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Region of dark matter present in the hydrogen atom

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This paper discusses ultra-low energy levels of the hydrogen atom which was not predictable with quantum mechanics. The author has derived the following relationship for a bound electron in a hydrogen atom, which must take into account the Coulomb potential: $E^2re.n + p^2n\,c^2 = m\ e\ c^2$ Here, is the relativistic energy of the electron, also is the rest mass energy. This paper theoretically predicts that if the energy level of the hydrogen atom is expressed relativistically as $Ere.n = meC^2 - \alpha^2\ me\ c^2/2n^2$ then the relativistic energy levels exists in the hydrogen atom. There is a negative relativistic energy solution, just like the Einstein's energy-momentum relationship which holds in free space. An electron at the negative relativistic energy levels exists near the atomic nucleus (proton). Under the classical description, the radius of this undiscovered hydrogen atom is extremely small. The radius is about 1.331×10^{-5} the radius of an ordinary hydrogen atom in the 1s state. An electron at the negative energy levels exists near the atomic nucleus. Also $(r^-_1 - r_e/4)(r_e/4)^{-1} = r^-_1/r^+_1 = 1.33124X10^{-5}$ Here, is the proton radius. Triplet production is an experiment which strongly supports the existence of an electron at this extremely low energy levels. (However, an interpretation different from the conventional interpretation is needed in order to regard triplet production as evidence for the prediction in this paper.) The matter formed from a proton with positive mass, and an electron with negative mass that orbits near that proton, is smaller than an ordinary hydrogen atom to an extreme degree. When this unknown matter gathers in large amounts, it becomes a huge mass. This paper identifies such matter as the true nature of dark matter, the mysterious matter that physicists are currently searching for.

Biography

Koshun Suto majored in chemistry and Buddhist studies. He uses his leisure time to study physics. Previously he derived an energy-momentum relationship for a bound electron in a hydrogen atom, solving the relationship; we can see that an electron with negative energy (mass) exists. He represented himself as a candidate for dark matter.

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