

Re: Quantum entanglement and information transfer

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"Caroline Thompson" <ch.thompson1@virgin.net> wrote in message news:<[3KZJc.104\\$wq5.31@newsfe3-gui.ntli.net](mailto:3KZJc.104$wq5.31@newsfe3-gui.ntli.net)>...

[snip]

>There are some very neat sources of "photons" around these days
>that do seem to naturally support QM, but have they really proved
>that they were initially of random direction? It's not easy to tell the
>difference between a mixture of signals, some of one polarisation, some
>orthogonal, and a genuinely random set.

One can find a practical example here:

<http://xxx.lanl.gov/abs/quant-ph?0404115>

"We present an entangled-state quantum cryptography system that operated for the first time in a real world application scenario. The full key generation protocol was performed in real time between two distributed embedded hardware devices, which were connected by 1.45 km of optical fiber, installed for this experiment in the Vienna sewage system. The generated quantum key was immediately handed over and used by a secure communication application."