

Translation into English: [Chapter 2 - Catalogue of Errors for Both Theories of Relativity](#)

from the German documentation of G.O. Mueller

"On the Absolute Magnitude of the Special Theory of Relativity - A Documentary Thought Experiment on 95 Years of Criticism (1908-2003) with Proof of 3789 Critical Works" - Text Version 2.1 - June 2004
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Translator: Rothwell Bronrowan

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E: Motion / Error No. 7

The practical realization of two inertial systems (ISs) inevitably leads to inaccuracies and obscurities about the consequences of which the theory knows nothing and its supporters say nothing

Inertial systems (ISs) belong to the elementary, permanent and essential inventory of the STR. A physical theory must prove its worth empirically. This is a requirement recognized by Albert Einstein himself. - With this, the question of the practical realization of ISs is raised, and with the practical realization of an IS, questions as its materials and physical properties. - The following questions represent only a small selection of particularly sensitive points.

(1) *A materially realized IS can very easily deviate in the constancy of its motion and it has relationships to various, arbitrary moving systems. Against which of several possible, real reference systems must the magnitude of the deviation be determined?*

(2) *As regards the choice of the reference system, this depends on whether the deviation, in keeping with physical practice, is to be evaluated "as negligibly small" or not. If the deviation is not to be evaluated as negligible, what is the meaning of a deviation for the alleged relativistic effects of length contraction and time dilation? Do the effects then appear with a reduced percentage value, or do they vanish suddenly?*

(3) *If the effects appear reduced, at what magnitude of deviation do they vanish completely?*

(4) *If the effects suddenly vanish vis-à-vis a system, do they remain intact vis-à-vis other systems that undergo the same deviations?*

(5) *If the non-negligible deviations fluctuate periodically around a zero point, do the effects also fluctuate periodically and is the level of deviation a maximum at the zero point?*

(6) *If one of two ISs achieves absolute stability in its motion (this case is normally seen by the relativists as the standard case) and that second shows non-negligible fluctuations in its motion, can, according to the principle of relativity, a rigid rod in the stable system evidence a constant length contraction when observed from the non-constantly moving system?*

(7) *If its contraction in accordance with the speed fluctuations in the non-constantly moving system also fluctuates, how does the rigid rod know which deviation the non-constant system has at any given moment?*

(8) *If the observed contraction of the rigid rod fluctuates and is also real, then work must be done in the material of the rigid rod. What source of energy powers this work?*

(9) *If, however, the non-negligible fluctuations of the non-constant system leads to a complete loss of the relativistic effects, what is the physical cause for this?*

(10) *All of the above questions can also be asked analogously with respect to the alleged effect of time dilation.*

(11) *All of the questions put must be extended to include yet another variant that envisages a multitude of systems (M. v. Laue: endless great diversity!) with respect to which motion takes place and which mutually observe each other. What, then, are the answers for the multitude of mutual observers?*

The silence of the theory and its representatives with respect to these questions on the realization of at least a multitude of the supposedly "endless great diversity" of inertial systems and on the closely related boundary observations in the case of realization shows that the relativists themselves do not regard their theory as real physics at all.