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Universal Theory on Planetary Motion

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Abstract: *This thesis explains why planets rotate on their axis in a particular angle? And why planets are in elliptical orbits? I took a simple ball which was in a big size, it was filled with air, I took a thin yarn and tie it with the ball's top then I rotated it using my hand and the result was the ball moved in an angle. Not only in an angle but with that angle that ball had another slight angle.*
Keywords: *Planets, Planetary motion, Gravity, Stars.*

I. Introduction:

The planets are moving around the stars by staying in a particular angle with their axis. Now the question is why they are moving on their axis in a particular angle? Like earth is moving in its axis with 23.5^0 angle.

For the experiment I took a big plastic ball (a very light weight plastic ball) and tie the north pole of the ball with a thin yarn. Then tie the yarn with board and rotate the ball in the highest possible speed with my hand. The ball started to rotate in an angle and the ball was slightly angled with the rotation angle.

A very similar thing happens with every planet. Actually here the board which I used to tie the yarn is another star! Not that star that's around the planets are moving. I mean every planet has another star which's gravity is causing of the planet's rotation along with their axis in a particular angle. This means the planets are not the planets of one star but two stars. One star is that one which is giving the planets centripetal force and another star gives them the rotational axis angle. But there are some other planets that have only one star. Their rotational angle is towards the star.

It also means our earth is not moving around the sun not for only the sun's gravity but also for another star's gravity.

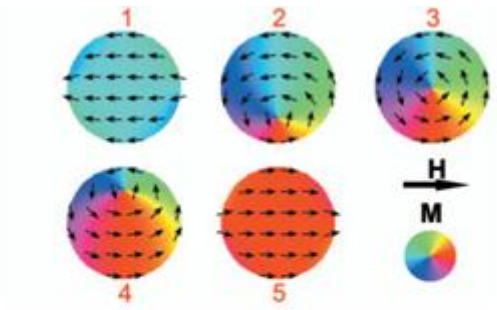

Figure A. '1' This picture shows the direction of the ball/planet's rotation and from the highest point or the North Pole the yarn is stitched or tied and other pictures of figure A are the rotation from other sides of the planet or the ball.

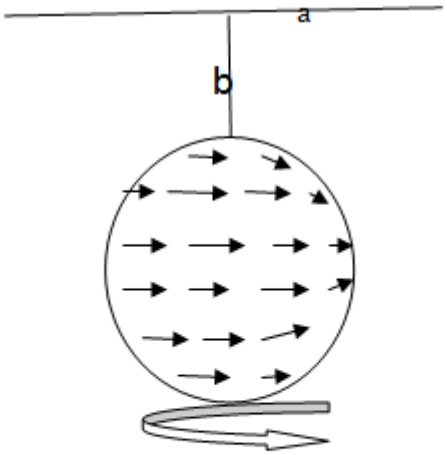

Figure B. It is the ball what we considered as the planet and 'a' the stage from where the ball is hanging. Actually I considered as the another star and 'b' is the yarn or the gravitational attraction of the star towards the planet.

Now when I start to spin the ball in the most possible speed with my hand, it starts to move and going a little curve angle with it's stationary position.

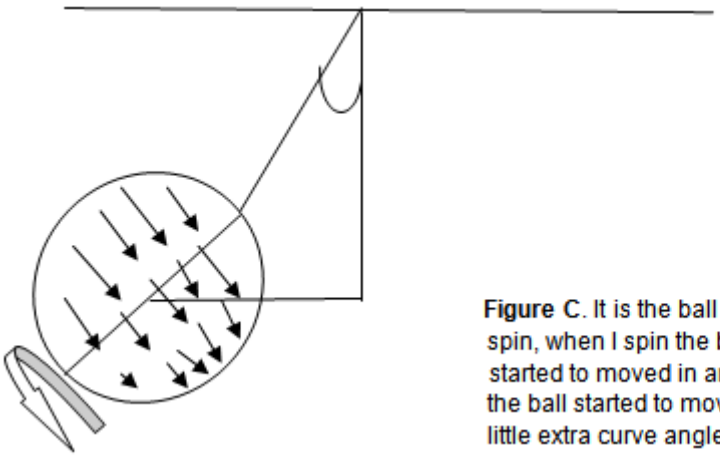

Figure C. It is the ball after spin, when I spin the ball it started to moved in an angle but there the ball started to move in a little extra curve angle with that angle

II. Laws:

1st law => "About every planets have 1 or more stars and they gets the small or big angle on their axis because of the another star's gravitational pull.

2nd law=> "It is not necessary that another star will be in 90° from the planet to the main star".

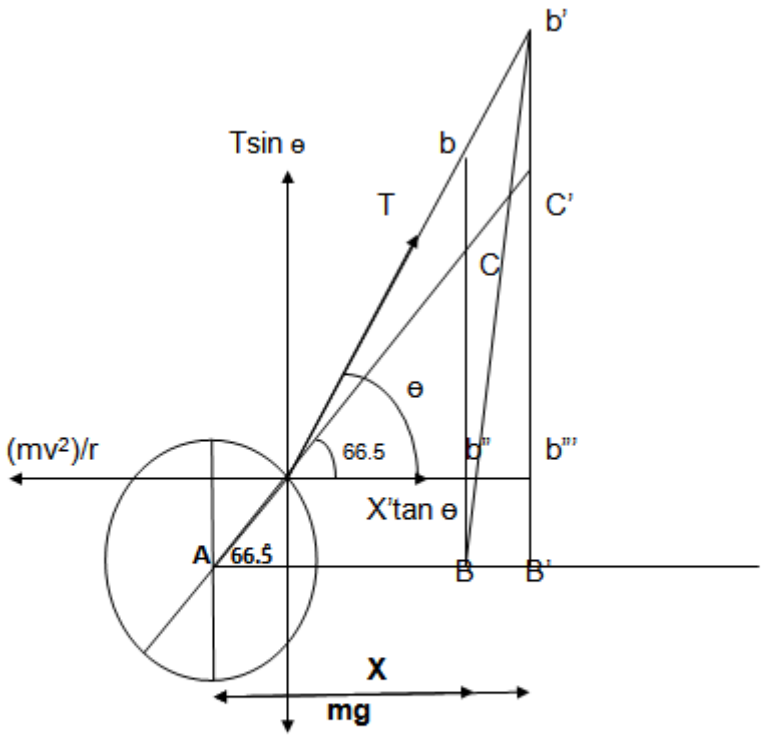

Figure D. Here A is the centre of the planet, And B is position of the star of which the planet moves around and b is position of the second star and b' is another possible position. And from 2nd law another star could be in b or b' position. (here think the ball as earth)

III. How can we find that star?

Consider it as Earth and earth is moving in 23.5° angle with it's axis, so the angle is $(90 - 23.5)^\circ = 66.5^\circ$

AB = the distance from the star's core to planet's core.

AC = the linear distance from the axis

So, BC = AC sin 66.5°

B'C' = AC' sin 66.5°

$\Rightarrow T \sin \theta = mg$

$\Rightarrow T \cos \theta = (mv^2)/r$

$\Rightarrow \tan \theta = mg / [(mv^2)/r] = gr/v^2$

$\theta = \tan^{-1}(gr/v^2)$

∴ bb"/X' = tan ɵ

=> bb'' = X tan ɵ

and, b'b"' =X"tan ɵ

Here T is the attraction between the Planet and the another star , and $(90 - 23.5) = 66.5^\circ$. So, b and b' are in a same straight line (2D according to the 2D picture and the 2D surface, though they are in 3D space, or 4D as Einstein said) and then the star is in b or b' position, there the probability depends on the planet's angle with it's axis and the star of which the planet is moving around.

IV. Reason of Elliptical Orbits:

The reason behind the elliptical orbits of the planets is the star who's around the planets are moving, actually when the planets move around the star, then because of planets gravitational pull the stars **do not stay in one particular point**, but the stars changes their place slightly. The star also moves in an orbit (as shown in the figure F, section A). The star gets the orbit because of the gravitational force of other stars or planets, these orbits are created to conserve the momentum.

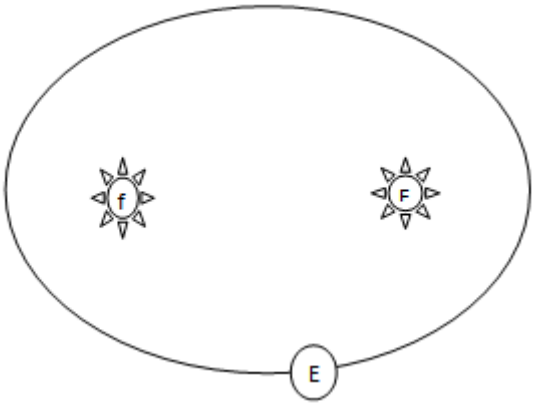

Figure E: Here f is a focus of the planet's (E) orbit and F is another focus. E is the planet.

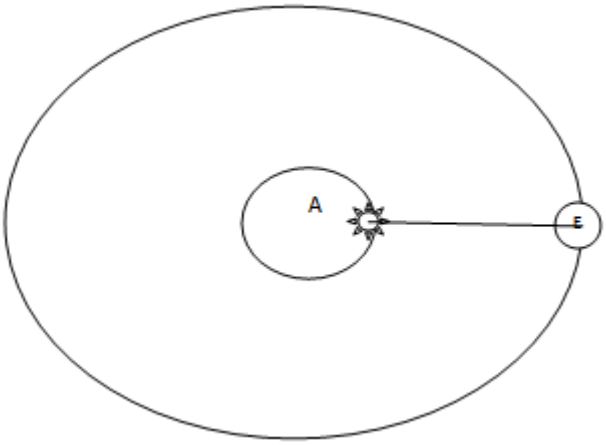

Figure F: Here A (star orbit) is the most probable shape of that orbit in where the star stays and which causes the planet's elliptical orbit.

V. Laws:

"The star's orbit causes the shape of the planet's orbit and the eccentricity of the star's orbit causes the increase or decrease in the eccentricity of the planet's orbit"

VI. Equation:

Consider the eccentricity if the star orbit is e' and the eccentricity of the planet's orbit is e.
Then, **e α e'**

VII. Conclusion:

In this paper I have demonstrated that the planets are not moving because of one star but they are moving in their axis because of another star.

VIII. Competing Interests:

No competing interests exist.

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