

THE MILKY WAY AND THE ELECTRON

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June 2018

Abstract: in our galaxy (the Milky Way) the Sun is at a distance of 8,5kpc from the centre and should have a rotation speed of 160 km/s, if it were due only to baryonic matter, that is that of the stars and of all visible matter.

But we know that, on the contrary, the Sun speed is 220 km/s.

So we have a discrepancy Δv of 60 km/s: ($\Delta v=220-160=60$ km/s).

The laws about such discrepancies are astonishing, as we will see.

(1kpc=1000pc ; 1pc=1 Parsec=3,26 *l.y.* = $3,08 \cdot 10^{16} m$; 1 light year *l.y.*= $9,46 \cdot 10^{15} m$)

($R_{Gal} = 8,5kpc = 27,71 \cdot 10^3 \text{ } l.y. = 2,62 \cdot 10^{20} m$ is the distance of the Sun from the centre of the Milky Way)

If the Sun were at a distance R_{GAL} of 30 kpc, it would have had the same speed of 220 km/s, but the discrepancy Δv would have been higher.

In general, we know that:

$$\Delta v = k \sqrt{R_{Gal}} \quad , \text{ where } k = \text{constant.}$$

It's possible to show that :

$$k = \sqrt{\frac{2Gm_e}{r_e^2}}$$

(It's also possible to show that, numerically: $k = \sqrt{\frac{2\pi h}{m_e c}}$.)

Such formulas for k are unknown to the official physics.

(G is the Universal Gravitational Constant, m_e is the mass of the electron, r_e is the classic radius of the electron $r_e = 2,818 \cdot 10^{-15} m$, h is the Planck's Constant and c is the speed of light)

Such formulas for k can be also verified on some other galaxies with certain orientations, such as the M33, at the following wiki link:

https://en.wikipedia.org/wiki/Galaxy_rotation_curve#/media/File:M33_rotation_curve_HI.gif

Thank you.

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