

## An Explanation for the Relative Strengths of 'Gravitational' And 'Electric' Forces Suggesting Equality of the 'Electrostatic'-potential-energy', 'Gravitational-potential-energy' and 'Energy of Mass' of the Universe

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*ABSTRACT* : Based on previous works of P.A.M. Dirac<sup>1,2</sup>, Eddington<sup>3,4,5</sup>, Dicke<sup>6,7,8</sup>, Hayakawa<sup>9,10</sup>, Carter<sup>11</sup> and Adair<sup>12</sup>, this paper presents an explanation for the relative strengths of 'gravitational' and 'electric' forces, and leads to an interesting conclusion that (i) the electrostatic-potential-energy stored between the protons and electrons in the atoms, in the whole universe is equal to (ii) the gravitational potential-energy of the whole universe, is equal to (iii) the energy of mass of the universe. This attempt also leads to an explanation for the cosmological red-shift.

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*Key words* : **Electromagnetic force, Gravitational force, Force-ratio, Cosmological red-shift**

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