Review of: "Speed of Gravity: A Simple Experiment to Test the General Relativity Theory"

Matthew P. Cartmell[1]

1 University of Strathclyde

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Gravitational wave experiments are based firmly in classical physics, which in turn is based on Einstein's premise for general relativity whereby the speed of light is a universal constant. There have been several attempts to create theoretical models in which the speed of light is not necessarily constant, notably and firstly by Dicke in 1957. As far as I know predictions from the various variable speed of light models have not actually undermined the underlying principles behind the various tests of GR that have been devised, however that in itself doesn't disprove or rule out the validity of variable speed of light models, nor does it imply any possible future invalidation of the various tests of GR that have been undertaken. It's also important to distinguish between theoretical modelling assumptions and the actual physical propagation speed of photons when questioning experimental techniques for measurement such as LIGO. Variable speed of light modelling may predict the actual propagation speed of photons correctly, or not, but the actual propagation speed of photons in different physical contexts also needs to be demonstrated in a categorical experiment to support any variable speed of light model. The argument of the paper appears to be that because there have been, and are, theoretical models which propose variable speed of light effects in some circumstances, then there is a basis for not believing the results from the LIGO experiments for the measurement of gravitational waves, despite those experiments being based on classical physics (which has not been disproved in this context). A response to that could be that it would be better to expand in more detail on a plausible theoretical basis for an experiment (for example the experiment proposed in this paper) that moves us closer to confirming the ultimate truth of variable speed of light models and their applicability, and importantly that this is the case within the 'stretched and contracted spaces' referred to. The paper introduces a thought experiment that might be developed but doesn't elaborate on it in any detail. So, it seems to me that the stronger argument is one based on an experimental proof that variable speed of light can be the case in some circumstances, and then to do that specifically for the circumstance of the 'stretched and contracted spaces', rather than saying that because variable speed of light may be a physical fact in some circumstances that this possibility then invalidates LIGO.