Abstract Submitted
for the APR15 Meeting of
The American Physical Society

The Electron is a Charged Photon RICHARD GAUTHIER[1], Santa Rosa Junior College — The Dirac equation's relativistic electron is modeled as a helically-circulating charged photon whose helical radius at low electron speeds is the Dirac equation's electron amplitude $hbar/2mc$. The helically-circulating charged photon's longitudinal or z-component of velocity equals the velocity of the electron. The electron's relativistic energy-momentum equation $E^2 = p^2c^2 + m^2c^4$ corresponds the helically-circulating charged photon's energy $E = \gamma mc^2 = h\nu$ with the charged photon's total momentum $p_{total} = \gamma mc$, its longitudinal momentum component $p = \gamma mv$ (the electron's linear momentum) and its transverse momentum component $p_{trans} = mc$. The charged photon's circulating transverse momentum component $p_{trans} = mc$, acting at the charged photon's helical radius $hbar/2mc$, generates the spin-up and spin-down z-components $\pm hbar/2$ of a slowly-moving electron's spin. The relativistic de Broglie wavelength $h/\gamma mv$ of the electron is easily calculated from the longitudinal component of the circulating charged-photon's wave vector $\vec{k}$.

[1]www.superluminalquantum.org

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Date submitted: 29 Dec 2014 Electronic form version 1.4