The neutrino is a taquion

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Abstract – There are a lot of proofs that the neutrino is a taquion, a particle that travels always faster than light speed constant. Because of that several physicists lost their jobs.

Here we present the case of the SN1987A supernova: the neutrinos came first than the visible light 4.7 hours (SI units).

Visible light:

$$f = 5\times10^{14}\,Hz....;.....w = \sqrt{c^2 - S_0 f^2} = c - \Delta w.....;.....S_0 = 9.5\times10^{-55}\,m^2$$

Speed difference:

$$\Delta c = \frac{c^2 \Delta t}{D} = \Delta v + \Delta w = 0.955\,m/s$$

$$\Delta t = 4.7h = 1.7\times10^4\,s.....;. ..... D = 1.68\times10^5\,LY = 1.6\times10^{21}\,m$$

$$\Delta w = \frac{S_0 f^2}{2c} = 4\times10^{-34}\,m/s$$

Neutrino speed:

$$v = c + \Delta v$$

$$\Delta v = \frac{c^5 {q_e}^2 S}{8{E_Y}^2} = 0.955 m/s.....\Leftrightarrow$$

Kinetic energy of the first neutrinos:

$$\Leftrightarrow ....E_Y = 1.25\times10^{-15}\,J = 7.8KeV$$

$$f - Light..frequency;..w - Light..speed;.c - Light..speed..constant;$$
$$S_0 - Saraiva..constant..in..extragallactic..vacuum;..\Delta t - Delay;..D - Distance;$$
$$q_e - Electron..charge;..S - Saraiva..constant..in..vacuum..at..earth..surface.$$

$$\frac{c^5 {q_e}^2 S}{8{E_Y}^2} = \frac{c^2 \Delta t}{D}$$

Our formulae can be used to measure the exact distance to a supernova if we know the delay and the kinetic energy of the neutrinos:

$$D = \frac{8.\Delta t.E_Y{}^2}{c^3 q_e{}^2 S} \ldots\ldots;\ldots\ldots S = \frac{h\alpha^3}{72.\varepsilon_0{}^3 c^3} = 1.9121\times 10^{-34} m^2$$

$$D = 6.05\times 10^{46}\,\Delta t.E_Y{}^2$$

h – Planck constant; $\alpha - Fine..structure..cons\tan t;..\varepsilon_0 - Vacuum..permittivity$;

If the minimum energy is E = 7.5 MeV:

D = 1.5x10^{27}m -- More than the radius of the visible universe.

Is it possible? We don't know but, we think that the kinetic energy raises from a lower value.