

Special Theory of Relativity and the Lorentz Force

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Abstract

Efforts to demonstrate that the application of Lorentz transformations leads to the form $Y' = [Y - (v/c)N]$ (at least to the leading orders of approximation), which has been elevated to the criterion for the validity of STR, has been the main point in the founding paper on Special Theory of Relativity (STR). The text that follows shows that the said criterion for the validity of STR set forth in the mentioned paper is not fulfilled, despite the implication in it that it is.

Keywords: Special Theory of Relativity, Lorentz Transformations, Lorentz Force, Simultaneity of Two Events

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

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