

# On the Derivation of $E = mc^2$

Noninski, Vesselin (2003) On the Derivation of  $E = mc^2$ .

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## Abstract

Analysis is presented of the derivation in [1] of what is popularly known as  $E = mc^2$ . It is emphasized that once a relationship, describing a phenomenon in the stationary system, is known exactly and with certainty, any theory that would derive a different relationship regarding the same phenomenon in terms of the same stationary system should be rejected out of hand.

**Keywords:** Special Theory of Relativity (STR), Lorentz transformations, inertial mass equivalent of energy, simultaneity, First Postulate, Second Postulate, Second Newton's Law, energy of motion of the electron

**Subjects:** [Specific Sciences: Physics: Relativity Theory](#)

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