance between (point electron) and (point universe) is $d_e \cong \frac{G\sqrt{M_0 m_e}}{c^2} \cong 0.213$ fm. Similarly minimum distance between (point proton) and (point universe) is $d_p \cong \frac{G\sqrt{M_0 m_p}}{c^2} \cong 9.11$ fm. Geometric mean of d_e and d_p is 1.39 fm.

Keywords: Hubble's constant; present universe mass, electron rest mass; proton rest mass; reduced planck's constant; classical force limit; strong interaction range;