singlephotonDSexp.doc 10/10/11

The Single Photon Version of the Double Slit Experiment: *Explanation 1*

I always considered the version of the Double Slit Experiment using electrons as much the more difficult problem to solve in this series of seemingly "similar" experiments, for in it the Copenhageners have a single electron passing through both slits simultaneously, and then interfering with itself on the other side.

This was clearly ridiculous, so that is what I addressed and "seemingly solved", though as with all theories, I did not expect what I produced to be the last word by any means.

The basis for a solution in that former case was spelled out in *The Theory of The Double Slit* published as a Special by **SHAPE** *Journal*, and used the concept of Empty Photons, which were conceived of as delivering a "paving" the Space traversed in the case that was tackled.

Much further research has since been carried out, mostly into the Early History of the Universe, and that has resulted in both Ordinary Photons (both moving and carrying energy), and Stationary Empty Photons – these being very different and indeed very old, and a leftover from the Big Bang.

But clearly, the more usual and universally accepted forms have both a contained energetic content, *and crucially*, a Speed and a Direction.

Indeed, the advances made in this fuller version of the Theory followed study based upon *Bow Waves, Side Waves and Wakes* caused by moving boats in water.

From that work, it became clear that you had to consider **energy**, not only as contained in quanta, but also as transitory quanta propagated via Empty Photons, and finally by the very different kind of energy associated with *full-entity* oscillations (as distinct from contained oscillations), and finally, even the Kinetic Energy associated with translational movements.

The solution was arrived at by considering the *ploughing through* of a space, paved with Empty Photons, by a **moving**, and *filled* ordinary Photon.

Clearly, the latter (using its "energy of movement") could elicit resonant E-M oscillations in the Empty Photon paving, and thus an **accompanying propagation**, and this could pass through **both** Slits, and interfere on the other side.

The Theory is too involved (and too unfinished) to deliver in full here, but it is based upon moving Photons possessing momentum and direction as well as the "energy of movement" and its *contained* E-M energy of oscillation.

One final point – it turns out that the Photon is NOT what it seems, but, by this new theory, is a mutually orbiting electron/positron pair, which has NO apparent matter and a zero resultant charge.

To get the full story you will have to wait for it to be published on **SHAPE** *Journal*.

An interesting Cosmological Issue of SHAPE is due for release very soon, which will address some of the ideas involved, and which have dramatic effects on the interpretation of what we think we see in the Heavens.

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