

The law of conversion of matter and energy.

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From Einstein we have the famous mass/energy equation, $E = MC^2$, which we can express as, $E \Leftrightarrow MC^2$. Physically, this means, (1) $E \leftrightarrow M$, (2) $E \Rightarrow MC^2$ and (3) $M \Rightarrow E/C^2$. As we have seen my paper, "Further conclusions based on the theory, "A relativistic theory based on the invariance of Newton's second law for motion and the constancy of the speed of light in vacuum", (1) and (3) are correct. But (2) needs modification. The correct expression for (2) is given by, $E \Rightarrow mc^2 + e_2$ or $E \Rightarrow m_0c^2(1 + v/c)^2 + e_2$. Here, e_2 is the residual energy after the formation of the mass, m . For non-relativistic speeds, i.e. $v \ll c$, we have, $E \Rightarrow m_0c^2 + e_2$. From this we see that, if we have an object of rest mass, m_0 , and we add-in energy, ΔE , to this object, then, from our equation, $E \Rightarrow m_0c^2 + e_2$, we see that, $\Delta E \Rightarrow (\Delta m_0)c^2 + \Delta e_2$, leads to $\Delta E \Rightarrow \Delta e_2$, because, $(\Delta m_0) = 0$. In other words, all the add-in energy remains as some form of energy only and no part of it goes to form matter. This is exactly what we have expected from the vast amount of knowledge we have from studying non-relativistic events.

References:

- (1) A relativistic theory based on the invariance of Newton's second law for motion and the constancy of the speed of light in vacuum. Mustafa A. Khan. viXra: 1406.0054. viXra.org.
- (2) Further conclusions based on the theory, "A relativistic theory based on the invariance of Newton's second law for motion and the constancy of the speed of light in vacuum". viXra: 1407.0105. viXra.org.