

Corrections to the text are suggested in bold:

“Effects without causes”.

Entangled particles are inextricably intertwined, so that making a measurement on one instantaneously affects its partner. In standard experiments, two entangled photons, A and B, follow different paths until they come to a beam splitter, which allows the photon to follow either a longer path or a shorter one to continue its journey (see Diagram). **One selects the cases in which A and B follow both the long path or both the short one. After reflection in the mirrors the photons A and B get back to the beam splitters, where there is a choice between two outputs. In every case, A and B make the same choice, proving they are entangled: either both go to the detector, or both go lost.**

A deterministic theory can explain the result if A hitting the beam splitter somehow affects the environment of B, encouraging B to take the corresponding **output** path - a straightforward causal link. To test this, the team exploited an effect of special relativity, which causes two events to appear to occur in a different order to different observers if those observers are moving relative to one another.

Graphic:

- One should simply write: **Photon lost** , and delete “if traveled up the short arm”
- Photon A (green) should enter the beam splitter through the other arm i.e. through the detector’s arm.