

It's A Young Earth After All



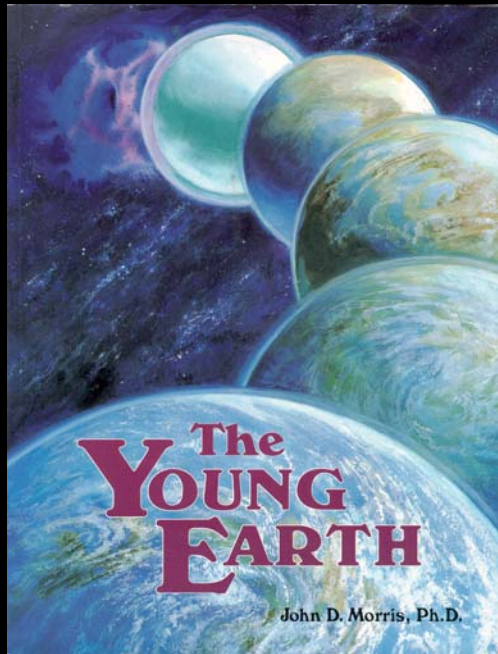
Richard Overman, M.S.

Creation Education Resources, Inc.

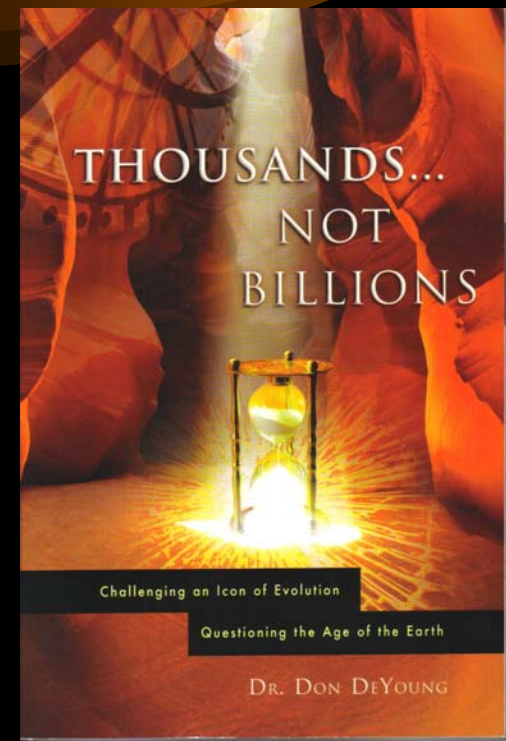
cer@creationeducation.org

[Www.creationeducation.Org](http://www.creationeducation.Org)

Primary Sources



**The bulk of the
information
and graphics in
this
presentation
comes from
these books.**



How To Date A System Or Object



- **Observe the present state of the system**
- **Measure the process rate within the system**
- **Assume certain things about the past**
- **Calculate the time necessary for that process to produce the present state**

Dating Assumptions



Uniformitarian (Evolutionist) assumptions

- **Known initial condition**
- **Closed system**
- **Uniform rate**

Catastrophism (Creationist) assumptions

- **Perfect initial condition**
- **Creator is outside influence**
- **Flood accelerated processes**

History Of Earth Age Science



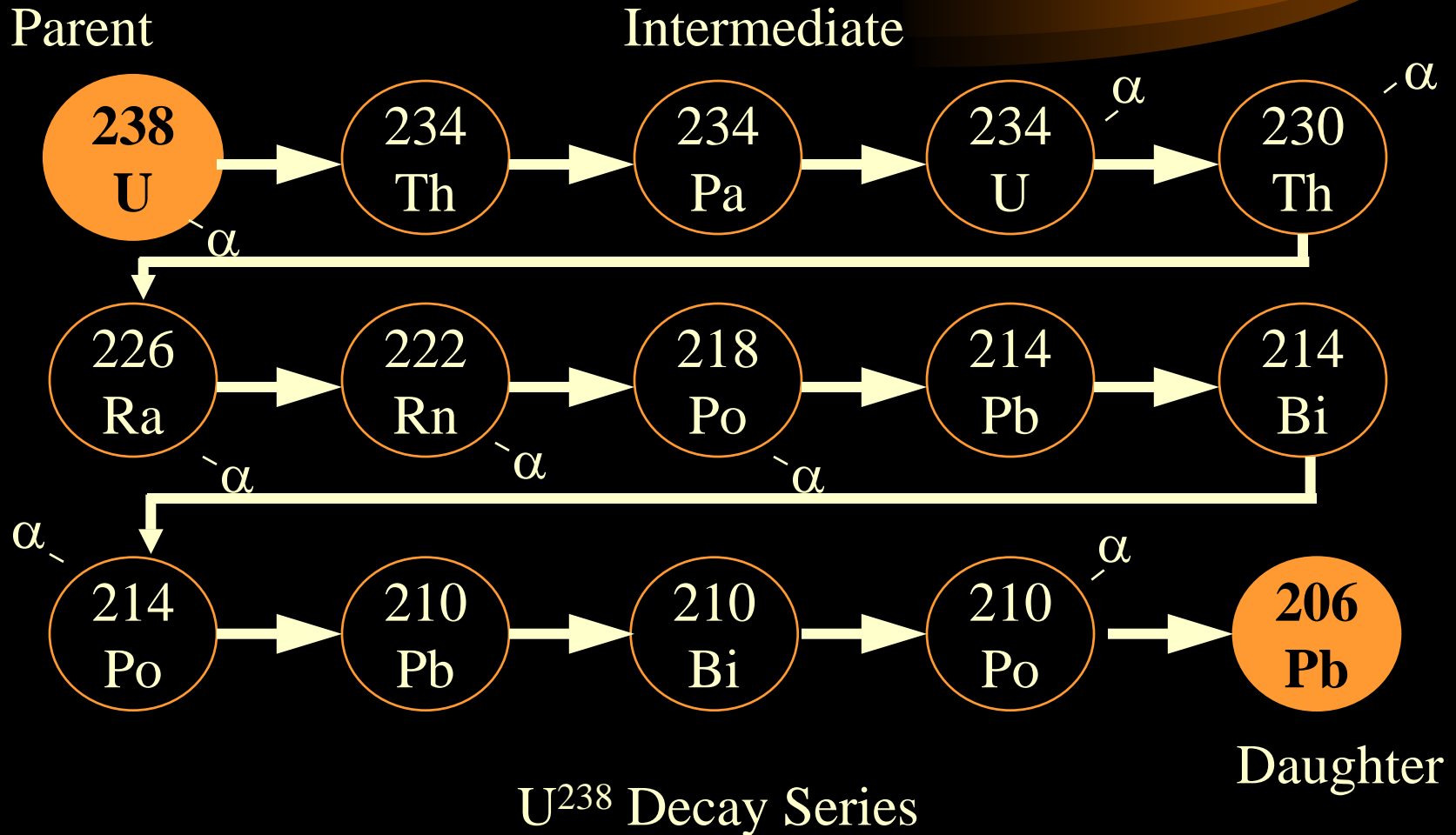
- 1700's- Scientific community accepts young earth
 - Geologists attempt to explain geologic events within the context of scripture
- 1785- James Hutton proposes that geologic study can only refer to natural on-going processes at current strength and intensity
 - Hutton's views not widely accepted
- Early 1800's- "Progression" observed in fossil record
 - Clergyman-Geologists find ways to compromise scripture by "re-interpreting" the days of Genesis
 - Leads to acceptance of Hutton's views

History Of Earth Age Science

- 1830- Charles Lyell publishes his “Principals of Geology” which contributes to the ultimate overthrow of catastrophism and acceptance of millions of years.
- Late 1800's- Lord Kelvin provides calculations from physics showing the earth is not old enough for evolutionists.
- 1896- Phenomenon of radioactivity discovered by Henry Bequerel leading to radiometric dating.

SCRIPTURAL COMPROMISE, NOT SCIENTIFIC ADVANCES, FACILITATED THE TRANSITION FROM YOUNG EARTH TO OLD EARTH BELIEFS.

What Is A Daughter Isotope?



What Is Radiometric Dating?



- Aliases
 - Isotopic dating
 - Radiometry
- Based on the nuclear decay of various elements
 - Measure the amount of parent and daughter elements
 - Assume no daughter element to start with
 - Assume no gain or loss of daughter or parent element from or to the outside
 - Assume decay rate constant
 - Age based on the amount of time for parent to decay into identified amount of daughter element

Scientific Validity of Radiometric Dating



- Are they reliable?
 - Give predictable expected results?
- Are they consistent?
 - Agreement between various methods?

Looking For Pre-existing Daughter Isotopes



- “The Cause of Anomalous Potassium-Argon ‘Ages’ for Recent Andesite Flows at Mt. Ngauruhoe, New Zealand and the Implications for Potassium-Argon ‘Dating’”.
- Paper by Andrew Snelling.
- Don’t be intimidated by the title.
- Impact is simple and profound.

The Lava Sample



- Collected samples from 3 lava flows known to have solidified in 1949, 1954, and 1975
- Samples should have been dated to be 48, 43, and 22 years old respectively
- Argon gas is assumed to percolate out of the lava until it solidifies

Dating The Rocks



- Sample sent to laboratory
- Mineral content measured
- Assume no ^{40}Ar to begin with (^{40}Ar not retained in lava until it solidifies)
- Decay rate from Potassium to Argon known and assumed constant
- Assume no ^{40}Ar can get in or out of the rock
- Age based on the amount of ^{40}Ar found in the rock

The Problem



- Potassium-Argon gave a range of 270,000 to 3,500,000,000 years old for the samples.
- Where did the “extra” ^{40}Ar come from?
- Dr. Snelling investigated various possibilities and eliminated all except one.
- The excess ^{40}Ar appears to have been in the earth’s mantle since creation.

Dr. SNELLING Concludes



- 1 “this is clearly consistent with a young earth, where the very short time-scale since the creation of the earth has been insufficient for all of the primordial argon to be released yet from the Earth’s deep interior.”

Dr. SNELLING Concludes

2 “when samples of crustal rocks are analyzed for [Potassium-Argon] ‘dating’, the investigators can never really be sure that whatever ^{40}Ar is in the sample is from *in situ* radioactive decay... or whether some or all of it is from the excess ^{40}Ar ” in the mantle.

Grand Canyon Experiments

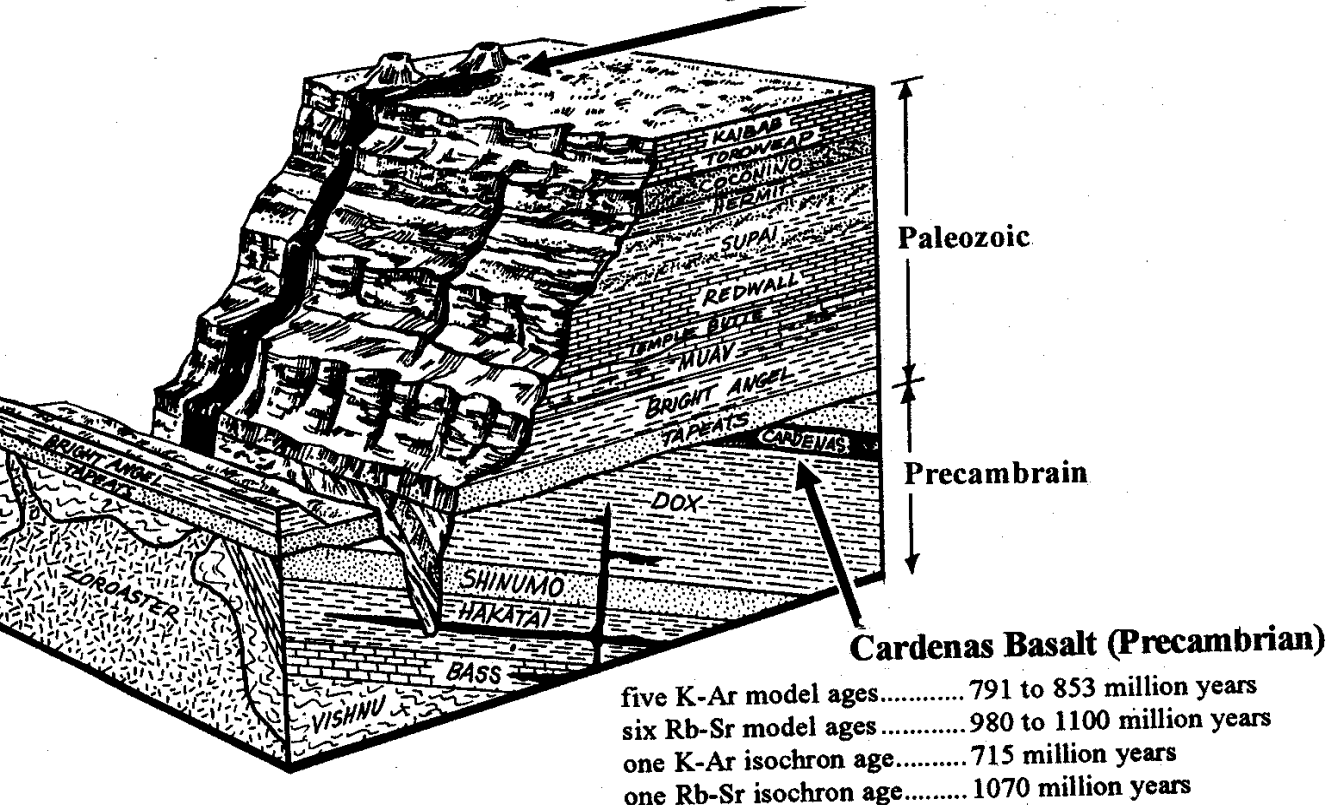


- Dr. Steve Austin sampled lava from two different levels
- Samples dated by various methods
- Results highlight problems with radiometric dating

Grand Canyon Results

Basaltic rocks of Uinkaret Plateau

six K-Ar model ages 0.01 to 17 million years
 five Rb-Sr model ages 1270 to 1390 million years
 one Rb-Sr isochron age 1340 million years
 one Pb-Pb isochron age 2600 million years



- Date range of bottom within date range of top
- Rb-Sr isochron ages show top older than bottom
- K-Ar model ages show top younger than bottom
- How old are these lava flows??

Radioisotopes and the Age of the Earth (RATE)



- 5 Year Study
- 8 Scientists
- Sponsored by the Institute for Creation Research and the Creation Research Society
- Funded by private donations

RATE - Scientists

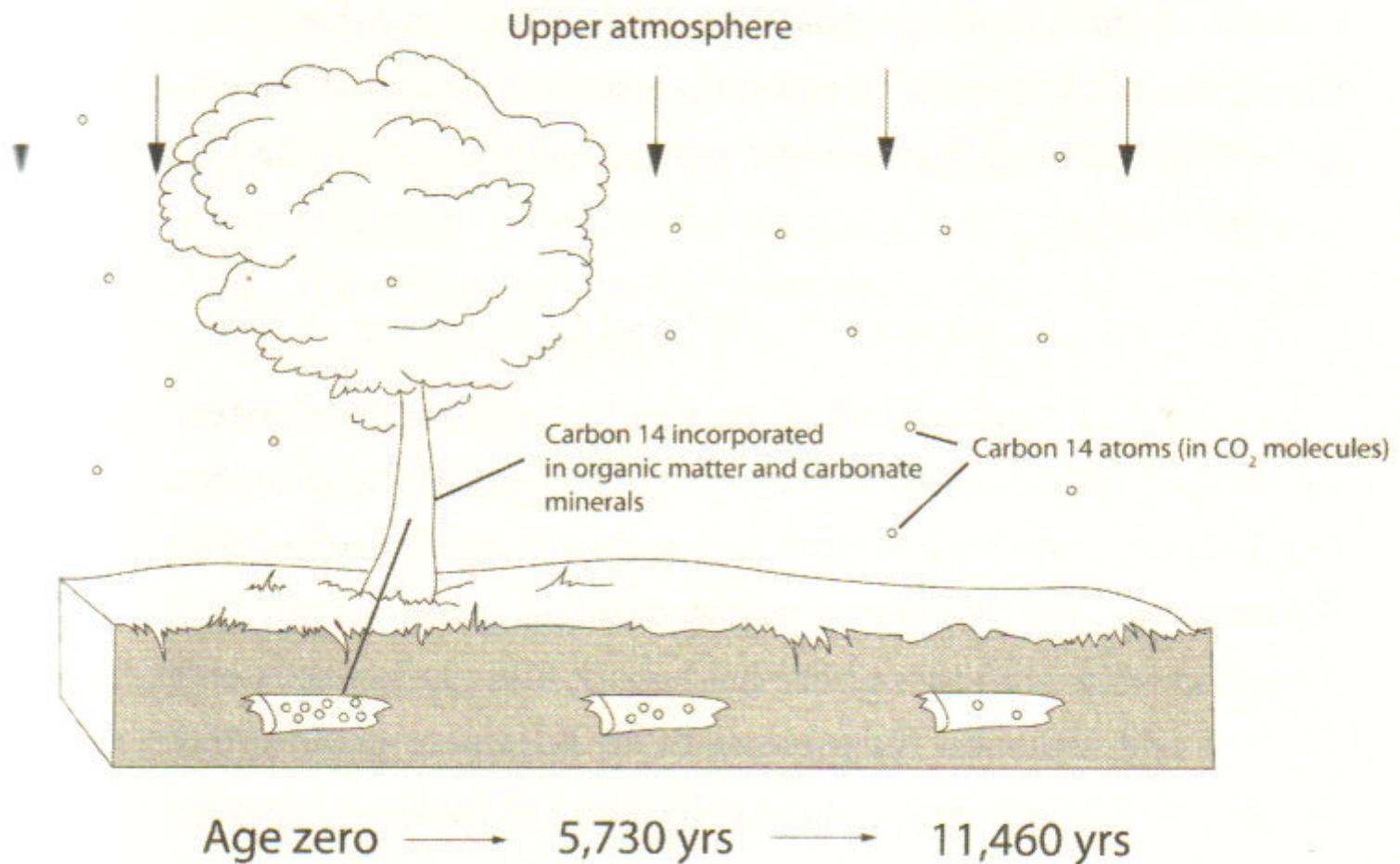
- Dr. Larry Vardiman, ICR – Atmospheric Scientist
- Dr. Seven Austin, ICR – Geologist
- Dr. Jon Baumgardner, ICR – Geophysicist
- Dr. Steven Boyd, The Masters College – Hebraist
- Dr. Eugene Chaffin, Bob Jones University – Physicist
- Dr. Donald DeYoung, Grace College – Physicist
- Dr. D. Russell Humphreys, ICR – Physicist
- Dr. Andrew Snelling, ICR – Geologist

RATE - Overview



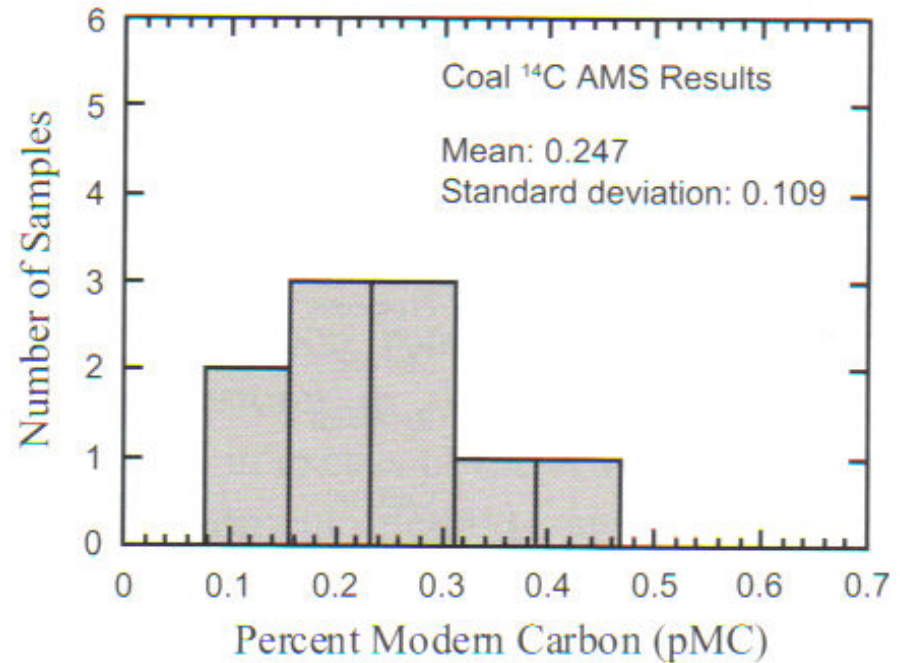
- Carbon 14 in coal
- Carbon 14 in diamonds
- Helium in Zircon crystals
- Radiometric rock dating
- Conclusions

RATE - Carbon 14 in coal



RATE - Carbon 14 in coal

- Coal dated at 40-350 Million years by Old earth methods
- C^{14} dates 40-60 thousand years old
- If millions of years old, no C^{14} should be found



RATE - Carbon 14 in diamonds

- Diamonds require high pressure of deep earth to form
- Believed to have formed over 3 Billion years ago
- Creation's hardest substance resistant to contamination

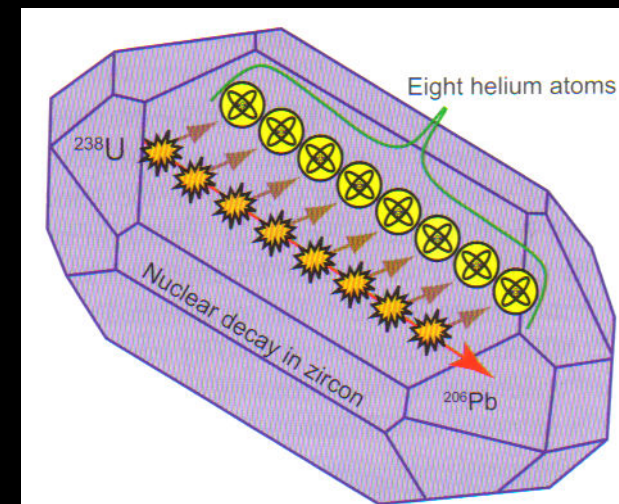
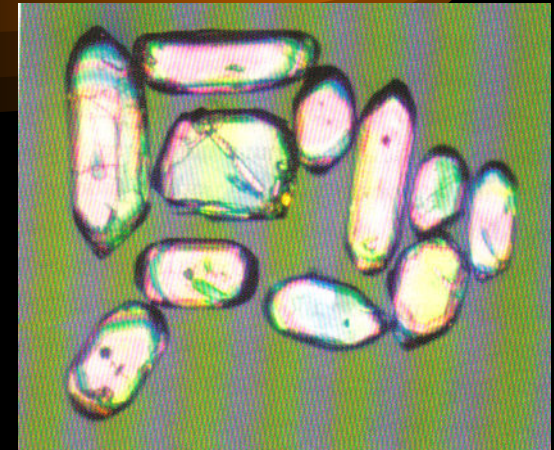
RATE - Carbon 14 in diamonds

- Lab found a lot of C¹⁴
- Carbon age about 55,700 years old

Country of Origin	Diamond Location	C-14/C-12 (pMC $\pm 1\sigma$)
Botswana, South-Central Africa	Orapa mine	0.06 \pm 0.03
	Orapa mine	0.03 \pm 0.03
	Lethakane mine	0.04 \pm 0.03
	Lethakane mine	0.07 \pm 0.02
South Africa	Kimberley mine	0.02 \pm 0.03
Guinea, West Africa	Kankan placer	0.03 \pm 0.03
Namibia, Southwest Africa (Six diamond samples)	Placer deposits	0.31 \pm 0.02
		0.17 \pm 0.02
		0.09 \pm 0.02
		0.13 \pm 0.03
		0.04 \pm 0.02
		0.07 \pm 0.02
Average percent modern carbon for the 12 diamonds is 0.09 \pm 0.025		

RATE – Helium in Zircons

- Zircon crystals form in granite
- Uranium 238 decays to Lead 206 inside crystal
- 8 Helium atoms generated
- Helium atoms escape crystal (diffuse)
- Diffusion rate changes with temperature



RATE – Helium in Zircons

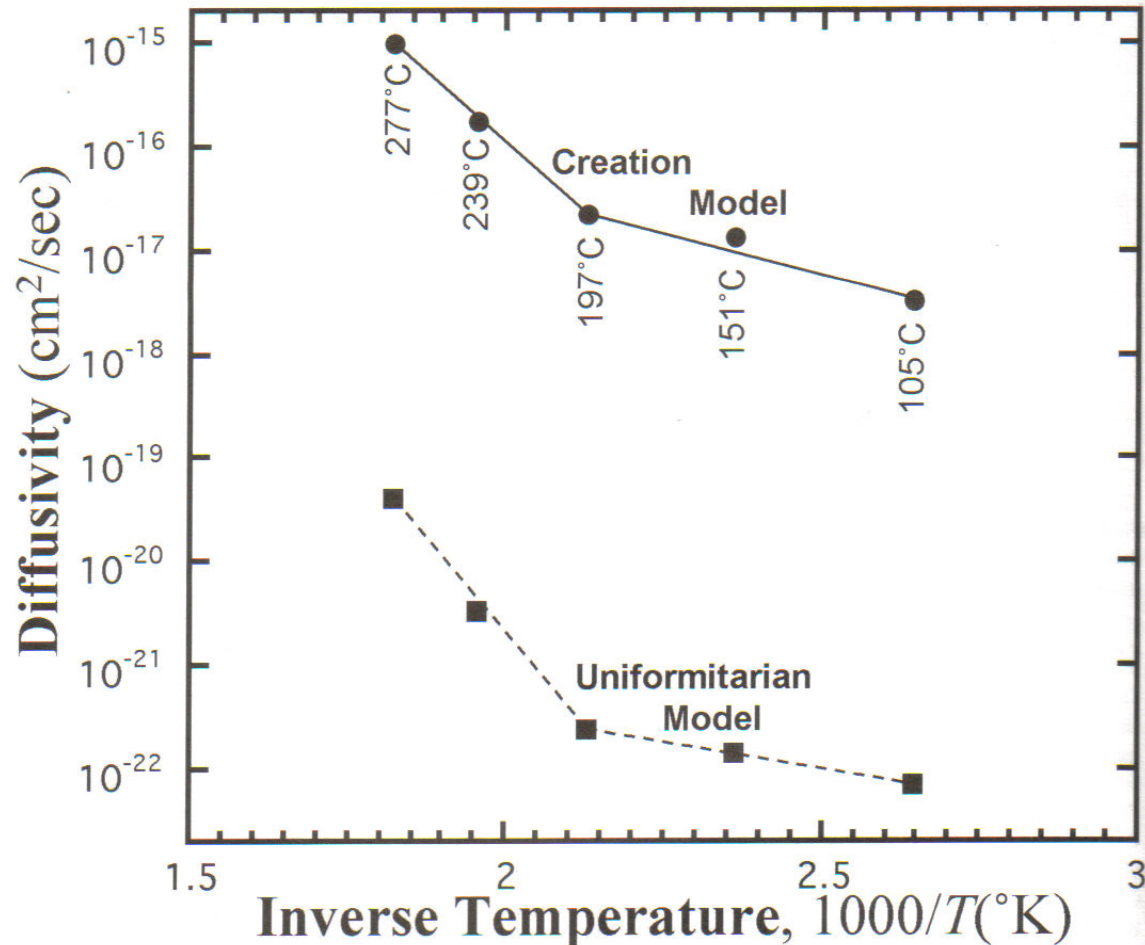


Scientific method

- Make predictions
- Collect data
- Compare to predictions

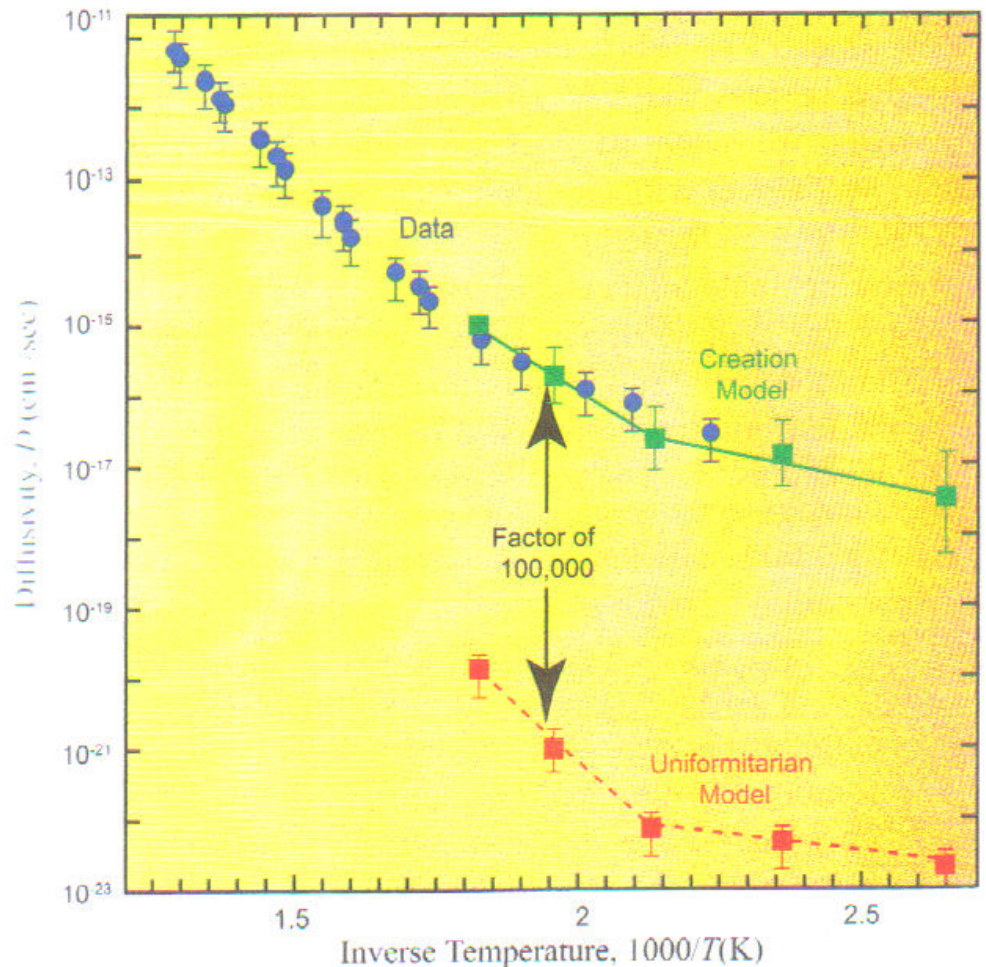
RATE – Helium in Zircons

- Pre-study predictions
- Old earth model predicts diffusion rates 100 times slower than young earth model



RATE – Helium in Zircons

- Actual diffusion rate measured by traditional lab
- Data almost perfectly matches young earth model
- Old earth model falsified



Conventional Geologic Dates of Rocks Tested by RATE



Radiometric dates observed by RATE team

0.1 Ma

1 Ma

70 Ma

490 Ma

600 Ma

2,900 Ma



RATE - Conclusions



- Carbon 14 in coal supports a young earth
- Carbon 14 in Diamonds supports a young earth
- Helium diffusion in zircons supports a young earth
- Radiometric dating of rocks falsifies an old earth

Scientific Validity of Radiometric Dating



- Are radiometric dating methods scientifically valid?

NO

- Unreliable
- Inconsistent

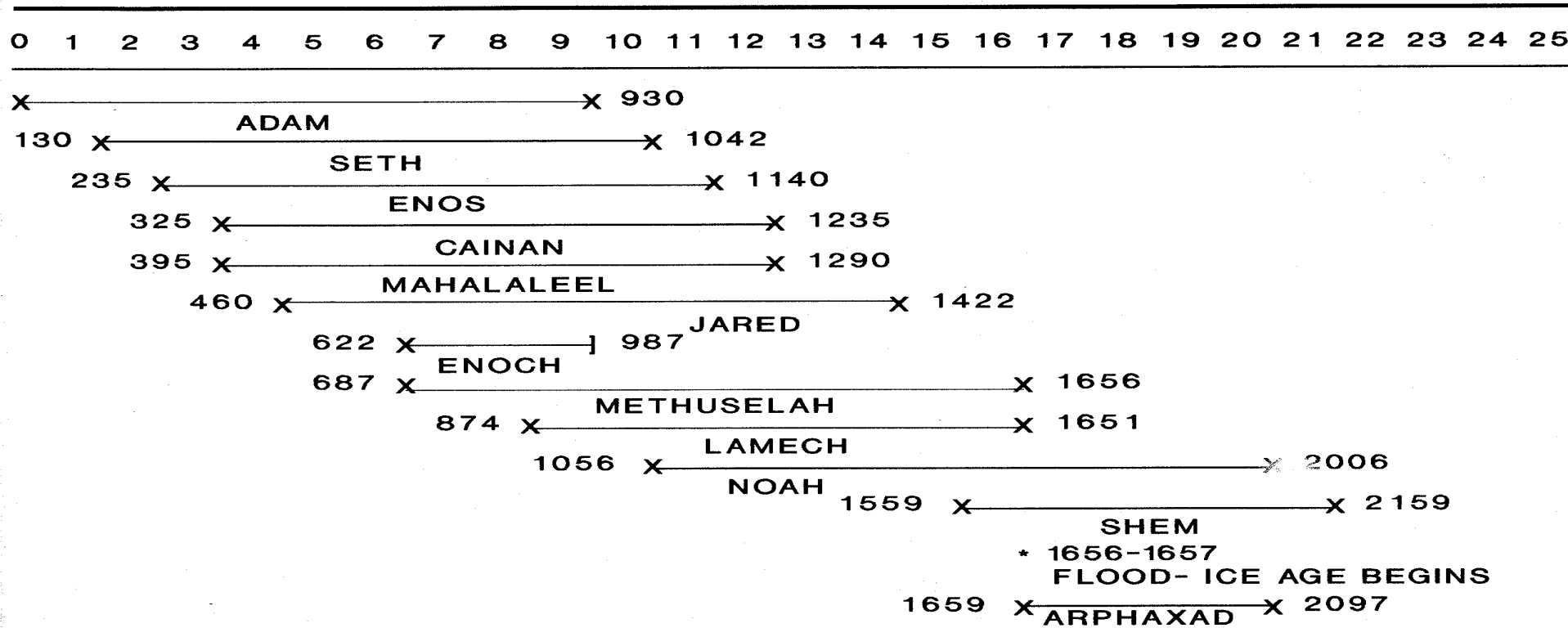
Biblical Evidence of the Age of the Earth



- Genealogies given Genesis 5, 9, 11, and 32
- Can be used to draw time line from creation to Abraham
- Recorded history since Abraham
- Time line shows creation just over 6,000 years ago
- Some claim gaps in the time line, but gaps would only account for a few more thousand years
- Time line probably provided to counter old earth claims

Biblical Time Line

BIBLICAL TIME LINE (X 100 YEARS)



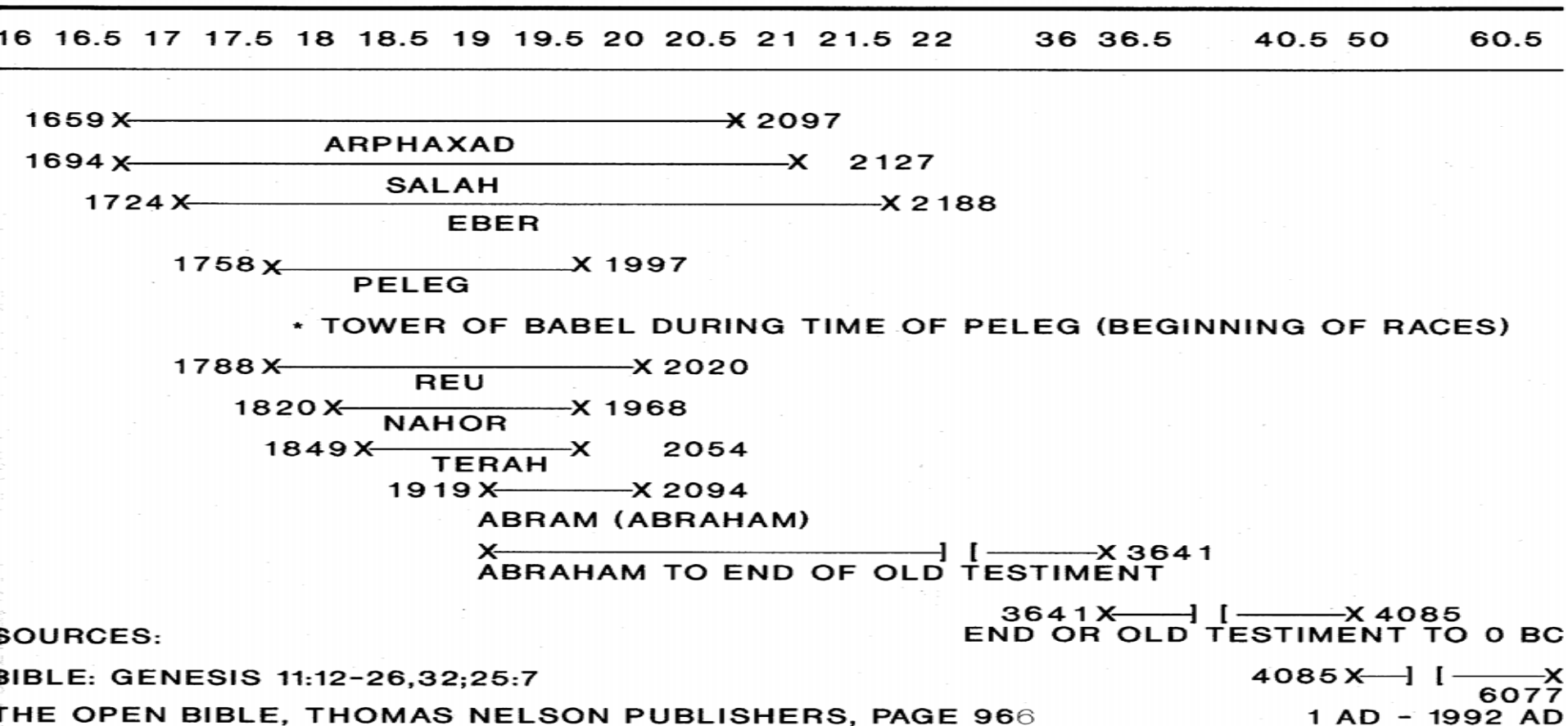
X=BORN, DIED

] = ENOCH DID NOT DIE BUT WAS TRANSLATED TO HEAVEN

SOURCE: BIBLE, GENESIS 5:3-32;9:29;11:10-11

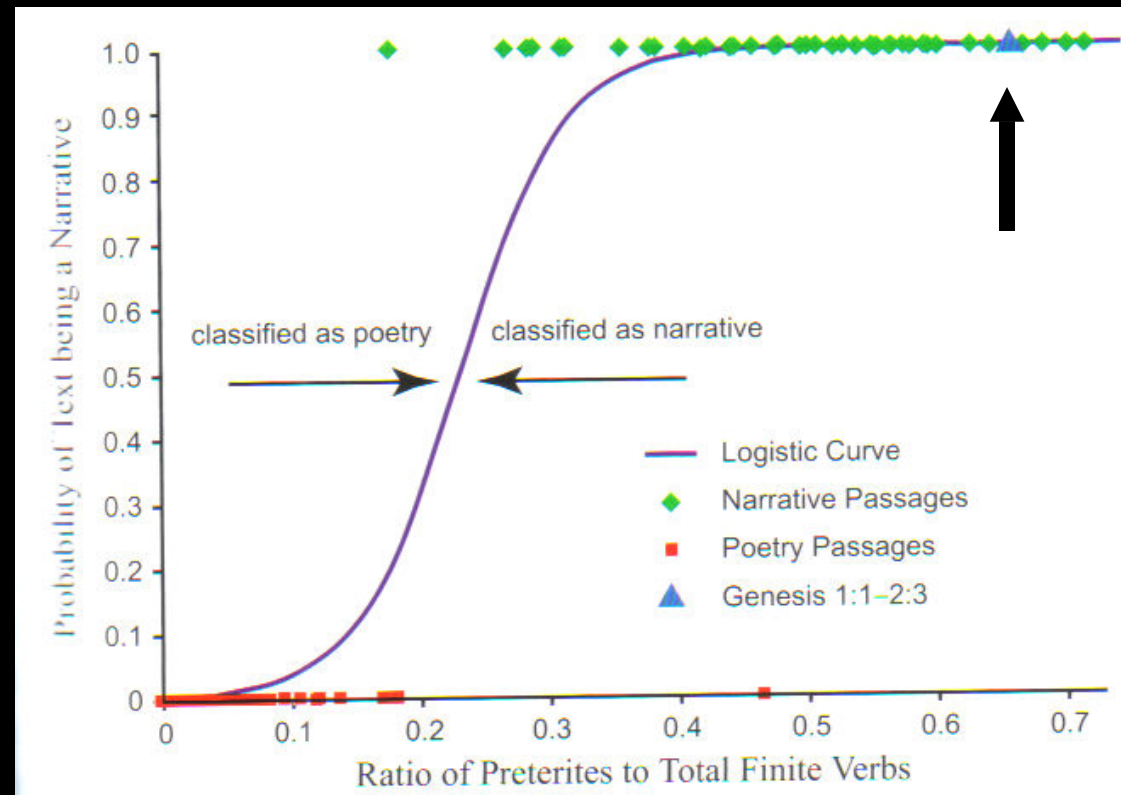
Biblical Time Line (Continued)

BIBLICAL TIME LINE (CONTINUED) (X100 YEARS)



RATE - Genesis 1:1 – 2:3 – Narrative or poetry

- Statistical analysis of verb usage in Hebrew text
- Genesis 1:1 – 2:3 must be narrative
- Poetic interpretation to explain away young earth not valid



How Old Is The Earth?

- **No one knows the exact age of the earth**
- **Biblical genealogies indicate creation was about 6000 years ago**
- **Dating techniques are unreliable and inconsistent**
- **There is more data to support a young earth over an old earth**
- **As a scientist, I believe the earth is about 6000 years old**

Conclusion



It's a young earth after all,
It's a young earth after all,
It's a young earth after all,
It's a young, young, earth.

It's a universe that God made mature,
It's an earth that was changed by the flood I'm sure,
It's an earth that we share, and it's time we're aware,
It's a young earth after all.

Conclusion



It's a young earth after all,
It's a young earth after all,
It's a young earth after all,
It's a young, young, earth.

Many scientists say the earth is old,
Just because it fits in their mental mold.
They say millions of years,
And the truth they won't hear.
It's a young earth after all.

Conclusion



It's a young earth after all,
It's a young earth after all,
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It's a young, young, earth.

Every dating technique has its many flaws,
So they choose the one that will fit their cause.
But the scripture is true,
And the math you can do.
It's a young earth after all.

Conclusion



It's a young earth after all,

It's a young earth after all,

It's a young earth after all,

It's a young, young, earth.