Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Linking Inverse Square Law with Quantum Mechanical Probabilities SHANTILAL GORADIA, Gravity Research Institute, Inc. — (©2007 by S Goradia) I modify the Newtonian inverse square law with a postulate that the probability of interaction between two elementary particles varies inversely as the statistical number of Planck lengths separating them. For two nucleons a million Planck lengths apart, the probability of an interaction is a trillionth (almost never), seemingly contradicting gravity. Likewise, statistical expression of the size of the universe implicitly addresses the issue of dark energy by linking fine-structure constant $\alpha = 1/137$ with the cosmological constant $\lambda = 1/R^2$ (abstract submitted 11/11/07 for APS APR2008 meeting). Since light travels one Planck length per Planck time, the radius R of the spherical shape of the universe is 10^{60} Planck lengths, linking the cosmological constant $\lambda = 1/10^{120}$ (see equation 14 in Einstein's 1917 paper) with α by the relationship $1/\alpha \approx ln\sqrt{}(1/\ \lambda)$. Intuitive answers to the questions raised suggest that the elementary particles interact via Planck scale mouths [(1),] with higher probabilities at smaller distances. This intuition may be supported by genetics, explaining issues such DNA – nucleosome interaction [(2)(3)]. [1] http://www.arxiv.org/pdf/physics/0210040 [v. 3] [2] www.gravityresearchinstitute.org [3] Segal E. *et al*, A genomic code for nucleosome positioning. *Nature* 442, pp. 772-778, 2006.

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Date submitted: 02 Dec 2007 Electronic form version 1.4