the general science journal

The Relativistic Carried-Along Theory

Jake Todd

Formerly of the University of Washington and Microsoft

Jake.Todd@Gmail.com

ABSTRACT. We explore the curvature of spacetime and in particular a theoretical effect on objects due to the process of their local spacetime curving by an approaching, very massive object. A method for detecting the effect is given. This effect is *in addition to* the expected, traditional acceleration by the massive object.

According to Einstein's Theory of Relativity[1], spacetime is warped toward gravitating objects. The Relativistic Carried-Along Theory is whether, when a massive object approaches, the resulting curving of spacetime carries-along low-mass objects within it or, if the curving spacetime slides by those objects. This effect is *in addition to* the expected, traditional acceleration of the low-mass object.

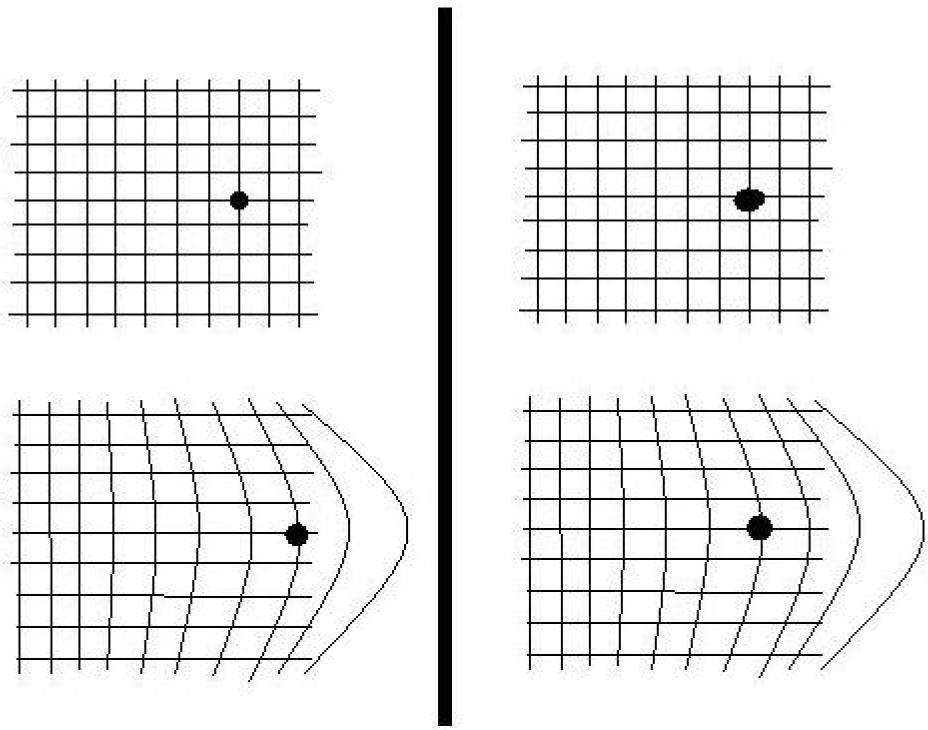

Figure 1:

Consider the position of the black dot object as it changes from the top two graphs to the lower two graphs. The graphs are separated into the left side and the right side. On the left side, the black dot object has been carried-along by the curving of spacetime and is closer to the oncoming massive object that is bending spacetime. On the right side, the black dot object has not been carried-along and has a position on a new line because spacetime has slid by the black dot object. This figure ignores the traditional, expected acceleration by the massive object in order to illustrate the theory.

1 Einstein, A. and Lawson, R. (2005). Relativity: The Special and the General Theory. New York, NY: Pi Press.

One way to test the theory is to fire photons at a low-mass object as a large, massive object is coming near. The low-mass object must be able to reflect the photons you are firing back to you. You can predict, using acceleration equations, how much to correct the trajectory of the photons, as the massive object comes closer, in order to keep the light on the low-mass object. You are correcting for the curved path the photons will take as the massive object gets closer and closer. You are also correcting the trajectory of the photons given that the low-mass object will start to accelerate towards the massive object. If, given these two corrections with a high enough level of precision, the low-mass object continues to reflect light until it is pulled to collide with the massive object, then The Relativistic Carried-Along Theory is disproved. However, if the light stops being reflected by the low-mass object before it hits the massive object, then The Relativistic Carried-Along Theory is proved because spacetime has moved the low-mass object in addition to accelerating it towards the massive object.

The photon source needs to be at angles near-perpendicular to the path the low-mass object takes toward the massive object. For example, if you were to have the photons' paths along the trajectory of the low-mass object, then, by default, the photons will be reflected because the photons' paths would be in-line with the path the low-mass object takes.

References:

Einstein, A. and Lawson, R. (2005). Relativity: The Special and the General Theory. New York, NY: Pi Press.