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Velocimeter of Gravitational Reference

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Abstract -- This paper consists of a description of an experiment, with a special interferometer to measure the speed of a vehicle, with the device inside, relative to the Earth's gravitational field.

We want to prove that the two basic postulates of relativity theory are wrong:

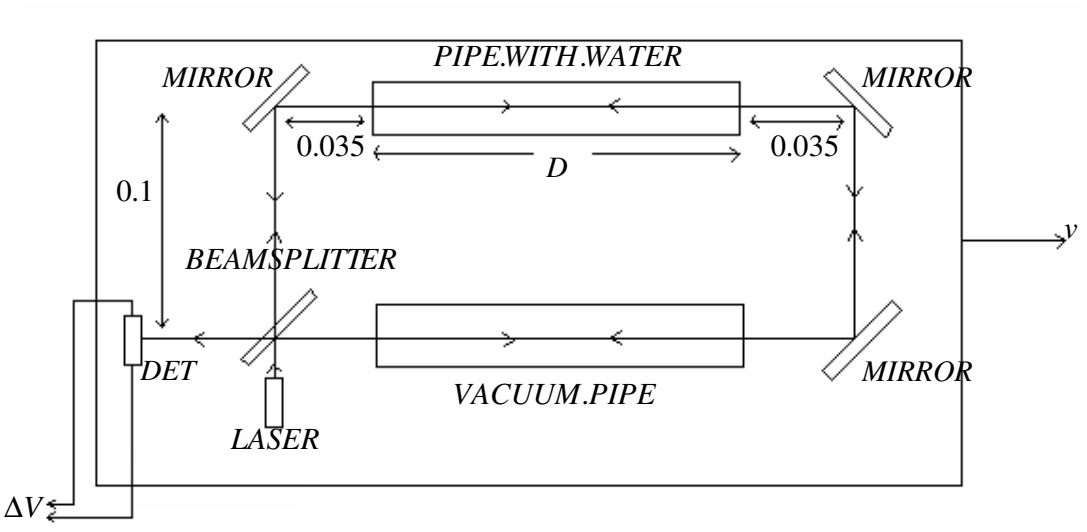
1st postulate – "we can't distinguish the state of uniform movement from the rest in a closed lab with any kind of experiment done inside it"

But there are no closed labs for gravity. If the ether is the earth's gravitational field it's possible to measure the speed relative to it. This hypothesis is coherent with the results of the Michelson's experiment.

2nd postulate -- " the speed of light is constant and doesn't depend on the movement of the emitter or the receptor ".

As proven by the phenomenon of astronomic aberration, light has relative speed. Our experiment proves that light speed is additive as are all others.

Experiment description



The device has a laser diode ($\lambda = 6.5\times10^{-7}\,m$, P= $3.5mW$), a 50% - 50% beam splitter, three mirrors, a pipe filled of water with two glass windows, another with vacuum and a light detector DET.

The laser beam is divided on the splitter and travels in two directions in the mirrors' circuit. Then they are joined again and go to the detector where the variable interference pattern generates the voltage ΔV.

The entire device is protected from visible light and infra-reds by a metallic box.

Times of the light rays:

$$\begin{cases} t_1 = k + \dfrac{D}{w} + \dfrac{D}{c-v} \\ t_2 = k + \dfrac{D}{w} + \dfrac{D}{c+v} \end{cases} \qquad \text{and} \qquad t = t_1 - t_2$$

$$t = \frac{2Dv}{c^2} \quad ; \quad D = 0.33m \quad ; \qquad t = 7.34\times10^{-18}\,v$$

Space phase shift:

$$\Delta t = 7.34\times10^{-18}\,\Delta v \qquad \text{and} \qquad \Delta x = c\Delta t \qquad \Leftrightarrow \qquad \Delta x = 2.2\times10^{-9}\,\Delta v$$

Voltage variation on the detector:

$$\Delta V = V\frac{\Delta x}{\lambda/2} \qquad \text{with} \qquad \lambda = 6.5\times10^{-7}\,m \qquad \Leftrightarrow$$

$$\Leftrightarrow \qquad \Delta V = V\times6.8\times10^{-3}\,\Delta v$$

In our device $V = 46mV$, so for a $\Delta v = 100km/h = 27.8m/s$:

$$\underline{\Delta V = 8.7mV} \qquad ; \qquad \frac{\Delta V}{V} = 19\%$$