

Abstract Submitted
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Relativistic Nonlocality and the EPR Paradox THOMAS CHAMBERLAIN, None — Denial of a privileged coordinate system, or aether, in formulating the electro-mechanical function of systems in motion was Einstein's profound contribution resulting in his relativity theory in 1905. His correct rejection of an empirically meaningful aether was made emphatically clear by the constant, isotropic light-speed stipulation. However, many laboratory experiments of the Michelson-Morley kind, before and after 1905, have established Lorentz-invariant photon round-trip time between opposing mirrors as more fundamental. On this more essential basis an alternative clock synchronization model and convention is defined which implicitly retains the Lorentz transformation. Anisotropic photon velocity is an integral feature of this model. In one (of two) limits, photon flight between mirrors becomes unbounded in the at-rest coordinate system, thereby advancing the prospect of instantaneous affect—but not instantaneous finite-distance information exchange. Prospective/heuristic resolution of the apparent paradox between special-relativity required locality and quantum mechanics non-locality under Bell's inequality theorem is addressed.

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None

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