the general science journal

# Astronomical Aberration

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**Abstract** – The 1905 Einstein's formula for light aberration is wrong and the true calculation proves that relativity theory is also wrong.

## The relativistic formula for speeds

$$\begin{cases} x = \dfrac{x_0 - vt_0}{\sqrt{1 - v^2/c^2}} \\ t = \dfrac{t_0 - vx_0/c^2}{\sqrt{1 - v^2/c^2}} \end{cases} \quad \Leftrightarrow \quad \frac{x}{t} = \frac{x_0 - vt_0}{t_0 - vx_0/c^2}$$

Doing: $w = x/t$ and $w_0 = x_0/t_0$ $\Leftrightarrow$

$$w = c^2 \frac{w_0 - v}{c^2 - vw_0} \qquad (1)$$

The 1905 Einstein's formula from "On the electrodynamics of moving bodies ":

$$\cos\theta' = \frac{\cos\theta - v/c}{1 - \cos\theta . v/c} \qquad (2)$$

We can put the formula (1) in this form:

$$\frac{w}{c} = \frac{\dfrac{w_0}{c} - v/c}{1 - \dfrac{w_0}{c} v/c} \qquad (3)$$

So: $\cos\theta' = w/c$ and $\cos\theta = w_0/c$

As, according to Einstein $w = c$ so the aberration angle is always equal to zero.
Just for fun, try to draw a figure for this problem – it's just impossible.

But we have made a mistake (as a lot of other investigators that have dealt with this problem).
In the speeds formula, both speeds are in the same line and we want an orthogonal sum, so one of the vectors must be imaginary.

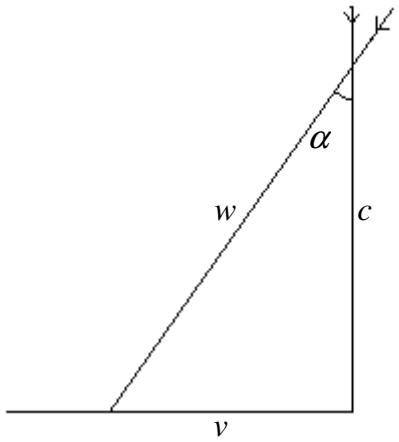
$$w = c^2 \frac{iw_0 - v}{c^2 - ivw_0} \qquad \text{or} \qquad w = c^2 \frac{w_0 - iv}{c^2 - ivw_0}$$

Both cases give the same value for the module of *w*:

$$w = \sqrt{c^2 + 2v^2} \qquad \text{or} \qquad w = \frac{c^2 + v^2}{c}$$

$$v \approx 3\times10^4; \quad w = 2.99792461\times10^8; \quad c = 2.99792458\times10^8$$

A speed greater then *c*.
The true angle of aberration is the one made by the two light rays and as the triangle is not Euclidian, we must relate *c* and *w*:




$$\alpha = Arc\cos\frac{c}{w} = 29.2''$$

Classical value: $\alpha = Artg\,\frac{v}{c} = 20.6''$

But what happens with time and distance?

$$x = \frac{x_0 - ivt_0}{\sqrt{1+v^2/c^2}} \qquad \text{and} \qquad t = \frac{t_0 - ivx_0/c^2}{\sqrt{1+v^2/c^2}}$$

According to Einstein: $x_0 = ct_0$

$$\Leftrightarrow \qquad x = x_0 \frac{\sqrt{c^2+v^2}}{\sqrt{c^2+v^2}} = x_0$$

$$\Leftrightarrow \qquad t = t_0 \frac{\sqrt{c^2+v^2}}{\sqrt{c^2+v^2}} = t_0$$

No comments.