

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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B: Light / Error No. 4

The claimed independence of the speed of light from the motion of its source (C-I) presupposes a medium (the ether) and thereby contradicts the STR

The claim of C-I (AE1905, pp 892 and 895) is widely accepted in the literature, even by the critics, the arguments for or against in the following connection being irrelevant. The important thing here is only the realization that the strict claim of C-U has been a fixed component of the STR since 1905, up to the present day.

The logical consequence of this claim of C-U is namely that the light, after leaving the source, spreads as a transversal wave in a carrier medium of its own (ether, space) which largely or fully determines the speed of expansion, as is suggested by the behaviour of a beam of light passing through another medium. In the period from 1905 until 1920 some statements on this physically justified and logically plausible assumption made by the STR and by Albert Einstein on the ether stand in contradiction, These contradictions also continued after 1920 and right up to the present day, because the world of relativity failed to allow for the consequences of Albert Einstein's 1920 lecture in Leiden (reintroduction of the ether as space).

The counter-position to the SRT, namely the assumption of a dependence of the speed of light on the state of motion of the source, was developed by Walter Ritz, amongst others, in the context of a corpuscular theory of light. Independent of the question as to how far Ritz was able to justify his theory, the problematic situation at any rate became clear in his jointly developed criticism of the STR. - Ritz works without the hypothesis of the ether. The light left its source in the form of a corpuscle. As a corpuscle the light needs no carrier medium, but its velocity is therefore dependent on the state of motion of the source.

Because the corpuscular (ballistic) theory of light questions C-U, in the world of relativity one works with the wave theory of light. This inevitably gives rise to conflicts with the quantum theory. On the question as to the compatibility of the two theories there is no agreement in the literature, because the unclear relationships of the quantum theory also stand in contradiction to the explicit, simultaneous stipulation of the place and the velocity of a particle in the STR.

Ritz, Walter: Recherches critiques sur l'électrodynamique générale. In: Annales de chimie et de physique. Ser. 8, P. 13. 1908, pp 145-275. Reprinted in: Ritz: Oeuvres. Paris Gauthier-Villars 1911, p. 317. - Ritz, Walter: [Collected Works] Theorien über Aether, Gravitation, Relativität und Elektrodynamik / Walter Ritz; with an epilogue by Karl Dürr. 2nd edition Bern u. Badisch-Rheinfelden: Schritt-Verl., 1965. 74 pages - O. Mathias: Die ballistische Lichttheorie und das Prinzip der Konstanz der Lichtgeschwindigkeit. In: Physika Physikalische Zeitschrift. 40. 1939, pp 443-460. - Einstein, Albert: Äther und Relativitätstheorie; address given on 5.5.1920 in the Reichs-Univ., Leiden. 1920. 15 pages reprinted in: Albert Einsteins Relativitätstheorie. Publ.: K. v. Meyenn. 1990. pp 111-123.