

The Fatal Mistakes: A Memo

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1. The use of sound waves as a model for light waves ignores an important difference between longitudinal and transverse wave motions. This mistake has resulted in the illegal use of stellar aberration as an evidence against the entrained ether.
2. The global positioning system (GPS) is the most obvious evidence against the absurd idea of a light speed that is isotropic in relation to all inertial frames. The importance of this evidence has not been observed due to a wrong classification of Sagnac effect as an effect of rotation.
3. Michelson-Morley's experiments are analyzed and found to be without relevance for the ether-wind.

1. Background

The theory of relativity demands multiple concepts of time. This fact is the most obvious evidence to the fact that the theory is absurd and untenable. Since this simple fact has not been enough to kill the theory we must search for fundamental physical illegal assumptions that until now has not been observed. One such very important mistake is the *use of sound waves as a model for light waves*.

2. Sound Waves as a Model for Light Waves

The reason to this mistake is ignorance about an important difference between longitudinal and transverse waves. The fact that the oscillations are oriented inside the wave front plane implies that they can conserve this orientation independent of ether-winds inside the same plane. Changes in transverse ether-wind have the same effect in all points on the wave front and orientation is conserved as long as c is universal and the normal to the wave front is detected in interferometers and telescopes. Only speed of wave motion is affected by the ether-wind (by the longitudinal component of ether-wind). This fact is also supported by the extreme resolution in images of fix stars. The irrelevance of transverse ether-wind means that stellar aberration cannot tell us anything about the ether-wind. Stellar aberration is only an illusion produced by our own unnoticed motion. Stellar aberration disappears if our measurements are transformed to the frame of the Sun.

The irrelevance of transverse ether-wind means that light bending due to the ether-wind is possible only as an effect of a difference in longitudinal ether-wind over the wave front (a gradient different from zero). This means that the small ($\approx 10^{-5}$ radians) bending of light near our sun can be explained by the ether in this way. This bending cannot be described by gravity since we consider light to be mass less waves.

Einstein regarded stellar aberration as evidence against entrained ether as documented in [1]. In the same letter he also stated that entrained translation without entrained rotation is impossible. Einstein motivated this statement by applying potential theory to the ether although, according to him, the ether did not exist in 1905. (In 1926 the ether came back, however, it was without velocity.) This statement of Einstein is contradicted by the compensation for Sagnac effect used in the Global Posi-

tioning System and by the fact that rotating planets appear to generate not rotating gravity fields.

These ideas were presented to NPA 2005 in [2]:

"When light moves from a Sun-dominated ether to an Earth-dominated ether, the plane of oscillations most probably is conserved. There is no reason to assume this plane of oscillations to change [orientation] according to ether changes inside this plane."

More information is available at my NPA page [3, 4, 5].

3. Ignorance about the Relevance of GPS in Relation to Relativity

Einstein correctly stated that we cannot synchronize separated clocks. However he was wrong when he concluded from this that we cannot measure the one-way speed of light. The synchronization problem can be circumvented. The GPS system is the best evidence to this fact. The times for one-way propagation of microwave signals from satellites in known positions are used to find the position of a GPS receiver. This means range measurement based on one-way speed of light. High precision is reached and positioning is dependent on the one-way speed of the signals. Circumvention of the synchronization problem is done by the use of many satellites and the use of feedback from receivers in known positions. The time error in the clocks must be constant over the time for the measurements but not necessarily zero.

Since Sagnac effect was discovered with rotating equipment, it was not discovered that the effect was *translational*. Confusion between behavior of equipment and behavior of light caused a wrong classification of the effect as rotational. According to a mathematical relation the effect can be interpreted as caused by a translating line or by a rotating area, but the distribution of light and effect proves that the effect is translational. Since the effect in reality is translational we can conclude that we have the same effect in a straight line moving in its own direction as the Sagnac effect demonstrated in a rotating circle. The Sagnac effect is an effect of the ether-wind on the speed of light that must be corrected for in transformations of moving coordinate systems. The need to make these adjustments in light speed is very obvious evidence against Einstein's absurd idea of the same light speed in *all* inertial frames. One result of ignoring the Sagnac effect is the production of multiple time concepts. In the GPS system the

Sagnac correction means transformation of data into a frame moving with the velocity of the center of our planet. This correction is equal to the receiver's total velocity in relation to the center of our planet. Since positioning is done by means of satellites in different elevation angles Sagnac correction is very important in that context. In comparisons of clocks in satellites and ground stations satellites in near Zenith positions are probably used. In these situations Sagnac effect is near zero and not very important.

When we observe very distant objects we must make Sagnac corrections (transformations) to the center of our sun (instead of our planet). When we do this the illusion we call stellar aberration disappears. The irrelevance of transverse ether-wind means that stellar aberration cannot tell us anything about the ether-wind.

Observations on satellites in GPS demands a frame centered by our planet and observations on fix stars and pulsars need a frame centered by the Sun to avoid the illusion of stellar aberration. The need to transform data to different frames is a correction of light speed according to Sagnac. We find that we have to use a different frame around each heavenly body. However, these frames are not real frames, but only approximations to one and the same velocity *field* defining the ether-wind. We find that the ether-wind is adapting to the distribution of matter in a way that is reminding of the field of gravity. This idea was described in an article to GED in 1999, from which the following is cited [6]:

"It is demonstrated that we have only to replace a constant vector (the ether) by a vector field (the translational field) in order to maintain absolute space and time.

"If the translational field is asserted to be proportional to the gravitational field, than both fields can be explained by a flow of neutrinos (or by particles with a very small mass). The translational field can be defined as the mean velocity of the neutrinos."

4. Michelson-Morley's Experiments

Michelson-Morley's experiments (MMX) play an important role in the motivation for Einstein's relativity. MMX has also been the most debated argument among dissidents. Analyzing MMX is therefore important.

The atoms in a crystal control their separations by means of their effects on the surrounding ether. There is apparently no other alternative. These effects are transmitted by the ether ac-

ording to the same differential equations that control the transmission of light. The separations between atoms are therefore controlled by a two-way effect like the effect on two-way speed of light. The separations between atoms are therefore also dependent on the ether-wind in the same way as the two-way speed of light. The small reduction in two-way speed of light is therefore compensated by the same reduction in the spacing between the atoms. This means constant time of propagation and MMX cannot tell us anything about the ether-wind.

5. Conclusion

We find that very important mistakes have been done by:

- Regarding the illusion of stellar aberration as real.
- Regarding Michelson-Morley's test as valid.
- Regarding Sagnac effect as rotational.

The facts presented here imply an ether-wind dependent on and generated by the distribution of matter (entrained ether). If the ether were autonomous we would find that:

- Sagnac corrections in GPS would be about $10^{-3}c$ (not $10^{-6}c$).
- Planet's motions would be retarded by friction.

More detailed descriptions of these ideas can be found in [4], [5] and [7]. [4] and [5] also contain references to other authors.

References

- [1] A Einstein, *Deutsche Physische Gesellschaft* **20** (261): 67-68 (Nov 1918) English translation at <http://www.wbabin.net>, under 'historical' and E. Gehrcke.
- [2] J. E. Persson, "The Generated Ether", *Proceedings of the NPA* **2** (2): 136-137 (2005).
- [3] J. E. Persson, http://www.worldsci.org/people/john-erik_persson
- [4] J. E. Persson, "The Special Theory of Relativity and the Sagnac Effect", *Infinite Energy* **77**: 35-40 (Jan 2008); "Interpretation of Physical Phenomena", *Infinite Energy* **93**: 35-40 (Sep 2010).
- [5] J. E. Persson "The Empirical Background behind Relativity", *Physics Essays* **23**: 634 (Dec 2010).
- [6] J. E. Persson, "The Too-General Theory of Relativity", *Galilean Electrodynamics* **10** (4): 79 (July 1999).
- [7] J. E. Persson, "Illusions and Reality in Relativity", *Proceedings of the NPA* **8**: this volume (2011).