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PSICONS, IMAGINARY TACHYONS: AN INTRODUCTION – 1988

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Two basic types of three space dimensions tachyons may be distinguished: Feinberg (1967) and Goldoni (1972).

Both of them have real mass when in movement. In the case of tachyon-psi or psicons, here described by Sarti – 1988, proposed, the situation is the opposite: the protomass is real and bradyonic, and the mass in superluminal movement is imaginary:

$$m = i m_0 / (v^2 - c^2)^{1/2}$$

The total energy of the psicons is also imaginary:

$$E^2 = P^2 + m^2 c^4 < 0 : (v^2 / c^2 - 1 > 1)$$

For that reason the psicon is connected to other no real forms of mind energy well related to semantic informational and neguentropic processes.

WAVE FUNCIONS TACHYONS – PSI OR PSICONS

The wave functions associated with psicons shall not form a packet because its group velocity would be subluminal. The function $\tau\Psi$, a plane wave obtained as a solution of the Schroedinger's equations without interaction potentials, is associated with the psicons:

$$\tau\Psi = \exp i(\kappa x - \omega t)$$

Since the $\tau\Psi$ functions don't form packets, by manipulating the de Broglie expressions we obtain:

$$v_{\text{phase}} = \lambda \mu = E/P = (1 + m^2 c^2 / p^2)^{1/2} > 1$$

0

Moreover, taking into account that the wave number k and the angular frequency w are constants, we conclude that the linear momentum p and the total energy E of the particle are determined.

Considering the uncertainty principle and the Born's postulate, the spacial and temporal indeterminations of the psicons are infinite:

$$\Delta x = \infty$$

$$\Delta t = \infty$$

$$\int (\tau\Psi)^*(\tau\Psi) dV = \infty$$

space-time

As a result, the psiconic particles have maximum probability, 1, throughout every point of space and time. We have an ocean of psicons which covers all space-time.

APPLICATION TO COSMOGENESIS OF BRADIONS

Bearing in mind that different functions $\tau\Psi$ do not maintain linear relation $\lambda\mu = c$ and that

phase constants $(\kappa x - \omega t)$ are different then the wave functions $\tau\psi$ are dispersively propagated and their superposition must form a subluminal packet more or less localized.

The packet formed in that manner represents a real particle. If the wave number κ lies in a narrow interval $\Delta\kappa$, the superposition of Fourier plane waves will be:

$$\psi = \int_{\Delta\kappa} a(\kappa) (\tau\psi) d\kappa$$

By using Taylor expansion with a fixed value κ_0 and not considering terms greater than one degree, we obtain:

$$\omega(\kappa) = \omega_0 + (d\omega/d\kappa)\kappa_0 (\kappa - \kappa_0)$$

The result is a real group – particle with definite probabilities of space-time occupation in the interval $(0,1)$:

$$\psi = (\tau\psi)_0 \bullet \text{ integral modulation with group velocity}$$

This demonstration represents a first try on the use of the psicons. Such proceeding may be of help to understand parapsychological and other PSI-phenomena related to the origin of matter.