The theory of motion of objects in the universe

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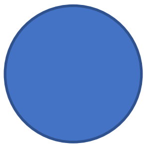
The motion of objects in the universe is governed by newton's laws of motion that describes motion in terms of the state and cause of motion, while also governed by Einstein's special theory of relativity for objects moving at high velocity. This paper will explain the importance of objects themselves and the motion that exists between the objects in the universe based on the fundamental nature of mutual existence of objects. It is critical to understand the evolution of motion between objects and then the nature of motion and its causes. This paper will be first of series of papers, that will open up for the understanding of objects, their behavior in terms of motion and the fundamental nature of universe that is governed by these behaviors of objects.

To define the postulates that govern the motion of objects in the free space, we need to first define the “reference mass”. A reference mass in the universe is a perfectly spherical, frictionless object either emitting or reflecting single color in the spectrum of light, irrespective of its size. An observer displays dual characteristics of being a single reference mass and multiple reference masses as we will see in the below postulates.



Postulate 1: Motion between the objects in the free space does not exist when there are no reference masses in the universe.

M 3^ DT,

where is M is magnitude of motion, D is change in the distance between the objects / reference masses and T is the time taken for change in the distance between objects / reference masses. 3^ is symbol for “does not exist”.

Postulate 2: Motion exist in the free space but indeterminate when only a single reference mass exist in the universe. If that reference mass is an observer, she displays characteristics of a single reference mass.

M 3 DT,

where is M is magnitude of motion, D is change in the distance between the objects / reference masses and T is the time taken for change in the distance between objects / reference masses. 3 is symbol for the state of “exists but indeterminate”.

Postulate 3: Linear motion in the free space originates when there are two reference masses in the universe. In this case the observer still behaves as a single reference mass even though he is not a frictionless, perfect spherical object. As in the below figure, the observer simply exhibits the characteristics of a single reference mass and there is linear motion between the two reference masses. Note that the motion in the form of rotation does not exist here because even though if the sphere rotates around its own axis, such motion is unobserved, since the sphere is frictionless perfect sphere that emits or reflects one color of light spectrum.

M = DT,

where is M is magnitude of motion, D is change in the distance between the objects and T is the time taken for change in the distance between objects.

Postulate 4: Motion in the form of revolution and rotation originates in the space when there at least three reference masses in the universe.

M = RT, where T is time for one complete rotation or revolution and R is the outer circumference of the sphere in case rotation and circumference of path traversed in case of revolution.

Case 1: Observer still shows the characteristics of a single reference mass. However, the reference mass which the observer is observing is now a package of multiple reference masses since it is now reflecting different colors in the spectrum.

Now if the sphere rotates around its own axis, observer can observe the existence of such motion since the sphere is now a package of multiple reference masses. Suppose the Sphere was a single reference mass, i.e., a frictionless, perfect spherical object, emitting or reflecting single color in the spectrum of light, then the observer would not have witnessed any rotation of the sphere.

The observer can also revolve around the sphere with the sphere being static at its axis, with such motion coming to existence, because we have a sphere which is package of multiple reference masses. If we had perfect, frictionless sphere emitting/reflecting single color, then the observer would not have observed the existence of motion in the form of revolution.

Case 2: Suppose instead of a sphere, let's consider two observers in the space, with one observer rotating around his own axis, while other observer observing that motion. Since we have at least three reference masses here, with static observer being single reference mass and the rotating observer as a package of multiple reference masses, we can observe the existence of rotation motion.

Let us assume that the previously rotating observer is now static, while previously static observer now revolves around the static observer, we can see that there is an existence of motion in the form of revolution.

Conclusion

Origination of motion, be it linear motion or rotation or revolution, is caused by the number of reference masses that exist in the space. An observer can exhibit dual characteristics of being a single reference mass as well as a package of multiple reference masses. Even though celestial objects do not have perfect spherical shape and neither are they perfectly frictionless, they do tend to show such behavior which is why most celestial objects gravitated to form spherical objects, which is intriguing. Like any other fundamental laws of physical motion, we can make assumption that such perfectly spherical frictionless objects do exist in the universe to define our postulates and lay foundation for further understanding.

Acknowledgements

This paper evolved as a result of deeper understanding of motion of objects. Any further understanding of universe would be possible only when we utilize the knowledge and understanding of work created by our predecessors. As an author of this paper, it's my duty to acknowledge the giants of past for their work; so, thanks to all the physicist such as Galileo, Isaac Newton, Kepler and Albert Einstein who defined the motion of objects in their own way.