

## Astronomical Aberration II

António Saraiva – 2008-02-16

[ajps2@hotmail.com](mailto:ajps2@hotmail.com)

Einstein's aberration formula is wrong and according to relativity theory, aberration can't exist.

Einstein's aberration formula:

$$\cos \theta' = \frac{\cos \theta - v/c}{1 - \cos \theta \cdot v/c}$$

Einstein's speed composition formula:

$$w' = c^2 \frac{w - v}{c^2 - vw}$$

So:  $\cos \theta' = \frac{w'}{c}$  and  $\cos \theta = \frac{w}{c}$

And  $\cos \theta' = c \frac{w - v}{c^2 - vw}$

According to Einstein  $w = c \Leftrightarrow$

$$\Leftrightarrow \cos \theta' = 1 \Leftrightarrow \theta' = 0$$

There's no aberration.

Let's see the case where the star is on the zenith, as  $v$  and  $w$  make 90 degrees one vector must be imaginary:

$$\cos \theta' = c \frac{w - v}{c^2 - vw} \quad \text{and} \quad v = iV$$

$$\cos \theta' = c \frac{w - iV}{c^2 - iVw} \quad \Leftrightarrow$$

$$\cos \theta' = c \frac{(wc^2 + V^2w) + i(Vw^2 - Vc^2)}{c^4 + V^2w^2} \quad \Leftrightarrow$$

$$\cos \theta' = c \frac{\sqrt{(wc^2 + V^2w)^2 + (Vw^2 - Vc^2)^2}}{c^4 + V^2w^2}$$

According to Einstein  $w = c \quad \Leftrightarrow$

$$\Leftrightarrow \quad \cos \theta' = 1 \quad \Leftrightarrow \quad \theta' = 0$$

No aberration.

The classical value:

$$\theta' = \text{artg} \frac{v}{c} \quad \text{and} \quad v = 3 \times 10^4 \text{ ms}^{-1}$$

$$\theta' = 20.6''$$

If light speed, according to Einstein, is not additive is obvious that, in Einstein's relativity theory, the aberration must be always zero. And we know that this is not true.