Deduction of New Gravitational Formula: $\overline{F} = -\dfrac{mc^2}{R}$

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Abstract. In this paper we deduce the new gravitational formula. Gravity is the tachyon centripetal force. Anybody may understand gravity.

Keywords: Deduction; Gravitational Formula; $\overline{F} = -\dfrac{mc^2}{R}$

Using the tardyon and tachyon coexistence principle [1-5]

$$u\overline{u} = c^2 \tag{1}$$

where c is light velocity in vacuum, $u \leq c$ tardyon velocity and $\overline{u} \geq c$ tachyon velocity.

We deduce a new gravitation formula: $\overline{F} = -\dfrac{mc^2}{R}$.

Figure 1 shows that the rotation ω of body A emits tachyon mass $\overline{m}$, which forms the tachyon and gravitation field and gives the body B revolutions u and $\overline{u}$.
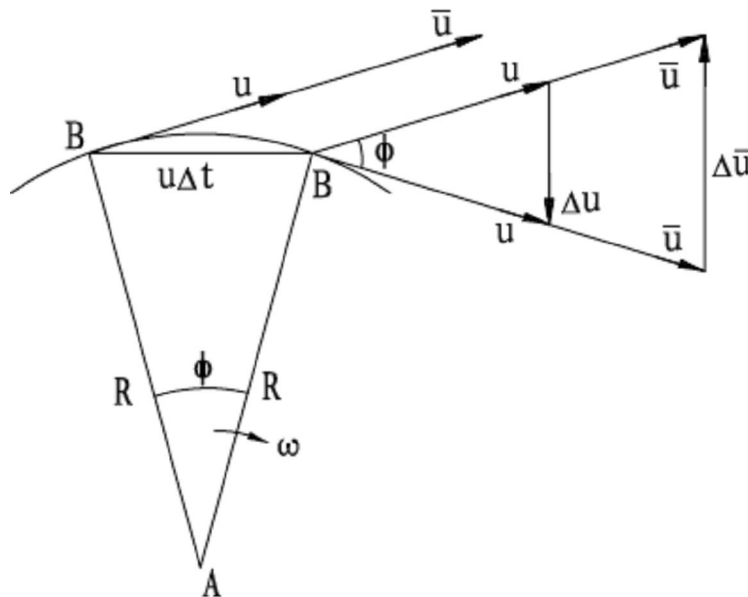

Fig.1. On body B $\dfrac{du}{dt}$ and $\dfrac{d\overline{u}}{dt}$ coexistence [2].

From Fig. 1 it follows

$$\frac{u\Delta t}{R} = \frac{\Delta u}{u}$$. (2)

From (2) it follows the tardyon centripetal acceleration on the body B [2-4],

$$\frac{du}{dt} = \lim_{\substack{\Delta u \to 0 \\ \Delta t \to 0}} \frac{\Delta u}{\Delta t} = \frac{u^2}{R}$$. (3)

From Fig. 1 it follows

$$\frac{u\Delta t}{R} = -\frac{\Delta \overline{u}}{\overline{u}}$$. (4)

From (4) and (1) it follows the tachyon centrifugal acceleration on the body B [2-4],

$$\frac{d\overline{u}}{dt} = \lim_{\substack{\Delta \overline{u} \to 0 \\ \Delta t \to 0}} \frac{\Delta \overline{u}}{\Delta t} = -\frac{u\overline{u}}{R} = -\frac{c^2}{R}$$. (5)

On body B $\dfrac{du}{dt}$ and $\dfrac{d\overline{u}}{dt}$ coexistence.

From (3) it follows the tardyon centrifugal force on body B [2-4],

$$F = \frac{M_B u^2}{R}$$, (6)

where M_B is body B mass.

From (5) it follows the tachyon centripetal force on body B , that is gravity [2-4],

$$\overline{F} = -\frac{mc^2}{R}$$, (7)

where m is the gravitation mass converted into by tachyon mass $\overline{m}$ which is unobservable and give all particles mass, but m is observable. On body B F and $\overline{F}$ coexistence.
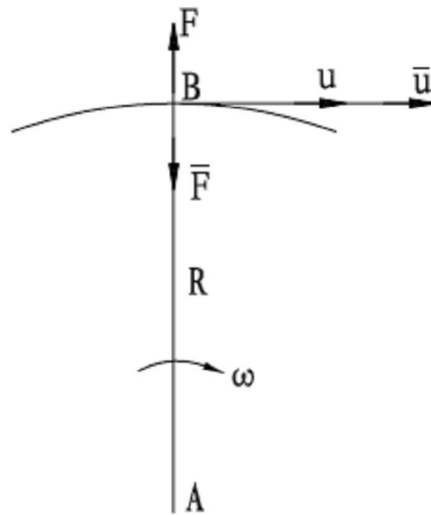

Fig.2. On body B F and $\overline{F}$ coexistence[2].

From Fig. 2, it follows

$$F + \overline{F} = 0$$ （8）

From (6), (7) and (8) it follows

$$\frac{m}{M_B} = \frac{u^2}{c^2}$$ （9）

Body B increases mass m and centrifugal force is greater than gravitation force, then body B expands outward.

From (7) it follows Newtonian gravitation formula. The m is proportional to body A mass M_A, in (9) m is proportional to M_B, is inversely proportional to the distance R between body A and body B. It follows
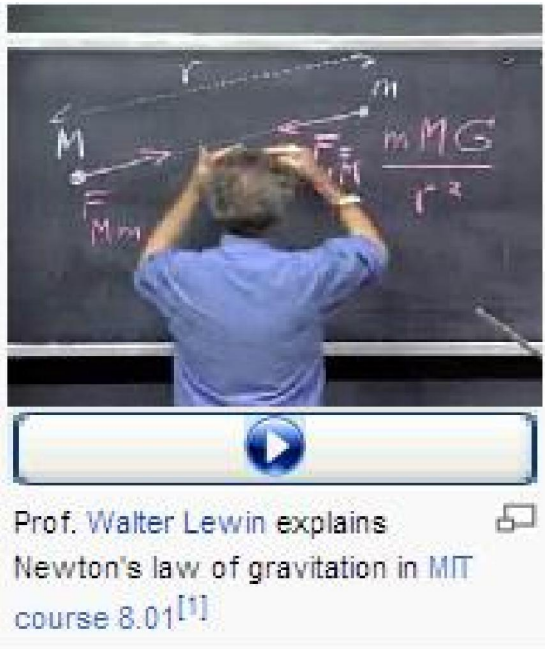
$$m = k \frac{M_A M_B}{R}$$, （10）

where k is constant

Substituting (10) into (7) it follows the Newtonian gravitation formula [2-4]

$$\overline{F} = -G \frac{M_A M_B}{R^2}$$, （11）

where $G = kc^2 = 6.673 \times 10^{-8}\, \text{cm}^3/\text{g} \cdot \text{sec}^2$ is gravitation constant.

Prof. Walter Lewin explains Newton's law of gravitation in MIT course 8.01[1]

12/23/2015

From: "Walter H.G. Lewin" lewin@space.mit edu
Dear Jiang
Thank for your email.
     I suggest you submit your theory to a refereed journal.If it is accepted,then buy yourself a plane ticket to Stochholm to pick up a Nobel prize.
     ……
Greetings.

References
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