

Abstract Submitted
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Every Nucleus, When Created, Will Exhibit No Motion or Linear, Rotational and/or Vibrational Motion Which May Later Become Modified By Outside Forces STEWART BREKKE, Northeastern Illinois University (former grad student) — Due to the excess energy of creation a newly created nucleus may exhibit linear, rotational and/or vibrational motion. For example, in nuclear decay $m_P c^2 + 1/2 m_P v_P^2 + 1/2 I_P \omega_P^2 + 1/2 k_P x_P^2 = m_D c^2 + 1/2 m_D v_D^2 + 1/2 I_D \omega_D^2 + 1/2 k_D x_D^2$ (particle mass-energy equivalence, linear, rotational and vibrational energies). In another nuclear reaction $m_1 c^2 + 1/2 I_1 \omega_1^2 + 1/2 k_1 x_1^2 + m_2 c^2 + 1/2 m_2 v_2^2 + 1/2 I_2 \omega_2^2 + 1/2 k_2 x_2^2 = m_3 c^2 + 1/2 m_3 v_3^2 + 1/2 k_3 x_3^2 + \dots + m_n c^2 + 1/2 m_n v_n^2 + 1/2 I_n \omega_n^2 + 1/2 k_n x_n^2$.

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