

Re: Photons shapeshifting to wave prior to measurement

Source: <http://sci.tech-archive.net/Archive/sci.physics/2005-03/14031.html>

From: RP (*no_mail_no_spam_at_yahoo.com*)

Date: 03/28/05

Date: Sun, 27 Mar 2005 20:41:05 -0600

Jack wrote:

> *RP wrote:*

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>>*It's classical wave interference, by the book. The fringes are caused*

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>

>>*by constructive and destructive interference as the wavelets that*

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> *have*

>

>>*traveled different distances to points on the target. The notion that*

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>

>>*a single photon at a time sent through the slits produces the same*

>>*pattern, is first of all not realizable, since untold number of*

>>*photons are passing through those slits in any vanishingly small*

>>*interval. The reason that the same pattern emerges is that this wave*

>>*(photon), in combination with the ambient field, borrows energy from*

>>*that field as it catalyzes a transition between orbitals. The*

>>*probability of this event is higher at the bright bands because the*

>>*amplitude is greater there. The probability is itself that of the*

>

> *atom*

>

>>*to absorb energy, which of course is higher when the available energy*

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>

>>*is higher.*

>>

>>*Richard Perry*

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>

> *Uhm... how come if you put a detector at one of the slits that*

> *can determine its path. The interference pattern in the screen*

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> *disappears?*

The same will occur if the waves were of water or of air. You've absorbed the second component of the wave that would have propagated on to the target to interfere with the second. How can it do that if you've intercepted it?

> *Common belief says its because measurement*

> *collapse the wave function.*

There is no wave function in nature. Accountants pushing pencils never caused a sale.

> *So you believe the wave function*

> *is a misnomer? Pls. share a web site where everything you*

> *described is illustrated in more details.*

Just drink some classical wave mechanics, add a shot of Minkowskian SR, chase with a teaspoon of

<http://www.cswnet.com/~rper/Electromagnetism.pdf>

Richard Perry