

Energy to Mass for Atomic Elementary Particles

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Transformation of Rest & Kinetic Energy to Mass of Elementary Particle:

Keywords: REN =Rest Energy of Neutron, REP =Rest Energy of Proton, REE =Rest Energy of Electron, RE = Rest Energy, KE = Kinetic Energy

1. Definition

As stated by Einstein, Energy can be converted to Mass in the number of Square of C or Speed of Light.

He measured based on 1KG of Mass.

Let try another way to convert the 1 neutron Mass or 1 AMU by multiplying the Square of C or Light of Speed.

Take as,
M = 1 AMU

Apply the $E = MC^2$ by making the M as 1 AMU.

Take the Electron, Proton, Neutron in AMU basis.

The Kinetic Energy emitted from an elementary particle can be measured in Mass by using the Einstein's Formal, $E=MC^2$

2. Formula or Derivation Cover

The Mass or Rest Energy of Neutron:
Neutron Mass = 1 AMU

C^2 = Square of Speed of Light

1 Neutron Mass = $1.67492749804(95) \times 10^{-27}$ kg

$C^2 = (300000)^2$

Therefore, $REN = (1.66054 \times 10^{-27}) * (300000^2)$

The Mass or Rest Energy of Electron:

C^2 = Square of Speed of Light

1 Electron Mass = $9.1093837015(28) * 10^{-31}$ Kg

$C^2 = (300000)^2$

Therefore, $R = (9.1093837015(28) * 10^{-31} \text{ Kg}) * (300000^2)$

The Mass or Rest Energy of Proton:

C^2 = Square of Speed of Light

1 Proton Mass = $1.67262192369(51) \times 10^{-27}$

$C^2 = (300000)^2$

Therefore,

$REE = (1.67262192369(51) * 10^{-27} \text{ Kg}) * (300000^2)$

KE of Elementary Particles to Mass:

To Find the Mass of KE approximately,

$E = MC^2$

KE = E, Here

KE of Electron or Charge of Electron = $-1.602176634 * 10^{-19}$

KE of Proton or Charge of Electron = $1.602176634 * 10^{-19}$

Formula KE to Mass:

$KE/C^2 = \text{Mass}$

Volume 10 Issue 5, May 2021

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Electron KE Mass:

$$(-1.602176634 * 10^{-19}) / (299392^2) = -1.78267 * 10^{-30} \text{ Kg}$$

Proton KE Mass:

$$(1.602176634 * 10^{-19}) / (299392^2) = 1.78267 * 10^{-30} \text{ Kg}$$

3. Conclusion

The Rest Energy of Mass of Elementary Particles are measured based on the Einstein's Formula.

The Kinetic Energy or Charge of Elementary Particles can be converted to Mass by Energy by C^2 Formula.

Charge can have minor Mass i.e., below 0 to Decimal.

When Energy equals the Energy of Neutron, It Never emits Kinetic Energy or Charge.