



New Theories, Models and Explanations of Science

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ABSTRACT

In may 2012, a book has been published in Bengali by Spike Trade International from Bangladesh named “Poromanu Hote Mohabishwa O Oikkoboddho Tattwa” (From Atom to Universe and the Theory of Unification) which is written by me. I tried to provide many information in the book from atom to universe as well as I have formulated some new theories, proposed some new models and also explained some unexplained problems of science which seems to be logical to me and many others. On the basis of explanations in the book I have formulated ‘The Theory of Everything’. All are yet to be judged and proved by the philosophers, scientists, physicists, religious leaders and by the people who love science. Some important aspects of those are appended below:

1. NEW ATOMIC MODEL

The quark of an atom has North Pole and South Pole. It rotates on its own axis with the influence of field where it lies. Due to rotation, the polarity of the quark changes frequently like the sun. For this reason electromagnetic waves are produced in the quark. When the number of electromagnetic wave exceeds the limit, it is emitted as a bundle of waves and bundle of loops. In atom these loops carry gluon particles. Each loop has two parts; one is positive and another is negative. With the interaction of loops from six types of quark globule is formed at the centre of atom and the quarks move in an elliptical path round the globule like galaxy.

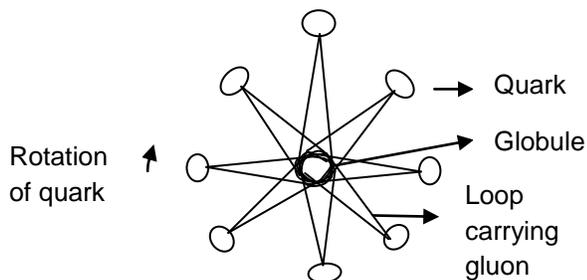


Fig: New atomic model

The electromagnetic wave loops emitted from atoms make bond by mutual interaction. The electromagnetic wave loops which are emitted towards the centre of an object make bond among the atoms and which are emitted outwards from an atom, carry gravitational force.

2. NEW EXPLANATION FOR ACTION OF GRAVITATIONAL FORCE

There are two types of forces acting on a planet which moves round the sun. One is centripetal force and another is centrifugal force. The centrifugal force is developed

due to the rotation of the sun. The centripetal force is the resultant of attraction or gravitational force and repulsion or anti gravitational force. The gravitational force and anti gravitational force works by using electromagnetic waves or light. The electromagnetic waves or light which is emitted from an object as a loop is the transverse wave. The attraction force occurs due to the interaction of electromagnetic wave loops emitted from the sun and the planets, which take place between the sun and the planets.

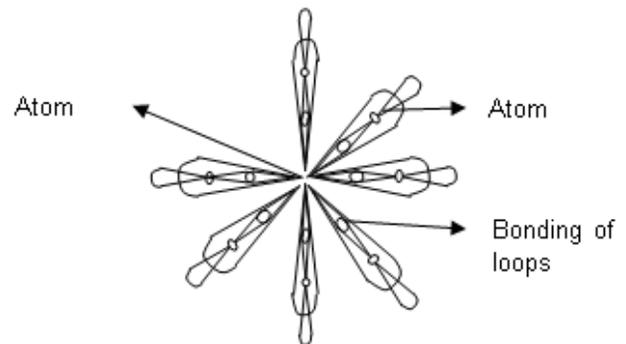


Fig: Bonding among atoms of an object

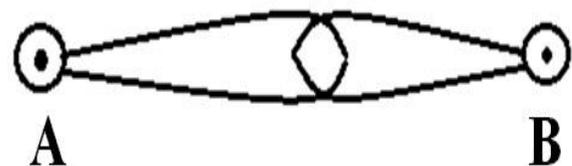


Fig: Attraction between two loops

If the mass of the sun is m_1 and the mass of a planet is m_2 and the distance between the centre of the nearest part of the sun and the centre of the nearest part of the planet is d and k is constant, then the gravitational force or attraction force = $k (m_1 \times m_2) / d^2$. The gravitational force or attraction force acts between the centre of the nearest part of the sun and the centre of the nearest part of the planet.

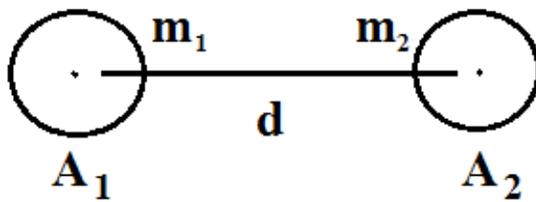


Fig: Attraction between two objects

On the other hand repulsion force develops due to the repulsion of electromagnetic wave loops generated in the planet by the electromagnetic wave loops generated from the sun, which takes place outside the planet.

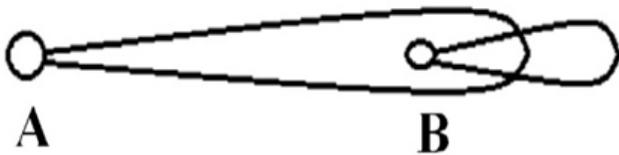


Fig: Repulsion force upon another loop

If the mass of the sun is m'_1 and the mass of a planet is m'_2 and the distance between the centre of the nearest part of the sun and the centre of the distant part of the planet is d' then the anti gravitational force or repulsion force = $k (m'_1 \times m'_2) / d'^2$. The anti gravitational force or repulsion force acts between the centre of the nearest part of the sun and the centre of the distant part of the planet.

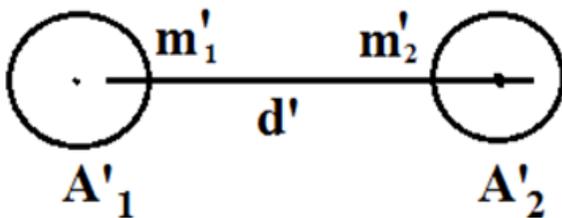


Fig: Repulsion force on opposite side

As the distance for attraction force is less than the distance for repulsion force, the value of attraction force is more than the repulsion force. So the resultant force here is the gravitational force or attraction force. Then the resultant force that is centripetal force on the planet by the sun = $k [(m_1 \times m_2) / d^2 - (m'_1 \times m'_2) / d'^2]$. This formula is also applicable to all the objects of nature.

Tide occurs at sub lunar point on earth due to attraction by moon's electromagnetic wave loops. On the other hand tide occurs at antipode due to the repulsion by moon's electromagnetic wave loops. The tail of a comet always remains away from the sun due to the repulsion by sun's electromagnetic (EM) wave loops.

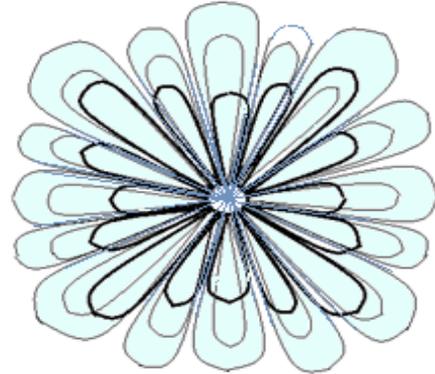


Fig: Gravitational field around an object

Due to interaction of electromagnetic wave loops, heat is produced at the centre of cyclone, lens like matter is produced at the centre of galaxy, black spot is seen on the water surface before forming a water spout and sunspot is formed on the surface of the sun. If medium sized hair of a person is tied up with a band, then the middle part of the hair expands with the repulsion of electromagnetic wave loops and the ends of the hair remains together with the interactions of electromagnetic wave loops which are emitted from the hair.

3. NEW EXPLANATION ABOUT 23.5° INCLINATION OF EARTH'S ORBIT

We know that, an object which rotates on its own axis has a natural property called 'rigidity in space'. That means; the rotational axis of a rotary body will remain pointing in a fixed direction in the space. The earth moves round the sun as well as it rotates on its own axis. Due to rigidity in space, the rotational axis of the earth should remain pointing in a fixed direction in the space. But as the distance between the sun and the earth varies due to the variation of centrifugal force and centripetal force, the axis of the earth cannot remain pointing in a fixed direction. So, to compensate the property of 'rigidity in space', the earth moves towards north or south. On 21st Jun the earth is at closest point to the sun and it goes to the maximum limit towards north. During this time, the sun is sighted towards maximum south (23.5° S). From that day centrifugal force starts overcoming centripetal force and the earth starts going away from the sun. And again, to compensate the properties of rigidity in space, the earth moves towards south till 22nd Dec. On that day the earth is at furthest point from the sun and the sun is sighted towards maximum north (23.5° N). From that day again centripetal force starts overcoming the centrifugal force. In this way the orbit of the earth is 23.5° inclined to the sun's equator although the earth's equatorial plane is only 7° inclined with the sun's equatorial plane.

4. NEW THEORY AND EXPLANATION FOR COMETS GO FAR AWAY AND COMES CLOSER TO THE SUN

If we consider that the perpendicular line to the direction of centripetal force which joins the centre of centrifugal

force (R_2) and the opposite direction of centripetal force as Rotational Lever ($R'_2 R_2$). If we again consider that the distance between the centre of centrifugal force and the centre of centripetal force along the line of centripetal force as Eccentric Distance ($R'_2 E_2$) as shown in figure below:

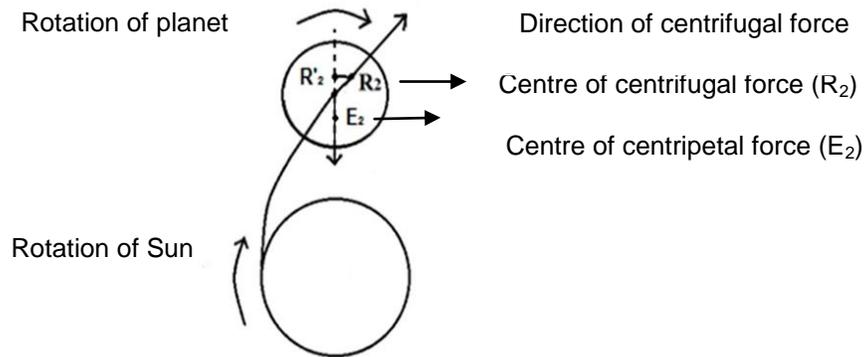


Fig: Forces acting on a planet

Then from the above discussions, we may derive the following theories:

- The body whose ratio between the mass and rotational lever is more, it rotates more rapidly on its own axis.
- The body whose ratio between the mass and eccentric distance is more, it goes more away from the sun and comes closer to the sun.
- The body whose ratio between the mass and the acting resultant force is more, it moves at higher speed in the orbit.

As the size is very small, the value of above ratios is more in a comet than a planet. So it rotates faster on its own axis, moves faster in the orbit and goes far away from the sun and comes closer to the sun.

5. NEW EXPLANATION ABOUT THE FORCES TEND TO MOVE THE PLANET ROUND THE SUN

The centrifugal force from the sun acts in a curved path which is outward from the sun. This force is generated due to the rotation of sun.

We know that the gravitational force acts through a centre and anti gravitational force also acts through a centre. The resultant force that is centripetal force also acts through the centre of the nearest part of the planet towards the centre of the nearest part of the sun. All these are shown below:

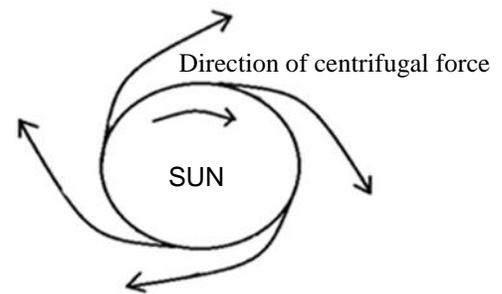


Fig: Action of centrifugal force

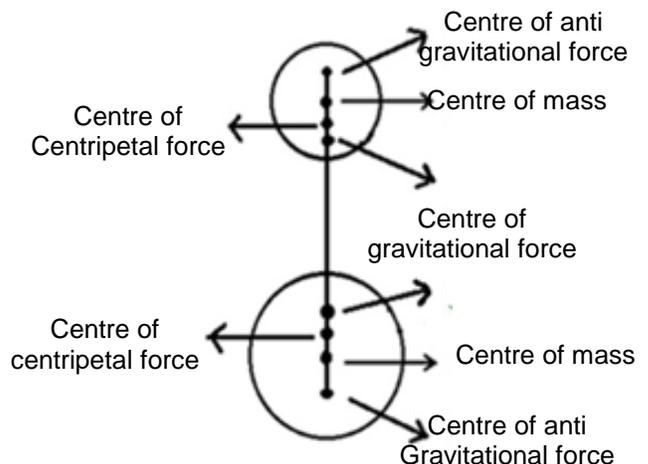


Fig: Centre of mass and different force

Due to the variation in value of both the forces, when the resultant force starts acting outwards or when the centrifugal force overcomes the centripetal force and the planet opens out at an angle, the velocity of the planet

starts decreasing. At some distance the centrifugal force starts decreasing and the centripetal force overcomes centrifugal force. Then the resultant force or centripetal force starts acting inwards, the velocity of the planet is increased gradually and the planet gets closer at an angle to the sun. At some distance, the centrifugal force again overcomes centripetal force and again the resultant force starts acting outwards. When the planet opens out from the sun, centrifugal force decreases rapidly than the centripetal force and when the planet gets closer to the sun, centrifugal force is increased rapidly than the centripetal force. As the centrifugal force acts in a curved path, the resultant force of centrifugal force and centripetal force acts in such a direction that the planet moves in an elliptical path round the sun. The path of the earth round the sun is shown in figure below:

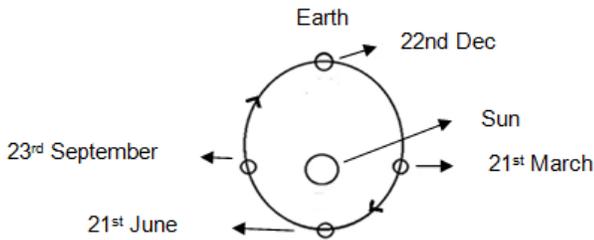


Fig: Elliptical path of Earth

The centre of centrifugal force remains outside the centre of mass in the direction of centrifugal force which is shown below:

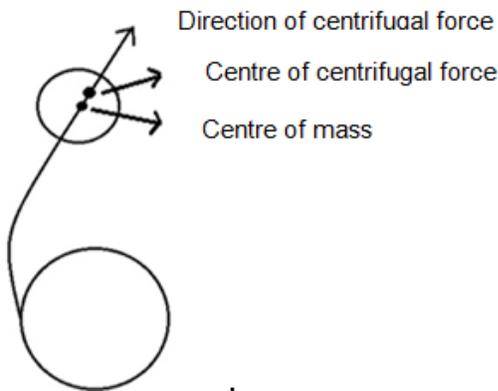


Fig: Centre of centrifugal force

The centre of the centrifugal force and the centre of the centripetal force remain away from the centre of mass in a planet when the planet is nearer to the sun like the figure below and moving in an elliptical path. In this position the length of Eccentric Distance ($E_1 R'_1$) and the length of Rotational Lever ($R_1 R'_1$) is maximum. The motion of a planet depends on the ratio of its mass and acting force including Eccentric Distance and Rotational lever.

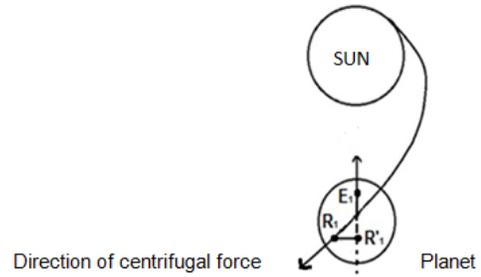


Fig: Forces acting when the planets are nearer to sun

The centre of the centrifugal force and the centre of the centripetal force remain closer from the centre of mass in a planet when the planet is away from the sun and moving in an elliptical path. In this position the length of Eccentric Distance ($R'_2 E_2$) and the length of Rotational Lever ($R'_2 R_2$) is minimum. The motion of a planet depends on the ratio of its mass and acting force including Eccentric Distance and Rotational lever.

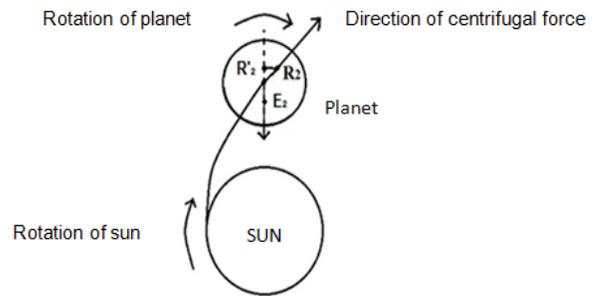


Fig: Forces acting when the planets are away from sun

In both the cases, the centre of centrifugal force and the centre of the centripetal force do not remain in a straight line which is passing through the centre of mass. That is why the planets are moving on their own axis because, both the centre of forces tends to come in a line which is passing through the centre of mass. The length of Eccentric Distance, the length of Rotational Lever and acting resultant force in a planet varies with the size, distance from the sun and position in the orbit.

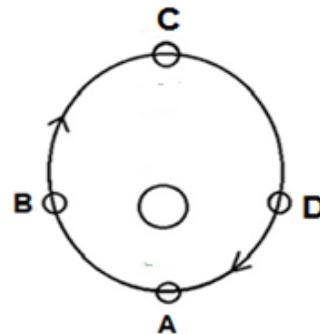


Fig: Elliptical path of planet round the sun

The centre of resultant force in a moving object remains away from the centre of mass in the direction of resultant force and shifts position with the change in value and direction of resultant force. The centre of resultant force in a planet which is moving in an elliptical path round the sun gradually shifts in a direction shown below. From above figure, when the position of the planet is at A, B, C and D, the positions of the centre of resultant force is at a, b, c and d as shown in figure below.

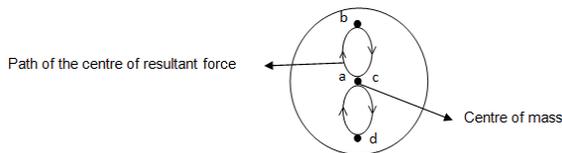


Fig: Centre of resultant force in a planet moving in elliptical path

6. NEW EXPLANATION FOR THE MOVEMENT OF SOME COMETS IN THE OPPOSITE DIRECTION OF SUN'S ROTATION

Actually the comets do not move directly on the opposite direction of sun's rotation. Due to the variation in centrifugal and centripetal force, the comets go away from the sun and come closer to the sun at an angle and move on the opposite direction of sun's rotation and apparently, it seemed to be moving in the opposite direction. These comets get forward motion from the variation in value and the direction of resultant force of centrifugal force and centripetal force.

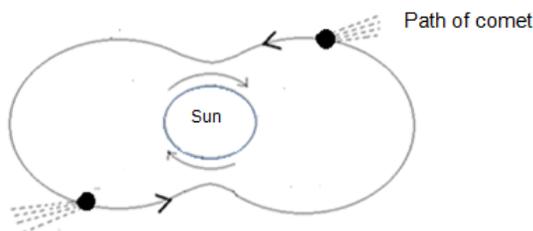


Fig: Comets moving on the opposite direction

This type of comets was received by the solar system from the opposite direction of sun's rotation and from rear side of the sun's motion.

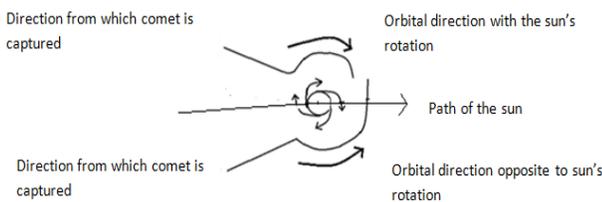


Fig: Direction of capture and orbit of comets

7. NEW EXPLANATION ABOUT THE FORMATION OF SOLAR SYSTEM

Initially the planets were formed from the dead stars. It was moving in the space with the action of drag force. Like other stars, after forming, the sun was also moving in the space with the action of drag force. As the planets are small in size than the sun, the value of the ratio of mass and acting resultant force is more in the planets than the sun. So the velocity of the planets in the space was more than the sun. As a result, the present planets came closer to the sun from rear side and attracted by the sun's gravitational force one by one. Firstly the planet Mercury was captured by the sun. Subsequently Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto and their satellites were captured by the sun. Just after being captured each planet started moving round the sun due to variation in centrifugal and centripetal force. Thus the solar system was formed. In future more objects may be captured by the present solar system which may be the satellites of present planets or may take position outside the present planets as planets.

8. NEW EXPLANATION ABOUT THE FORMATION OF UNIVERSE

Energy, time and space is infinite in the nature. Hydrogen produced in the space from energy. Hydrogen clouds formed by the accumulation of these hydrogen. Due to the gravitational force large amount of hydrogen clouds collapsed at a point and the stars were formed in different places at different time. Due to centripetal force and lack of centrifugal force the stars have fallen at a point to form galaxies. In the same way a number of galaxies have fallen at a point to form cluster of galaxies and the universe too. The universe was not created as a result of big bang, but the big bang happened when the universe formed due to the falling of all objects at a point, that is the centre of the universe. That is why the age of some stars is more than the age of the universe. There may be infinite number of universes outside our universe.

9. NEW AND LOGICAL MODEL OF THE UNIVERSE

Stars were formed due to the accumulation of hydrogen clouds. Due to gravitational force these stars started falling at a point and the rotation of stars started around that point like cyclone, and the galaxies were formed. A number of galaxies have fallen at a point to form cluster of galaxies. In the same way, due to the effect of centripetal force and lack of centrifugal force all the clouds, stars, galaxies and cluster of galaxies have fallen at a point and the Big Bang occurred. While all these objects were falling at a point a circular movement of these objects started around that point like cyclone. Some

objects, whose ratio between mass and Eccentric Distance is more than the limit, are falling into the centre. Due to the heat at the centre these objects are melted and the gaseous and liquid matters are escaped by whirling through the two poles of rotational axis like the clouds of a cyclone. As the objects are falling at the centre continuously, we get the micro wave radiation from back all the time. The larger objects, whose ratio between mass and Eccentric Distance is less, do not fall at the centre. Due to increased centrifugal force these objects are repelled by the centre towards the pole before falling into the centre. The vacuum created surrounding the universe due to the objects coming towards centre is filled up by the gaseous, liquid and solid objects escaped through the poles. New objects also come from outside the area of present universe. Thus the size of the universe also increased day by day. The gaseous and liquid matters are the source of drag force by which all objects are moving forward and rotate on their own axis. This drag force acts in a curved path. New stars and also galaxies are formed from the energy, gaseous and liquid matter which is escaped through the pole. In this way an elliptical path is created for the stars and galaxies outside the centre of the universe. Because of the action of drag force and the action of centripetal force, all the stars, galaxies and cluster of galaxies continuously get rotary motion and forward motion in the universe. The position of our galaxy is in, one of the polar region, so we are going away from the centre of universe. All the questions related to universe may be answered from this model.

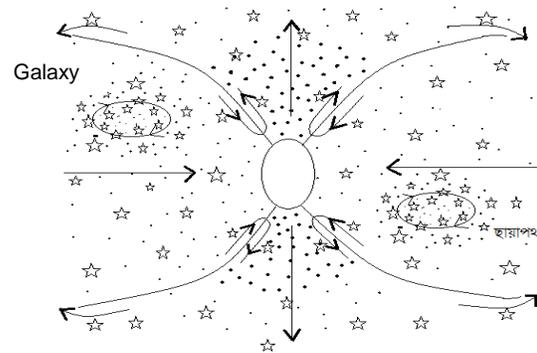


Fig: Logical model of universe

10. THEORY OF EVERYTHING

The electromagnetic wave loops or light is the basic of all forces. The electromagnetic wave loops make bond among the quarks of an atom as strong force. They make bond among the atoms of an object as weak force. They also make bond among the objects of the universe as gravitational force. The electromagnetic force or energy is transmitted through medium with the help of electromagnetic wave loops. This is the long awaited and expected theory of everything, because it can explain everything from atom to universe.