

Critical notes on Milo Wolff's spherical standing wave theory of matter.

Milo Wolff's spherical standing wave theory of matter. His web page:

<http://www.quantummatter.com/>

The following website promotes the spherical standing wave theory.

<http://www.spaceandmotion.com/Physics-Quantum-Theory-Mechanics.htm>

the spaceandmotion site states:

“Erwin Schrodinger apparently was not happy with Max Born's statistical / probability interpretation of waves that became commonly accepted in Quantum Theory. He believed waves were real, and the “particles” in wave-particle duality were merely an artifact.”

Comment:

This seems to be supported by a reference from Schrodinger in

<http://www.spaceandmotion.com/Physics-Quantum-Theory-Mechanics.htm>

“He discovered that standing waves are scalar waves rather than vector electromagnetic waves.”

“de Broglie introduced the concept of standing waves to explain the discrete energy states of atoms and molecules.”

Comments:

Considering the following web sites:

http://en.wikipedia.org/wiki/Schr%C3%B6dinger_equation

http://en.wikipedia.org/wiki/Standing_wave

http://en.wikipedia.org/wiki/Wave_equation

<http://www.dartmouth.edu/~genchem/0102/spring/6winn/BohrWaves.html>

We can conclude that standing waves can either be scalar, (the simplest case), or transverse.

de Broglie's and Schrodinger's time independent equations describe standing wave solutions of the time-dependent equations, which represent states with definite energy. These standing waves are transverse, not spherical, as shown in the Dartmouth general chemistry web site illustration.

“... [Milo Wolff] ... was aware of Feynman's conception of charged particles which 'somehow' generated Spherical Electromagnetic In and Out Waves (Feynman called them advanced and retarded waves),

Comment:

The discussion refers to the Feynman-Wheeler Absorber model. Although the wave equation for scalar potential is symmetric with respect to both time and space, the use of

“advanced” and “retarded” for space as well as time may be correct, but both time and position must be involved. Further, the FW Absorber model itself “runs into trouble when one tries to combine electromagnetism with quantum mechanics.” It may not be correct.
<http://farside.ph.utexas.edu/teaching/em/lectures/node51.html>

but Wolff realized that there are no solutions for spherical vector electromagnetic waves (which are mathematical waves which require both a quantity of force and a direction of force, i.e. vector). Wolff had the foresight to try using real waves, which are Scalar (defined by their Wave-Amplitude only). And this then led to a series of remarkable discoveries.”

“He realized that spherical In and Out-Waves removed the need for a separate particle, as the Wave-Center of the Spherical Waves created the particle effect. He then discovered that when one spherical standing wave was moving relative to another the Doppler shifts gave rise to BOTH the de Broglie Wavelength AND the Mass increase of Albert Einstein's Relativity. (i.e. Wolff demonstrated that when two charged particles (Wave-Centers of two SSWs) are moving relative to one another they give rise to beats of interference (caused by the Doppler shifting of the In and Out Waves due to relative Motion) which were identified in experiments as the de Broglie wavelength $\lambda = h/mv$, and also gave rise to the frequency increases and thus energy/mass increases (as $E = hf = mc^2$) of Special Relativity.”

<http://www.spaceandmotion.com/Physics-Quantum-Theory-Mechanics.htm>

Comments:

Physics forum comments on the work of Milo Wolff do not take his work very seriously:

<http://www.physicsforums.com/showthread.php?t=229096>

<http://www.physicsforums.com/showthread.php?s=999eae364c10fd43575d46711c995399&t=71666>

the physics forum thread above notes that “The Physics of Bruce Harvey” also seems to suggest that particles are really a wave phenomena. However, Harvey does not mention spherical standing waves:

<http://users.powernet.co.uk/bearsoft/> ; <http://www.bearsoft.co.uk/>