

Example of how things are changed in special relativity

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Two postulates/axioms become three postulates/axioms as example of change that can occur when talking about special relativity.

Horst Eckardt [1] claims the following: “Special Relativity according to Einstein”, and cites H. Ruder [2] for this information:

“We describe shortly the axiomatic foundation of special relativity as given by H. Ruder [2]. All physical conclusions follow from the Lorentz transformation. This can be derived from three postulates or axioms:

- “1. Homogeneity and isotropy of space;
- “2. Principle of relativity;
- “3. Constancy of light velocity.

“The first axiom is foundational for all physics. The three-dimensional space free of masses has no places which are sin-gled out from others and all directions are equivalent. From classical mechanics we know that these properties lead to the conservation laws of energy and angular momentum. Both statements are equivalent. Therefore axiom 1 is unsurrendable.”

However, if we go back to Einstein in 1905, [3] he only gave only two postulates/assumptions not three!

This is yet another example of how things get changed when talking about special relativity. It is the method of moving the goalposts; can't talk about a definitive defined theory, because what the theory “is” keeps changing.

As natural development of a theory I suppose things do change, but in the case of Einstein's relativity these changes are not being kept record of; leaving people are cross purposes and talking of different theories when trying to talk about his relativity.

References

[1] Progress in Physics vol. 2, April 2009

<http://www.ptep-online.com/2009/PP-17-11.PDF>

-says other things of interest, but - I pass.

[2] Ruder H. and M. Die Spezielle Relativitätstheorie. Vieweg-Verlag, 1993.

See: <https://www.tapatalk.com/groups/gsjournal/horst-eckardt-claims-the-following-special-relativ-t10077.html> where I made a related posting

[3] English translation, that I am now unhappy with: ON THE ELECTRODYNAMICS OF MOVINGBODIES, A. EINSTEIN June 30, 1905

http://hermes.ffn.ub.es/luisnavarro/nuevo_maletin/Einstein_1905_relativity.pdf

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