

Thousands or Billions?

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Note: The Table of Contents above is intended to be used as a tool for individuals to address specific questions that they may have. Some people may be interested in reading the entire paper, but the Table of Contents is intended to make it easy for people to pick and choose which topics to review.

The Question:

Questions pertaining to the “age” of the universe are (by far) the most common questions I receive. For example, in a recent 10 week creation seminar, the students selected the topics they desired to cover. Seven out of twenty topics were directly related to the age of the earth! This paper is not intended to address all of these topics, but it is intended to cover the basics of the most common scriptural and scientific questions on this subject.

Is the earth thousands of years old; or billions? Does it even matter? As we read and study the scriptures, we all have questions of which we simply do not have an answer. For some of these questions we desire to dig deeper. For others, we simply jot the question down on our proverbial “3 x 5 card” to take to heaven and ask the Lord to explain to us once we get there. I am sure these Q & A times will be some of our grandest blessings in heaven! For many solid Christians, this question simply does not matter. It may not even be on the 3 x 5 card. For all solid Christians, it is prudent not to be so dogmatic about this particular subject that we cannot glean spiritual growth from a solid believer who has the opposite opinion than our own. In fact, if we could look at any solid Christian close enough, I am sure we could find something that we strongly disagree with. Do we deny ourselves the opportunity to grow just because we can find something that we disagree with? I hope not. On the other hand, for some individuals, this particular question may be a spiritual stumbling block or barrier. It may be a stumbling block impeding further spiritual growth, or it could be an impenetrable barrier to someone who needs to accept Christ. For these individuals, it is a crucial question that needs to be addressed.

Purpose of this Paper:

The difference between “thousands” and “billions” is enormous. It should be easy to tell the difference. However, when it comes to the age of the earth, this seems to be an unfortunate ongoing argument.

The word “argument” was used intentionally. It serves no useful purpose for Christians to argue this point amongst each other. It serves to merely be divisive. Satan loves divisiveness in the church. It also serves no useful purpose to “argue” this point with unbelievers. However, WHEN the age of the earth can be used as a constructive witnessing tool, or WHEN it can be used to bolster one’s faith in God’s word, THEN it is a very valuable tool. However, to “argue” e.g. merely “match wits” with another person is completely counterproductive. The old axiom, “A man convinced against his will is of the same opinion still” is very true.

Perhaps the best “litmus test” for a conversation on this subject should be to ask yourself the question, “Who or what is dominating this discussion, the Holy Spirit, or my pride?” The purpose of this paper is to provide a scripturally and scientifically based discussion on the age of the earth that can be used as a tool when directed by the Holy Spirit to witness to unbelievers or to bolster the faith of believers.

This tool can be particularly useful when witnessing to a “left brain” thinking individual with the mindset,

“The Bible says the earth was created in six days, thousands of years ago. Science says the earth is still evolving after billions of years. End of discussion. The ‘hard data’ of the ‘pure math’ beats the ‘soft logic’ of a theologian every time.”

For this individual, the Holy Spirit may be leading you to place a stone in his shoe (as Frank Turek would say) by scientifically addressing this issue. The balance of this paper will show that, when considering all the data, his ‘hard data’ of ‘pure math’ has significant shortcomings.

The Perceived Contradiction:

The Bible speaks in terms of God creating the earth and all that is in it fairly recently (thousands of years ago) in only six days. To some people, science seems to indicate that the earth and all that is in it has been evolving for billions of years. This is obviously a clear contradiction. Straight forward logic should clearly indicate that they cannot both be correct. This is not just a “measurement” problem. There is a vast difference between “thousands” and “billions.” The difference is so vast that it really shouldn’t be difficult to examine the evidence and determine which age is correct. Modern measurement techniques are certainly adequate. One thing for sure, at least one of these two estimates for the age of the earth is wrong. Let’s take a more detailed look at the scriptures and then the science.

Scripture:

- Genesis 1 clearly speaks of a time frame of “six days” for creation. *And God saw every thing that he had made, and, behold, it was very good. And the evening and the morning were the sixth day.* Gen 1:31
- Genesis 2 confirms this. *Thus the heavens and the earth were finished, and all the host of them. And on the seventh day God ended his work which he had made; and he rested on the seventh day from all his work which he had made.* Gen 2:1-2
- Just in case there is any confusion as to the meaning of the word “day” in Genesis 1, God further clarifies His meaning by using the phrase “evening and morning” for each of those six days.
- The six days of creation are confirmed again in Exodus 20:11. *For in six days the LORD made heaven and earth, the sea, and all that in them is, and rested the seventh day...*
- And again in Exodus 31:17-18 which was inscribed by the finger of God. *It is a sign between me and the children of Israel for ever: for in six days the LORD made heaven and earth, and on the seventh day he rested, and was refreshed. And he gave unto Moses, when he had made an end of communing with him upon mount Sinai, two tables of testimony, tables of stone, written with the finger of God.*

- The concept of creating the earth in six days and resting on the 7th is reinforced 10 more times in the Old Testament.
- And then again in the New Testament in Luke 13:14. *And the ruler of the synagogue answered with indignation, because that Jesus had healed on the sabbath day, and said unto the people, There are six days in which men ought to work: in them therefore come and be healed, and not on the sabbath day.*
- Rom 6:23 tells us that “*the wages of sin is death.*” Some people suggest that the “death” in this passage does not apply to animal death for millions of years prior to man’s sin. However while elaborating on the consequences of the curse due to man’s sin, Rom 8:19-22 states that “the whole creation groaneth and travaileth in pain” and will continue to do so until the end time; when the lion and lamb lay down together as indicated in Isaiah. Consequently, the Romans 6:23 “death as a wage of sin” pertains to the entire creation; not just man.
- It is true that scripture sometimes uses the word “day” to indicate “a period of time” as opposed to a “specific day.” For example “the Day of the Lord” (2 Peter 3:10) and even “that one day is with the Lord as a thousand years” (2 Peter 3:8.) However, whereas the numerous passages pertaining to six days are all specifically referring to creation, none of these passages that use a “day” as an indefinite “period of time” are referring to creation. When evaluating scripture, the “context” for word choices must be considered. For example:
 - 1) The Hebrew word ?D? kh could mean “virgin” or “young woman.” However, in Isaiah 7:14, a clear prophesy of Christ, the context of the word is clearly “virgin.” *Therefore the Lord himself shall give you a sign; Behold, a virgin shall conceive, and bear a son, and shall call his name Immanuel.* In the context of this passage, it wouldn’t be a “sign” for Immanuel (God with us) to be born of a young woman. The Hebrew word ?D? kh clearly means “virgin” in this passage.
 - 2) Similarly, the phrase “Day of the Lord” is used in scripture 25 times. In a few cases, it is referring to the present, but in most cases it is referring to a future event that may be near, but the specific time is not known. It is never used to describe a particular period of time in the past. In this case, the context varies depending on the passage, but in no case does the “Day of the Lord” pertain to an indeterminate period of time in the past.

With all of these passages that specifically refer to a creation in only six days, it is difficult to imagine any other interpretation.

Scripture not only indicates that creation occurred in only six days, but that these six days occurred only thousands of years ago.

- The age chronology from Adam to Joseph (the time of the Egyptian Empire) is complete. (A chart indicating the “birth date” and the “death date” of this complete age chronology is included at the end of this paper.)
- Although the genealogy is not complete (some generations of this genealogy have been skipped) the age of the father (grandfather or great grandfather) at

the time of the birth of the next individual is always given. By this method, the age chronology has no gaps.

- By using this approach, Joseph was born 2173 years (plus or minus 50) after creation. The “plus or minus 50 years” is due to the possibility of minor “rounding” for a couple of the ages. For example in Gen 11:10, were Shem, Ham, and Japheth exactly 100 years old when Arphaxad was born? Not likely. Genesis 10:21 tells us that Japheth was older than Shem. Therefore, it would be reasonable to believe that some of these numbers have been rounded to the nearest 10. Nevertheless, even with a little rounding, this age chronology has been fully detailed very accurately.
- The great Egyptian empire lasted for several millenniums, but Christian and secular archeologists place the earliest possible beginning of the Egyptian empire to be about 3500 B.C. This places the creation date at 5700 B.C. at the earliest.
- Scripture provides over 80 specific dates in over 40 verses to establish this detailed age chronology.

With such an intricate chronological age detail included in scripture, it is difficult to imagine that these ages have no meaning. Generally when people attempt to convey information to us, their words can be taken literally. Scripture does include passages which are symbolic and not literal. However, this is generally easy to determine from their symbolic context. The same thing is true pertaining to the age of the earth. To believe that the earth is billions of years old requires that we:

- a) Spiritualize many passages of scripture, or
- b) Treat these passages as if they were symbolic.

The problem with this is that the context of these passages referring to a six day recent creation is worded as quite literal. No “spiritualization” or “symbolism” is implied.

Science – Does the Science Even Matter

For a Christian, God is omnipotent and He could have created the universe and all that is in it any time He wanted to. He could have chosen to create the universe in any length of time that he wanted to; a long period of time or a short period of time. To many Christians, it really does not matter.

On the other hand, to a non-Christian who believes that we are a product of the long slow processes of evolution, the age of the universe is paramount. The processes of evolution require enormous periods of time. Consequently, if the universe is very young, as the Bible seems to indicate, then evolution is utterly, completely, and totally impossible. A “few thousands of years” is a mere blink of an eye to the processes of evolution. Once an evolution believing non-Christian begins to understand the evidence for a young creation, he has no choice but to begin questioning other aspects of his belief system.

Science – The Evidence That Supports A Young Earth

Evolution originally *assumed* uniformitarian (slow and gradual) change over eons of time. Although science has convinced many evolutionists that major catastrophes have played a significant role in what we observe around us, as creationists, we can still use uniformitarian calculations to determine the oldest possible age for the earth.

Catastrophes would merely speed up this process and allow for the earth to be much younger than the calculations would indicate. Uniformitarian calculation methods, almost without exception, indicate that the earth cannot possibly be billions of years old. In Appendix 5 of The Defenders Study Bible, Dr. Henry Morris provides 68 different uniformitarian estimates (including the scientific papers referenced to support these estimates) for the age of the earth. Not one of these estimates provides an age of the earth anywhere near a billion years. Many methods of estimating a maximum age for the earth are easy to grasp. For example:

- Since water always runs down hill, the vast worldwide network of rivers and streams carries numerous minerals to their final resting place in the oceans. Due to environmental concerns, these rates of increase in the oceans are monitored very closely. Based on a) the current concentration of these minerals in the oceans, and b) the rates of their increases, we can estimate the age of the earth. To establish the “oldest” possible age, we would assume that no minerals were present in the oceans at the time of creation. There is no reason to believe that no minerals were present at that time, but this gives us the oldest possible age. By using this method, not one of these mineral concentrations in the oceans suggests a billion year old earth.
- Similarly, this network of rivers and streams carries considerable silt towards the oceans. These silts are deposited in the bays and provide marshlands and river deltas. Due to environmental concerns (you have often seen “silt nets” at construction sites to prevent river silting), these rates of silt flow are also closely monitored. By measuring a) the amount of silt in the ocean, b) the size of various deltas, and c) the rates of silting, the maximum age of the earth can also be estimated. As expected, ages determined by this method are all well under a billion years. Although “weather” can certainly affect the rates of silting and mineral flow by a factor of ten or more, the difference between thousands and billions of years is millions! Weather cannot account for this enormous difference.
- The earth has a magnetic field. The strength of this field is decaying. The age of the earth can also be estimated by a) measuring this rate of decay and b) determining a maximum field possible before the earth has significant problems in supporting life. Once again, this method establishes a very young age for the earth. (This method is unaffected by weather.) It should be noted that one source of confusion for the earth’s magnetic field is the “reversal” of this field. This is a function of the “direction” of the field; not a function of the field strength and is therefore unrelated to this calculation.
- The distance from the earth to the moon’s orbit is increasing. That being the case, the moon was, in the past, closer to the earth. This orbit can only be so

close or the moon would be drawn towards the earth instead of away from the earth. This calculation also yields a very young earth.

- Supposedly sedimentary rock is laid down one grain at a time over millions of years. As the story goes, the strata of the Grand Canyon was laid down one layer at a time and solidified one layer at a time, over a billion years. However, rock mechanics tells us otherwise. Rocks do not bend. Upheavals due to tectonic plate activity would bend sediments, but break rocks. This photo of Carbon Canyon (within the Grand Canyon) shows that these rocks were still sediments when folded into their present condition. The red line has been added to clearly show the “bending.” The size of the people provides a feel for the enormous “scale” of this bending. This “upwarp” of the Grand Canyon is known as the Kaibab Upwarp. The sediments of one side of the canyon have been elevated over 3000 feet above the other side of the canyon. This evidence (and others within the Grand Canyon) proves that the canyon was not formed over a billion years, but very rapidly.



As mentioned earlier, evolution originally *assumed* uniformitarian (slow and gradual) change over eons of time. Observing the gradual formation of river beds and mountain growth was the primary “proof positive” for uniformitarianism. However, our omniscient gracious God has shown us otherwise. There are many features of strata that indicate that many of these sediments could not have possibly been laid down over millions of years; in fact some must have been laid down very rapidly. One interesting feature is called “polystrate fossils.” The word “polystrate” is derived from two words; “poly” for *multiple*, and “strate” for *stratum* (singular for strata). These are fossils that extend vertically from one sedimentary formation to another. Dead trees do not stand for millions of years. They rot, decay, and fall over. The trees in the photo below could not have possibly been deposited in the lower sediments and then covered by the upper sediments millions of years later. All of these sedimentary layers must have been deposited very quickly.



Science – Handling Evidence that “Appears” to Support An Old Earth

Although there are well over a hundred methods of estimating the maximum age of the earth, only two provide an estimated age that supports a billion+ time frame. These two are star light and radiometric dating. Both will be addressed individually below.

Science – Star Light

The term “light-year” is intended to mean, “The distance light travels in a single year.” Light travels at the enormous speed of 3×10^8 m/s or 670,000,000 miles per hour which is virtually impossible for man to grasp. If light could travel around the earth, it would circumnavigate the earth more than 7 times in a single second!

However, a light-year is a unit of “distance.” That distance is 9.46×10^{15} meters or 5.88×10^{12} miles (5.88 trillion miles).

The problem: Since light from a star that is one billion light-years away would have taken one billion years to reach the earth, the earth must be at least one billion years old. However, the word “since” in this statement implies an “assumption.” It is important to recognize that a light-year is a unit of DISTANCE. NOT TIME.

- If I told you my car is 15 feet long, would that tell you how old it is?
- If I told you my house is 3 miles from town, would you be able to tell me how old my house is?
- If I told you a galaxy is 87 million trillion miles away, would the thought that it could be 15 million years old even cross your mind?!?

The “assumption” is that the light took a billion years to reach the earth. This may not necessarily be true. There are two explanations as to why this assumption “may not” be true, and one explanation as to why this assumption “cannot” be true.

1) God created a mature earth.

“Maturity” and “age” are two different things. (We all know people who act or appear much older or younger than their actual age.) This may sound like a confusing concept, but consider the following passages:

Genesis 1:9 *And God said, Let the waters under the heaven be gathered together unto one place, and let the dry land appear: and it was so.* When God separated the water from the land, this wet ground was already dry. This requires instant maturity.

Genesis 1:11 The herbs were yielding seed and the fruit trees were yielding fruit. This requires mature trees. The soil to support the life of these herbs and trees requires nutrients, e.g. organic material. This also requires “maturity.”

Genesis 1:20 The fowl of the air were not young hatchlings in their nests. (If hatchlings, where did the nests come from?)

Genesis 1:21 The “great whales” or “great sea monsters” (JkG{IDQv ym) were obviously mature.

Genesis 1:24 God created “cattle” (b°KrP kh), not calves (Ern) which, once again, requires maturity.

Genesis 1:26 Adam and Eve were created as mature individuals; not infants. (Infants cannot have “dominion” over anything.)

Everything listed in Genesis 1 is listed as a mature creation. However, this maturity is not limited to just creation the creation week. Consider Psalm 19:1. David, the psalmist, does not say, *In a few more million years, the heavens will declare the glory of God; and the firmament sheweth his handywork.* The heavens have always declared His glory and handiwork! Furthermore, when Jesus fed the thousands, he fed them “fish,” not “caviar” and “bread,” not “dough.” This newly created food was also fully mature. Therefore, it would be consistent to assume that starlight was created “mature” as well; i.e. fully dispersed throughout the universe. Although this information appears to be scriptural (not scientific), the concept of “maturity” (which is fully indicated by the scriptures), is a “scientific” state of existence. Technically speaking, “maturity” is physically different from “infancy.” This “physical difference” may easily explain the visibility of stars billions of light-years away.

The only “objection” to this explanation that I have ever heard pertains to the concept of “history.” In this case, the word “history” means events that appear to have happened in the past that we see evidence of today. When we examine the cosmos, quasars, nebula, the size and color of the stars all imply “history.” This history would appear to take billions of years to accomplish. However, the same thing is true with a “mature Adam” (or any of the other examples above). Regardless of how “mature” Adam was when God formed him; his body would have had the appearance of “history.” A baby in the mother’s womb does not eat or breathe. The baby’s total life support comes solely from the mother. Then, within moments and days of birth, the baby’s body goes through tremendous changes. Adam’s body would have required all of these changes to exist. If you could examine the features of Adam’s body (regardless of his perceived maturity level,) these features would all imply “history.” Similarly, a person’s DNA includes the information that determines “height” and “rates of growth” at various stages of

development. In order to pass these genes onto subsequent generations, Adam’s DNA must have included it even though he did not need it. Obviously a “mature cosmos” would not be any different than any other aspect of God’s “mature creation.” All aspects of this “mature creation” would include the “appearance of history.”

Speaking of “history” in the cosmos, the spirals of galaxies (or lack of) suggests “age.” The more defined these spirals are, the younger the galaxy is. The less defined the spirals are, the older it is. Interesting enough, the light that took the longest to reach the earth (from the galaxies the farthest away) should be showing us the youngest galaxies. After all, we are looking at light representing the distant past of these galaxies. However, the “spirals” of these galaxies look no different from the closest (oldest) galaxies. In both cases, distant or near, there is very little difference in the “age” of these galaxies. This “history” supports the young earth model; not an old earth model.

2) The speed of light was faster in the past.

Man has been measuring the speed of light for over 400 years. It appears to be slowing down. Consider the following data:

<u>AUTHORITY</u>	<u>DATE</u>	<u>SPEED OF LIGHT KM/S</u>
Roemer	1675	307,600
Delambre	1738	303,320
Martin	1759	303,440
Encyc.Brit.	1771	302,220
Glaserapp	1861	300,050
Sampson	1876	300,011
Harvard	1876	299,921
Currently Accepted Value		299,792

This is limited data but it is quite possible that we can see star light from distant stars in part because the light from those stars traveled much faster in the past.

3) The gravitational affects of general relativity must be considered.

When considering the gravitational affects of general relativity the statement, “*since light from a star that is one billion light-years away would have taken one billion years to reach the earth, the earth must be at least one billion years old*” cannot possibly be true. We mentioned before that the word “since” includes an “assumption.” This assumption disregards the gravitational affects of general relativity. The gravitational affects of general relativity have been proven to be real and they cannot be disregarded just because they may be difficult to comprehend. In our era of atomic clocks, it has clearly been demonstrated that *time* at Boulder,



Colorado (elevation > 1 mile above sea level) runs faster than time at Greenwich, U.K (at sea level.)

The gravitational affects of general relativity can be substantial. This may be difficult to comprehend, but “gravity” affects “time.” This does not mean that gravity affects how fast a watch or clock runs. These would be considered “time measurement errors.” The forces of gravity affect *time* itself. Consider the following two equations:

$$1) \quad Fg = \frac{GM_1M_2}{d^2}$$

The variables in this equation can be described as:

M_1 is the mass of one object

M_2 is the mass of second object

d is the distance between the two

G is the the gravitational constant

$$= (6.67 \times 10^{-11} \text{ Newton-Meters}^2/\text{Kilogram}^2)$$

Thus, the forces of gravity are determined by

- a) the gravitational constant,
- b) the masses of the nearby objects, and
- c) the distance squared between those objects.

$$2) \quad ds^2 \approx \left(1 + 2\frac{\mathbf{f}}{c^2}\right)c^2 dt^2 - \left(1 - 2\frac{\mathbf{f}}{c^2}\right)(dx^2 + dy^2 + dz^2)$$

This equation is a little messier, but essentially the pertinent variables can be described as:

dt is the rate that time occurs in one position of the cosmos

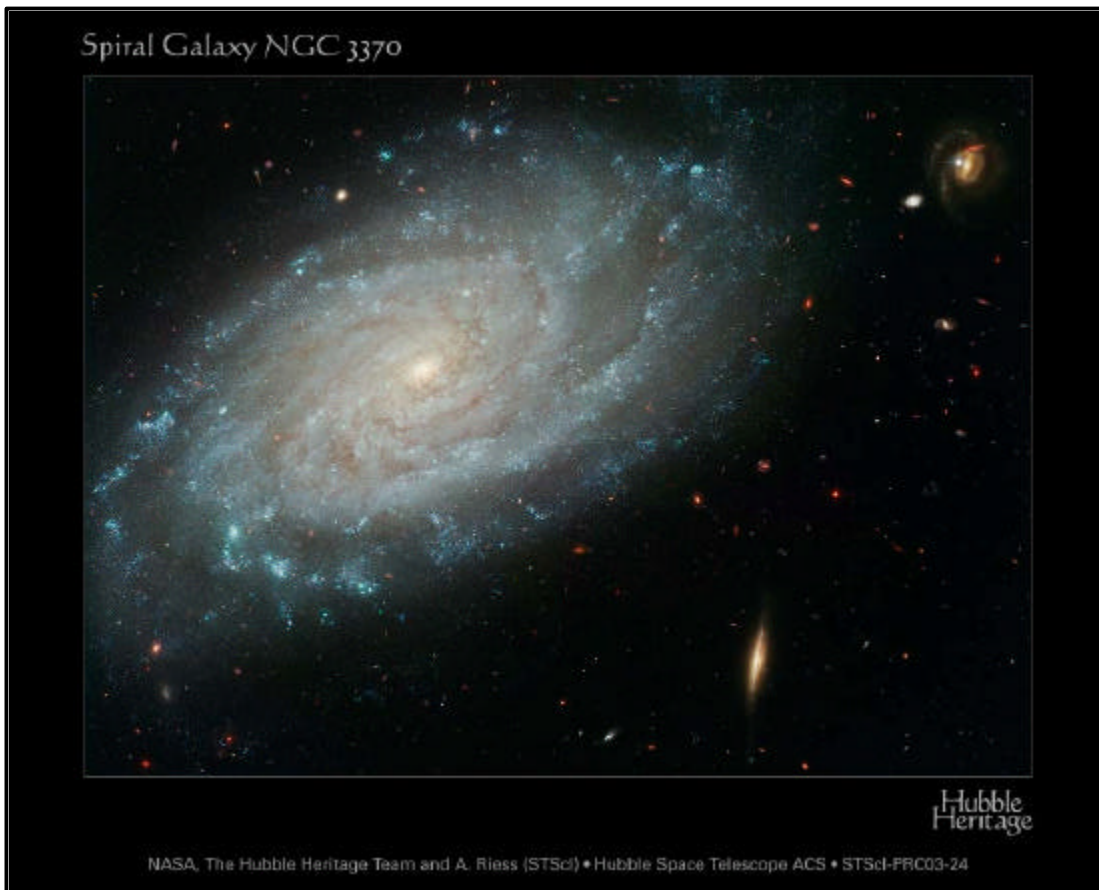
ds is the rate that time occurs in a diffeent position of the cosmos

dx , dy , and dz are the distances (in terms of x , y , and z coordinates) between these two positions

\mathbf{f} is an even messier equation that is a function of gravitational forces

Thus, (the point of this ugly equation) is that the closer large masses are together, the slower time occurs. The universe is so vast and the galaxies are so far apart that this gravitational affect is inconsequential today. However, science and scripture tells us that this has not always been the case. Scripture tells us multiple times (Is 40:22, Is 42:5, Is 44:24, Is 45:12, Is 51:13, Jer 10:12, Jer 51:15, and Zec 12:1) that God “stretched out the heavens.” The “red shift” seen by modern day telescopes confirms this expansion.

That being the case, the universe was not as vast and large at the time of creation. For the sake of this discussion, let’s consider this photo of the NGC3370 galaxy (below) to represent the entire universe at the time of creation. (Ignore the other galaxies in this photo.)

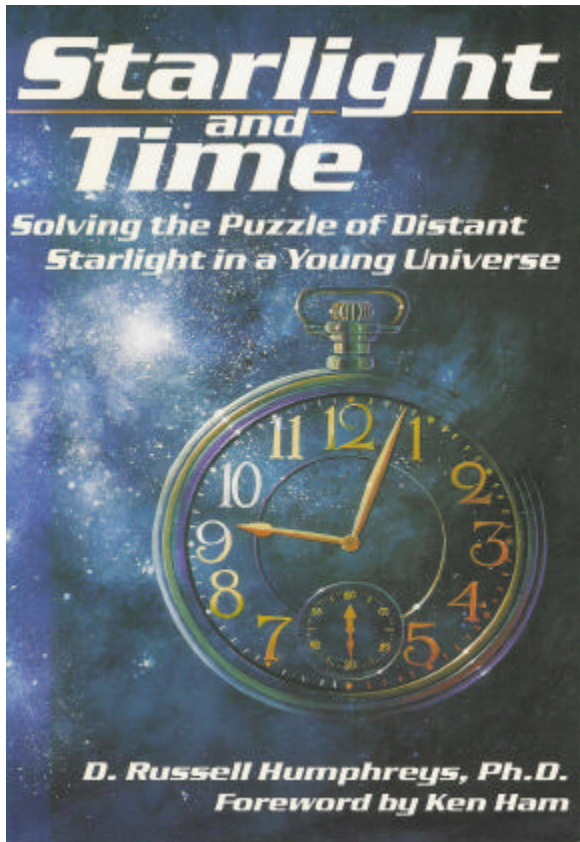


From earth, as we look into the cosmos, although we cannot see through the center of the Milky Way, the universe appears to be very similar in every direction. That being the case, it would make sense that earth (or the Milky Way) is relatively near the center of the universe. So:

- 1) Consider earth to be at the center of the galaxy above; inside the white dot.
- 2) Consider the stars that are currently billions of light-years away to be the stars near the edge of the galaxy above.

This is not a perfect illustration of what the cosmos would look like during the creation week, but it serves to illustrate the gravitational affects on time. With the earth (or Milky Way) in the white dot, obviously there is enormous mass extremely short distances away from the earth. Gravitational forces would be extremely high. On the other hand, the stars (or galaxies) at the edge of the universe have comparatively very little mass at great distances apart. Gravitational forces would be extremely low. Consequently, with these gravitational conditions, “time” for earth would run extremely slow compared to “time” for the stars (galaxies) at the distant edges of the universe. Dr. Russell Humphreys, of Sandia National Laboratories, has performed the calculations for this scenario. According to his calculations, this phenomenon alone can explain the difference between 6000 years and a perceived 15 billion years. It all depends on where you are in the universe during the initial days of creation.

This explanation (based on astrophysics and general relativity) is obviously over simplified, but the pertinent information to remember is this:



- 1) The Bible states many times that God “stretched out the heavens.”
- 2) The red shift observed in the cosmos confirms this “stretching,” commonly referred to as “expansion.”
- 3) If the cosmos is expanding, it was obviously smaller at one time in the past.
- 4) The distant galaxies were much closer to earth at the time of their creation.
- 5) By looking into the heavens, it appears that the earth (or Milky Way) is near the center of the universe. (Red shift data is consistent with this observation.)
- 6) The “mass” of the universe is “astronomical.” (pun intended.)
- 7) Prior to “stretching” the universe, this enormous mass would be much denser near the center (near earth) than at the distant stars.
- 8) “Time” is a function of gravity. Time runs much slower in high gravitational fields compared to low gravitational fields.
- 9) Consequently, “time” on earth

would run much slower than at distant stars until after the universe was “stretched” out by God. (By the way, scientists are still mystified as to why the universe is still expanding. No “natural cause” can fully explain this phenomenon.)

The evolutionary Big Bang theory and the original size of the universe proposed by Dr Humphreys above both require assumptions. However, for someone with an open mind, which is more reasonable?

A) The mass and energy of the entire universe initially defied physics by being fully contained in an infinitesimal dot and then, for some unknown reason that also defies physics, an explosion of this infinitesimally small pinpoint formed the basis for the entire universe in a split second.

OR,

B) The entire universe was created and the laws of physics were all defined by our omnipotent God in six days.

One scenario defies physics. The other defines physics. When witnessing to an unbeliever, if this does not put a stone in his shoe, the problem is not with the six days; it is with his acceptance of God Himself.

Summary:

The assumption that “light from galaxies billions of light-years away requires billions of years to reach the earth” is simply not true. This assumption ignores,

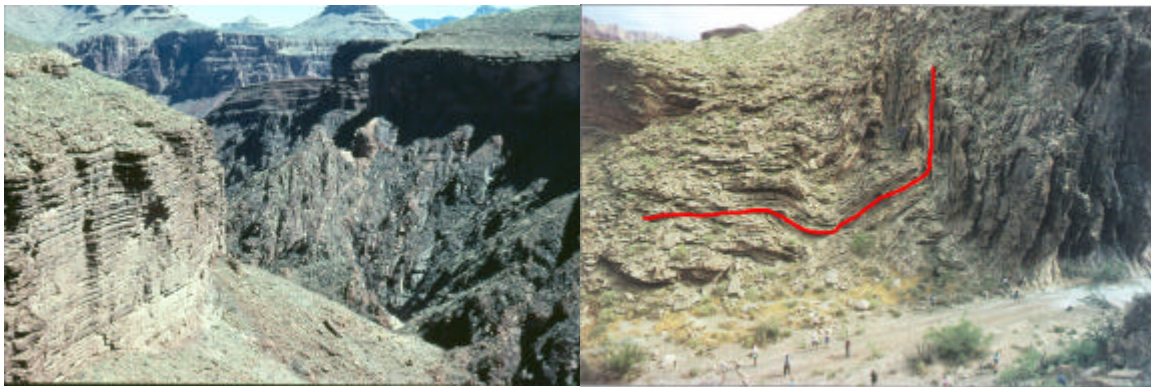
- a) The strong Biblical implication that God created a “mature” universe,
- b) The fact that the speed of light is slowing down,
- c) The fact that the universe used to be much smaller (distant galaxies were much closer), and
- d) The gravitational effects of time due to general relativity.

Science – Old Earth - Radiometric Dating Methods:

When it comes to the age of the earth, the term “radiometric dating” conjures up more confusion than probably any other term. This is due to a variety of reasons. We cannot cover all of them in this short paper, but hopefully we can clear up the confusion.

The Geologic Column:

The evolutionary geologic column attempts to date different strata (layers of rock or soil) and the fossils buried in that strata based on the assumption that strata is laid down one grain at a time over millions and billions of years. This assumption is simply not true.



The Grand Canyon

Carbon Canyon

Photos of the Grand Canyon (like the one above) often show thousands of feet of strata. An enormous amount of time would certainly be required if this strata was laid down one grain at a time. However, the Carbon Canyon photo (also above) tells a different story. This photo was also taken in the Grand Canyon. The red line has been added to show the curvature of these strata. The people in the foreground give the photo perspective. As we have all known since childhood, rocks are not very flexible. They are brittle and break before noticeable bending occurs. How did the strata of Carbon Canyon get bent to this degree if these strata were laid down over millions and billions of years? Obviously these strata were all laid down very quickly, then while still “plastic” (flexible) they were folded (bent) into their current condition. This is just one (of many) easy to understand examples as to why the strata of the Grand Canyon had to have been formed very rapidly. (Almost certainly as a result of Noah’s Flood, but that is a different subject.) When we study the various strata of a rock formation, the only thing we know for certain, is that a

rock layer “above” other layers must be younger than the layers below it. Or do we even know that for sure?

Radiometric Rock Dating:

The geologic column would have no relevance at all to the age of the earth if it weren't for the radiometric dating of these rocks. Interesting enough, almost all rock strata of the Grand Canyon is sedimentary rock – which cannot be dated by radiometric methods. Since “sedimentary” rock is formed from “sediments” from various sources, if radiometric dating of a specific rock were used, this single rock would have multiple “apparent ages” of all the various sources of those sediments. Consequently, radiometric rock dating can only be used with igneous rocks; those which were formed from the cooling and solidification of molten rock. Since molten rock is two thousand degrees or more, you will never find a fossil in an igneous rock. Let's review the impact of this paragraph:

- 1) Fossils are only found in sedimentary rock.
 - 2) Radiometric rock dating only applies to igneous rock.
- (So much for dating fossils!)

Nevertheless, let's look at the “apparent ages” of the igneous rocks of the Grand Canyon based on radiometric dating methods.

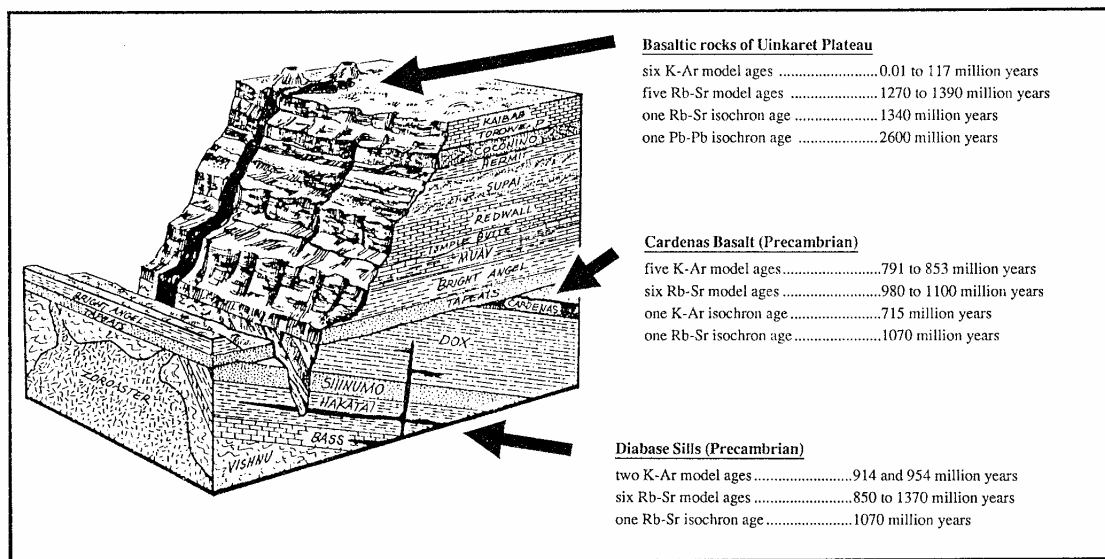


Figure 6.8 Are Grand Canyon rocks one billion years old? Radioisotope dating methods give strongly discordant “ages.” The lava flows at the rim of Grand Canyon, impose an incredible contradiction on radioisotope dating. The flows at the rim appear to be older than deeply buried lava flows. Data sources shown in text.

The data in the chart above came from the research of published data from various radiometric studies and was assembled by Dr. Steve Austin of the Institute for Creation Research (ICR). The distinct problem with the radiometric data above is that the lava from the volcano at the top of the canyon appears to be older than the basalt at the base of the canyon! Didn't we establish earlier that “the only thing we know for certain is that a

rock layer above other layers must be younger than the layers below it?” Yes. This is still certainly true. The problem is with the dating method.

One would think that this data would confound the evolutionists and that they would want to find out what went wrong and then correct the discrepancies. However, evolutionists simply stood firm with their claim, “See, the canyon is nearly a billion years old {which disproves the Bible.}” Evolutionists did nothing to resolve or understand this data discrepancy. It was the creationists (ICR) that spent the time, energy, and over a million dollars to ascertain what went wrong with these measurements.

The caption of this diagram states, “Radioisotope dating methods give strongly discordant ages.” The reason for this discordance (the differences of the data) is due to the fact that the tests used to determine these dates were run by different people with different test methods at different laboratories with different levels of sophistication. It was the Institute for Creation Research (ICR) that embarked on a research project to use only the newest most accurate technologies to run controlled tests to date these rocks via radiometric methods. The end results were astounding.

How Radiometric Dating Works:

At this point we must diverge from our Grand Canyon discussion and discuss radiometric dating in general. Specifically, what is it? And how is it measured?

Atoms “chemically” bond with each other to form all sorts of compounds and materials. This is a function of their electrons. However, we generally consider the nucleus of individual atoms (the center of the atom which is made of protons and neutrons) to be extremely stable. For all practical purposes, although oxygen “chemically” bonds in countless ways with numerous other types of atoms, the nucleus of the oxygen atom, and therefore the number of oxygen atoms in the world today, is pretty much the same as when God created the earth. However, some atoms are not so stable. For example some Polonium atoms “decay” (change into other atoms) in 2.1 nanoseconds! If we wrote that number out it would be 0.000 000 002 1 seconds! That is approximately one divided by 500 million seconds. These atoms do not hang around for long! Many other atoms also decay, some very quickly and some very slowly. The original atom is called the “parent” and the atom that is formed by this decay is called the “daughter.” When atoms decay (change into others), we use the term “Half-Life.” To describe the term “half-life,” I like to use a “sugar and mouse” illustration. Suppose I spill a cup of sugar on the floor. The next day, I look at the mess, and half the sugar is gone. The mice ate it. The next day, I look at the mess and expect it to all be gone. However, the mice were not so hungry the second day and could only eat half of what was left. I look at it again (surely the mice will have finished it by now) but, since the mice had gorged themselves for the previous two days, they could still only eat half of what was left. After four days, the mess on the floor was 1/16 of a cup which is 1/2 of 1/2 of 1/2 of 1/2 of the original cup of sugar. We could say that the “half-life” of this sugar on the floor is “one day.” The same thing is true of radiometric decay. The half-life of the polonium mentioned above is 2.1 nSec. Atoms that change (decay) into other atoms are called “radioisotopes.”

Rock Dating Methods:

Hopefully you have two birthdays. You have your physical birth, and you have your spiritual birth at the time that you were born again. Individual rocks have no “spiritual birth” and consequently have only one single birth day. However, by using the most sophisticated radiometric dating laboratories and methods in the world, these rocks have as many different birth dates as there are radioisotopes to date them. One example of the multiple “birth dates” of a single rock is shown below. This data is a very brief summary of numerous studies that all draw the same conclusion. It can be found in Radioisotopes in the Diabase Sill at Bass Rapids, Grand Canyon, Arizona: An Application and Test of the Isochron Dating Method by Andrew Snelling, Steve Austin, and William Hoesch. This is just one research project of several supporting the conclusions below.

Radioisotope (Parent)	Daughter	Apparent Age	Half-Life
Potassium	Argon	841 Million Years	1.3 Billion Years
Rubidium	Strontium	1057 Million Years	47 Billion Years
Samarium	Neodymium	1375 Million Years	106 Billion Years

How old is this rock? Is it 841 million years old, 1057 million years old, or 1375 million years old?? The equipment used to date this rock was the most sophisticated equipment available; an Accelerator Mass Spectrometer (AMS) literally counts the various atoms and can easily determine an “apparent age” with an accuracy of 1%. (In some cases, an accuracy of 0.1%.) The “apparent ages” in the chart above are considerably further apart than the 1% accuracy of the AMS measurement. The fact that a single rock has significantly “different ages” is a serious problem. It should be noted, that this is just one example. The same rocks were dated by AMS equipment from multiple laboratories around the world. In each case, the dates as determined by a single radioisotope agreed with each other from one laboratory to another laboratory, but they disagreed from one radioisotope to another radioisotope. In other words, several different nationally recognized laboratories concluded that each rock has a different age based on which radioisotope is used to determine that age. Keep in mind, a single rock can only have a single birth date.

Well – That does not seem to be a very good answer. We were trying to understand how the volcano at the top of the canyon could be older than the bedrock at the base of the canyon. We could explain this variance by the fact that these ages came from older less reliable methods, but now, when we literally count the atoms to calculate the age of a rock, we arrive at multiple dates for a single rock. We have addressed one problem by creating another problem. If our equipment and processes are so accurate what could be wrong now? Is it possible that our “calculation” is wrong? We know that the number of atoms that we have counted is correct. What if our calculation of age based on those numbers of atoms is in error?

To address this question, we need to look at that equation. Our basic equation is:

$$N = N_0 e^{-t/I}$$

For this equation;

- N_0 is the initial number of atoms (or specific radioisotope)
- N is the number of atoms left after a certain amount of time
- e is a constant 2.71828...
- I is the half-life of that radioisotope, and
- t is time.

Although the equation looks fairly simple, for a non-math major, solving this equation for “ t ” may be a little intimidating but it is actually easy to solve for “ t ” using logarithms. (Actually, I have over simplified the calculation. To determine the value of N_0 the original number of parent atoms, we would need to add the value of “ N ,” the remaining parent atoms, to the number of “daughter atoms.”)

So what could be “wrong” with our equation? Notice from the chart above, that the longer the half-life, the older the rock appeared to be. Is it possible that the half-life, I , has not always been the same? Suppose the half-life was, at one time, much shorter for these atoms. If the decay occurred when the half-life was short, then the longer the half-life today, the older the rock would appear to be!

On the surface, this seems outrageous. But, the half-life of some polonium atoms (as mentioned earlier) is 2.1 nSec. The half-life of other polonium atoms is 138 days. The half-life of some thorium atoms is 14 billion years!! What is the difference between these atoms? They are all very large atoms, yet the difference between the half-life of polonium and thorium is a factor of 10^{26} . That’s

100,000,000,000,000,000,000,000,000!!!

Obviously very minor differences in the nucleus of an atom make enormous differences in the stability of that atom. Historically, scientists believed that if there was the slightest change, any change, in the nucleus of atoms, the entire universe would completely fly apart into nothing but subatomic particles. For the most part, this is still true. However, in recent years, it has been determined that there are specific slight changes that can and have occurred that will change a half-life but does not cause the entire nucleus to become “unglued.” For an example of “have” changed, see the fascinating tech paper “The Oklo Natural Nuclear Reactors – Evidence of Variable Constants?” by Mark Matthews. For a discussion of how the nucleus of an atom “can” change, see (a highly technical paper) “Accelerated Decay: Theoretical Models” by Eugene Chaffin.

Uranium–Lead Decay and Helium Diffusion:

At this point, the astute technically minded individual reading this paper would have two significant objections:

- 1) Uranium–Lead decay is conspicuously absent from the chart above.
- 2) Just because a change in the nucleus “can” change the half-life of an atom does not mean that a change did occur that happens to match a Biblical time frame.

These are two excellent points. However, as a nuclear engineering major, I love “objections” to Biblically based radiometric dating explanations! The more we study radiometric dating, the more the data supports the Biblically based creation model!

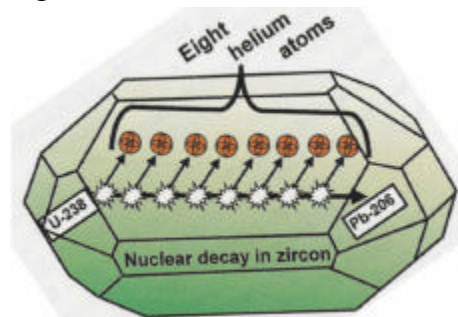
The Uranium–Lead decay was not included in the chart above because this decay is considerably more complex than the ones above. However, it is included in the chart below.

Radioisotope (Parent)	Daughter	Apparent Age	Decay Type	Half-Life
Potassium	Argon	841 Million Years	Alpha	1.3 Billion Years
Rubidium	Strontium	1057 Million Years	Alpha	47 Billion Years
Uranium	Lead	1249 Million Years	8) Alpha, 6) Beta	The sum of multiple shorter half-lives
Samarium	Neodymium	1375 Million Years	Alpha	106 Billion Years

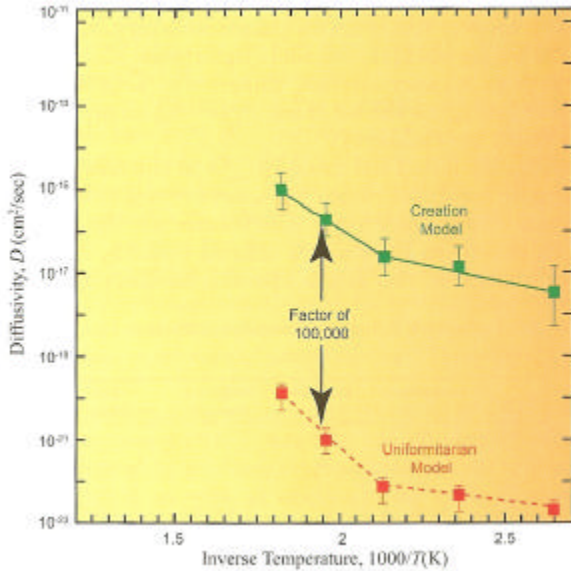
Without getting into a discussion of the differences between alpha decay and beta decay, the three radioisotope decay methods discussed earlier involve only one alpha decay. The Uranium–Lead decay method involves fourteen separate decay processes. Although this process is significantly more complex, as was the case with the other three radioisotope methods, the uranium – lead method of dating a single rock agreed from one nationally recognized laboratory to another, but strongly disagreed with the other decay methods of the same rock. So – Would the real age of this rock please identify itself? Is it 841 million years old, 1057 million years old, 1249 million years old, or 1375 million years old??? Once again, the accuracy of the measurement processes is considerably more accurate than the differences between these ages. Something must have changed.

OK, so looking at our equation, $N = N_0 e^{-\lambda t}$, the half-life (λ) is the only variable that could have changed. (We counted N and N_0 .) But did it change such that t (time) matches the Biblical framework of 6000 years? There is a gigantic difference between a 6000 year model for the age of the earth and a 4.5 billion year model for the age of the earth. This is a factor of a million! Scientists certainly ought to be able to determine which model is correct.

It is this Uranium–Lead decay process that provides the alternative method of determining the age of the earth that confirms the 6000 year Biblically based model. As mentioned above, the Uranium–Lead decay process involves fourteen distinct steps. Eight of these steps involve alpha decay. One byproduct of



each alpha decay is a helium atom. Consequently, each Uranium–Lead decay produces eight helium atoms. Helium, as you know, is so small and so “slippery” that it can wiggle its way right through solid materials. As a young child you probably (and sadly) experienced this phenomenon with your first helium party balloon.



Uranium is conveniently found in zircon crystals. Zircon crystals are tiny stones where the molecular structure of the atoms is so tight that it is very difficult for this helium to escape. However, the helium does slowly escape at a rate that is highly dependent on the temperature of the zircon. The higher the temperature, the more the helium “wiggles” and the faster it escapes. This rate of escape is referred to as the diffusion rate, or diffusivity.

The validity of radiometric dating methods should be an interesting question for all scientists, yet, once again, it was the Biblically based creation scientists that went to the time, energy, and expense to investigate this question; not the evolutionary scientists. The Institute for Creation Research studied multiple zircons with a radiometric date of one billion years. The difference between 6000 years and 1 billion years is a factor of more than 100,000. That being the case, the diffusivity of helium atoms through zircon would be 100,000 times slower for a “uniformitarian” 1 billion year model that assumes the radiometric half-life has not changed than it would be for a 6000 year creation model that recognizes that the half-lives have changed. This is a cumbersome sentence, so let’s illustrate this concept in the form of a mathematical equation:

$$\text{Zircon diffusivity assuming the half-life has not changed} < 100,000 \times \text{Zircon diffusivity assuming the half life has changed}$$

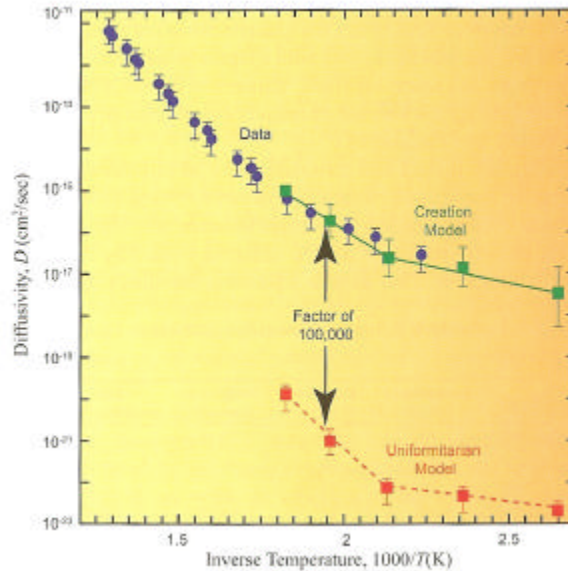
This diffusivity was calculated for each model; the 6000 year creation model, and the 1 billion year model. Once again, helium diffusivity is a function of temperature. The chart above represents the calculated diffusivities for each model. With a difference of 100,000, it should certainly be easy to see which model more closely resembles the scientifically measured data.

The Research:

A single data point from a single crystal could be an anomaly and not prove anything. Consequently, the Institute for Creation Research selected multiple zircon crystals all of the same size and by radiometric dating methods appeared to be 1 billion years old. These crystals came from different depths deep in the ground where they would have been exposed to significantly different temperatures. The zircon crystals were sent to a

nationally recognized laboratory and the diffusivities of the zircon crystals were measured at the various appropriate temperatures. By using this method, they could then plot the experimentally determined diffusivities on the same graphs as the theoretical determined diffusivities to see which model more closely resembles the actual data.

Which model would you expect this measured diffusivity to resemble; the uniformitarian (the half-lives have never changed) model, or the creation (the half-lives have changed) model? Not only did the data “more closely resemble” the creation model, the data lined up perfectly with a 6000 year old age of the earth! For a more in depth discussion, see “Helium Diffusion Rates Support Accelerated Nuclear Decay” by Russell Humphreys, Steve Austin, John Baumgardner, and Andrew Snelling.



The critic, at this point, would argue, “What would you expect from a ‘creationist’ organization?!? Of course the data supports their theories.” However, as indicated in every case above, the actual tests were not run by ICR. They were all run by nationally recognized laboratories. This is a significant point since nationally recognized laboratories carry an “anti-creation” bias. In order to avoid this “anti-creation” bias, ICR routed these tests through Los Alamos National Laboratory. (Dr. John Baumgardner was employed there at the time.) By this method, it can be assured that the data was not biased towards any ICR expectations.

It should also be noted that time does not permit me to include details of all the tests in this short paper. (Nor would you probably sit still long enough to read such a long technical dissertation.) The information above is simply a summary of numerous tests. There were also other tests run by entirely different methods involving entirely different principles that also came to the same conclusions! Two other research projects with similar fascinating results are:

Radiohalos in Granites: Evidence for Accelerated Nuclear Decay by Andrew Snelling
 Fission Tracks in Zircons: Evidence for Abundant Nuclear Decay by Andrew Snelling
 Both can be found in the book, Radioisotopes and the Age of the Earth which is a compilation of numerous studies.

Carbon-14 Dating Methods:

The objection at this point (I love objections) could be, “Well, I don’t really understand all that stuff about rock dating, but I read an article about Carbon 14 showing that the tusk of a mammoth had a significantly different age than the rib of the same mammoth!! One thing for sure, that cannot possibly be! So I believe

This is a very unfortunate conclusion. Man has a major tendency of throwing out data just because it does not fit our expectations. A true scientist asks, “What is this data trying to tell me?” It is certainly possible that the data is telling the scientist that the tests were not run properly. If he could identify what went wrong, then it would be appropriate to throw out the data. Otherwise, maybe there is a perfectly logical explanation for the seemingly obscure data.

It turns out that this “scatter” (differences in results of test samples of the same age) with Carbon-14 data often strongly supports the Biblical time frame! The theory behind Carbon-14 is as follows:

- 1) Plants and animals are actively exchanging oxygen and carbon dioxide with the atmosphere as long as that plant or animal is alive.
- 2) The atmosphere includes a certain ratio of Carbon-14 to Carbon-12. (Carbon-14 and Carbon-12 are both carbon, but with a different number of neutrons.)
- 3) That being the case, as long as the plant or animal is alive and exchanging oxygen and carbon dioxide with the atmosphere, then the Carbon-14 ratio of the plant or animal should reflect the Carbon-14 ratio of the atmosphere.
- 4) Once the plant or animal dies, this exchange stops.
- 5) Carbon-14 decays into Nitrogen-14 over time.
- 6) The plant or animal is no longer in equilibrium with the atmosphere, so the ratio of Carbon-14 becomes lower than the ratio in the atmosphere.
- 7) This “difference” can be used to calculate how long ago the plant or animal died (or ceased having a constant exchange with the atmosphere.) This “difference” in the two Carbon-14 ratios is called the “percent modern carbon” (pmc). To establish the “pmc” we divide the measured Carbon-14 ratio of the specimen by the current atmospheric Carbon-14 ratio. The formula for this calculation is $pmc = 100 * 2^{-t/5730}$ where,

pmc = percent modern carbon

100 is due to the data being expressed as percent

2 pertains to “half-life”

5730 = the half-life of Carbon-14

t = time

To ascertain the age of the specimen, we simply use logarithms to solve for t . One obvious problem with this theory is that the Carbon-14 ratio of the atmosphere is not a constant. It has been increasing since the beginning of time. That skews the calculated ages as we will see below.

So how can a single mammoth have two entirely different ages?? From an evolutionary perspective, the mammoth can’t have two different ages. From a Biblical perspective,

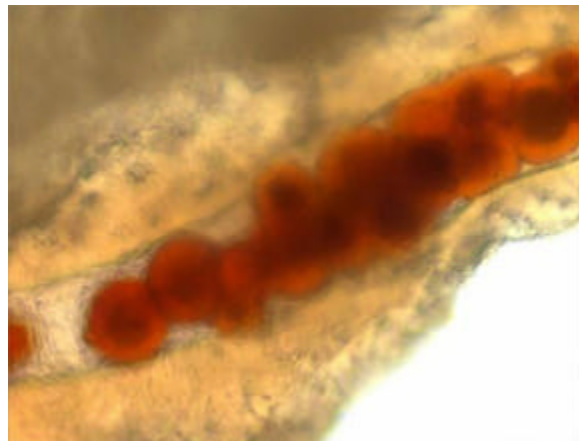
this is precisely what we would expect. Carbon-14 is formed from the bombardment of cosmic waves on the atmosphere. Noah's flood buried practically every living thing. This flood buried in excess of 99.99% of the biosphere. However, the cosmic radiation did not change. That being the case, a substantially smaller biosphere (that which contains organic carbon) absorbed this cosmic radiation. As a result, the Carbon-14 ratio of the atmosphere would have increased rapidly immediately after the flood. Mammoths lived in the ice age which was directly after the flood. (A totally different topic of discussion.) The Carbon-14 ratio of the air and food that they were breathing and eating was changing rapidly. Different types of animal cells have significantly different regeneration rates. So – the Carbon-14 ratio of creatures living soon after the flood would be quite different from one part of the body to another. This sounds like an interesting theory, but can it be supported by data?

Yes! The Leibnitz Laboratory in Keil, Germany spent two years trying to address Carbon-14 anomalies. In so doing, they discovered a family of ice age clams that consistently appeared that the outside of the clamshell was 6000 years older than the inside of the same clamshell! Clamshells grow from the inside out, so it is expected that the carbon in the outside of the shell would be older than the inside, but only by a few years; not 6000! What was their scientific conclusion to all of these tests? “So far, no theory explaining the results has survived all the tests.” No theory ever will survive all tests as long as they stand in opposition to the Biblical model. The Apostle Paul tells us that we should stand in opposition to “false science.”

1Timothy 6:20 *O Timothy, keep that which is committed to thy trust, avoiding profane and vain babblings, and oppositions of science falsely so called.*

When viewed from a Biblical framework, this data is exactly what we would expect. The Carbon-14 ratio prior to the flood was very low and increased very rapidly immediately after the flood.

“But doesn't Carbon-14 data tell us that dinosaurs are 64 million years old??” No! Carbon-14 always tells us that specimens are thousands of years old; never millions. You have probably heard of red blood cells recently being found in dinosaur bones. (The photo to the right is from the May, 2006 Smithsonian Magazine on this subject.) Since fossils are always found in sedimentary rocks, and sedimentary rocks cannot be dated by radio isotopic means, naturally the scientist would want to date this dinosaur by the available Carbon-14. Since it is impossible for blood cells to survive millions of years (without disintegrating) Carbon-14 tests should be of the utmost priority. Were they? No! The dinosaur is “assumed” to be 64 million years old even though it makes no sense. Why? Because scientists are very well aware that Carbon-14 dating methods always yield ages in the thousands of years; never in the millions. (This



has been a significant “problem” for evolutionists and was the underlying reason for the intensive Leibnitz studies mentioned above.)

This is a clear case of “selecting the data.” Scientists today “select” which data to use and which data to ignore. (Or, in this case, to not even run the test!) This is very bad science. As Christians with a keen desire for “truth,” we should draw our conclusions based on all of the data, not just selected data.

So the next “objection” is obviously, “OK – So how do you explain the 6000 year difference of the age of the clamshell if the earth is only 6000 years old?” The answer to this question lies in the word “appears.” The outside of the clamshell appears to be 6000 years older than the inside. Keep in mind, these “ages” are determined by comparing the measured Carbon-14 ratio with the modern atmospheric Carbon-14 ratio. (Thus scientists use the term “percent modern carbon” or “pmc.”) The atmospheric Carbon-14 ratio has been increasing since the beginning of time. (In addition to the Leibnitz tests, this has been confirmed by numerous other tests as well. See “Measurable C14 in fossilized Organic Materials: Confirming the Young Earth Creation-Flood Model” 2003, by Baumgardner, Snelling, Humphreys, and Austin.) The Carbon-14 ratio was extremely low prior to the flood, increased very rapidly after the flood, and has only recently been somewhat constant. The atmospheric Carbon-14 ratio at the time of the creature’s life must be considered in order to estimate how long ago this creature actually died.

This brings us to perhaps two of the most exciting radiometric studies ever.

1) Carbon-14 studies of various coal seams from different geologic strata: The Institute for Creation Research retrieved highly protected coal samples (stored in sealed helium filled containers). These samples came from eight different geographic locations of three different strata that evolutionists would all agree were 50 million years old, 100 million years old, and 300 million years old. There is very little Carbon-14 in the atmosphere, and from an evolutionary perspective, decays very rapidly. Coal samples of these ages should have absolutely no measurable Carbon-14 at all. With as sophisticated as AMS testing is, it should be completely incapable of detecting the slightest trace of Carbon-14 in any of these samples. Was Carbon-14 detected? Absolutely! In fact, even though these samples supposedly had a 250 million year difference in age, the apparent age determined by the Carbon-14 was for all practical purposes all the same. There was more variance between the geographic locations than there was between the supposed millions of years’ difference in presumed age. The pmc of these coal samples was fully consistent with the Biblical timing of the flood!

2) Carbon-14 studies of diamonds: Diamonds are practically pure carbon and the crystal lattice is so tight that they are practically impervious to any outside contamination. Supposedly they were formed nearly at the same time as the earth. That being the case, diamonds should have absolutely no



measurable Carbon-14. Even with the most sophisticated AMS technologies in the world, no Carbon-14 should be detected in any diamond. All Carbon-14 that would have been present at the formation of the diamond should have decayed to Nitrogen-14 by now. Once again, it was ICR that took the time, energy, and expense to embark on this study. Samples were purchased and sent to nationally recognized AMS research laboratories. What did they discover?? Carbon-14 was easily detectable in the diamonds and the pmc of data was fully consistent with what was expected based on previous research of other non-organic carbon sources, like marble and some minerals, that were also formed at the beginning of time!

Scientific Old Earth Problems with Scripture:

The only reason a Christian would accept an old age interpretation of scripture is because that person believes that science supports that view. There is nothing in scripture that would automatically suggest millions or billions of years. This prompts the question, “Does the science actually support that scriptural view?” As mentioned above, most areas of science do not support an old earth. The two areas of science that do appear to support an old earth are starlight and radiometric dating. Do these two areas support any theological view?

The Gap Theory:

The “Gap Theory” implies that there is a “gap” in time somewhere in the first day (or first couple of days) of creation; prior to God’s creation of any life. Christians who subscribe to this approach normally do so in order to accommodate their preconceived notion of old age without compromising the definition of the word “Day,” or the Rom 6:23 “wages of sin is death” passage. From a scientific perspective, this may serve to satisfy their starlight concern, but it does nothing to resolve radiometric issues. Radiometric dating processes (if taken at face value) clearly indicate many millions of years of life (not days) prior to the creation of man. Consequently, this “Gap Theory” is actually a “theological or philosophical approach” (not a scientific theory at all) since it does not fully address the science involved.

Theistic Evolution:

Theistic evolution implies that God used evolution to direct the development of life. Christians who prescribe to this approach believe the Biblical use of the word “Day” is not literal in order to accommodate the starlight and radiometric issues. As is the case with the gap theory, this may accommodate the starlight issue, but it fails to accommodate geologic and radiometric issues. These Christians will acknowledge that Adam and Eve begat Seth who begat Enos, who begat Canain, etc. They will readily accept clear Biblical sequences of events. However, the theistic evolution approach fails to acknowledge the differences in the sequence of events between evolution and scripture. See below:

Contradictions between the Biblical View and the Secular View

Biblical Order of Appearance	Evolutionary Order of Appearance
1. Matter created by God in the beginning	1. Matter existed in the beginning
2. Earth before the sun and stars	2. Sun and stars before the earth
3. Oceans before the land	3. Land before the oceans
4. Light before the sun	4. Sun, earth's first light
5. Atmosphere between two water layers	5. Atmosphere above a water layer
6. Land plants, first life forms created	6. Marine organisms, first forms of life
7. Fruit trees before fish	7. Fish before fruit trees
8. Fish before insects	8. Insects before fish
9. Land vegetation before sun	9. Sun before land plants
10. Marine mammals before land mammals	10. Land mammals before marine mammals
11. Birds before land reptiles	11. Reptiles before birds
12. Man, the cause of death	12. Death, necessary antecedent of man

From The Young Earth by Dr. John Morris

The logic behind accepting theistic evolution (that God guided evolution), is to accept the long periods of time suggested by the radiometric dating of the geologic record. The problem with this logic is that the sequence of events is totally out of order. Consequently, since the sequence is completely out of order, this theory does not accommodate the radiometric dating of the geologic record.

The “Day – Age” Theory:

The day-age theory implies that each day is really a very long unspecified period of time. This approach uses the 2 Peter 3:8 passage “that one day is with the Lord as a thousand years” to justify any length of time. This may resolve long periods of time, but as is the case with theistic evolution, it fails to resolve the sequence of events problem. Once again, it uses the long periods of time implied by radiometric dating and the geologic column to justify the usage of 2 Peter 3:8 to support long periods of time – but these long periods contradict the geologic sequence. This theory also fails to acknowledge that the entire creation must work together in order to work. Long periods of time from one “creation day” to the next would not support life.

The “I Don’t Know” Theory:

Surprisingly, this “theory” is quite common; even by very intelligent individuals. It basically attempts to acknowledge scripture (verbatim) with old ages (as supposed by science) without any attempt to reconcile these conflicts. This is most unfortunate. In order to have a logical “interpretation,” one should have a logical “explanation.” Otherwise – it is “illogical.” Usually the “I Don’t Know” theory is justified by “Well,

other scholars don't see the conflict." They fail to recognize that these "other scholars" probably never really wrestled with these conflicts.

The Use of the Word "Theory":

One should also recognize that the use of the word "theory" is a bit of a misnomer here. The word "theory" suggests a scientific approach with research to support that approach. Although there are scientists that subscribe to these "ideas" (and even promote them), that does not make them "theories." No research organization (that I am aware of) is actively performing research to explain why the geologic column is out of sequence for their "theory." No research organization is actively performing research to explain why radiometric dating is out of sequence for their "theory." No "theory" is without some unanswered concern. (If there were no unanswered concerns, it would be considered a "scientific fact.") Without active research to address these concerns, it is not a theory; only an idea. There are scientists that will disagree with me on that point. It is true that "active research" is not technically a requirement for the use of the term "theory" but a theory carries little weight if no one considers it worthwhile to spend the time and money to at least investigate the wrinkles.

Scientific Conclusions:

- 1) If we are selective as to which data we evaluate, we can easily develop a case for an old earth. That is undeniable.
- 2) If we are non-selective and consider all of the data, we see a completely different picture.
 - A) Almost all "uniformitarian" methods of estimating the oldest possible age of the earth indicate that the earth is very young; or at least, that it could not possibly be billions of years old.
 - B) Only two "uniformitarian" methods of estimating the age of the earth seem to indicate that the earth is billions of years old. These are starlight and radiometric dating.
 - i) The old age due to starlight from distant stars can easily be explained by two or three possibilities; or probably a combination of all three.
 - ii) Contrary to popular belief, not all radiometric dating supports the notion of an old earth. Carbon-14 radiometric dating methods indicate that the earth is very young! Furthermore, precise radiometric measurements of rocks with modern sophisticated AMS processes indicate that the half-life of these radioisotopes has not always been the same. Helium diffusion tests of zircon crystals (which would be totally independent of half-life changes) indicate that the age of the earth is 6000 years old. This not only supports a Biblically based age of the earth, but confirms that the half-lives of these isotopes have changed. The helium diffusion data alone seems to adequately address the inconsistencies of radiometric data of rocks and provides substantial evidence for a 6000 year old

earth. Also, radiohalo and fission track studies (mentioned but not elaborated on in this paper) strongly support these findings.

- 3) The Biblically based 6000 year age of the earth can be scientifically supported by all disciplines of science.

Theological Problems with an Old Earth:

Genesis 1:29-30 *And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat. And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat: and it was so.*

From this passage, “every beast of the earth, and every fowl of the air, and every thing that creepeth upon the earth” was a vegetarian; given “every green herb for meat.” Many of the creatures of the fossil record were clearly carnivorous creatures; not vegetarians. If they lived millions of years before man (as supposed by the old earth scenario) then this is a clear contradiction to scripture.

Exodus 20:11 *For in six days the LORD made heaven and earth, the sea, and all that in them.* God did not *start* the creation in these six days, he completed it by making *all that [is] in them.*

Exodus 31:18 tells us that these commandments were *written with the finger of God.*

Isaiah 64:4 *For since the beginning of the world men have not heard, nor perceived by the ear, neither hath the eye seen, O God, beside thee, what he hath prepared for him that waiteth for him.*

This passage indicates that man has been here since the beginning of the world. If the earth is billions of years old (as supposed by the old earth scenario), then man did not show up on the scene until billions of years after *the beginning of the world.*

Mark 10:5-6 *And Jesus answered and said unto them, For the hardness of your heart he wrote you this precept. But from the beginning of the creation God made them male and female.*

This passage also indicates that man has been here since the *beginning of the world.* Scripture does not support the notion that man showed up on the scene billions of years later.

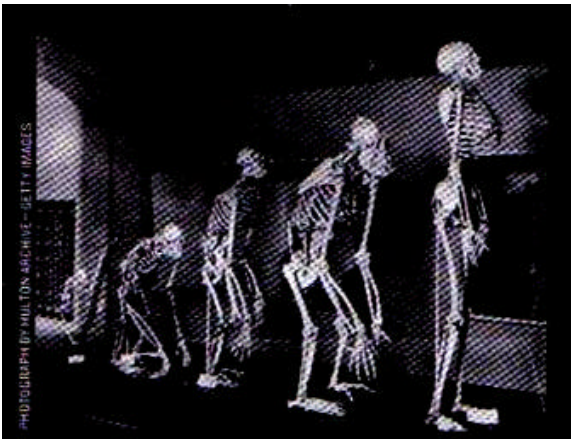
Luke 16:31 *And he said unto him, If they hear not Moses and the prophets, neither will they be persuaded, though one rose from the dead.*

For Example in Exodus 20:11 Moses said, “*For in six days the LORD made heaven and earth, the sea, and all that in them is, and rested the seventh day: wherefore the LORD blessed the sabbath day, and hallowed it.*”

This is a critical passage! Jesus is talking about the consequences of eternal damnation. In this passage, He confirms the six days of creation (by inference to Moses’ teachings) and warns that many people will never be persuaded even though their eternity is at stake.

Romans 6:23 *For the wages of sin is death....*

If death and dying have been around for millions of years, then “death” is not a



consequence of sin. This passage does not pertain only to man. While elaborating on the consequences of the curse due to man’s sin, Romans 8:19-22 states that “*the whole creation groaneth and travaileth in pain*” and will continue to do so until the end time.

If hominids (sub-humans) have been around for millions of years, at what point did one of these sub-humans become fully human? In the photo to the left, which man sinned first? Hominid #1, #2, #3, or #4? If by the sin of one of these hominids,

death entered the world, which of these hominids initiated death? According to any old age concept, they all died millions of years apart from each other.

1Corinthians 15:38-39 *But God giveth it a body as it hath pleased him, and to every seed his own body. All flesh is not the same flesh: but there is one kind of flesh of men, another flesh of beasts, another of fishes, and another of birds.* To suggest that one creature gradually changed into another denies that God distinctly gave each *seed his own body*.

Hebrews 11:3 *...things which are seen were not made of things which do appear.* The *things* we see today were not made from other *things*.

For unbelievers: This one issue could be the “wall” (or justification) that prevents this person from coming to know Christ. For this person, his salvation rests on this single issue. Once the unbeliever rejects Genesis 1, he also rejects Isaiah 64, Mark 10, Luke 16, and Romans 6 (as listed above). Now – having rejected so many passages, he easily justifies discarding the entire Bible.

For young believers: We must be careful not to teach young believers that they have the liberty to interpret scripture as they please. Teaching a young believer that the word “day” may not really be a “day” in Genesis 1, Exodus 21, Exodus 31, etc or that the “years” of the age chronologies of Genesis 2 through 27 do not really mean “years” could give this person the liberty to “hand pick” which passages of scripture he deems “valid” and which passages he deems “fluff.” To this person, he becomes the god of his Bible choosing on his own limited understanding which passages to accept, and which passages to reject. This is a scary thought. By using similar logic, he can quickly reject the virgin birth. After all, in his mind, the Hebrew word **ׁוּלְ** kh could mean “virgin” or it could mean “young woman.” (Upon closer examination, he should recognize that the context of Isaiah 7:14, prophesying the birth of Christ, as discussed earlier, is clearly “virgin.”)

However, once a young believer uses this type of “word game” to justify his limited understanding of scripture, spiritual growth becomes severely crippled.

Summary:

If you read a news headline that the dialysis machine at the local hospital was broken, for many of us, we would not be concerned enough to even read the article. For many of us, it simply would not matter. However, for some people, this could be devastating. For some, this could mean the difference between life and death.

For many people, the age of the earth does not matter. This is certainly true. However, the statement “The age of the earth does not matter” is not a true statement. For many people, it may be the difference between spiritual growth, and spiritual slothfulness. For others, it may be the difference between spiritual life and death.

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Appendix:

Age Chronology from Adam to Joseph – With No Gaps:

Reference	Father	Age	Son	Birthdate	Death
Gen 2:19	Adam			0	
Gen 5:3	Adam	130	Seth	130	
Gen 5:4	Adam	930			930
Gen 5:6	Seth	105	Enos	235	
Gen 5:7	Seth	937			1042
Gen 5:9	Enos	90	Canain	325	
Gen 5:10	Enos	905			1140
Gen 5:12	Canain	70	Mahalaleel	395	
Gen 5:13	Canain	910			1235
Gen 5:15	Mahalaleel	65	Jared	460	
Gen 5:16	Mahalaleel	895			1290
Gen 5:18	Jared	162	Enoch	622	
Gen 5:19	Jared	962			1422
Gen 5:21	Enoch	65	Methusalah	687	
Gen 5:22	Enoch	365			987
Gen 5:25	Methusalah	187	Lamech	874	
Gen 5:26	Methusalah	969			1656
Gen 5:28-29	Lamech	182	Noah	1056	
Gen 5:30	Lamech	777			1651
Gen 5:32	Noah	500	Shem,Ham,Japheth	1556	
	Noah				
Gen 11:10	Shem	100	Arphaxad	1656	
Gen 11:11	Shem	600			2156
Gen 11:12	Arphaxad	35	Salah	1691	
Gen 11:13	Arphaxad	438			2094
Gen 11:14	Salah	30	Eber	1721	
Gen 11:15	Salah	433			2124
Gen 11:16	Eber	34	Peleg	1755	
Gen 11:17	Eber	464			2185
Gen 11:18	Peleg	30	Reu	1785	
Gen 11:19	Peleg	239			1994
Gen 11:20	Reu	32	Serug	1817	
Gen 11:21	Reu	239			2024
Gen 11:22	Serug	30	Nahor	1847	
Gen 11:23	Serug	230			2047
Gen 11:24	Nahor	29	Terah	1876	
Gen 11:25	Nahor	148			1995
Gen 11:26	Terah	70	Abram	1946	
Gen 21:3	Abram	100	Isaac	2046	
Gen 25:26	Isaac	60	Jacob	2106	
Gen 30	Jacob	appr 50	Joseph	2156	
Gen 37:2,28	Joseph	17	Sent to Egypt	2173	
Ex 12:40	Jews in Egypt	430		appr 2180 to 2610	