

3rd International Conference on

HIGH ENERGY PHYSICS

December 11-12, 2017 | Rome, Italy

Establishing ether as a stationary real field and how to measure it

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Michelson-Morley and similar experiments (MMX) were correct in establishing that there is no ether drag. A set of negative experimental results can never negate the existence of something definitively. Something can still exist without generating MMX drag. This paper will present scientific rationale for the existence of that something as a complex tension field (CTF), which is inseparable from the cosmic space. This CTF is stationary everywhere, functioning as the stationary cosmic reference frame. The manifest universe, consisting of EM waves and particles. They are two kinds of excitations of CTF, without requiring any bulk movement of the CTF. Hence, MMX should always give null result. EM waves have two unique characteristics: (i) Once generated by some dipole excitation, it propagates perpetually across the entire cosmic space

with the same fixed velocity, $c^2 = \epsilon_0^{-1} / \mu_0$, where ϵ_0 and μ_0 are the intrinsic electric tension and the restoring magnetic tension, validating Maxwell's belief in an ether; (ii) EM waves are linear excitations of the CTF and hence they can co-propagate and cross-propagate through the CTF without generating any superposition effect in the absence of any interacting media. This is a general characteristic of all tension field driven propagating waves. Thus, the EM waves require CTF and now we add the postulate that the particles are localized, self-looped resonant vortices or doughnut-like oscillations of the same CTF. Then these vortices of CTF can move without any drag in the CTF. Finally, we propose two satellite based experiments that would validate the stationarity of CTF as the new ether.

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