Incorporation of the Golden Ratio Phi into the Schrodinger Wave Function using the Phi Recursive Heterodyning Set

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Abstract

Part I:

The Golden Ratio Phi (Φ), 1.618033… is a ubiquitous number in nature that is omnipresent in Biology: (phyllotaxis of plants and DNA); The Universe: the spiral structure of galaxies and in Physics with regards to the gfactor of the electron, proton and neutron. All of these particles are the chief constituents of matter on earth and in the Universe and have recently been found to be connected with or have a relationship with Phi. This paper will present evidence that The Golden Ratio Phi is intimately related to quantum properties as will be proven through the derivation of the wave-function using the Schrodinger Wave Equation and by the use of the heterodyning set of wavelengths. The basic premise of this argument is that a single wavelength of electromagnetic radiation is actually an infinitely recursive summation of wavelengths that are directly connected to, or a result of, the number Phi. This view supports the "so-called" Many Worlds Interpretation (MWI) of Quantum Mechanics as opposed to the older Copenhagen Interpretation or the collapse of the wave-function upon observation. In this paper, it will be shown that the solution to the Time-Independent Schrodinger Wave Equation is related to a pre-exponential factor based on the four basic constants (e, π, 2 and Φ) multiplied by a wave-function dependent only on its spatial coordinates. Solutions and formalisms to these wave-functions will be shown in both one-dimensional and three-dimensional Cartesian Coordinates as well as in Spherical Coordinates.

Part II:

The use of the Cauchy Surface Integral as a Contour around an Isolated Singularity (Black Hole) and the Theorem of Residues and its Superluminal Implications involving the Transportation of High energy Particles through an elastic Wormhole

Through the use of the above derived Phi-based solutions to the Schrodinger Wave Equation, it will be demonstrated that the diameter of the wormhole inside of a black hole is elastic in nature and adjusts its diameter in accordance only with the mass and the wavelength of the gravitating particle (i.e., electron, positron, muon, neutrino, etc.).

Additionally, it will be proven that the subatomic particle is "squeezed" through the wormhole at superluminal speeds and also that the speed at which the particle is squeezed through the wormhole to a parallel universe is completely independent of time and is solely dependent on the wavelength and mass of the particle. Also, it will be shown that the diameter of the wormhole adjusts itself to the energy of the particle entering the wormhole. The larger the energy of the particle, the smaller the diameter of the wormhole and vice-versa, the lower the energy of the particle, the wider is the diameter of the wormhole. This behavior is consistent with the curvature of space-time of highly massive black holes since there appears to be an energy absorptive interaction between the energy of the incoming particle and the diameter (and mass) of the wormhole which may be considered to increase in mass with increasing energy and thus the space-time curvature for higher energy particles entering into the wormholes causes a stronger distortion of the space-time curvature around the wormhole.