“RELATIVITY REVISITED: WAS EINSTEIN WRONG ABOUT $c$ ?”

“CALENDAR CONVERSION CONSIDERATIONS”

RELATIVITY REVISITED:
WAS EINSTEIN WRONG ABOUT $c$ ?
by Douglas Roger Dexheimer

One of the longstanding enigmas in creation science is the question, "How can starlight come all the way from distant heavenly bodies that are said to be millions of light years distant, if the entire creation is young, i.e., approximately 6,000 years old?" In other words, if the most distant stars began to shine 6,000 years ago, we would not be seeing their light today if it were traveling at Einstein’s light speed. In fact, we would not even see the vast majority of the stars in our own Milky Way Galaxy with telescopes.

In our August 2014 CSAMA meeting, Mr. Dave Penny presented a program on the topic of “Relativity and Creationism.” An MIT graduate, Dave has a gift of understanding mathematics and physics. He makes electro-gravitational wave theory look simple.

I am neither a physics major, nor a rocket scientist. I have never felt I could understand the concept of a constant speed of light, as claimed by Albert Einstein, the most famous scientist of our day. Since the time I first became a young-Earth creationist, I thought Einstein had picked the wrong parameter to be constant. I believe that the rate of passage of time is constant from eternity past to eternity future, but the speed of light, $c$, varies depending on the media through which it is passing.

Every high school science student has done experiments that reveal that the speed of light is slower in some media than in others. The simple lens is an example that demonstrates that light goes slower through glass than through air.
How a Lens Refracts Light

First, let’s consider a double convex lens. Suppose that several rays of light approach the lens; and suppose that these rays of light are traveling parallel to the principal axis. Upon reaching the front face of the lens, each ray of light will refract towards the normal to the surface. At this boundary, the light ray is passing from air into a denser medium (usually plastic or glass). Since the light ray is passing from a medium in which it travels fast (less optically dense) into a medium in which it travels relatively slowly (more optically dense), it will bend towards the normal line. This is called the principle of refraction.¹

When you shoot an arrow into a still pond in hopes of shooting a fish, the light is slower in water than in air, so refraction of the image of the fish is bent, and the arrow misses its target.

You may ask, so what? The answer is that light is an electromagnetic wave, and it moves through whatever media it encounters. If the media is air, glass, water, crystal, or diamond, it always obeys the laws of physics.

When experimentation is done with media that we can measure, we find that the light follows the simplified Maxwell equation for the speed of light, \( c \). Maxwell derived the speed of light in an electromagnetic medium of transport:

\[
\frac{c^2}{\varepsilon \cdot \mu} = 1
\]

where \( c \) is the speed of light, \( \varepsilon \) is the permittivity (electric field medium parameter) and \( \mu \) is the permeability (magnetic field medium parameter). The permittivity and permeability are measures of the electromagnetic field strength of light’s transport medium. According to Maxwell’s derivation of the speed of light, the light speed does not vary with time but varies with the electromagnetic strength of the space or material through which the light travels.

Now here is where the question is a bit more difficult: can the electromagnetic characteristics of deep space be determined, or measured? The answer is yes, but stay tuned until we review some other scientific explanations for variable speed of light, called \( \text{C-decay} \), theories of the speed of light decaying everywhere with the passage of time. In these theories the speed of light was faster in the past and decayed in speed until the present day.

In the past, I have encountered several scientists who have proposed a variable speed of light. First was Barry Setterfield, an Australian astronomer, and young-Earth creationist.
In a recently published technical report entitled, The Atomic Constants, Light, and Time, Trevor Norman and Barry Setterfield put forward their most recent evidence in favor of the hypothesis that the speed of light, \( c \), has been decreasing in the past. This hypothesis has received much acclaim in some sectors of the creationist community since its initial introduction by Barry Setterfield a few years ago.\(^2\)

I met Barry at a creation conference in Columbus, Ohio. Barry came to his conclusion by plotting the speed of light, as measured by many scientists, against the year of their measurement. Barry discovered that the plot of speed versus year is a curve which approaches a straight line in the present, but extrapolates to almost infinite speed in the deep past. He was interviewed by Dr. Chuck Missler in Australia.\(^3\)

This result has been analyzed and commented upon by many.

Thus, any gradual and asymptotic approach of the results of experiments to measure \( c \) to its present-day value needs to be carefully and critically scrutinized to determine if the effect is due to real, physical changes in the structure of the universe which have altered \( c \), or if it is merely the result of "refinements of technique and method" of measurement.\(^4\)

When all 163 values involving 16 different experimental methods are used, the linear fit to the data gives a decay of 38 km/s per year.\(^5\)

Then my friend Dave Penny proposed the idea that light is an electromagnetic wave, whose speed is a function of the medium through which it is passing. He bases his talks on Maxwell’s equation published in the late 19th century. Dave believes that Maxwell’s derivation shows light speed varies with the strength of its electromagnetic medium and that the speed of light does not decay with time as the preceding and following light speed decay theories advocate. Dave has spoken on this topic several times at CSAMA meetings. (His website is [www.gravitationalrelativity.com.](http://www.gravitationalrelativity.com.)

Then I learned of a Portuguese astronomer who proposed an idea similar to that of Setterfield: that the speed of light decays with time.

The physicist João Magueijo has proposed a heretical question: What if the speed of light—now accepted as one of the unchanging foundations of modern physics—were not constant? Magueijo, a native of Portugal, puts forth the heretical idea that in the very early days of the universe light traveled faster—an idea that if proven could dethrone Einstein and forever change our understanding of the universe.\(^6\)

At ICC 2013, I met Mark Amunrud, who proposed the idea from a biblical word study basis that the speed of light decays with time. His presentation, *Seeing Distant Stars in Near-Real Time*, asks the question,

hypothesis about space: Gravity Warps Paired Spaces (GWPS). GWPS originates from Biblical descriptions of space. The Bible describes paired spaces that were created and stretched out.7

Since then there have been a number of books and articles that have crossed my desk, that have considered the concept of constant/variable speed of light.

• *The Speed of Light* (Paperback). Louise Riofrio’s *The Speed of Light* is a delightfully written, straightforward, clear introduction to the likely role of a slowly declining speed of light in the history of the universe and beyond. It is a quick read that goes easy on the math, maintaining congruence with the theory that formulas describing these events are probably, when mature, quite simple.8

• *Redshift from changing speed of light*, [Kindle Edition] Patrick Hackett (Author)

• Experimental Tests Invalidating Einstein’s Relativity.9

• Variable Speed of Light: *Einstein’s theory of General Relativity*. Suppose that you have a clock and a ruler (which is not rotating with respect to stars) and that you are not accelerating (inertial). Locally (where you are) you will always measure the speed of light at 299792.458 km/sec. However in the presence of gravity if I am at a different location than yours then I could measure the speed of light at your location to be any value smaller than or greater than 299792.458 km/sec. It depends on where I am and where you are (it depends on locations). So in the presence of gravity the speed of light becomes relative.10

Recently, I opened a dialog with Dave Penny on the subject of Einstein’s insistence that the speed of light is constant. Here is the text of that recent dialog:

I asked Dave for an explanation of black holes, as presented in a video that looked suspicious to me. He replied:

The whole concept … is to visually portray a black hole according to the understanding of modern relativity; hence, the collaboration with the physicist Kip Thorpe. As they explain in the first part of this short video, they are assuming Einstein’s theory of general relativity (gravitational and accelerating frames of reference are equivalent) which forms the mathematical basis of space warped by a gravitational field. Black holes are the theoretical warping of space around very intense gravitational fields around super dense gravitational bodies.

The problem is that general relativity is not true. First, gravitational and accelerating frames are not equivalent. Second, gravity does not warp space or time as Einstein asserted. In fact, even if gravity could warp space according to general relativity and if the whole universe were put into one body of matter, that body would not create a black hole because gravity is too weak a force to compress all of the matter in the universe into a super dense body of matter. Gravity would have to compress the electromagnetic fields in matter which are $10^{36}$ times stronger than gravity, which is not possible.

A true concept of general relativity comes from the relationship of electromagnetic
nature of matter with the electric fields of subatomic particles, principally electrons and protons, whose electric fields extend infinitely out into space. These electric fields from celestial bodies of matter form the transport medium of electromagnetic waves and probably all other physical phenomena including mechanical and gravitational phenomena. Time is universal and space is linear in every direction.

According to Mach’s Principle, all of the matter of the Universe supplies a slowly changing background frame of reference for the whole Universe. Stronger local gravitational fields form local frames of reference for physical phenomena. Hence the terminology gravitational relativity; but it is based on the electric fields of the subatomic electrical charges in matter. There appear to be an equal number of positive (proton) and negative (electron) charges in the Universe from the Periodic Chart of Elements. Gravity is a very weak positive attractive force created by the overload difference between the attraction force of unlike subatomic electric charges and the repulsion of like subatomic electric charges.11

At this point, I asked David why he thought Einstein had ignored the determination of $c$, the speed of light, using Maxwell’s equations, the Michelson-Morely Experiment, and the Sagnac Experiment. He responded:

I am not sure why Einstein did not concentrate on Maxwell’s derivation of the speed of light which was done almost fifty years before he released his theory of special relativity in 1905. He claimed even years later that he was trying to preserve Maxwell’s equations of electromagnetism. Ironically, Maxwell derived the speed of light from those equations.

Also, you are right that [Einstein] ignored: (1) Maxwell's derivation which requires an electromagnetic transport medium (permittivity-electric parameter and permeability-magnetic parameter) for light, (2) Michelson’s lifetime objection to special relativity based on his experiment, and (3) the Sagnac experiment.

The Sagnac experiment is basically the same type of interferometer experiment as Michelson-Morley’s except that it is mounted on a revolving table. Whereas the M-M experiment showed no frequency shift indicating a difference of speed of light in one direction from the other direction, the Sagnac experiment showed that there was a frequency shift depending on the revolving speed and the direction of revolving. The faster the revolutions the greater the shift, and the shift reversed with the reversal of revolution direction. The Sagnac experiment shows not that the speed of light changed speed (i.e., with respect to the earth) but that the light is traveling in an electromagnetic medium stationary with respect to the earth and that the revolving table is spinning in that earth-based electromagnetic medium.12

The conclusion of this trail of logic is, simply put: Einstein did not trust experimental results. His hypotheses were based on his own “thought-experiments,” not physical measurements that
any observer could repeat and verify. His contemporaries did not challenge him, because they could not follow his explanations any more than you or I can.

Because his thought-experiments could not be repeated by other scientists, and were not challenged in his day, Einstein ignored the physical scientific experimentation that demonstrated that light does travel through space at a different speed depending on the medium through which it is passing.

Here is the solution to the enigma that started this article: When the permittivity (the electrical parameter of the electromagnetic medium) and the permeability (the magnetic parameter of the medium), which are a measure of the strength of the electromagnetic transport medium of light, are very small in deep space far from the subatomic electric charges in celestial bodies, the Maxwell Equation for \( c^2 \) gives an almost infinite speed in deep space. This is because the speed of light squared, \( c^2 \), in Maxwell’s derivation, is equal to one divided by the permittivity, times the permeability (the electromagnetic strength of deep space and a very tiny value) in the denominator, which results in an enormously large number for the speed of light in deep space. That means that light travels through deep space at almost infinite speeds, until it comes into a stronger gravitational field where it slows down.

Dave remarks that light from the nearest star to our Sun, Proxima Centauri, is said to be just a "short 4.24 light-years away."\(^{13}\)

Let’s get sense of scale for just how far away Proxima Centauri really is. Think about the distance from the Earth to Pluto. NASA’s New Horizons spacecraft travels at nearly 60,000 km/h, the fastest a spacecraft has ever traveled in the Solar System. It will have taken more than nine years to make this journey when it arrives in 2015. Travelling at this speed, to get to Proxima Centauri, it would take New Horizons 78,000 years.\(^{14}\)

…. may have originated hours ago traveling at light speeds almost infinitely greater than Einstein’s fixed speed!

I’d like to point out that Adam was created on day number six of creation week, whereas the sun, moon and stars were created on day number four. That means that the light from distant stars had two days or so to transit to planet earth at nearly an infinite speed of light! Consequently, I believe Adam saw a sky full of stars that first night.

Psalm 147: 4, 5:

He determines the number of the stars;  
He gives to all of them their names.  
Great is our Lord, and abundant in power;  
His understanding is beyond measure.\(^{15}\)

I believe this is the answer to the enigma posed at the beginning of this article. If that gives you goose bumps, join the crowd! Praise the LORD GOD Almighty!

February Monthly Meeting
February 3rd, 2015
“Expelled: No Intelligence Allowed” DVD
(the 2008 motion picture)
moderated by Bob Farwell

American writer, lawyer, actor and commentator Ben Stein conducts onscreen interviews with professors who have been fired for expressing views favoring the concepts of intelligent design in nature, as well as academics who support the mainline evolutionary viewpoint. Stein finds striking similarities between the views of the latter group and those of the supporters, past and present, of Nazism, Communism, eugenics, and abortion.

Monthly Meetings
2015
(1st Tuesday of each month; content subject to change; no sign up or registration necessary.)

- January 6th: “Formed to Fly” DVD, by Dr. David Menton, moderated by Kevin Anderson.
- February 3rd: “Expelled: No Intelligence Allowed” (the 2008 motion picture) DVD, moderated by Bob Farwell.
• April 7th: “Canopy Theory,” by Dave Penny.
• May 5th: “Living Fossils Evolution: The Grand Experiment” Episode 2 DVD, moderated by Bob Farwell.
• June 2nd: “Evolution’s Achilles’ Heels” DVD, by Creation Ministries International, moderated by Kevin Anderson.

CSA Monthly Meeting Location
Westbrooke Church
9777 Antioch
Overland Park, KS 66121
10 blocks east of 69 Highway (or Switzer) on 95th St. to Antioch, south two blocks on Antioch, on east side of street.
Fellowship & book table: 6:15PM. Meeting: 7:00PM.

For detailed Monthly Meeting information:
www.csama.org

2015 Creation Safaris

• March 20 (Friday, 7:15 PM) – Astronomy Safari.
• April 17 (Friday, 8:00 PM) – Astronomy Safari.
• April 25 — (Saturday) 8AM - 6PM - South East KS Fossils and Mineral Safari.
• May 15 (Friday, 8:30 PM) – Astronomy Safari.
• May 22 - 25 – (Saturday - Monday) - South East Missouri & Saint Francisious Mountains.
• June 6 – (Saturday) -Photo / Nature Hike Creation Safari at O.P. Arboretum.
• June 18-20 – (Thursday - Saturday) - Ozark Stream Float - Elk River.
• June 20 (Saturday, 8:45 PM) – Astronomy Safari.
• July 11 (Saturday, 8:45 PM) – Astronomy Safari.
• July 18 – (Saturday) - KU Natural History Museum.
• August 14 (Friday, 8:15) – Astronomy Safari.
• August 15 – (Saturday) Greater KC Fossil Hunt.
• September 4 - 7 – (Friday - Monday) - Cahokia Mounds/Keoke Geodes.
• September 11 (Friday, 7:30 PM) – Astronomy Safari.
• October 9 (Friday,7:15 PM) – Astronomy Safari.
• October 17 – (Saturday) – HaHa Tonka Safari.
• November 6 (Friday, 7:15 PM) – Astronomy Safari.
You must register for any safari. For safari details, and to register please visit: www.csama.org

Astronomy safaris only, call: (913)-515-6421.

Creation Ministries International
Tour¹
“Exposing Evolution’s Fatal Flaws”

Dr. Robert Carter²
(in person)
January 25, 2015

Get Answers!
Does God exist? How can anyone believe in religion when science has neither a need nor a place for God? Is evolution happening today? If God is a God of love, why do we suffer and die?

Creation Ministries International is coming to your area soon with answers to these important questions. Come and hear Dr. Jonathan Sarfati expose the bankruptcy of the evolutionary myth. You'll be amazed to see how weak the scientific evidence for evolution is.

This is an issue that affects everyone. Evolution teaches us there is no need for God, there is no spiritual realm, and there is no afterlife. According to the theory, spirituality is just an evolutionary trick of the mind!

The Bible gives a very different picture about the nature of these things. At this presentation, you will learn how the scientific evidence, when properly understood, confirms the details of the biblical account. At the same time, we will answer many of the Big Questions.

The Alternative: Creation’s Competitive Edge
The Most asked Questions Answered!

Dr. Robert Carter
January 25th, 2015, 6:30 PM
Christ Community Church
1100 Kasold Drive
Lawrence, Kansas 66049

¹ http://creation.com/calendar
² http://creation.com/dr-robert-carter
Last month, we saw that the LORD created the Sun, Moon and Stars for "signs and seasons." Seasons are special celebrations of the LORD’s feast days, which the Children of Israel were instructed to observe each year on particular dates on the Jewish or Hebrew calendar.

Many of the significant biblical events are noted in terms of dates in the Jewish calendar, or so many days later, etc. Because most people, Christians included, are not taught to think in terms of the Hebrew calendar, we often misinterpret the intended correlations. It would be very helpful if we could understand more clearly the relationship and correlation between the two calendar systems. That knowledge would help us to understand the signs and seasons that are part of scripture. In this article I will attempt to offer an explanation and comparison of the Gregorian and Hebrew calendars.

**GREGORIAN CALENDAR**

These days, we are familiar with the Gregorian calendar, which contains 365.25 days each solar year. To account for the approximate quarter day, we add a day to the month of February every fourth year. The Gregorian calendar does not follow the lunar month cycles. "The Gregorian calendar, also called the Western calendar and the Christian calendar, is internationally the most widely used civil calendar. It is named for Pope Gregory XIII, who introduced it in 1582. The calendar was a refinement in 1582 to the Julian calendar amounting to a 0.002% correction in the length of the year."¹

The LORD’s Feast days do not fall on specific dates in the Gregorian Calendar, so most American Christians miss the point and do not realize when the biblical events are to be celebrated or rehearsed.

On the other hand, other calendar systems do account for lunar month cycles.

**ISLAMIC CALENDAR**

The Islamic calendar is based on lunar months only, and thus their dates change each year in comparison to the Gregorian or Hebrew calendars. The Islamic calendar is based on the synodic period of the Moon's revolution around the Earth, approximately 29½ days. The Islamic calendar alternates months of 29 and 30 days (which begin with the new moon). Twelve of these months constitute an Islamic year, which is 11 days shorter than the Gregorian year.²

Muslim calendars are based solely on Lunar cycles, probably because they follow the Moon God, Allah, instead of the Lord GOD Almighty, worshiped by Jews and Christians. The Muslim calendar slides through the solar year, without any Leap Year or Leap Month. In this way, a given Islamic holiday will occur 10 or 11 days earlier each year on the Gregorian calendar.

**THE HEBREW CALENDAR**

The Jewish calendar is a solar-lunar calendar with many complex exceptions, which have been devised to prevent conflicts between the feast days that are observed on Special High Sabbaths, and those of the weekly Sabbaths.
The Hebrew Priests in Jerusalem determined the start of each month, when they could see the tiny crescent of a New Moon just before it set in the west. When sighted, a smoke signal was used to tell the rest of the nation of Israel that a new month had begun.

The Hebrew calendar is based on lunar cycles. Towards the beginning of the moon’s cycle, it appears as a thin crescent. That is the signal for a new Hebrew month. The moon grows until it is full in the middle of the month, and then it begins to wane until it cannot be seen. It remains invisible for approximately two days—and then the thin crescent reappears, and the cycle begins again. The entire cycle takes approximately 29½ days.

Knowing exactly when the month begins has always been important in Hebrew practice, because the Torah schedules the Hebrew festivals according to the days of the month.³

THE HEBREW MONTHS

Nissan is the first month on the Jewish calendar. Before the Jews left Egypt, on the first day of the month of Nissan, GOD told Moses and Aaron: “This chodesh (new moon, or month) shall be to you the head of months.”⁴ Thus the peculiarity of the Jewish calendar: the year begins on Rosh Hashanah, the first day of the month of Tishrei (the anniversary of the creation of Adam and Eve), but Tishrei is not the first month. Rosh Hashanah is actually referred to in the Torah as “the first day of the seventh month.”⁵

APPOINTED DATES FOR THE LORD'S FEASTS

Leviticus 23:1-4 NKJV:

And the Lord spoke to Moses, saying, “Speak to the children of Israel, and say to them: ‘The feasts of the Lord, which you shall proclaim to be holy convocations, these are My feasts. Six days shall work be done, but the seventh day is a Sabbath of solemn rest, a holy convocation. You shall do no work on it; it is the Sabbath of the Lord in all your dwellings. These are the feasts of the Lord, holy convocations which you shall proclaim at their appointed times.’”

The Hebrew calendar dates for the LORD's Feasts as instructed in the above passage are illustrated on the following circular calendar.
Feasts of the Lord.⁶

From this circular calendar you can see that:

1. The Feast of Passover always comes on Nisan 14 each spring.
2. The Feast of Tabernacles always comes on Tishrei 15 each fall.

**CALENDAR CONVERSIONS**

If you would like to convert from Gregorian or civil calendar dates to Jewish calendar dates, there are a number of on-line calendar conversion programs that you can use.

One of the easiest is located at [http://www.hebcal.com/.converter/](http://www.hebcal.com/.converter/)

For example:

1. Take the date for Passover, Nissan 14 and convert it to a Gregorian calendar date. You will find that Nissan 14 fell on April 15 in 2014, and will fall on April 3 in 2015.
2. Take the date for Tabernacles, Tishrei 15, and convert it to Gregorian dates. You will find that Tishrei 15 fell on October 9 in 2014, and will fall on September 28, 2015.

These two Feasts are particularly pertinent in this present series of articles.

By now, you have probably guessed that I am building up a logical case that shows an incredible concurrence of "signs in the Sun, Moon, and stars" -- i.e., eclipses with the appointed dates for the feasts of the LORD. If this is getting too complicated for you, or if you disagree, or have questions, please contact me at our usual newsletter contact address.

In a forthcoming newsletter, we’ll look at the astronomical geometry that causes eclipses of the Sun and Moon. We’ll reference NASA eclipse catalogs for the Gregorian calendar dates of the lunar tetrads (a “tetrad” being defined as four sequential blood moons). We’ll also look at a
A diagram that shows a remarkable symmetry of the events on a timeline, or a calendar showing solar and lunar eclipses during our current eighteen-month period.

In yet another issue, we'll look at some historical incidents coincident with lunar tetrads that have occurred in the past. Finally, we'll examine a creationist astronomer's article addressing the lunar tetrads of 2014 and 2015.

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2. [http://en.wikipedia.org/wiki/Muslim_holidays](http://en.wikipedia.org/wiki/Muslim_holidays)
4. Ibid.
5. Ibid.
6. [http://endtimepilgrim.org/feastslord.htm](http://endtimepilgrim.org/feastslord.htm)

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**Help Wanted**

CSAMA is seeking an editor for, and contributors to, our newsletter. If you are a born-again Christian, believe the Bible is the infallible word of God, subscribe to the literal 7-day creationist viewpoint, if you have researching and writing skills, and if you have suitable ideas for articles to contribute to our publication and can meet a monthly deadline schedule, please contact the newsletter webmaster via the link at [www.csama.org](http://www.csama.org).

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You are invited to attend all of the monthly meetings, and as many of the safaris as you can fit into your schedule. Pass the word. Tell your friends and neighbors about CSAMA and our activities. Show them how to subscribe to the [CSAMA Newsletter](http://www.csama.org).

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Never miss an opportunity to debunk the "millions-of-years" notion that evolutionists insist is necessary for life as we know it.

We’d love to hear from you!

If you have questions or comments, or if you have suggestions for making our newsletter better, please feel free to contact us. We’ll do our best to respond to every query. THANK YOU!

(Use the editor link on the contact page at www.csama.org.)

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