Zero Point Energy (3D)

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Proof of Goldbach's Conjecture

Proof of Fermat's Theorem

The Relativistic Unit Circle

Mass, Energy (Two Particles)

$$x = \sqrt{x^2}, y = \sqrt{y^2}$$
$$x = c\tau$$
$$y = v\tau'$$
$$\psi\vec{i} = (x + y)\vec{i}$$
$$(\psi^2)\vec{i} = (x^2 + y^2 + 2xy)\vec{i}$$
$$\varphi\vec{i} = (x + iy)\vec{i}$$
$$(\varphi\varphi^*)\vec{i} = [(x + iy)(x - iy)]\vec{i} = [x^2 + y^2]\vec{i}$$

There is only Thee and Me, and I'm not altogether sure about thee….)

In the expansion, the " $+$ " preserves the identities of the particles ("nomials", set counts) .

(Samuel Johnson was only refuting himself, not Bishop Berkeley, by feeling his toe against an equal and opposite force. The question is if Samuel Johnson actually convinced Bishop Berkeley by his experiment. To do that, he would have had to transfer "information".. somehow… maybe a left hook?

People have trouble with complex numbers only if they imagine their product is somehow real….

Mass, Energy (3 particles)

$$\psi\vec{i} = (x+y+z)\vec{i} = x + (y+z)\vec{i}$$
$$\psi^2\vec{i} = (\mathrm{x}^2 + \mathrm{y}^2 + \mathrm{z}^2 + \ldots \text{interaction products})$$
$$(\varphi\varphi^{*2})\vec{i} = \left[x^2 + (y+z)^2\right]\vec{i} = \left[x^2 + i(y^2+z^2+2yz)\right]\left[x^2 - i(y^2+z^2+2yz)\right]\vec{i} = \left[x^2 + i(y+z)^2\right]\left[x^2 - i(y+z)^2\right]\vec{i}$$
$$yz = S^2$$
$$h^2 = 2yz = 2S^2$$
$$S = \frac{h}{\sqrt{2}}$$

where ψ^2 is expanded by the multinomial expansion for n=2

(Divide both sides by ψ^2 in the second equation to express as a final state $\left(\frac{\psi}{\psi}\right)^2 = \left(\frac{\tau'}{\tau'}\right)^2 = \left(1'^{\,2}_{\psi}\right)$

If $y = c\tau$, $z = \pm v\tau'$ and $x >> y \wedge z$, the contribution of $y+z$ and $(y+z)^2$ will be with respect to ψ and ψ^2 in the context of the RUC, since $x = c\tau = x_0 = m_0 = \chi$ can be arbitrarily large (therefore, χ can be taken as the "zero point" energy, independent of y , z , and the interaction $h^2 = 2yz$.

Mass, Energy (4 Particles)

Consider the expression:

$$\psi\vec{i} = \left[(c\tau) + (x+y+z)\right]\vec{i}$$
$$\psi^2 = \left[(c\tau) + (x+y+z)\right]^2 = \left\|\left[(c\tau)^2 + x^2 + y^2 + z^2 + \text{interaction products}\right]\right\|$$
$$(\varphi\varphi^*)\vec{i} = (c\tau)^2\vec{i} + i\left[(x+y+z)^2\right]\left[(c\tau)^2 - i(x+y+z)^2\right]\vec{i} = \left[(c\tau)^2 + (x+y+z)^2\right]\vec{i}$$

Let $m_0 = c\tau$. Then m_0 is independent of the "coordinate system" $\{x, y, z\}$, especially if the latter is modeled as quark masses. m_0 is then the "Higgs boson", independent of any quark or coordinate system. Note that the parameters of the Higgs boson are mutually adjustable.

This can be further expanded conceptually as:

$$\psi = \left[(c\tau) + (x + (y + z)) \right] \vec{i}$$
$$\psi^2 = \left[(c\tau)^2 + (x + (y + z))^2 \right] \vec{i} = \left[(c\tau)^2 + (x + (y + z))^2 + \text{interaction products} \right] \vec{i}$$
$$\varphi\varphi^* = \left[(c\tau) + i(x + (y + z)) \right] \left[(c\tau) - i(x + (y + z)) \right] = (c\tau)^2 + (x + (y + z))^2$$

and

$$\psi\vec{i} = \left[(c\tau) + \sum_n (x_n) \right] \vec{i}$$
$$(\psi^2)\vec{i} = \left[(c\tau)^2 + \sum_n (x_n)^2 + \text{interaction products} \right] \vec{i}$$
$$(\varphi\varphi^*)\vec{i} = \left[(c\tau)^2 + i\left(\sum_n (x_n)\right) \right] \left[(c\tau)^2 - i\left(\sum_n (x_n)\right) \right] \vec{i} = \left[(c\tau)^2 + \left[\sum_n (x_n) \right]^2 \right] \vec{i}$$

(I may have got some algebra wrong (I usually do), but you should be able to get the idea).

And further for n particles for a complete characterization of particle physics (and Universes).

The Creation of the Universe (My first paper when I started all this…. ☺

(Note: the reference to Hume should actually be Samuel Johnson)..