

# Self- quantization of the extended electron reveals the minimal closed path - electric analog of the Compton length

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The continuously distributed electron should replace in principle the point charge in the Bohr-Sommerfeld quantization rule. On the other side, General Relativity requests 4D space-time generalization of Feynman path integrals for instantaneous quantization over closed line counters instead of the semi-classical rule in 3D space only. By taking the continuous electron in energy density terms of Maxwell electrodynamics, one can derive electrons self-flux quantization with vanishing metric contributions in any gravitational fields. The fundamental analog of the Compton length,  $2,4 \times 10^{-12}$  m, appears for relativistic path self-quantization of electric charges as the minimal loop length,  $5,9 \times 10^{-34}$  m. Based on Journ. Supercond. and Novel Magnetism 2009, v.22, pp. 627-629, pp.723-727.