

Re: Photons shapeshifting to wave prior to measurement

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- *From:* RP <no_mail_no_spam@xxxxxxxxxx>
 - *Date:* Wed, 30 Mar 2005 21:28:43 -0600
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bz wrote:

RP <no_mail_no_spam@xxxxxxxxxx> wrote in <news:3b0uh8F6a2ujuU1@individual.net>:

When the two slits are opened, the waves interfere constructively at the maximum, i.e. the amplitude is doubled. In wave mechanics however, a doubling of the amplitude means a quadrupling of the energy. Destructive interference is taking place at the minima. The count is thus directly proportional to the wave energy, exactly as I stated in an earlier post. To wit, "the probability of a transition is greater where the energy is greater."

count is count. The energy of each these photons is $h\nu$. Since they are from a laser, or a band pass filter, they are all the same energy.

If the beam is attenuated to drop the count rate in half, and the clock times are doubled, the counts do not change. If you change the frequency of the laser (and thus the wave length and energy) the counts don't change, the interference bands just shift (spacing between them changes).