

Aether exists wordplay

Roger J Anderton

R.J.Anderton@btinternet.com

Some examples from New Scientist magazine where wordplay is engaged in as regards the existence of aether. Einstein discarded aether in 1905 but brought it back 1920, so for those people who sing about the genius of Einstein that forces them to engage in wordplay, where they want both discarding aether and bringing it back as a sign of genius. While some want to bring some form of aether back, there are those who want to find excuses for not bringing the aether back.

Robert Matthews (in New Scientist 1995) [1] eventually admits aether exists (which he calls a “universal fluid” after saying Einstein showed didn’t need it: “Einstein’s special theory of relativity showed that physics works perfectly well without this peculiar, all-pervasive fluid, which was supposed to be the medium through which light and other interactions travelled from place to place. This does not mean that a universal fluid cannot exist, but it does mean that such a fluid must conform to the dictates of special relativity.”

i.e. After wordplay is telling us– special relativity (SR) allows aether. However, it’s really Lorentz (with his theory) that talks of aether not Einstein 1905 theory, so wordplay is muddling the two theories.

Brendon Foster (New Scientist 2019) [2]: “If anything does turn up, it would be an irony of truly cosmic proportions. More than a century after its banishment from the realm of respectable science, the aether could be the very thing we need to help make sense of the universe. In the graveyard of failed ideas, something ethereal is stirring.”

His article is called “Einstein killed the aether. Now the idea is back to save relativity.” So, after most people think that special relativity (SR) has no aether, he wants to put aether into it.

Paul Davies (New Scientist 2011) [3] gives the most confusing wordplay on aether when muddles it in with vacuum : “So the modern conception of the

vacuum is one of a seething ferment of quantum-field activity, with waves surging randomly this way and that. In quantum mechanics, waves also have characteristics of particles, so the quantum vacuum is often depicted as a sea of short-lived particles – photons for the electromagnetic field, gravitons for the gravitational field, and so on – popping out of nowhere and then disappearing again. Wave or particle, what one gets is a picture of the vacuum that is reminiscent, in some respects, of the ether. It does not provide a special frame of rest against which bodies may be said to move, but it does fill all of space and have measurable physical properties such as energy density and pressure.”

More wordplay by Paul Davies, when he says “reminiscent” of an aether, and I disagree with what he says about special frame.

Mainstream likes to pay homage to the genius of Einstein, and so instead of saying that Einstein is out-and-out wrong; wordplay has to be invented so can pay that homage to the genius of Einstein in discarding aether in 1905.

According to Einstein 1920 there is an aether, quote: "According to the general theory of relativity space without ether is unthinkable; for in such space there not only would be no propagation of light, but also no possibility of existence for standards of space and time (measuring-rods and clocks), nor therefore any space-time intervals in the physical sense." [4] It would then mean something like - according to general relativity there is an aether, but special relativity is ignoring it; BUT of course, there are problems then with semantics and ambiguities in how special and general relativity should be defined.

There have been a lot of different types of aether proposed over the years see Whittaker's book "A History of the Theories of Aether and Electricity". Kostro's book deals in more detail as to what Einstein meant by aether: "Einstein and the ether". While wiki has page for Einstein's aether theory. [5]

References

[1] Nothing like a vacuum, New Scientist 25 Feb 1995

[2] Einstein killed the aether. Now the idea is back to save relativity. New Scientist 2 November 2019

[3] Nothingness: The turbulent life of empty space, New Scientist 19 November 2011

[4] http://mathshistory.st-andrews.ac.uk/Extras/Einstein_ether.html

[5] https://en.wikipedia.org/wiki/Einstein_aether_theory

c.RJAnderton25June2020