A statement with respect to the 1887 Michelson and Morley Ether experiment

I am convinced that the Earth is moving through a fluid like ether, which is space, itself

I have come to this conclusion for a number of important reasons. I feel that the primary reason is that in the physics community there remains confusion and antagonism with respect to the original 1887 Michelson and Morley ether experiment results. This is together with the later Dayton Miller results of 1929 to 1932. In my opinion this is because of the divorce between physics theoreticians and down to earth field experimentalists. Loyd S Swenson seems to affirm these words when he said: “The origins of relativity theory may be explained in various ways, but one neglected factor in that summation is the way different canons of scholarship in physics and history have effected the selection of data and the narration of relationships between experiment and theory…” “…linear and sequential development that cannot be justified.”

In my opinion the importance of these words are that physics history has lead to the contemporary conclusion that the original 1887 Michelson and Morley experiment was a null result. I argue that this is incorrect. Amongst other things this presentation looks at the politics amongst physicists and analysts that dominated the debate at that time. Quotations from different parties are included in it. My position with the Michelson and Morley experiment is as follows:

1] Space is an informational material like "foam" [substance] with fluid like properties. Furthermore space is not static.

2] I believe that space can be seen to be like a jelly that waxes and wanes with respect to itself. It is this waxing and waning that is causal to variations of space foam densities. It is these variations in space foam densities that cause matter to be formed.

3] It is this variation of densities in space with itself that means space is a dynamic space. This dynamic space is a space of varying ratios and averages of its fluid like (foam) properties. I see this process as being the natural inherent energy of the universe as it “flexes” in the manner that I described have it. It can be seen as being akin to the contemporary infinite potential model.

4] I see where packets of matter in space foam are packets of matter that move away from each other as the universe expands. It is these “gaps” between “blobs” of moving matter in space that is causal to instantaneous gravity. Within this process matter also absorbs space foam. This absorption process is also a representation of its dynamic nature.

5] It is these diverse ratios, averages and densities of the informationally dynamic space and matter relationship that is the medium for light waves and it is in this respect that this combined process can be seen as being like ether. I believe it is for this reason that there can be no absolute frame of space. However, as I have indicated we can talk about space as being a dynamic matrix of information. This is information that both means something as

well as its influences that informationally create the conditions for possibilities and probabilities to do something.

6] I see these possibilities and probabilities to do something as being like an “opportunities” field unto itself from wherein “all things” can happen. I also see this field as being a field of averages from which the affects of sub-quantum mechanics emerge. I say it is these affects that are from which Quantum Particle physics theory grew. This same field can be also being seen as the field of non-locality [entanglement] that informationally connects all matter and events related thereto together in the universe. This entangled field is without time.

7] With respect to the Michelson and Morely experiment it was Dayton Miller [and other notable physicists at the time] that were seeking to clarify and explain the alleged null result of the 1887 Michelson and Morely experiment. Miller and others were seeking to explain the diversity of values from measurements derived from the apparatus that was being used at that time. I believe that the natural and dynamic process of space itself that I have described can explain the variations in the measurements that Miller and others detected. By this I mean that these variations of measurements at different times [including across the wider universe] are because of the changes and averages of densities of the properties of my informational description of space.

8] The Earth moving through these space disturbances [including light] in the sub-quantum mechanics field exacerbates these natural space fluctuations. These fluctuations would be significantly less if the universe were static.

9] For these reasons I consider that it should be the averages of the measuring apparatus readings with respect to the original Michelson and Morely experiment that should be considered by physicists. This as distinct from short-term measurements that might have been taken at either regular or irregular times.

10] I feel that it is only by physicists regularly employing measuring apparatus over a considerable time [as Miller did] that meaningful averages with respect to these measurements can determine if the 1887 Michelson and Morely measurements were “reasonably” null or not. In a general sense this means the dynamic nature of space would be needed to be considered by physicists with respect to the measurement results.

11] Also, because of the “primitive” nature of the original measuring apparatus of the Michelson and Morely interferometer I feel that it is unreasonable and incorrect for contemporary physicists to maintain that the Michelson and Morely results were null. I say that the Michelson and Morely results were measuring “something”. Dayton Miller and others further identified these “something’s”. These “somethings” also included undetectable null “somethings”. These null “somethings” also mean “somethings” with respect to the dynamic nature of space. You might say that this something is ether.

12] From these words I am stating that it is clear to me that relativity modelling types that contemporary physicists are attempting to justify their theories upon today have never been absolutely correct in the first place. Quantum theory allows for this (the uncertainty principle). These physicists include Lorentz, Poincare and other notable physicists around the time of the 1887 Michelson and Morely experiment. This includes until a few years later those in the 20th century such as Dayton Miller and Ives. Furthermore I am stating (as you will find a little later) that I have provided an opinion as to the means how and why the informational variations of measurements occurred in both the Michelson and Morley experiment. This is as well as those of Miller and others. Furthermore with respects to physics experiments today I am suggesting that these types of variations need to be considered and accounted for in experimental findings.

With respect to this debate a contemporary theoretical physicist [Morris] wrote the words below. You might note that they follow my line of reasoning. The theorist points out that the words in a statement made by Einstein in 1920 in respect to his General Relativity theory are in contradiction with later experimental findings of other distinguished physicists at that time. These are those who continued to maintain that ether existed such as Lorentz. This ether "field" they believed was without time. I cite the theorist Einstein quotation as follows:

Quote:

“Ether and the Theory of Relativity
Albert Einstein, May 5th, 1920

Ether and the Theory of Relativity

“.... according to the general theory of relativity space is endowed with physical qualities; in this sense, therefore, there exists an ether.....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..."

What this means is that in General Relativity Theory, space has physical properties, and therefore can be considered to be an ether. However unlike a liquid or gas which consists of molecules, the space of General Relativity Theory does not consist of parts that can be identified as being in motion.

In addition, General Relativity Theory predicts that measurements of the speed of light are not affected by motion through space. This implies that experiments such as the Michelson Morley experiment that attempt to detect such motion, by comparing the speeds of light in different directions, should detect no effect...”

However, as Morris points out, on page 206 of the following (Dayton) paper, one reads the following:

Quotation:
“The Ether-Drift Experiment and the Determination of the Absolute Motion of the Earth

Dayton C. Miller, Case School of Applied Science
July 1933, Reviews of Modern Physics, Volume 5.

".....Michelson and Morley performed the historic experiment in the northwest room of the basement of the Main Building of Adelbert College in Cleveland in 1887; their entire series of observations was of six hours' duration.....

.....The brief series of observations was sufficient to show clearly that the effect did not have the anticipated magnitude. However, and this fact must be emphasised, the indicated effect was not zero; the sensitivity of the apparatus was such that the conclusion, published in 1887, stated that the observed relative motion of the earth and ether did not exceed one fourth of the earth's orbital velocity. This is quite different from a null effect now so frequently imputed to this experiment by writers on Relativity...."

This implies that the Michelson Morley experiment DID detect motion relative to space, which contradicts the prediction by General Relativity Theory that such experiments couldn't detect such motion.

Dayton C. Miller was confident of what he said, because he had repeatedly performed Michelson Morley type experiments a sufficient number of times to eventually arrive at a speed and direction for the motion of the earth relative to space (or relative to ether if you prefer that term)."

The theorist went on to discuss Einstein's concept of General Relativity ether with respect to the Dayton Miller results:

Quote:

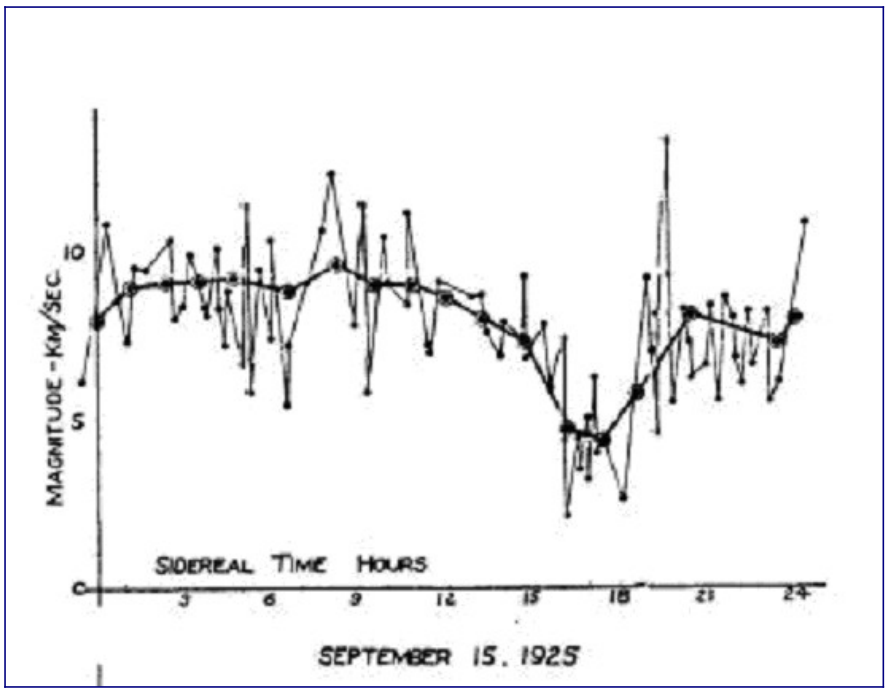
"In General Relativity Theory space is an ether but the idea of motion cannot be applied to it. So according to this theory, even though the earth is orbiting our sun at tremendous speed, and orbiting the centre of our galaxy at even greater speed, we are entitled to consider the earth to be at rest relative to space itself.

This is a comforting idea, though the experiments by Dayton C. Miller and Michelson Morley seemed to show that the earth is in fact moving relative to space.

However, a feature of these experiments is that the speeds

Varied wildly, and,
Their values calculated using Newtonian physics theory were too low to be credible.

Eg. Here are the speeds calculated by Miller using Newtonian physics theory during the course of a 24-hour period. The heavy black line is a running average.



Notice that the speeds vary a lot and are only about 5 .. 15 km/s, whereas the orbital speed of the earth is about 30 km/s, so to obtain credible speeds Miller had to multiply his measured speeds by a factor that would make his final values compatible with the orbital speed of the earth. That wasn't difficult, but he didn't have a theory to explain why this factor was needed.

The lack of theoretical justification for this factor he introduced would have made his results suspect.
And as the large variations of determined speed are not consistent with the concept of the earth travelling through motionless ether (which was the traditional idea of ether), that raised questions about his results as well.

Perhaps for those reasons, most physicists chose to ignore his results in favour of relativity theory which simply predicted that detecting motion relative to space couldn't be done."

In summary, my opinion is that these words mean:

1] The dynamic three space theory of Cahill (and other dynamic space theories similar to it such as the Hiley Bohm and Ives models related thereto) is fully consistent with the results of the Michelson and Morley and Dayton Miller experiments.

2] Traditional Ether Theory is not fully consistent because it doesn't predict the variations of speed, which are seen. Via Morris I have shown why this cannot be done.

3] Einstein's space ether substitute is not consistent because general relativity predicts that zero speed should be seen as he predicted in his modelling. This is in relationship to the speed of light.

With respect to Einstein it should be remembered that he progressively changed his mind over time with respect to there being a motionless (sea like) ether. For example in a lecture in 1920 Einstein said "…but every theory of local action assumes continuous fields and also the existence of an ether."

I acknowledge that Einstein's words were mostly related to his theory of General Relativity and that they had no specific relationship with his theory of Special relativity. However, I point out that Einstein in his statement in 1920 said that ether was necessary for his theory of General Relativity to make sense. My point is that how is it that when Einstein was working to develop a progressive unity theory of everything could he employ an ether continuum in one model and not the other. Einstein died before he could complete his unity theory.

It is only after Einstein began to change his mind about ether that around this time that the wider scientific community began to ignore Einstein's views relating to ether. They saw ether as having no role in the continuing development of contemporary quantum theory physics models. I believe that I might have shown otherwise. I also suggest that you should note Einstein's concern about the null result or otherwise with the 1887 Michelson and Morley experiment, (this is together with the later and more sophisticated experiments of Dayton Miller) as discussed. [see the quote below]. Especially note the last sentence of Einstein's quotation. This is in respect to different theories.

Einstein said with respect to this matter:

Quote:

"Should the positive result (meaning the Michelson - Morley experiment) be confirmed (as pointed out it eventually wasn't), then the special theory of relativity, and with it the general theory of relativity, in its current form, would be invalid. Experimentum summus judex. Only the equivalence of inertia and gravitation would remain. **However, they would have to be a significantly different theory**" (I emboldened)

Source: Albert Einstein in a letter to Edwin E. Slosson, July 1925

I urge you to peruse Cahill's opinion about ether theory as well as those of M Consoli and A. Pluchino commencing on page 445 of their online book submission.

Additionally I suggest that you consider a detailed essay written by Loyd S. Swenson written on the same topic in 1970. The title of Swenson's paper is "The Michelson-Morley-Miller experiments before and after 1905".

I have drawn attention to the well-documented divorce between physics theorists and experimentalists with respect to the long-standing ether debate. What must be kept in mind with respect to this debate is that regardless of a disagreement between theorists and experimentalists is that there was no doubt in Isaac Newton's mind that ether exists. He also expressed the opinion that there are small particles in the ether. This seems to align with the

debate about particles that exist in respect to the dynamic conditions of space that informationally link local space foam to a non-local ether (sub-Quantum Mechanics type of continuum as described by Bob Henderson). Here is what Newton had to say about his concept of ether:

Quote:

"I do not know what this Aether is", but that if it consists of particles then they must be exceedingly smaller than those of Air, or even than those of Light: The exceeding smallness of its Particles may contribute to the greatness of the force by which those Particles may recede from one another, and thereby make that Medium exceedingly more rare and elastic (waxing and waning?) than Air, and by consequence exceedingly less able to resist the motions of Projectiles, and exceedingly more able to press upon gross Bodies, by endeavouring to expand itself."

(Source for above quote)

Apart from the Michelson and Morley, Dayton Miller, Cahill, Ives and numerous other experiments relating to the existence and properties of an universal ether conducted over a period of nearly a century, contemporary physicists have never become convinced that a universal ether exists. Today, in addition to my earlier notes, I provide what I consider to be reasonable reasons as to why this universal reluctance by contemporary physicists to positively accept ether into their modelling should change.

I present you with two references relating to ideas and experiments conducted by Morris to consolidate my position in this presentation. These are a physics paper entitled "Perth-Muenster REG-REG Correlations: Remarkable New Evidence for Dynamical Space" and a separate open access repository (zip file) archive supporting Morris's paper with data.

The abstract for Morris's primary paper is as follows:

Quote:

"We have obtained new evidence for dynamical space by applying correlation analysis to a year of data from a Random Event Generator (REG) device located in Perth, Australia and from another in Muenster, Germany, recorded between July 1, 2012 and June 30, 2013. The results obtained are consistent with results obtained by applying similar analysis to data from a REG located in Manchester UK and the REG in Perth. Consequently evidence for dynamical space is mounting. For each day we applied correlation analysis to determine travel times for putative waves. Then wave speed and direction, over each 24-hour period, were determined by fitting to the observed travel times, theoretical curves of how travel times would vary with Earth rotation. We thereby derived an average incoming RA, declination and speed for the waves of each day. A probability density plot of the incoming directions exhibited a peak near RA = 4.5 h, consistent with previous determinations of incoming space flow direction by Reginald Cahill and Dayton Miller. Moreover, removing

Earth orbital and gravitational inflow velocities from the observed wave velocities allowed a peak of higher density to be obtained, which is consistent with predictions of Dynamical 3-Space theory (like mine). The peak indicated a most probable incoming galactic direction of RA = 4.50 h, dec = -80.6 deg. Probability density plots of speeds indicated a most probable incoming galactic speed of 502 km/s."

My closing statement

With respect to the Michelson and Morley experiment I have described how and why I believe the variations of measurements have occurred. This is with not only the 1887 Michelson and Morely experiment but also those of Miller and other scientists over time as well. Furthermore by doing this I have demonstrated why some relativity theories have probably been constructed upon inappropriate foundational premises. This is because they do not take into account that a common cosmic continuum could exist, such as ether, Bohm's Holomovement premise and other cosmic continuums like them as well.

I believe that I have conceptually demonstrated that Earth is probably moving through an informational like fluid such as ether. This is space itself. Space might best be identified as being an "influence of foam".