Non-universal Reference Point for Velocity Concept William Beaujon MD bice_97@yahoo.com

Abstract: This paper describes a concept that sub-photons (described in a previous paper) contribute to a "zero reference point" for velocity. This paper also describes how this "zero reference point" can vary in the universe. Also proposed is a variable speed of light depending on the reference, based on a comparison of the origin of electromagnetic or gravitational waves to the point of measurement. Also described is a proposal to explain the controversial subject of high velocities of celestial objects in the outer portions of rotating galaxies.

A common question often arises in physics and cosmology regarding whether an "absolute" zero reference point exists for velocity comparisons. The prevailing theory is that the speed of light is seen as the maximum possible velocity. This "maximum velocity" is to be considered infinite in calculations and has no reference point, according to prevailing wisdom. I would argue a different explanation:

- The "zero reference point" for velocities in the universe is set by the average velocity and direction of sub-photons in the area of the universe in question.
- Matter absorbs and radiates sub-photons at the speed of light, as referenced from the last point of matter interaction.
- The "zero velocity reference point" for each sub-photon is determined by the average velocity and distribution of matter that last reacted with the sub-photons before reaching the area of the universe in question.
- The "zero reference point for velocity" is different for each part of the universe.
- The velocity of sub-photons is a finite speed (of light) compared to last reflection or emission.
- The relative velocity of sub-photons can exceed (or be less than) the speed of light based on the points of reference.
- The "zero velocity reference point" for a specified area of space is determined by the relative velocity and direction (the sum) of all sub-photons traveling through that area.
- Evidence for this theory can be seen in the rotation of galaxies in the universe. There has been a controversy surrounding the velocity of the outer part of the galaxy. Scientists have not been able to understand how the outer arms of the galaxy can travel so swiftly and do not simply fly apart into space due to rotational inertia. The answer lies in the theory that the "zero reference point for velocity" is produced by the matter that last radiated or produced the sub-photons in the area. The "ether" can be seen as a sea or sub-photons traveling in all different directions. Since the sub-photons in the outer part of a galaxy were mostly absorbed or emitted from other matter in the outer part of the galaxy, their "zero reference point for velocity" tends to follow the matter in the outer part of the galaxy. These sub-photons in the outer galaxy, therefore, exhibit a push on nearby celestial objects, causing them to have a tendency to move at the same velocity throughout the galaxy. The very outermost layer of the galaxy has more "contact" with the empty space between galaxies and the sub-photons in this area tend to push this outermost layer inward toward the galaxy center.

- This theory also explains the science question about a rotating barrel of water in space. The question states: "If a barrel of water is rotating in space, how does the water know that the universe is not spinning and the water is standing still?" The answer lies in the concept that the sub-photons create reference points for both velocity and directional orientation of space. The impact of sub-photons onto matter can be seen as "feedback information" that instructs the matter on its orientation in space.
- To confirm or disprove this theory, velocity of light determinations need to be made using different celestial objects with different velocities. It may be possible to detect light from various celestial objects (and at different frequencies) on both the moon (or another satellite) and the earth and make velocity determinations from this.