

## The Lies from LIGO

In September 2015, the Laser Interferometer Gravitational Wave Observatory (LIGO) reported to the world that it detected a merger of two blackholes in deep space that sent a single “gravitational wave” to Earth. The science community used this “detection” to assure the world that Einstein’s General Relativity theory, which predicts both blackholes and gravitational waves, was thus confirmed. LIGO did no such thing. In fact, LIGO is one big lie by the powers-that-be to prop up the battered and beaten Relativity theory of Albert Einstein so that it survives for another hundred years, despite its many internal contradictions as well as external contradictions against Quantum Mechanics and String Theory.

Not only do the LIGO claims influence the secular science community, they also affect the Christian science community. Various leaders in the Creationism movement have clung to Einstein’s relativity theories as if they were handed down by God himself. Among these are D. Russell Humphreys and Hugh Ross. I debated Hugh Ross last year and my paper on that debate can be found at our website.<sup>1</sup>



As for Humphreys, he recently published a two-page article for *Creation Matters* titled: “Gravity Wave Observations are Powerful Evidence for Relativity and Black Holes,” in the May/June 2016 issue, a publication of the Creation Research Society. In the article, Humphreys, who has always advocated Einstein’s Relativity theories, tries to make a case that LIGO is one of the best proofs of Einstein’s theories. Here I will examine his article paragraph-by-paragraph to show that not only does LIGO offer no evidence or proof of Relativity, LIGO and its interpreters are telling us the same lies they have been telling the public for over a hundred years.

Humphrey’s second paragraph states the following:

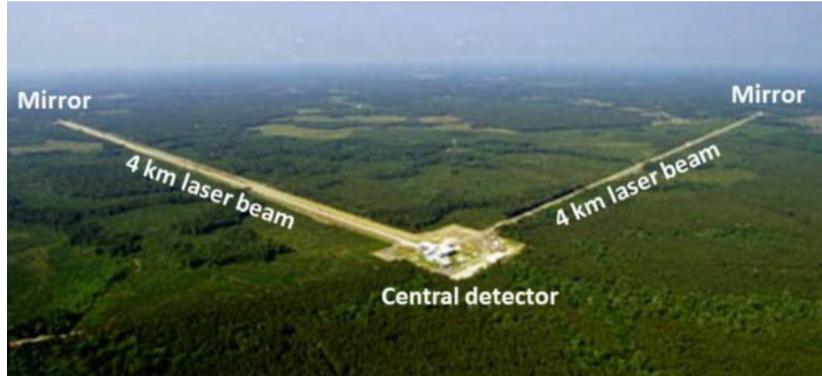
Tiny changes in the length of each arm produce the signals. Figure 3 shows the two signals observed, one shifted 6.9 milliseconds to lie over the other. Theorists using Einstein’s general theory of relativity had predicted the basic shape and timing of these signals by calculating the gravity waves that would be made by the inspiraling and merger of two star-sized black holes (Baker et al., 2006). The large LIGO team of physicists and engineers

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<sup>1</sup> <http://galileowaswrong.com/hugh-ross-v-robert-sungenis-debate-on-moody-radio/>

spent about one month looking for ways, including a possible malicious hoax, that the signals might not have been caused by real gravity waves. But they found none.

Fortunately, Humphreys here gives us the basis for LIGO's claims right up front. He states, "Tiny changes in the length of each arm produce the signals." The "arms" that Humphreys refers to are the two lengths of 4 kilometer vacuum pipeline in the following aerial picture of LIGO:



First, just to verify Humphrey's use of "changes in the length of each arm" of LIGO, I will quote from the original LIGO paper published by MIT. It says:

A passing gravitational wave effectively alters the arm lengths such that the measured difference is  $\Delta L(t) = \delta L_x - \delta L_y - h(t)L$ , where  $h$  is the gravitational-wave strain amplitude projected onto the detector. This differential length variation alters the phase difference between the two light fields returning to the beam splitter, transmitting an optical signal proportional to the gravitational-wave strain to the output photodetector.<sup>2</sup>

Inside each pipeline, lasers are discharged from the "Central detector" and bounced off the "Mirror" at the end of the pipeline. The two laser beams then come back to the detector and are measured for any phase differences. A "phase difference" is when the peaks of the waves of the laser beams do not coalesce. If there is a phase difference, it means one of the laser beams is coming back to the detector sooner than the other.

The working principle behind LIGO is that, if one of the pipelines is pointing toward the direction of a gravity wave, the gravity wave will then put pressure on the LIGO 4 kilometer arm and cause it to shorten in its length. If the length of the pipeline is shortened, then the laser beam traveling in it will come back to the Central detector sooner than the other laser beam.

If you know your science you will immediately recognize, then, that the LIGO apparatus is like a giant Michelson-Morley experiment. Two arms are mounted perpendicular to each other. One arm is oriented parallel to the incoming force and the other arm is mounted perpendicular to the incoming force. The arm that is parallel is allegedly affected by the external force whereas the

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<sup>2</sup> *Physical Review Letters*, 116, 061 102 (2016), p. 3.

perpendicular arm is not. The MIT paper itself confirms the comparison between LIGO and Michelson-Morley when it says on page 3: “The LIGO sites each operate a single Advanced LIGO detector, a modified Michelson interferometer that measures gravitational-wave strain as a difference in length of its orthogonal arms.”

In the original 1887 Michelson-Morley experiment, the parallel arm of the orthogonal pair was oriented toward the presumed direction of the Earth’s revolution around the sun. The light beam traveling in this parallel arm was supposed to be affected by the pressure caused by the Earth’s 66,000 mph movement through space, which space was then understood to be composed of ether. The pressure was supposed to produce a phase difference in the two light beams equal to a speed of 66,000 mph.

There was one big problem, however. The results of the experiment did not show the Earth going 66,000 mph. It only showed a small fraction of what was predicted, less than 10% of what was predicted. But obviously, if the Earth is revolving around the sun it cannot be going anything less than 66,000 mph, since it would not be able to complete its revolution in one year. In order to account for the Earth revolving around the sun at 66,000 mph, the phase shift had to be 0.40 nm, but the phase shift was only 0.02 nm, as if the Earth was not moving at all.

In an attempt to answer this problem, Dutch physicist Hendrik Lorentz proposed that the pressure from the ether against the Earth moving at 66,000 mph caused the westward arm of Michelson’s apparatus to contract. The contraction of the arm would then cause a phase shift of 0.02 nm instead of 0.40 nm and thus make it appear as if the Earth were hardly moving at all, but in reality Lorentz said the Earth was actually moving 66,000 mph around the sun.

Here’s the rub. Lorentz had no evidence or proof that the westward arm had contracted. All he had was his dogmatic belief that the Earth was revolving around the sun, and from that foundation he ASSUMED that the parallel arm of Michelson’s apparatus HAD TO contract. Obviously, it wasn’t empirical science that led Lorentz to this conclusion. It was the scientific dogma that the Earth was revolving around the sun, which then led Lorentz to invent an ad hoc theory that the arm of Michelson’s interferometer HAD TO contract, *ipso facto*, no questions entertained to the contrary.

Here is the bigger problem – all of modern physics (and I mean ALL) is built on the idea of Lorentz’s length contraction. Next to Newton’s  $F = ma$ , Lorentz’s equation calculating the supposed length contraction of a moving object ( $L' = L \sqrt{1 - v^2/c^2}$ ) is the most used and the most famous equation in physics. Essentially, then, all of modern physics is built on a hypothetical foundation that lengths contract when an object moves in space.

This hypothetical and unproven idea is also the basis for Einstein’s Special Theory of Relativity. Although Einstein rejected Lorentz’s claim that ether pressure caused the length contraction, Einstein still believed there was a length contraction. He was forced to this conclusion, otherwise he would have no explanation between motion and non-motion.

But Einstein did not replace Lorentz's ether with something better. Rather, Einstein claimed that the "relative motion" between objects mysteriously caused the moving object to contract in length, and the faster the object moved, the more it would contract. Of course, Einstein was accused by many philosophers of creating an effect without a tangible cause, but the world was only too happy to accept Einstein's theory since it relieved them from having to accept the frightening alternative, namely, that the Earth wasn't moving around the sun. This is the whole basis for Einstein's Special Theory of Relativity, which he invented in 1905 to answer the 1887 Michelson-Morley experiment, by his own admission.

### **LIGO and Length Contraction**

The unproven idea of length contraction is precisely what is behind the present claims of LIGO, only this time it is being claimed that a "gravity wave" contracted one of the arms. Where does the concept of a "gravity wave" originate? From Einstein's General Theory of Relativity invented in 1915, since it included the concept of gravity which the Special Theory had not included. Essentially, what is being claimed is that a "gravity wave" is space coming toward the Earth instead of, as in the 1887 Michelson-Morley experiment, the Earth was said to be going through space. In either case, whether Michelson-Morley or LIGO, a length contraction is caused by Earth and space moving against one another.

To say it another way, if one believes the Earth is moving, the only explanation to Michelson-Morley is length contraction in one of the arms of the apparatus. Likewise, if one believes in gravity waves (per Einstein), then the only way one can account for its existence is by assuming a length contraction of one of the LIGO arms, but in both cases there is not one ounce of proof that the arm actually contracted.

The other explanation, of course, is that the light beams themselves in both Michelson-Morley and LIGO were retarded by an external force in order to cause the phase differences or "fringe shifts" in the light beams when they converged at the Central detector. But, of course, that would mean that light is not constant and would immediately nullify the Special Theory of Relativity (SRT), and thus nullify modern science's answer to Michelson-Morley, which would mean the Earth actually is standing still in space and that modern science has no credible explanation for this apparent motionlessness of Earth.

As you can see, modern science has painted itself into the proverbial corner. In the interim, it is better for them to claim that the pipeline contracted and hope that no one asks for any proof of the alleged contraction.

Of course, they could also try to use General Relativity (GRT) to claim that the "gravity wave" contracted the LIGO arm, but then not only would they have a contradiction between SRT and GRT (since each theory would have a different cause for why there is a contraction), they would have a contradiction in explaining why GRT can contract a LIGO arm but not reduce the speed of light in the LIGO arm. Since GRT claims gravity can bend light and reduce its speed, why wouldn't a "gravity

wave" bend and reduce the speed of light in a LIGO arm instead of contracting the LIGO arm? They are stuck for an answer, obviously. So they have to stick with their previous unproven assumptions, namely, that the LIGO arm underwent length contraction. This allows them to preserve SRT and GRT but, of course, without any proof of length contraction. Essentially, it boils down to smoke and mirrors.

### **Gravity Waves**

In his third paragraph, Humphrey's claims the following:

Gravity waves are a necessary consequence of the gravitational field equations (the basis of general relativity) that Einstein published one hundred years ago. Just as in the 19th century, Maxwell's equations for electric and magnetic fields had predicted that accelerating electrons would make radio waves moving at the speed of light, so also Einstein's gravitational equations in the early 20<sup>th</sup> century predicted that accelerating masses should make waves in the fabric of space moving at the speed of light. But gravitational waves would be so weak that only astrophysical events with fast-moving star-sized masses would offer a chance of making waves strong enough to detect. Very compact massive objects, such as neutron stars, orbiting each other very fast, would be the most likely sources.

Notice first that Humphreys says, "Gravity waves are a necessary consequence of the gravitational field equations (the basis of general relativity) that Einstein published one hundred years ago." In other words, there was no empirical evidence for gravity waves; rather, if one follows Einstein's GRT equations to their logical conclusions then there must be gravity waves, which is precisely why they have been looking for them for several decades but with no success. In other words, if there are no gravity waves, then Einstein's GRT is falsified. So you can imagine the pressure these scientists are under to "find" gravity waves. If not, then "one hundred years" of physics goes down the drain in a heartbeat.

Second, Humphrey's above explanation only exposes another contradiction in Einstein's theories. What is the "fabric of space" and how does this "fabric" make a "wave"? Einstein had originally told us in his 1905 Special Relativity theory that space is a vacuum of nothing. It had no "fabric" and it obviously couldn't make waves. It was Einstein's claim that the 1887 Michelson experiment was "null" because space has no "fabric" and is etherless, that is, it has no substance. It was just "space" and "time" in the abstract sense without any clear definition, except for a math equation. As noted above, the alleged "contraction" of Michelson's interferometer arm (which Einstein needed to show the difference between a moving Earth and a motionless Earth), occurred because of a "relative motion" between space and Earth but he never explained how such relative motion could contract matter. How would two objects even know of each other's existence if there was no communication in the "space" between them? Gravity would have no effect since the Special Theory did not incorporate gravity. Rather, the contraction "happened" because Einstein needed it to happen, otherwise he would be bowing at the feet of the popes who condemned Galileo.

But then, of course, when Einstein invents GRT ten years later (1915), he realizes that he can't get away with saying that space has no substance. So he reintroduces the ether concept. He then claims that space can be "warped" at the same time the ether of space can serve as a medium for light.<sup>3</sup> The General theory also says the light can be "bent" and can either be accelerated or decelerated depending on the presence of gravity and inertial forces in its spatial environment. So now we have a theory that is the direct opposite of SRT. Whereas SRT said there was no ether and that light never varied, GRT has an ether and says light constantly varies. Go figure.

The further problem, however, is that GRT never claimed to be able to contract lengths of material objects. The contraction effect was exclusive to SRT, as noted above. So how is a "gravity wave" able to "contract" a LIGO arm? No explanation is given. And if there is such a thing as a "gravity wave," then what is "waving"? SRT's "spacetime" can't wave, since it has no substance. But even GRT's "ether" can't wave because Einstein said that the ether of GRT is "not ponderable."<sup>4</sup> Ether for GRT was just an abstract concept Einstein allowed, but it was not an actual substance that could be discovered or defined. So what is "waving" or "bending"? No explanation is given.

Einstein and his colleagues tried the same double-standard or shell game in an attempt to explain the 1925 Michelson-Gale experiment. In this experiment, Michelson found almost 100% of the ether he predicted, whereas in the 1887 experiment he found less than 10% of the ether he predicted. Why the difference? Because the 1925 Michelson-Gale was measuring a rotation between space and Earth, whereas the 1887 Michelson-Morley was measuring a revolution of the Earth around the sun.

Incidentally, Geocentrists can easily explain this difference, since there is a daily rotation of space around the Earth (hence, Michelson had a 100% detection of the ether of space daily going around the Earth), but the Earth is not revolving around the sun (hence, Michelson had no detection of the Earth traveling 66,000 mph around the sun). We surmise, then, that the 'less than 10%' ether found in 1887 was due to the slight spillage of the ether into the Michelson-Morley interferometer from space's daily rotation around the Earth. It's very simple. A child could understand it.

But Einstein could not use SRT to explain the 1925 Michelson-Gale since SRT said there was no ether. Effectively, Michelson-Gale falsified SRT since the detection of ether was indisputable. So Einstein (in the person of Ludwig Silberstein who was speaking for GRT, not Einstein himself who

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<sup>3</sup> Einstein writes: "Recapitulating, we may say that according to the general theory of relativity, space is endowed with physical qualities; in this sense, therefore, there exists an ether. According to the general theory of relativity space without ether is unthinkable; for in such space there not only would be no propagation of light, but also no possibility of existence for standards of space and time (measuring-rods and clocks), nor therefore any space-time intervals in the physical sense. But this ether may not be thought of as endowed with the quality characteristic of ponderable media, as consisting of parts which may be tracked through time. The idea of motion may not be applied to it" (Äther und Relativitätstheorie. Rede gehalten am 5. Mai 1920 an der Reichs-Universität zu Leiden. Berlin: Springer, 1920 [Vol. 7, Doc. 38, 305–323; trans. 160–182]; [http://en.wikisource.org/wiki/Ether\\_and\\_the\\_Theory\\_of\\_Relativity](http://en.wikisource.org/wiki/Ether_and_the_Theory_of_Relativity), Journal of the Optical Society of America, Vol. 5, No. 4, July, 1921).

<sup>4</sup> Einstein writes: "But this ether may not be thought of as endowed with the quality characteristic of ponderable media, as consisting of parts which may be tracked through time" Ibid.

never acknowledged the 1925 MGX) was forced to attempt to use GRT to explain Michelson-Gale. But the "ether" of GRT was, as Einstein said in 1920, "non-ponderable" and "could not be used to track time and space." But a tracking of time and space is precisely what Michelson-Gale did as it detected a daily ether rotation around the Earth. So, both Einstein's "Relativity" theories were unable to explain the 1925 Michelson-Gale and, in fact, Michelson-Gale totally falsified "Relativity."

### **The Merging of Two Blackholes?**

The third problem with Humphrey's paper is in paragraph 4, in which he says:

Simple physics analysis of the LIGO signals showed that the source had to be two merging black holes. Black holes are a unique feature of general relativity. If a massive object gets small enough, a spherical "event horizon" comes into existence around it. At the event horizon, the gravitational energy (not force) in the fabric of space is so great that light waves come to a complete stop there. No light inside the event horizon can get outside it, so astrophysicists of the 1960's dubbed the then-theoretical objects "black holes."

This explanation merely presents yet another contradiction in Einstein's theories. If it is the case that gravity affects the light in a blackhole so that the light cannot escape and has a speed of zero, then why can't a "gravity wave" affect the light beam in a LIGO arm but somehow has the immense capability to contract the length of 4 kilometers of concrete pipeline? Gravity is an equal opportunity effect, is it not? Is there anything that gravity does not affect? No. It affects light and matter. So how does a "gravity wave" decide to contract a LIGO arm but not contract a light beam in the LIGO arm?

Of course, as we noted earlier, the reason these LIGO scientists opt for a contraction of concrete is because they are forced to accept, *via* Einstein's Special Relativity theory, that a light beam must always go the same speed. It was Maxwell Abraham that pointed out this contradiction in Einstein's theory, but to no avail.<sup>5</sup>

To add to the confusion, Einstein's General theory WILL allow light's speed to be modified. So which one does Humphreys want to hang his hat on? In the end, he picks and chooses between two contradictory theories depending on the problem he is faced with.

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<sup>5</sup> Wolfgang Pauli writes: "For this purpose we shall discuss the Michelson interferometer experiment....Now, because of the Lorentz contraction....it would therefore seem that an observer travelling with  $K'$  measures a velocity of light...different from that measured by an observer in  $K$ . According to Abraham there is no time dilation. Abraham's point of view is consistent with Michelson's experiment, but it contradicts the postulate of relativity, since it would in principle admit of experiments which would allow one to measure the 'absolute' motion of a system. (Maxwell Abraham, *Theorie der Elektrizität*, Vol. 2, 2nd edition, Peipzig, 1908, p. 367, cited in W. Pauli, *Theory of Relativity*, page 14, fn. 41).

## Measuring Distances in the Universe

The fourth problem is in paragraph 5. Humphreys says:

Numerical relativity simulations fitting the signals say that the inspiraling black holes had about 29 and 36 Solar masses, and that the final (merged) black hole had about 62 Solar masses. The difference of about 3 solar masses was radiated as gravity-wave energy. The mass of three Suns, converted entirely to energy, made this a very bright source, but only in the gravity- wave spectrum, not as light. Knowing the brightness of the source allowed the LIGO team to estimate its distance as about 1.3 billion light-years. Various creation cosmologies would say the merger happened only thousands of years ago as measured by clocks on Earth, and that the gravity waves got here as fast as the light from distant galaxies.

First of all, there is no foolproof way to estimate the distance to celestial objects. The only proven empirical method is by parallax, but that only goes to 300 light years with any accuracy.<sup>6</sup> So there is no proven way to conclude that the alleged blackholes are billion of times farther away. This is a big problem for the LIGO advocates, since if they cannot determine how far away the alleged blackholes are yet claim they know the speed of the gravity wave, then they cannot determine when the black

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<sup>6</sup> With the advent of the Hipparcos satellite launched in 1989 by the European Space Agency, its telescopes gathered 3.5 years worth of data on stellar positions and magnitudes, which were eventually published in 1997. Viewing the stars through two telescopes 58 degrees apart, Hipparcos measured the parallax of 118,000 selected stars within an accuracy of 0.001 seconds of arc. This accuracy is comparable to viewing a baseball in Los Angeles from a telescope in New York. Another mission, named Tycho (after Tycho de Brahe) measured the parallax of a million stars, but only to an accuracy of 0.01 seconds of arc. As accurate as these measurements appear to be, the reality is, beyond 100 light years, it is hardly possible to measure an accurate parallax. Even within 20 light-years, parallax measurements are accurate only to within one light-year. At 50 light-years from Earth the error could be as high as 5-10 light-years in distance. All in all, within a 10% margin of error, Hipparcos measured the parallaxes of about 28,000 stars of up to 300 light-years from Earth. For any star beyond 300 light years, scientists are forced to estimate its distance from Earth by other means, none of which are proven methods of measurement (*e.g.*, redshift). Other methods of determining parallax include: Photometric parallaxes, which are found by estimating a star's absolute magnitude (*M*) based on a spectral classification, and comparing that with its apparent magnitude (*m*). Statistical parallaxes could perhaps extend to 500 parsecs, but this only applies to groups of stars, not individual stars. Overall, of the half dozen or so methods employed today to measure astral distances, none of them are indisputable (including distances measured by redshift, Cepheid variables, luminosity, color of stars, etc.). There is only one purely empirical method, parallax (and its attendant modifications such as Spectroscopic, Moving Cluster Method, and Statistical Method), but it is quite limited in its applicability, since it can accurately measure only a thousand or so stars. In effect, modern science is left without an irrefutable means to measure cosmological distances, and thus all the literature espousing that stars, galaxies or quasars are billions of light years away from Earth is an unproven scientific assertion. Using Cepheid variables, for example, is certainly a question-begging venture, since Cepheids are too far away to be measured by parallax and, thus, depends on an unproven statistical method to measure distance. Other methods such as Secular Parallax, Expansion Parallax, Kinematic Distance, Light Echo Distance, Baade-Wesselink Method, Expanding Photosphere Method, Main Sequence Fitting, RR Lyrae Distance and about a dozen or so other methods have been proposed for measuring star distances, each with their own problems and uncertainties, and all of which makes one reflect on the veracity of Jeremiah 31:37: "Thus says the Lord: "If the heavens above can be measured, and the foundations of the earth below can be explored, then I will cast off all the descendants of Israel for all that they have done, says the Lord."

hole merger took place. It would be sheer coincidence that it happened to be detected in September 2015 when, as the story goes, "by accident," someone happened to be looking at the scope and saw the heightened phase difference.

Second, as Humphreys refers to "various creation cosmologies would say," he is referring to his own theory that claims there is a "time warp" between time on Earth as opposed to time in deep space, all based, of course, on Einstein's "Relativity" theory. Humphreys, being an Evangelical who has some semblance of allegiance to the Bible, is forced to account for at least some face-value or literal understanding of Genesis, which he believes he accomplished by mixing and matching Genesis with Einstein. This, in Humphreys' mind, allows him to make a distinction between how time passes on Earth as opposed to how it passes in deep space when viewed on Earth. Suffice it to say, it's all a bunch of theoretical nonsense that doesn't have the slightest evidence, much less proof. Einstein's theory is simply a wax nose that Humphreys can twist any way he likes so that he can fit it into his already convoluted interpretation of Genesis.

Also notice that Humphreys says, "and that the gravity waves got here as fast as the light from distant galaxies."

This, of course, means that gravity travels the same speed as light, and thus Humphreys is following Einstein's edict that nothing can exceed the speed of light, which Einstein held to be 186,000 miles per second ( $c$ ). But if gravity was limited to light speed, the universe simply could not exist since everything would be flying apart at will. Gravity, as a compression wave of ether, can be shown to be virtually instantaneous, even as Newton suggested. This understanding can be found in my new book, *A Googolplex of Planck-Particles: A Theory of Gravity, Inertia and the Speed of Light*.

Additionally, we again see Humphreys' conflation of SRT and GRT. It is only SRT that says light and material objects are limited to  $c$ . GRT says that light and material objects can travel way beyond  $c$ , which is precisely the GRT dimension that today's Big Bang cosmologists use to claim that space at the edge of the universe expands faster than  $c$ . But the whole basis of a gravitational wave is that it can make a wave (in whatever they believe "spacetime" is composed of) because it travels slow, at the speed of  $c$ . But why do Humphreys and his LIGO colleagues limit gravity and gravitational waves to  $c$ , especially when SRT itself says it has nothing to do with gravity? As you can see, Humphreys is doing the same thing all Relativists do – they mix and match SRT with GRT depending on which one will help answer the contradiction with which they are faced, never admitting, of course, that both theories contradict each other.

Next, Humphreys' says:

For 100 years now, a small but determined cadre of critics has been taking pot shots at general relativity (GR), special relativity (a subset of GR), and black holes. Some creationists are among the critics. Their thought seems to be that since evolution is so drastically wrong, any hard-to-understand ideas in modern science must be wrong also.

The critics have persisted despite a series of ever-more-stringent experimental tests over the century that GR has survived (Will, 1986).

Although Humphreys cites Clifford Will for support of Einstein, in the same book Will also says, "General Relativity has passed every solar-system test with flying colors. Yet so have alternative theories."<sup>7</sup> In the end, Humphreys' statement shows he has given his undying allegiance to Einstein as the be-all and end-all of physics and simply won't listen to anything else. This leads him to come up with his cockamamie "time warp" interpretation of Genesis noted above. But his creationist critics are on the right track. Once you dump Einstein, Genesis starts to become very clear.

I have only given a few of the many contradictions between SRT and GRT. They also contradict quantum mechanics, string theory, and Newtonian mechanics. That's because they are patently false. They don't have a good pedigree. SRT was invented out of thin air to keep the Earth moving when the 1887 MMX showed it was standing still. GRT was invented because Einstein forgot to add gravity to SRT, but GRT says the exact opposite about ether and the speed of light that SRT does, besides the fact SRT removes Earth from the center of the universe but GRT puts it back in the center.

### **Proofs of Relativity?**

In the last paragraph Humphreys claims that Relativity has been verified by no less than 7 proofs. He writes:

These include:

1. deflection and time delay of radar beams and pulsar signals passing close to the Sun
2. now very precise measurements of gravitational and velocity time dilation by atomic clocks and the GPS system
3. satellite measurements of gravito-magnetism
4. gravitational red shift of light and gamma rays
5. orbital perturbations of planets
6. rundown of binary pulsar orbits (Taylor and Weisberg, 1982)
7. ...and now, gravitational waves from merging black holes.

The truth is, NONE of them prove Relativity.

1) deflection of radar beams does not prove Relativity. It only proves that the sun affects radar beams.

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<sup>7</sup> Clifford Will, "The Confrontation Between Gravitation Theory and Experiment," General Relativity: An Einstein Centenary Survey, ed., Stephen W. Hawking, Cambridge University Press, 1979, p. 62.

2) variations in atomic clocks and the GPS do not prove Relativity. It only proves that something is affecting atomic clocks. As for the GPS, it actually disproves Relativity since it shows that light beams going east to west travel faster than light beams going west to east, a clear violation of SRT, but clear evidence for space rotating east to west around a fixed Earth.

3) measurements of "gravito-magnetism" do not prove Relativity, much less do we know of an entity that mixes gravity with magnetism.

4) the gravitational redshift does not prove Relativity. It only proves that gravity can cause a redshift. Note here how Humphreys allows gravity to affect light to cause a redshift, but apparently a gravity wave cannot affect the light in a LIGO interferometer.

5) orbital perturbations of the planets do not prove Relativity. They only prove the planets can be perturbed by gravity. In fact, Einstein's solution to the perihelion of Mercury was fixed ahead of time. It was not a solution. Hence, it is no surprise that when the same Einsteinian equations are applied to the other planets, they are off by a wide margin.

6) binary pulsar orbits do not prove Relativity. They only prove that Relativity bases its conclusions on unproven assumptions about the speed of light.

7) gravitational waves do not prove Relativity, for all the reasons I mentioned above.

### **A Straight-Forward Understanding of Scripture?**

Finally, Humphreys says:

"The more one knows about the LIGO observations, the harder it is to avoid the conclusion that GR is very accurate, a basic feature of God's creation. That is good news for creation cosmologists who have been using GR to reconcile astronomical observations with a straight-forward understanding of Scripture."

In reality, GRT is nothing more than a mathematical lash-up, much less a "basic feature of God's creation." If Humphreys really wanted a "straight-forward understanding of Scripture," he would follow his previous work on galaxy redshifts<sup>8</sup> and conclude that not only is our galaxy in the center of the universe, but the Earth is the very center of that universe. That's what Scripture tells us, from Genesis 1:1 to Joshua to the Psalms.

But, of course, Humphreys won't allow himself to be THAT "straight-forward" with the Bible, since that would mean that the Catholic Church was right about Galileo, and also right when it used the same hermeneutic against the Protestant Reformation that Humphreys ascribes to. To act as a

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<sup>8</sup> <https://www.youtube.com/watch?v=M8tL21vHyzg>

buffer, Einstein has become the god of choice for Humphreys, and everything in the Bible must subsume to Einstein rather than vice-versa.

Until he recognizes this fact, Humphreys will be like Sisyphus pushing the rock up the mountain to get it to the top, only to have it fall down again when he is just about to place it on the summit.

### **So What Caused the Phase Difference in LIGO?**

Since we have faulted Humphreys' analysis of the LIGO data, what then caused the LIGO interferometer to produce a phase difference? Nobody really knows. But we do know that assigning it to a "gravitational wave" is no closer to the truth than anything else the universe has to offer. Even the MIT report admits that it doesn't know if it was caused by a gravitational wave. It simply guesses. It states:

The basic features of GW150914 point to it being produced by the coalescence of two black holes...The most plausible explanation for this evolution is the inspiral of two orbiting masses...due to gravitational wave emission....This leaves black holes as the only known objects compact enough to reach an orbital frequency of 75 Hz without contact.<sup>9</sup>

In other words, the merging of two blackholes is only a theoretical explanation of the phase difference detected in LIGO, not an empirically verified cause. This is especially suspicious since the report also admits that "black hole mergers have not previously been observed."<sup>10</sup> But, of course, these theoretical assumptions allow the science community to kill two birds with one stone. Since black holes themselves have not been empirically verified to exist but are only based on what the MIT paper says are "candidates,"<sup>11</sup> and since gravitational waves have such flimsy evidence for their existence, using the "coalescence of two black holes" as evidence for gravitational waves, makes all the Einstein advocates very happy.

As for the existence of gravitational waves, the only evidence that the 2016 MIT LIGO paper cites is from a 1981 paper by Taylor and Weisberg titled: "Gravitational waves from an orbiting pulsar," published in *Scientific American*, vol. 245, Oct. 1981, p. 74-82.

First, one would think that after 35 years of looking for gravitational waves that the MIT paper could cite numerous examples of their existence. After all, isn't that what science is supposed to do, namely, give us a lot of evidence so that we can have enough to confirm or deny the theory being proposed? Instead, they rely on one report and have no other evidence for the very foundation of their analysis of LIGO.

Be that as it may, the Taylor/Weisberg paper is filled with bias. The abstract itself states:

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<sup>9</sup> Ibid, p. 3.

<sup>10</sup> Ibid., p. 1.

<sup>11</sup> Ibid. p. 1.

The reported investigation provides the strongest evidence now available for the existence of gravitational radiation. Gravitational radiation has been predicted by Einstein's general theory of relativity, according to which an accelerating mass should radiate energy in the form of gravitational waves. Yet in cases of their suspected emission, the waves would be so weak, that they could not be detected. The binary pulsar PSR 1913 + 16 represents an object suitable for testing the prediction regarding gravitational radiation. *In the absence of possibilities for a direct detection of the gravitational waves, possibilities exist for an indirect detection. An emission of gravitational radiation should lead to a gradual reduction in the orbital energy, causing the orbital period to decrease. It was found that the rate of decrease in the orbital period is proceeding at almost precisely the rate predicted by general relativity. The rate of decrease is not consistent with the predictions of other gravitational theories* (emphasis mine).<sup>12</sup>

First, we see Taylor and Weisberg admitting there is no direct evidence for gravitational waves. Second, they then assume, without proof, that an emission of gravitational radiation should lead to a reduction of orbital energy and a decrease in orbital period. Says who? This is nothing more than putting the cart before the horse. That binary systems often decrease in orbital period has been known for a long time. But whether there is any connection between the emission of a gravitational wave and the orbital energy reduction in a binary system is mere conjecture.

Taylor and Weisberg then make a special pleading for General Relativity by claiming that the rate of reduction is close to what is predicted by GRT. So what? It is not the orbital period that is of interest here, but the grand assumption that Taylor and Weisberg are making that a reduction in orbital period means the production of gravitational waves.

Furthermore, Taylor and Weisberg then claim that, "The rate of decrease is not consistent with the predictions of other gravitational theories." Huh? What other gravitational theories are there besides Einstein's? The only other one we have is Newton's, but Newton could not allow gravitational waves because he believed that gravity had to be instantaneous and not limited to the speed of light as in Einstein's theory. The only reason Einstein has a "wave" of gravity is because he limited gravity to a very slow speed – the speed of light (at the same time, however, that he never defines what the gravity is "waving" in).

Of course, if Taylor and Weisberg are referring to how Newton would answer why a binary pulsar would decrease in its orbital energy, Newton wouldn't have an answer, since he did not claim to know the origin and cause of gravity.

As to why a binary pulsar decreases in orbital energy is anyone's guess. It could be the Second Law of Thermodynamics; it could be a neighboring object affecting the pulsar; it could be a material deterioration within the pulsar. But it certainly doesn't have to be because of "gravitational wave emission," especially when Taylor and Weisberg admit at the start that there is no direct evidence

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<sup>12</sup> "Gravitational waves from an orbiting pulsar," *Scientific American*, vol. 245, Oct. 1981, p. 74.

for gravitational waves. The only reason “gravitational waves” are pushed as the answer is due to the unswerving obedience that the academic community is forced to give to Einstein at the risk of losing their jobs if they don’t.

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