

Abstract Submitted
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Special relativity: two postulates or one? DAVID ECKHARD, ALEXANDER PANIN, Utah Valley State College — In current physics textbooks special relativity is derived from Einstein's two postulates: 1. The laws of physics are the same in all inertial frames. 2. The speed of light is the same as measured in all inertial frames. Because the speed of light is also the proportionality constant in the strength of electromagnetic interactions, and is among three fundamental constants (c , h , G) governing laws of physics, then the second postulate is the consequence of the first one (indeed, otherwise Coulomb law and all e/m phenomena would be reference frame dependent). Therefore, should not SR be reduced to one postulate only? Details of this discussion are presented.

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