The atomic radius and energy of matter with the universal density of potential energy

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Let us now consider what the local consequences, for the atomic radius and energy of matter, subject to change of the density of potential energy at local. This is another draft of verification experience of relativity NBS, theory of non-curved space.

Introduction:

Remember, the mechanical changes, obtained for the RF relativity in which space does not curve:

Consider therefore:

t_o - Time on our site

t_l - Time on site under study

$$t_v = t_o \sqrt{\frac{\rho_o}{\rho_t}}$$

$$E_v = \frac{E_o}{\sqrt{\frac{\rho_o}{\rho_t}}}$$

$$C_v = \frac{C_o}{\sqrt{\frac{\rho_o}{\rho_t}}}$$

$$m_v = m_o \sqrt{\frac{\rho_o}{\rho_t}}$$

$$e_v = e_o \sqrt{\frac{\rho_o}{\rho_t}}$$

Relationship between the local variable gravitational, and the pure potential of the Universal mass.

The dependence of the atomic radius of matter and energy of matter with the universal density of potential energy -ρ_{pu}:

As seen previously in the article “Relation between the speed, the atomic ray and the energy of the matter.” the speed does not change the radius of the matter.

General and from the new relativity:

$$\frac{t_o}{t_t} = \sqrt{\frac{\rho_t}{\rho_o}}$$

The universal gravitational variable, G_ρ

$$U_{\rho t} = G_{\rho t} \frac{M_{\rho t}}{R_{\rho t}}$$

$$U_{\rho o} \frac{\rho_t}{\rho_o} = k\, G_{\rho o} \frac{M_{\rho o}}{R_{\rho o}} \frac{\sqrt{\frac{\rho_o}{\rho_t}}}{\frac{\rho_0}{\rho_t}}$$

$$K = \sqrt{\frac{\rho_t}{\rho_o}}$$

$$G_{\rho t} = G_{\rho o} \sqrt{\frac{\rho_t}{\rho_o}}$$

The gravitational permeability, $G_{k\rho t}$

$$G_{\rho t} = G_{k\rho t}\, C_{\rho t}^{\,2}$$

$$G_{k\rho t} = \frac{G_{\rho t}}{C_{\rho t}^{\,2}}$$

$$G_{k\rho t} = \frac{G_{\rho o} \sqrt{\frac{\rho_t}{\rho_o}}}{C_{\rho o}^{\,2} \frac{\rho_t}{\rho_o}}$$

$$G_{k\rho t} = G_{k\rho o}\sqrt{\frac{\rho_o}{\rho_t}}$$

Magnetic permeability of vacuum, Uρ

The magnetic permeability of vacuum has the same nature of the gravitational permeability.

$$U_{\rho t} = U_{\rho o}\sqrt{\frac{\rho_o}{\rho_t}}$$

Atomic radius:

As:

$$R_o = \frac{4\,\pi}{m_{\rho o}\,U_{\rho o}\,C_{\rho o}{}^2\,z\,e_{\rho o}{}^2}\left(\frac{h}{2\,\pi}\right)^2 n^2$$

$$R_t = \frac{4\,\pi}{m_{\rho t}\,U_{\rho t}\,C_{\rho t}{}^2\,z\,e_{\rho t}{}^2}\left(\frac{h}{2\,\pi}\right)^2 n^2$$

$$R_t = \frac{4\,\pi}{m_{\rho o}\sqrt{\frac{\rho_o}{\rho_t}}\,U_{\rho o}\sqrt{\frac{\rho_o}{\rho_t}}\,C_{\rho o}{}^2\frac{\rho_t}{\rho_o}\,z\,e_{\rho o}{}^2\frac{\rho_o}{\rho_t}}\left(\frac{h}{2\,\pi}\right)^2 n^2$$

$$R_t = R_o\,\frac{\rho_t}{\rho_o} = R_o\,\frac{t_o{}^2}{t_t{}^2} \quad a)$$

The atomic radius of the matter is directly proportional to the local universal density of potential energy.

Energy of photon;

$$E_o = \frac{m_{\rho o}\,U_{\rho o}{}^2\;C_{\rho o}{}^4\,z^2\;e_{\rho o}{}^4}{2\,(4\,\pi)^2}\left(\frac{2\,\pi}{h}\right)^2\frac{1}{n^2}$$

$$E_t = \frac{m_{\rho t}\,U_{\rho t}{}^2\;C_{\rho t}{}^4\,z^2\;e_{\rho t}{}^4}{2\,(4\,\pi)^2}\left(\frac{2\,\pi}{h}\right)^2\frac{1}{n^2}$$

$$E_t = \frac{m_{\rho o}\sqrt{\frac{\rho_o}{\rho_t}}\,(U_{\rho o}\sqrt{\frac{\rho_o}{\rho_t}})^2\;(C_{\rho o}\sqrt{\frac{\rho_t}{\rho_o}})^4\,z^2\,(e_{\rho o}\sqrt{\frac{\rho_o}{\rho_t}})^4}{2\,(4\,\pi)^2}\left(\frac{2\,\pi}{h}\right)^2\frac{1}{n^2}$$

$$E_t = E_o\left(\frac{\rho_o}{\rho_t}\right)^{\frac{3}{2}} = E_o\left(\frac{t_t}{t_o}\right)^3 \text{ b)}$$

a)-The evolution of the radius of the celestial bodies over time

$$R_t = R_o\,\frac{\rho_t}{\rho_o}$$

Is this the Earth's future.

The atomic radius of the matter is directly proportional to the density of potential energy on site, the dimensions of the body that are also part of course will vary accordingly.

In an expanding universe, the universal potential energy density will decrease, so the atomic radius will decrease which will cause the stars are shrinking.

Our planet Earth is shrinking.

Currently, its radius shrinks in the order of 42cm per millennium.

The moon is shrinking 11.4 cm per millennium.

Out of curiosity (http://www.cienciahoje.pt/3445/44651) NASA has already found and reported that the moon was shrinking.

The Sun for this purpose without regard to mass loss, will shrink 4554 m in the next millennium.

The Earth and all the other stars and planets are decreasing their radius, are getting smaller.

It is this shrinking of the earth that explains that the interior of this, has not cooled, nor will cool, but instead will heat up.

This phenomenon of the variation in atomic radius, with the universal density of potential energy is also observed in different parts of our local universe simultaneously.

For example, the lengths of the same objects on the lunar surface will be lower than the same surface of the Earth. -1.306 E-09 and in all parts of the Mars-7.9E-09 parts of the whole.

Celestial Mechanics

Locally the centers of mass move away with the growth of the universe and the radius of the celestial bodies vary in inverse proportion to that growth.

From our perspective we now have a clearer idea of the evolution of the universe.

b)- **Evolution of temperature and radiation from celestial bodies.**

$$E_t = E_o \left(\frac{\rho_o}{\rho_t}\right)^{\frac{3}{2}}$$

$$E_t = E_o \left(\frac{I_t}{I_o}\right)^{\frac{3}{2}}$$

T – Temperature:

$$T_t = T_o \left(\frac{I_t}{I_o}\right)^{\frac{3}{2}}$$

The temperature will increase proportional to the square root of the cube of the age of the universe

$W_{r\_}$ Radiated energy:

$$W_{rt} = W_{ro} \left(\frac{I_o}{I_t}\right)^2 \left(\left(\frac{I_t}{I_o}\right)^{\frac{3}{2}}\right)^4$$

$$W_{rt} = W_{ro} \left(\frac{I_t}{I_o}\right)^4$$

$W_{rd\_}$ Radiated energy to a distance D_

$$W_{rdt} = W_{rdo} \frac{\left(\frac{I_t}{I_o}\right)^4}{\left(\frac{I_t}{I_o}\right)^2}$$

$$W_{rdt} = W_{rdo} \left(\frac{I_t}{I_o}\right)^2$$

$T_{r\_}$ - Temperature received from the star:

$$T_{rt} = T_{ro} \left(\left(\frac{I_t}{I_o}\right)^2\right)^{\frac{1}{4}}$$

$$T_{rt} = T_{ro} \sqrt{\frac{I_t}{I_o}}$$

This is the temperature rise that we receive in the future from the Sun

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