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

Chun-Xuan Jiang
P.O.Box 3924, Beijing 100854, P. R. China
123jiangchunxuan@gmail.com

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

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

$$u\overline{u}=c^2 \qquad (1)$$

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

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

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 $\overline{u}$.

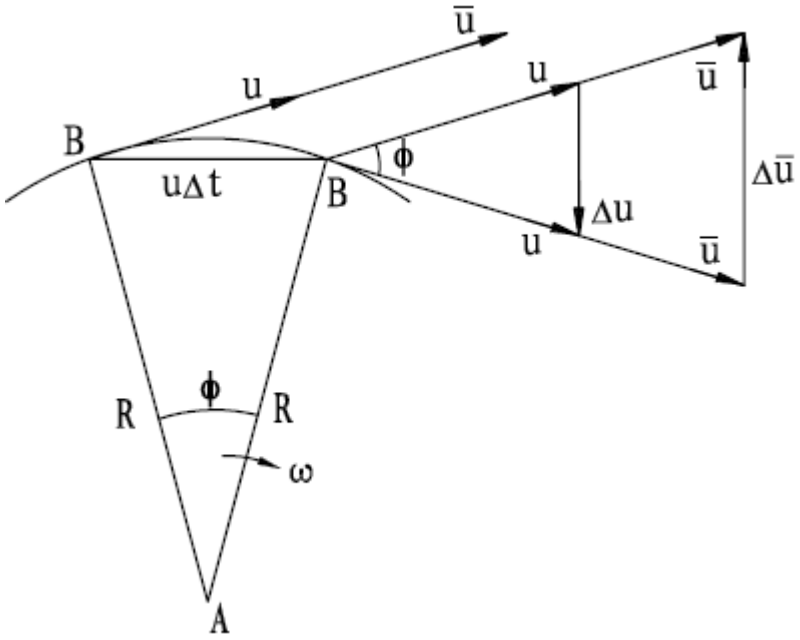

Fig.1. On body B $\frac{du}{dt}$ and $\frac{d\overline{u}}{dt}$ coexistence [2].

From Fig. 1 it follows

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

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

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

From Fig. 1 it follows

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

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

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

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

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

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

where M_B is body B mass.

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

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

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

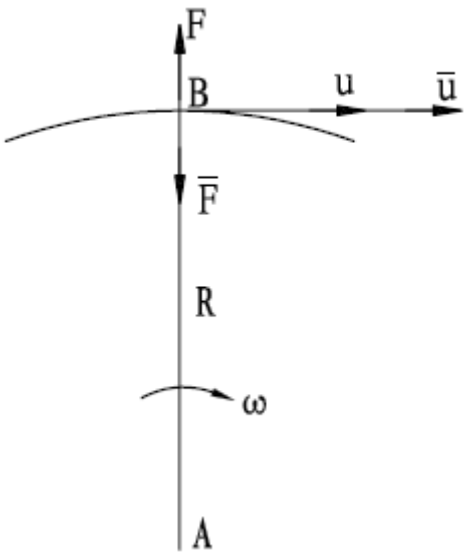

Fig.2. On body B F and $\bar{F}$ coexistence[2].

From Fig. 2, it follows

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

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

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

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

$$m=k\frac{M_AM_B}{R}, \qquad (10)$$

where k is constant

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

$$\bar{F}=-G\frac{M_AM_B}{R^2}, \qquad (11)$$

where $G=kc^2=6.673\times10^{-8}\,\mathrm{cm}^3/\mathrm{g}\cdot\mathrm{sec}^2$ is gravitation constant.

References

[1] Chun-Xuan Jiang, A theory of morphisms between the tardyon and tachyon,physics(Chinese), 4. (1975)119-125.

[2] Chun-Xuan Jiang, On nature for gravitation, J. Beijing observatory (Chinese), 7(1976)32-38.http://www.vixra.org/pdf/1205.0094v2.pdf

[3] Chun-Xuan Jiang, An approach on the nature of attractive force, Potential science (Chinese), 4(1982)19-20.

[4] Chun-Xuan Jiang, A unified theory of the gravitational and strong interactions, Hadronic J., 24(2001)629-638.

[5] Chun-Xuan Jiang, An equation that changed the universe: $\bar{F}=-\frac{mc^2}{R}$

http://www.vixra.org/pdf/1007.0018v1.pdf

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The author is greatly indebted to Professor Walter H.G.Lewin for his emails.

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

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

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.