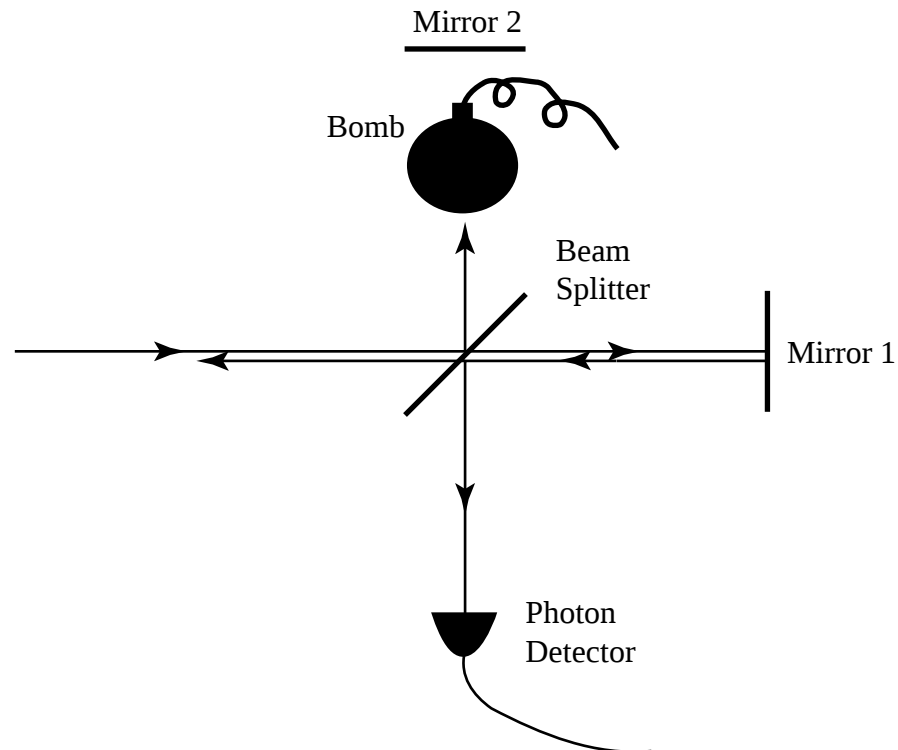


Quantum Seeing in the Dark



The interferometer is prepared, before the insertion of the light-sensitive bomb, to give perfect destructive interference at the photon detector. Placing the bomb in the path of the second mirror destroys the interference, and a photon can reflect from mirror 1 and reflect off the beam splitter into the detector. If the detector records the photon, it has succeeded in detecting the presence of the bomb without having the photon "touch" it.