

THE END of LONG AGE RADIOMETRIC DATING

A Summary of the Million Dollar RATE Research Project

(RATE: Radioisotopes and the Age of The Earth)

Introduction: Rocks and fossils do not come with dates on them. In fact, the very concept of strata representing “long ages” does not come from the rock strata themselves. That concept began with eighteenth-century French naturalist Georges Cuvier, picked up steam with Charles Lyell, and it has been in vogue ever since. This is despite the fact that it causes more problems for interpreting rock strata than it solves. And today we know through lab experiments and natural disasters (such as the eruption of Mt. St. Helens) that major layering of rock strata can happen catastrophically in a short period of time.



Young-earth creation geologists have long held that most sedimentary strata resulted from waterborne deposits during Noah’s Flood. The resulting rock strata may harbor fossils from a particular habitat area or ecosystem, but do not represent a particular “age or era.”

Why else do we find **marine fossils on tops of all the major mountain ranges**? An examination of sedimentary rocks worldwide shows a striking consistency with an unimaginably massive Flood that wiped out whole environments. It caused massive sedimentary layering and sorting and fossilizing of the creatures buried therein.

Also remember that modern disasters (on a smaller scale) like Mount St. Helen’s and SW Pacific tsunami’s produced large deposits of multi-layered deposits in a matter of hours or days. Not millions of years. Yes, we all have been inundated with teaching that rocks are dated in the millions and billions, but are they really? What is the real science behind dating of rocks? Do they really NEED to be millions or billions of years old?

Actually the assignment of a certain number of “millions of years” to a rock formation does not derive from the strata itself. The standard Geological Column became the reference point, even though it does not appear anywhere on earth except in text books. And the ages assigned to the layers were derived from “long age” evolutionary assumptions - *not* from the scientific facts, - as the column was established long before we even had radiometric dating. Yet the column and its assumptions are used along with “index” fossils, to assign dates to sedimentary rock layers and which in turn is used to ‘**date**’ any fossil in that rock layer.

In uniformitarian geology, the buzzword is “The present is the key to the past” - but today no 100 mile cavern systems are being formed, no giant fossil beds are being formed, and no new strata covering entire continents are being laid down. What we do see around the earth are huge layers of sedimentary rock filled with dead things. Everywhere! -including tops of the mountain ranges. Unfortunately, uniformitarianism (i.e., Geo-processes have been ‘uniform’ for billions of years) has gripped geology academia and no other viewpoints are allowed. This evolutionary assumption has become a naturalistic religion, an ideology.

Radioisotope dating is used to bolster the vast time spans ascribed to the geologic record. However, geologist John Woodmorappe (a pen name) has pointed out that the radiometric methods are actually hand-picked to coincide with the dates previously assumed for the geologic column diagrams. These dating methods rely on a series of assumptions about the amounts of the parent-daughter elements, and a constant rate of decay. Radioisotope dating, using the trace amounts of radioactive elements within the rock, was quickly accepted as proof the earth is millions and millions of years old. So what does radiometric dating really do? How does it work?

It has been accepted that a rock is formed when it first cools down from a molten or semi-molten state, which may include a variety of elements, including radioactive ones. The radioactive elements decay from heavier larger atomic elements (parent) into smaller atomic elements (daughter) that are more stable. For example, Uranium (U) decays into Lead (Pb). This was confirmed in 1905. For the last 100 years we have been able to measure the decay rate, and during this time it has been very steady and consistent. The rate of decay and the amount of parent & daughter elements present today in a rock sample are used to calculate back to the estimated age of when the rock was first formed. This method is used only on metamorphic and igneous rocks - not sedimentary rocks (which are rocks laid down by water - and is where the fossils are primarily found). The radio-dating calculations are based on a series of

3 Key Assumptions:

- 1) The decay rate has not changed. A 100 year sample of decay rates is inadequate when talking about millions of years. We do not know for sure if the rate of decay was the same 1000 years ago, let alone 10,000 years ago, or millions of years ago.
- 2) It is a closed system. Has there been contamination into the rock of either extra amounts of parent or daughter elements? What if extra lead leached into the rock? Or U washed out? This is assumed to be immaterial, but can change the end results drastically.
- 3) The starting point contains only the parent element. How do we know that there wasn't lead in the rock when it was first formed? What is the real **initial** percentage of the U parent and Pb daughter elements? To assume the rock starts with only U and no Pb is a big assumption. (Isochron dating, which relies on multiple rock samples, is an attempt to correct this, but still has underlying assumptions based on 1 and 2 above.)

Examples of Problems with Radiometric dating of rocks: Grand Canyon Lava flows:

Sedimentary rocks make up the layers of the Grand Canyon and these are not dateable by radiometric dating. All the canyon layers are ocean bottom sediments, filled with fossils of ocean dwelling creatures and plants - top to bottom- almost a mile high. The Cardenas Basalt (the very bottom layer- below the Cambrian explosion) is usually dated with Rhenium -Strontium and calculated to be about 1 billion years old. Much later, igneous rocks were formed from a volcano on top of the canyon, that Indians saw erupt, only about 1000 years ago. (The volcano lava flows have Indian artifacts in them.) These rocks were dated using the same method in the lab and were assigned an age of 1.3 billion years old. How can the very top, volcanic rock be older than the bottom layer basalt rock? Even evolutionists admit that those Indian artifacts are not 1.3 billion years old. This is a real and common problem with radiometric dating techniques. Consider also:

- **Mt. Etna** - erupted 2100 years ago, but rocks were dated 25 million years ago.
- **Sunset Crater**, Northern Arizona - erupted in 1065 AD, but rocks were dated 200,000 years old.
- Lava flows at **Mt. Ngaurhoe**, New Zealand - erupted in 1949, 1954, but rocks dated 275,000 yrs old.
- **Hualalai basalt**, Hawaii erupted 200 years ago, but rocks were dated 1.4 to 22 million yrs old.
- **Mt. Etna basalt**, Sicily, erupted in 1971, but rocks were dated 140,000 – 350,000 yrs old.
- **Mount St. Helens** erupted in 1980, but rocks were dated up to 2.8 million years old.



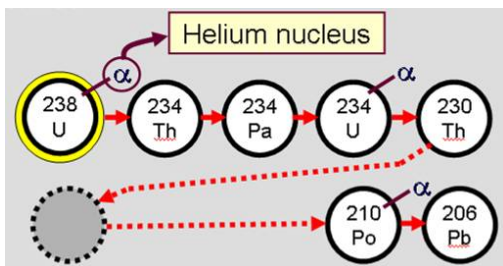
ALL of the samples taken from volcanic eruptions of known times and dates are carefully collected and sent to the labs. Then they ALWAYS come back dated at 100,000's to millions of years old. ALWAYS. NEVER do they come back from the lab, with the note: "Too young to measure". It is a definite pattern. If you know the date of the source of the rock, they say "you don't have to accept this dating technique numbers" But if its an unknown sample, then they say: "Oh you can trust the lab dates!"

You see, the radiometric dating techniques do **not** work when you can check them, but you should **trust** them when you can **not** check them. Got It? Not very scientifically consistent is it?

These issues with radiometric dating been known for many decades and is the prime reason many scientists have had doubts about radiometric dating all along. But recently, the **RATE** research team has conclusively demonstrated (with independent lines of evidence) that radioactive decay rates, widely used to bolster deep time assumptions, were dramatically accelerated in the past.

RATE found 3 indicators that strongly indicate decay rates changed in the past, all pointing to a young age for the rocks and the earth.

1) Helium retention in Zircons - High levels of radiogenic Helium have been found in Zircon crystals. The very small crystals were taken from core samples deep in the earth's crust. (multiple-mile deep cores drilled in New Mexico) Within the biotite rocks, are Zircon crystals that contain trace clusters of U. As the U decays into Lead, it goes through various stages and is giving off Helium atoms. This He is released into the crystal and rock.



Helium atoms are pretty thin and can seep through solid rock. But even for Helium, this takes some time. The speed of Helium diffusion through solid rock has been measured, but only recently. If long -age evolutionary guesses of the original amount of U are correct, then we can calculate how much He should've been produced and also seeped out of the rock.

If the granite is billions of years old, only the most recent Helium would still be trying to work its way out of the rock. So there should be very little He left in the rock samples today.

BUT, if the rock is only thousands of years old (not billions), there should still be plenty of He still trapped in the solid granite rock. What do we actually find? What does the data (basis of true science) show?

The standard age of the rock is said to be 1.5 billion years old. Plenty of time for the process to reach steady state by uniformitarian standards. All this time as Helium (a very light element) is given off, it slips around the other atoms and leaves the crystal lattice.

The hotter the crystal, the faster the He escapes into the surrounding rock. As the Zircon crystals were studied, it was apparent there was a lot of He still in the crystal - in fact much to much - if this was going on for a billion years. There is enough Helium left in the rocks, to account for an age for Earth of only (you guessed it!) about 6000 years!

Sophisticated measurements in a reputable laboratory were taken to determine the diffusion rate of He leaving the crystal at various temperatures. Before the results were reported, predictions were made for the diffusion rates to be at two different levels - one for an evolutionary time frame of billions of years (slow diffusion) and one for a Creationist time frame of thousands of years (faster diffusion). The different potential diffusion rates between the two assumptions differ by a factor of 100,000. The results from an independent lab, showed the diffusion rate to be practically the same as the predicted Creationist rate. Extremely close - excellent results for the young earth creationist time frame, and not at all what the evolutionary time frame predicted. In fact off by a factor or 100,000.

This is proof that those deep earth rocks with large amounts Helium still in the Zircon crystals were only 1000's of years old. They cannot be a billion years old, or even close to that figure. If you believe in predictive, quantifiable science, then you cannot believe in '1.5 billion year old' rocks.

In order to get the level of helium found in the rocks, there had to have been a lot of radioactive decay. But the results show also that there was not only very a rapid decay episode, but the **Helium still in the crystal, shows it happened in the recent past. Recently as in 1000's of years ago, not millions let alone billions.**

2) Radio Halos in Granite (picture from ICR.org website)

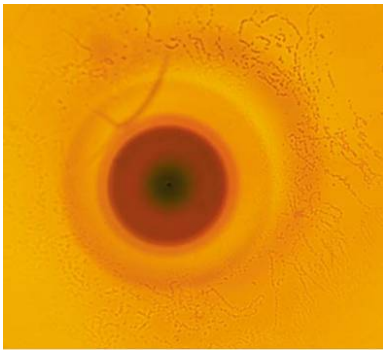


Figure 2. ^{218}Po radiohalo. Photo by Mark Armitage.

Polonium halos in granite and metamorphic rocks formed in the catastrophic world wide flood indicate a young age as well. Samples came from several granites. (ie Stone Mountain in Georgia, Yosemite Park, and Australia) Halos are a microscopic spherical pattern of damage in the crystalline structure of the granite. The damage is caused by high energy alpha particles that are emitted by radiometric decay of the Uranium in the rock.

The particles are like tiny bullets piecing the rock and leaving a spherical pattern, outward from the U atoms. These are found in high numbers, and at today's rates would take millions of years to form. Polonium is one of the intermediate steps in U's decay. Polonium is very unstable, and decays quickly. Some can decay in 3 minutes... some a few days. Po halos are found in all rocks and in large numbers. How can they be there in large numbers? Including what some consider 'Flood Age' granites? Also those that are considered to be 'ancient' rocks also have large numbers of short life polonium halos but ALSO long life U halos. They should not have both. Again, this conundrum can only be explained if there were one or more rapid changes in U decay rates. The large numbers of these Po finds, also indicates quick changes in decay rates, and that the rocks cannot be millions and millions of years old. Again, the observable science fits the Creation model and not the uniformitarian model.

3) Carbon 14 in fossils and Deep Earth Diamonds / (this is the one that makes evolutionists who understand C-14 - jaws drop!)

Carbon 14 (or radiocarbon) is an entirely different method of dating materials in the earth. It is only used on material that was once alive. Bones, flesh, plants, and any remains that are not entirely fossilized into rock, is what C-14 can be used on. It is only good for a dating back with any confidence to less than 80,000 years. This is because C-14 (the radioactive parent element) has a half life of only 5,730 years. C-14 is from the atmosphere and part of the food chain. Plants take it in as carbon dioxide, the C-14 is the carbon atom, instead of the normal and stable C-12. It is everywhere and all through the food chain, such that all living things as well as the atmosphere, have about the same amount of carbon-14 inside their living tissue. While the C-14 is replenished by breathing and eating, the C-14 already in the body is decaying to C-12, and a steady state is held, matching the C-14 in the body with the amount in the atmosphere. (only about 1 part per million of Carbon elements in CO₂ is made up of C-14.)

However once a plant or animal dies, it stops ingesting new C-14. The existing C-14 in the body continues to decay, reducing the percentage of C-14 to C-12 in the physical remains. After digging up a sample, and caring to insure no contamination occurs from handlers, the sample's percentage of C-14 to C-12 is measured, compared to the atmosphere's percentage and the time since death is then calculated. That's basically how it works. Again, radio-carbon dating is only used on samples that were once alive, and is typically good for only ages up to 80,000 years with any reliability. It was never used to indicate millions of years of age for fossils or rocks or anything else. Evolutionists never use C-14 on samples they believe to be millions of years old. To them it would be a waste of money to do this test, since they 'know' the rock or sample or fossil is millions of years old - and should therefore be C-14 dead (no trace amounts of C-14 to be measured).

Yet samples of material analysis of rocks believed to be millions of years old, do contain tiny (microscopic) fragments of shells, bone, graphite (wood) and other organic materials. Marble is metamorphosed limestone (calcium carbonate) and has been studied for other reasons many times. The compositional analysis of its content from these studies have been published in many scientific journals. These studies always show some amount of C-14 in the details (that shouldn't be there), but is generally not commented on in the publications.

Because of this observation, the RATE Team collected samples of coal (Metamorphosed plant remains) from deep mines from all over the earth. Each one is thought to be hundreds of millions of years old, and therefore should be C-14 dead. These samples were sent to independent labs for C-14 dating. EVERY ONE of the samples was dated to be only thousands of years old based on the C-14 content that was still there - in EACH AND EVERY SAMPLE. This is in spite of the assumption that the surrounding rock was supposed to be millions of years old. Yet the coal was shown to be only thousands of years old.

Bones of dinosaurs were also dated, as well as petrified wood. EVERY sample contains C-14. In fact, fossil samples from a large spectrum of the fossil record were also tested. EVERY ONE contains C-14 indicating an age in the thousands - NOT millions of years old.



Diamonds from deep mines were also tested. Samples of industrial diamonds from around the world were checked for C-14. (Since they are so dense, diamonds are not susceptible to internal contamination.) These are thought to have been formed early in the earth's history - "billions" of years ago.

AND YET every one had C-14 detectable. If DEEP-EARTH Diamonds contain C-14, it is truly impossible for this planet to be in the millions and billions of years in age. This is real observable science. Not conjecture and not a series of "assumption after assumption" processes used in the billion year old thinking.

Summary:

- **Helium retention in zircons and Polonium halos in granite show that nuclear decay rates went through a major acceleration in the past! This throws off the calculations in radiometric dating.**
- **Dates derived from radiometric dating techniques are off by massive amounts, when known dates are available.**
- **Based on these repeatable results, as outlined above - Long age dating is dead.**
- **No way can this planet be millions - let alone billions of years old.**
- **This calls into question the entire assumption of millions of years- and the foundation of evolutionary theory.**
- **It's over. Without millions of years as a smoke screen, it's apparent that evolution is nothing but another "frog morphing into a prince" fairy tale. Modern genetics and DNA have already shown that "Microbe to Mankind" evolution cannot happen, and that yes - there is a Creator. And this RATE data from three different areas of geologic research, confirms it.**

Plus there are many other "natural processes" like the recession rate of the moon, the decay of earth's magnetic field, outer planetary magnetic fields, the Hot Sun paradox, the sodium and silt build up rates in earth's oceans - all can be used to estimate the age of the earth. And all of these methods give maximum ages that are in the thousands & not billions of years. They are totally incompatible with evolutionary time spans.

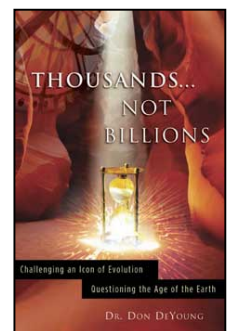
We know its not easy. Yet, changing your viewpoint to one that includes a "young earth" and the year-long Noahic Flood, makes sense in terms of modern scientific findings. It also makes the geological world (and every other branch of science) much more compatible with observable and repeatable science.

And yes, if the **obvious conclusion** is that there is a Creator and the Bible can be trusted - it does have deep spiritual repercussions.

References:

Radioisotopes and the Age of The Earth: A Young-Earth Creationist Research Initiative, edited by L. Vardiman, A.A. Snelling, and E.F. Chaffin (Institute for Creation Research, El Cajon, CA., and Creation Research Society, St. Joseph, MO., 2000)

Layman's Version: **THOUSANDS...NOT BILLIONS** as a BOOK and DVD. These summaries by Dr. Donald DeYoung, examine the physical evidence for a young earth and will help you understand the findings of the RATE project.



Dr. DeYoung authored the non-technical book (THOUSANDS...NOT BILLIONS) in order to equip the layperson to defend scientific six-day creation and refute modern dating techniques. For more than five years, the RATE team labored examining modern dating techniques and found that these techniques do not support an earth that is billions of years old. The relevance and processes of helium diffusion, fission tracks, and methods of radioisotope dating are described in a way that the attentive reader can understand. The RATE project findings are significant for more than just science; the results confirm the Scriptural account and the reliability of God's Word! - Author: Donald DeYoung Publisher: Master Books Publication: 2005

RATE: Radioisotope and the Age of The Earth

Members of the Rate team:

- John Baumgardner, Ph.D. Geophysics
- Larry Vardiman, Ph.D. Atmospheric Physics
- D. Russell Humphreys, Ph.D. Physics
- Eugene Chaffin, Ph.D. Nuclear Physics
- Andrew Snelling, Ph.D. Geology
- Steven Austin, Ph.D. Geology
- Donald DeYoung, Ph.D. Physics
- John Morris, Ph.D. Geological Engineering
- Kenneth Cumming, Ph.D. Biology
- William Hoesch, M. S. Geology
- Stephen Boyd, Ph.D. Hebraic and Cognitive Studies



“I am convinced there is far more evidence for a recent, six-day creation and a global Flood than there is for an old earth and evolution.” - Dr. Keith Wanser (Ph.D. Condensed Matter Physics)

Summary article by Helmut Welke, MS; president, Quad-City Creation Science association.
www.QCCSA.org Email: EvolutionisDying@yahoo.com

See also:

- http://www.pathlights.com/ce_encyclopedia/sci-ev/sci_vs_ev_4b.htm
- <http://www.answersingenesis.org/articles/am/v4/n3/radiometric-dating>
- <http://www.answersingenesis.org/articles/am/v4/n4/assumptions>
- <http://www.answersingenesis.org/articles/am/v1/n1/radioactive-dating>
- <http://www.answersingenesis.org/articles/aid/v2/n1/radioisotopes-earth>
- <http://www.answersingenesis.org/articles/arj/v1/n1/radiocarbon-ages-for-ammonites-wood>
- <http://www.icr.org/article/nuclear-decay-evidence-for-young-world/>
- <http://www.icr.org/article/grand-canyon-lava-flows-survey-isotope-dating-meth/>
- <http://www.icr.org/article/radiohalos-significant-exciting-research-results/>

Radiometric dating methods		
	Short ages	Long Ages
Methods	Carbon -14	U-Pb, K-Ar, Rb-Sr
Time Frame	less than 80,000 years	~200,000 years to Billions
Specimens	Anything that was once alive	Igneous and Metamorphic Rock
Comments	Its presence rules out millions of years!	1) Always wrong when can be checked. 2) More conflicts than agreements.
Key Assumptions	The atmosphere has 'always' had the same amount of C-14	1) Starting amount of elements 2) Decay rates 'unchanging' 3) No leakage; in or out
No method for Sedimentary Rock - where fossils are found!		