Ether was proved based on the Sagnac effect

Demin Liu

(Quxian Fire Brigade，Dazhou635000，China , email：960954893@qq.com)

Abstract: In fact, the ether can be proven from the deformation of the Sagnac effect formula, but relativity gives different explanations, so the author did a new experiment "The Discovery of a New Photoelectric Medium Based on Experiments" published in the Thermodynamics and Energy section of this website.

Key words: Sagnac effect；Ether was found

It is known that the number of stripe moves in the Sagnac effect is proportional to the product of the angular velocity of the interferometer and the area enclosed by the loop.So

$$n = k_1 \omega S = k_1 \omega \pi r^2 \Rightarrow n\lambda = \frac{k_1\lambda}{2} \bullet \omega r \bullet 2\pi r \Rightarrow 2v_r t = k_2 vl$$

Where k_1 and k_2 are both coefficients, and $k_2 = \dfrac{k_1\lambda}{2}$ 。

Because $t \approx \dfrac{l}{u}$ so $v_r = \dfrac{k_2}{2} v \dfrac{l}{t} \approx \dfrac{k_2}{2} vu$, order $\dfrac{k_2}{2} u = k$ Then there are $v_r = kv$.

The "V" is the speed of the medium, and the "V$_r$" is the speed of the medium relative to the ether. That is, the relative motion speed of the ether is proportional to the speed of the medium.

But in the case that the length of the medium is fixed, if the length of the medium is variable, then the author thinks that the driving speed should be related to the length of the medium.

The specific relationship is as follows

$$v_r = \frac{\tau}{n_0} v - \Omega$$

$$v_d = v - v_r = v(1 - \frac{\tau}{n_0}) + \Omega$$

The "V$_d$" is the drag speed. In the medium, the speed of ether in the medium will also loss. The "τ" is the transmittance, The "n_0" isThe refractive index of the medium, because part of the ether collides with the moving medium, and the velocity of the penetrating medium is proportional to the transmittance. The "Ω" is the speed loss factor, indicating the loss of the ether speed in the medium. Ω Positive correlation with the medium speed and length, approximate thought at low speed, so "k_m" is the

loss coefficient of a certain medium.

For air $\dfrac{\tau}{n_0} \approx 1$, $k_m \to 0$, but when $l \to \infty$, $k_m l \to 1$, or when $l \geq \dfrac{1}{k_m}$, the speed of ether in the medium drops to 0,so

$$v_r = v(\frac{\tau}{n_0} - k_m l) \approx v(1-1) = 0$$

Here $v_d = v - v_r = v$

The atmosphere length l can be approximated as infinite relative to the Earth's circumference. We can also understand in this way when $l \to \infty$, and, according to $\Delta P = \mu_m \rho v^e l$, the infinite pressure loss of the ether fluid in the medium eventually leads to the relative speed of the ether being 0.

references：

1. https://baike.so.com/doc/685408-725432.html