

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

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Gravity is a great mystery. No one has since given any machinery. In this paper we give a simple machinery. Gravity is the tachyon centripetal force.

Anybody may understand gravitation.

Using the tardyon and tachyon coexistence principle [1]

$$u\bar{u} = c^2 \quad (1)$$

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

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

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

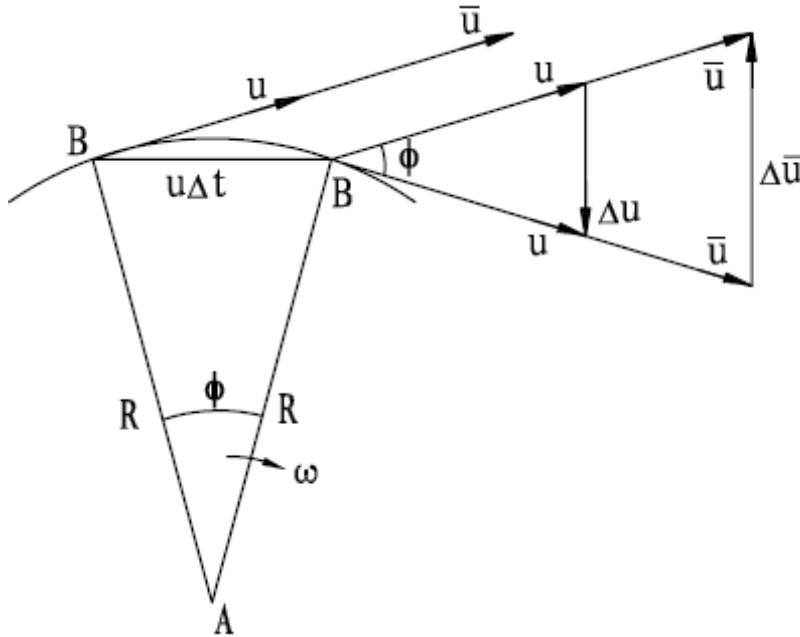


Fig.1. On body B $\frac{du}{dt}$ and $\frac{d\bar{u}}{dt}$ coexistence [2].

From Fig. 1 it follows

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

From (2) it follows the tardyon centripetal acceleration on the body B [2-6],

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

From Fig. 1 it follows

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

From (4) and (1) it follows the tachyon centrifugal acceleration on the body B [2-6],

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

On body B $\frac{du}{dt}$ and $\frac{d\bar{u}}{dt}$ coexistence.

From (3) it follows the tardyon centrifugal force on body B [2-6],

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

where M_B is body B mass.

From (5) it follows the tachyon centripetal force on body B , that is gravity [2-6],

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

where m is the gravitation mass converted into by tachyon mass \bar{m} which is unobservable but m is observable. \bar{m} give all particles mass which replace the Higgs bosons. Elusive Higgs bosons have not been produced at the Large Hadron Collider at CERN. On body B F and \bar{F} coexistence.

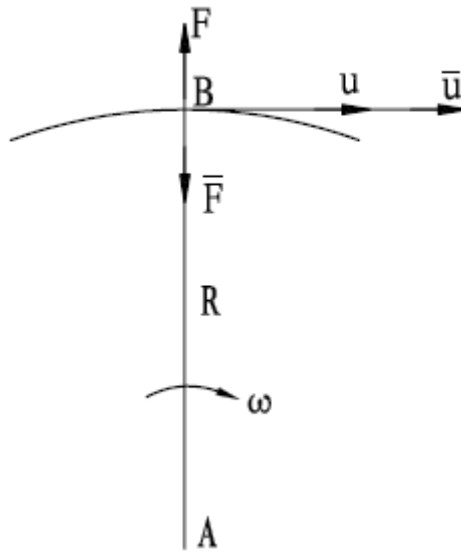


Fig.2. On body B F and \bar{F} coexistence[2].

From Fig. 2, it follows

$$F + \bar{F} = 0. \quad (8)$$

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

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

Body B increases mass m and centrifugal force is greater than gravitation force, then body B expands outward. [5,6]

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

$$m = k \frac{M_A M_B}{R}, \quad (10)$$

where k is constant

Substituting (10) into (7) it follows the Newtonian gravitation formula [2-6]

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

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

References

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From:"Walter H.G.Lewin"lewin@space.mit.edu

Date:Sun,10 Jun 2012 22:22:21-0400(EDT)

Subject: Re:Fwd

To:123jiangchunxuan@gmail.com;lewin@mit.edu

Cc:luc@vanocken.be

Publish this in a refereed journal and once it is accepted buy yourself a first class ticket to Stockholm to pick up Nobel prize for physics.

From:"Walter H.G.Lewin"lewin@space.mit.edu

Date:Sun,17 Jun 2012 06:19:37-0400(EDT)

Subject:Re:

To:123jiangchunxuan@gmail.com

Cc:luc@vanocken.be

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.

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Greetings.