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"Energy ignored by Einstein: Dark Matter is not Required"

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Abstract

Dark matter has never been observed. And localized galaxy sizes have never been explained. It is suggested by their contradictions that Einstein's equation is deficient. If we know the decreasing energies of electro-magnetic and gravitational waves with over time, they can be explained theoretically. According to my stress equation (dE/dt=kE), energy ignored by Einstein was calculated. And it is added to his gravitational equation. Ignored energy E(t) with over time is

"ignored" $E(t)=E(0)(1-e^{kt})e^{kt}$

Dark matter, dark energy and the big bang are not required. Limited galaxy sizes, a mandala structure and a pattern of constant dark energy can be explained by a new gravitational equation.

Keywords: Dark matter, ignored energy, Einstein, Gravitational wave, Big bang

Abbreviations
E(t): quantity of energy at time(t)
E(0): quantity of energy at time zero
Stress(t): quantity of stress at time (t)
c: speed of light
r: distance
d , k, t_C, t_1: fixed numbers

Introduction

Dark matter [1] has never been observed. And localized galaxy sizes have never been explained theoretically. It is suggested by their contradictions that Einstein's equation is deficient. In this report, energy ignored by Einstein is shown. Ignored energy is added to Einstein's equation in new gravitational equation.

Procedures

Hypothesis
The quantity of all stress is in direct proportion to the quantity of energy at time (t). Stress is the changed degree of energy per time.

$$Stress(t) = \frac{dE(t)}{dt} = kE(t). \quad (1)$$

Calculations

From equation (1)

$E(t)=E(0)(e^k)^t$. (2)

If k is less than 0,

$e^k=1-d$. $(0<d<<1)$ (3)

From equations (2) and (3)

$E(t)=E(0)(1-d)^t$. (4)

$E(t) \approx E(0)(1-d\ t)$. (5)

$E(t)=E(0)(1-d\ t)$. (6)

Equation (6) is equivalent to Hubble's law. From equations (4) and (5), the big bang theory [2] is shown to be an approximation of my theory [3]. It is misunderstood that the time (t_C) after big bang is 13.7 billion years.

t_C=13.7 billion years (7)

From equations (6) and (7)

$1-d\ t_C=0$. (8)

$$d=\frac{1}{13.7 billion\ years}=\frac{1}{4.32\times10^{17}\sec onds} \quad (9)$$

From equations (3) and (9)

$$k=\log(1-\frac{1}{4.32\times10^{17}\sec onds}) \quad (10)$$

It is shown that energy of electro-magnetic and gravitational waves decrease with over time by equation (4). When energy of electro-magnetic and gravitational waves is considered constant, E(t) is equal to E(0). Newton's and Einstein's equations were made with its premise. It is equivalent to k=0 in equation (2). However, k is less than 0 according to my hypothesis. Energy of gravitational wave decreases with over time in addition to distance. A relation of decreasing gravitational energy to mass (M) is shown in figure. A vertical axis is quantity of energy E(t). And a horizontal axis is time (t). A speed of light is (c). A relation of distance (r) to time (t) is

$r=ct$. (11)

Gravitational force to mass (m) is observed at time t_1. A quantity E(0) of gravitational wave energy made by mass (M) at time zero is point C. It decreases such as a solid curve. According to equation (2), the quantity of decreasing energy at time (t_1) is point B. A quantity of energy at time zero being equal to point B is point A. It decreases such as a dotted curve with over time. According to equation (2), the quantity of energy at point A decreases to point D at time (t_1). Both Newton and Einstein considered their equations at point B. Newton considered a change of gravitational force with only distance. Einstein's equation is

$$G_{mn}+\Lambda g_{mn}=\frac{8G}{c^4}T_{mn} \quad (12)$$

This is an approximate equation, too. Because Einstein had corrected Λ item of equation (12), he considered a change with only distance as the result. At time zero, the quantity of energy considered by Newton's and Einstein's equations is point A. Therefore, a difference between point C and point A is equivalent to ignored energy at time zero. The quantity of its energy is

ignored $E(0)=E(0)(1-e^{kt1})$. (13)

At time t_1, it decreases and becomes to point D. Therefore, the ignored energy at time t_1 is a difference between point B and point D. From equation (2)

ignored $E(t_1)=E(0)(1-e^{kt1})e^{kt1}$ (14)

Ignored energy E(t) with over time is

ignored $E(t)=E(0)(1-e^{kt})e^{kt}$ (15)

Equation (15) must be added to Newton's or Einstein's equation in a new gravitational equation.

Energy part of equation (15) is T_{mn}. Therefore, gravitational energy with over time is from equations (12) and (15).

$$E(t) \approx \frac{c^4}{8G}(G_{mn} + \Lambda g_{mn}) + E(0)(1 - e^{kt})e^{kt} \qquad (16)$$

This is a new gravitational equation.

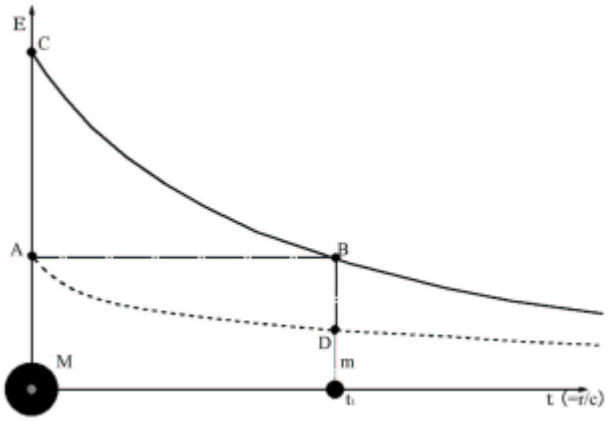

Figure: A relation of decreasing gravitational energy to mass (M)

A quantity E(0) of gravitational wave energy made by mass (M) at time zero is point C. A quantity of decreasing energy at time (t_1) is point B. A quantity of energy at time zero being equal to point B is point A. The quantity of energy at point A decreases to point D at time (t_1). The ignored energy at time (t_1) is a difference between point B and point D.

Discussions

Dark matter has never been observed. And localized galaxy sizes have never been explained by Einstein's equation. It is a cause that the decreasing energies of electro-magnetic and gravitational waves with over time were ignored by Einstein. If we know them, ignored energy is calculated. Ignored energy was added to Einstein's equation in equation (16). No dark matter, no Big Bang, the localized galaxy radius, a mandala structure and pattern of constant dark energy are explained by equation (16).

Conclusions

The decreasing gravitational energies with over time were ignored by Einstein. Ignored energy was added to Einstein's equation in a new gravitational equation.

References

[1] Lewin, J.D. & Smith P.F., "Can cosmic neutrinos be detected with superconductors?" Astrophysical Letters **67** (1984)59-67.

[2] Narlikar, J., "What if the Big Bang didn't happen?" New Scientist, March **2**(1991)48-51.

[3] Yanagisawa, H, "Three Equations of Fluctuation (1/f) to Feeling, Weber-Fechner's Law and Hubble's Law deduced from Stress Equation (dE/dt=kE)". EJTP **3**(2004) 32-36.