Abstract Submitted for the OSS21 Meeting of The American Physical Society

A new theoretic framework mathematically derived from the principle of constant light speed QIAN CHEN, International Education Foundation — The well-established principle of the constancy of the velocity of light can be mathematically represented with the general equation $O(t_o)$ - $S(t_o)$ = $c(t_o$ - t_o). Based solely on this equation without including any other assumptions, a comprehensive set of ground-breaking results was derived solely through strict mathematics, covering: the Light velocity; Sagnac effect; Stellar aberration; Time dilation; Doppler effect; Lorentz force law; Maxwell's wave equations; Momentum to acceleration ratio; Mass-Energy relationship; Mass of moving particle. This set of results is named "Asymmetry Theory", which is comprehensive, self-consistent, and in harmony with all existing experiments. It provides a straightforward and mathematical explanation of key physical phenomenons without any paradox, including the Sagnac effect, one-way light speed, M-M experiment, observed time dilation, "twin paradox", Doppler effect, cosmological redshift, and particle acceleration. Furthermore, Maxwell's equations provide the theoretic base and proof for Asymmetry Theory. Two experiment designs based on the predictions of Asymmetry theory are proposed for further conclusive confirmation.

¹A new theoretic framework mathematically derived from the principle of constant light speed

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