

# Review of: "Light Speeds in Stretching and Compressing Spaces"

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First the author gives a very summary description of how an interferometric gravitational wave detector works. Then he describes that the laser velocity depends on the medium and is described by

$v = 1/\sqrt{\epsilon\mu}$ , very well known constants that have their values depending if the medium is compressed or stretched, after that he argues that laser speed velocity used in the experiment (using the value for the constants in vacuum) is  $v = 1/\sqrt{\epsilon_0\mu_0}$  and the laser velocity should vary as the vacuum is not in its normal state (making an analogy with laser traveling in matter), and no signal should be measured in the detector. It is a very strong assumption using an analogy that light behaves in vacuum in the same way that behaves inside a medium. The author should present more arguments proving its statement. The argument that the speed of light is constant is the kernel of special relativity, at least in normal vacuum. The author should propose how the laser velocity should vary with the stretching of space. I think this is a very difficult task as no one knows how it works. There are some results of experiments using Casimir effects showing that the light speed could depend on some boundary conditions, maybe it can be a start.