

Correction to UART

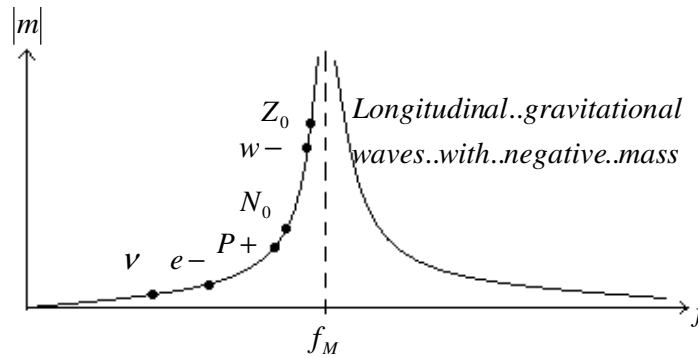
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The neutron and the neutrino:

$$mcw = \frac{chf}{w} \quad \Leftrightarrow \quad m = \frac{hf}{c^2 - kf^2}$$

$$f = \frac{-h + \sqrt{h^2 + 4km^2c^2}}{2mk}$$



Neutron:

$$m = 1.6749 \times 10^{-27} \text{ kg} ; \quad f = 2.27156 \times 10^{23} \text{ Hz}$$

$$w = \sqrt{c^2 - kf^2} = 2.9977532 \times 10^8 \text{ ms}^{-1}$$

$$x = \frac{w}{f} = 1.31969 \times 10^{-15} \text{ m} ; \quad g = \frac{kf^3}{w} = 7.78635 \times 10^{27} \text{ ms}^{-2}$$

Proton:

$$m = 1.6727 \times 10^{-27} ; \quad f = 2.26858 \times 10^{23}$$

$$w = 2.99775365 \times 10^8 ; \quad x = 1.321423 \times 10^{-15}$$

$$g = 7.75574 \times 10^{27}$$

Neutrino:

$$m = 4 \times 10^{-34}$$

$$f = \frac{mc^2}{h} = 5.425571 \times 10^{14} ; \quad w = c$$

$$\Delta w = \frac{kf^2}{2c} = 9.7768 \times 10^{-14} ; \quad x = 5.5255467 \times 10^{-7}$$

$$g = 1.061 \times 10^2$$

Nuclear physics

$$g_p = \frac{v^2}{R} = \frac{c^2 2\pi}{n^3 x_p} = 7.755 \times 10^{27} \quad \Leftrightarrow \quad n = 38$$

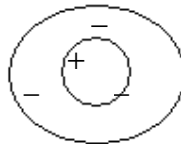
$$v_p = \frac{c}{38} ; \quad R_p = \frac{38x_p}{2\pi} = 7.86 \times 10^{-15}$$

Binding energy per nucleon of the deuteron:

$$\frac{m_p c^2}{2 \times 38^2} - m_p \frac{38x_p}{2\pi} g = 1.1 \text{ MeV} \quad \Leftrightarrow$$

$$\Leftrightarrow \quad g = 9.4 \times 10^{27} \approx 7.77 \times 10^{27}$$

The neutron is composed of a proton, an electron and a neutrino more some energy:



The protons repels each other and also for the neutrons. The protons attract the neutrons.