Fundamentally Anisotropic Light-Velocity at the Foundation of Classical Physics

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"... any two clocks of [accelerated system] Σ are synchronous with respect to [nonaccelerated reference system] S at the time t = 0, and undergo the same motion, they remain continuously synchronous with respect to S.

□ On the other hand, we must not consider the [same-motion] local time as simply the "time" of □ Σ , because, in fact, two [clocks] at two different points of □ Σ □ are not [synchronous] in the sense of [special relativity] when their local times are equal to each other." Quotations in reversed order. (Albert Einstein, Principle of Relativity and Gravitation, 1907, p. 900)□

ABSTRACT

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While it is certainly true that Einstein's special and general theories of relativity are insightful and useful models of physical reality, they are interim theories destined to be contained within a deeper understanding. An examination of Einstein's 1907 essay *Principle of Relativity and Gravitation* reveals "same motion" acceleration within his "nonaccelerated reference system

S

" as the basis for an alternative transformation as foil or counterpoint to the standard Lorentz transformation. Using this alternative transformation

closely related to the recently substantiated optically-anisotropic Selleri gauge (Rizzi et al., 2008)

Einstein's

progressive time-shift

due to linear, first-order acceleration is re-derived at the deeper anisotropic level, thereby further validating the Selleri gauge. This same-motion transformation is again employed within Einstein's reference system

 \mathcal{S}

but now in a *two-phase* procedure

to establish Selleri's optical anisotropy as a fundamental

condition of space-time. Indeterminate space-time of relativistic-classical physics is also established in a similar (two-phase) procedure, by showing Schrödinger's cat to be (briefly) both alive and dead in the determination and conclusion of a removed observer. These advances define a new

neoclassical

paradigm

midway between the relativistic-classical and quantum-mechanical paradigms, and recommend *singularly*

unbounded (i.e., one-way infinite) light-speed as the empirically-promoted basis for resolving the Bell-EPR impasse and defeating the divide between classical physics and quantum theory.

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