

Abstract Submitted  
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**Haunted Quantum Entanglement When the Entangled Entities Are Distant From Each Other And Where Only Photons Are The Entangled Entities** DOUGLAS SNYDER — Haunted quantum entanglement involves entanglement between 2 entities where entanglement is based on 1 entity supplying which-way information regarding the other. This ww information is lost before it is released to the environment with the result that the entanglement is also lost. The result of losing entanglement is Young interference as if ww information never existed (not fringes and anti-fringes as in a quantum eraser). In an earlier hqe scenario, ww information is eliminated at a distance between an entangled atom and photon. In the hqe scenario here, the entangled entities are both photons and ww information provided by one photon regarding the other is lost with the accompanying loss of entanglement between the two photons. The entangled photon pairs are created in a similar process to that used by Kim et al. in their quantum eraser. The photon carrying the ww information (i.e., the idler photon) is effectively lost through the release of classical em radiation of a similar character to the idler photon into a box that is evacuated (except for the idler photon that traverses the box initially on one of its two possible paths to a detector) before the signal photon reaches its detection axis. “Two slit” interference for the signal photon shows no evidence that ww information ever existed regarding the signal photon.

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