

Abstract Submitted  
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**Complementarity explained by a rogue theory, promoted by a psychiatrist who is an APS member** JEFFREY BOYD, Retired — Complementarity can be explained by a rogue theory: Elementary Wave theory, which says particles follow zero energy waves backwards. Suspend your disbelief for a moment. In the double slit experiment waves emanate from every point of the target screen. The waves through the upper and lower slit interfere in proximity to the particle gun. If  $A$  is the amplitude at the gun of a wave through slit A,  $B$  is the amplitude of a wave through slit B, then the probability of a particle being triggered in response to an incident wave is proportional to  $(A + B)$  squared. The particle would follow that wave backwards with a probability of one and make a dot on the target screen at that location from which the wave originated. The target screen shows us a map of the interference located near the particle gun. If a detector is introduced, it emits a tiny amount of energy, which in turn changes the elementary wave so it is incapable of interacting with its mate: the wave through the other slit. There is no further constructive or destructive interference. They are two independent waves. The screen now shows us no interference near the gun.

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