

Reines and Cowan: Savannah River Neutrino Experiment **The mathematical proof of erroneous neutrino Physics and physicists**

By Professor Joe Nahhas 1980

joenahhas1958@yahoo.com

Abstract: the assumption that the free neutrino is detected at the Savannah River nuclear power plant experiment in 1953 and published in nature 1956 by Reines and Cowan and advertised by United Nations in 1958 is not only wrong but dead wrong. The claim of a second signal detection delayed 5 micro second after the pair annihilation indicating a neutron capture by Cadmium and proving the existence of the neutrino to support Wolfgang Pauli Neutrino theory and relativity theory is not justified. Here is why

Proof: The gate length is $T(0) = 25 \mu s$ (microseconds)

The Container that had Cadmium is basically Tri ethyl benzene mixed with water. The refractive index of water at 25°C is 1.333 ~ 4/3 and the refractive index of tri ethyl benzene is 1.44 with 5 to 1 ratio water to tri ethyl benzene which is a minor distraction to water refractive index.

Time delays are given by this formula:

$$T = T(0) \text{Exp} [-i \omega t] = T(0) [\cosine \omega t + i \text{sine } \omega t] = T(x) + i T(x)$$

$$= T(0) [1 - 2\text{sine}^2(\omega t/2) + i \text{sine } \omega t]$$

$$T(x) = T(0) [1 - 2\text{sine}^2(\omega t/2)]$$

Along the line of measurement: $\Delta T = T(x) - T(0)$

$$\Delta T = - 2 T(0) \text{sine}^2(\omega t/2) = - 2 T(0) \text{sine}^2 \{[\text{arc tan}(v/c)]/2\}; \omega t = \text{arc tan}(v/c)$$

$$\Delta T = - 2 T(0) \text{sine}^2 \{[\text{arc tan}(1/n)]/2\}; n v = c; n = \text{index of refraction}$$

$$\Delta T = - 2 \times 25 \text{sine}^2 \{[\text{arc tan}(\sim 3/4)]/2\} = 5 \mu s \text{ time delays}$$

The coincidence of Pair annihilation gammas and Neutron capture gammas is not justified

If all the mixture was Tri ethyl benzene because the literature says it is a mixture and it say it is tri ethyl benzene

$$\Delta T = - 2 \times 25 \{[\text{sine}^2 \text{arc tan}(1/1.44)]/2\} = 4.46575 \mu s \text{ time delays}$$

The delayed signal **within** the 5 μs intervals is not a sign of Neutrino capture but a flash of light caught traveled and delayed. Meaning it is the same gamma and not two different gammas. What Reines and Cowan did is measuring the same signal in a 25 micro second interval at the start they measured the signal and in that 25 micro seconds interval the signal had 5 micro seconds signal time delay that was measured as a second event. Reines

and Cowan claimed two signals the first event was the signal of pair annihilation and the second event is the neutron capture and releasing a second gamma ray when in fact looking at the same signal.

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