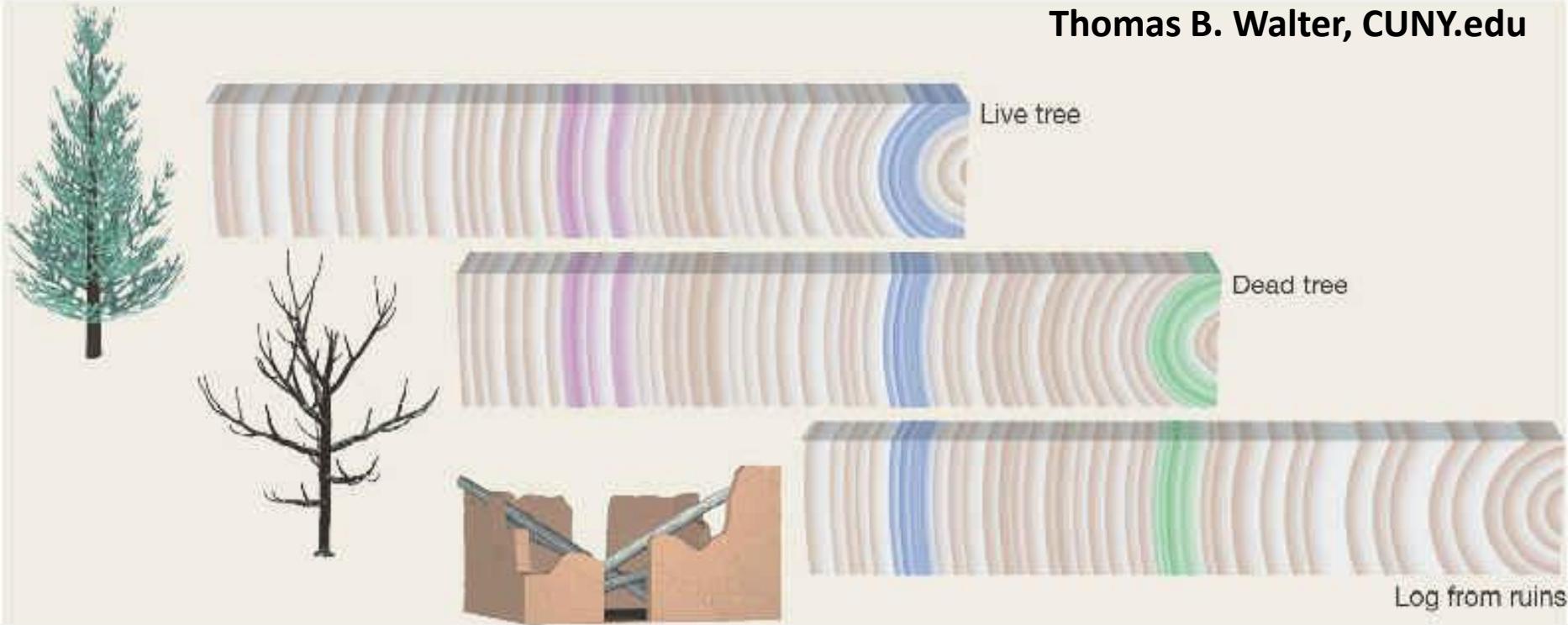




The Age of the Earth



“Varves”

ncdc.noaa.gov



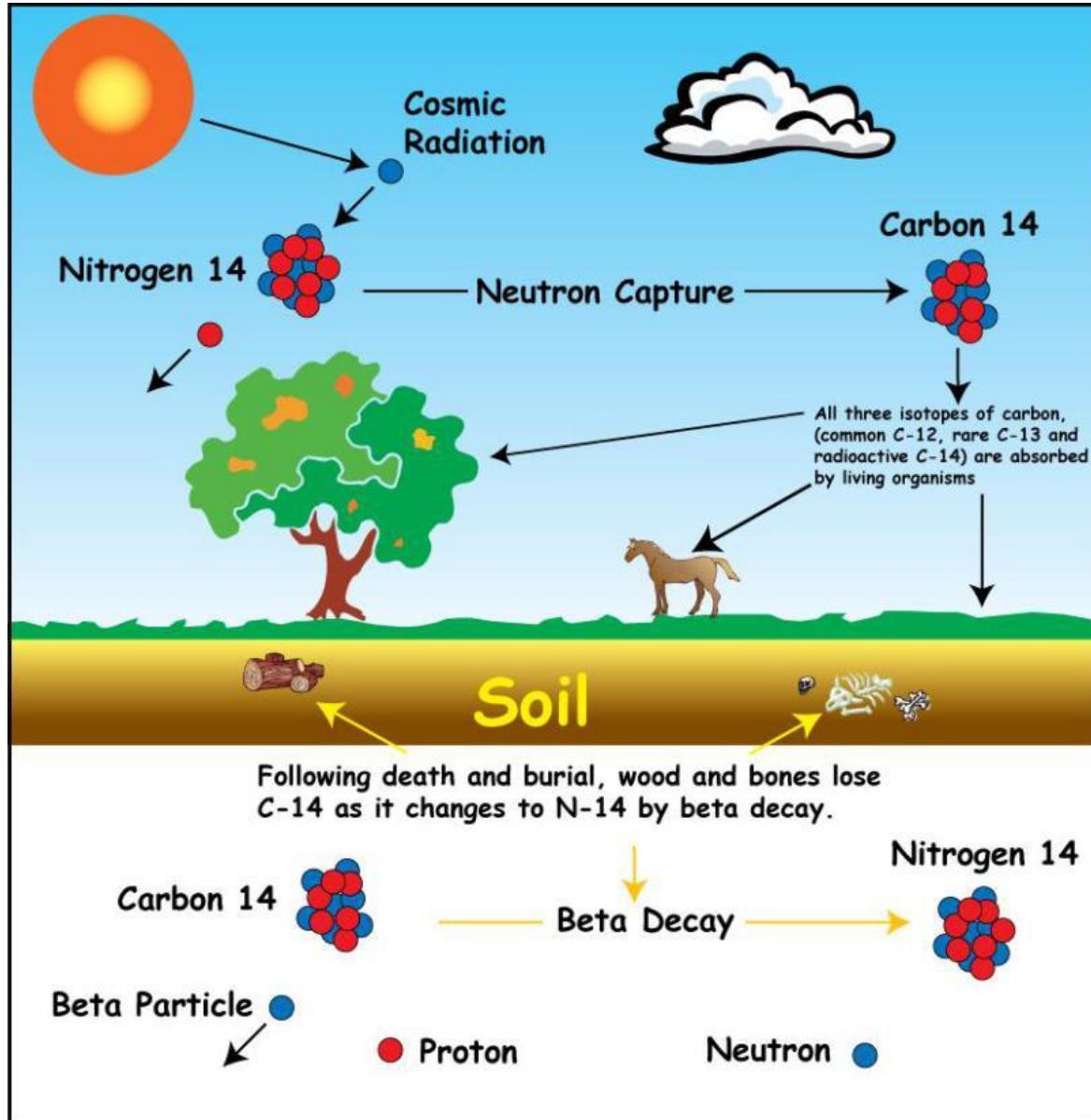


http://www.eoearth.org/files/155101_155200/155195/icecore2_wais_kendricktaylor.jpg

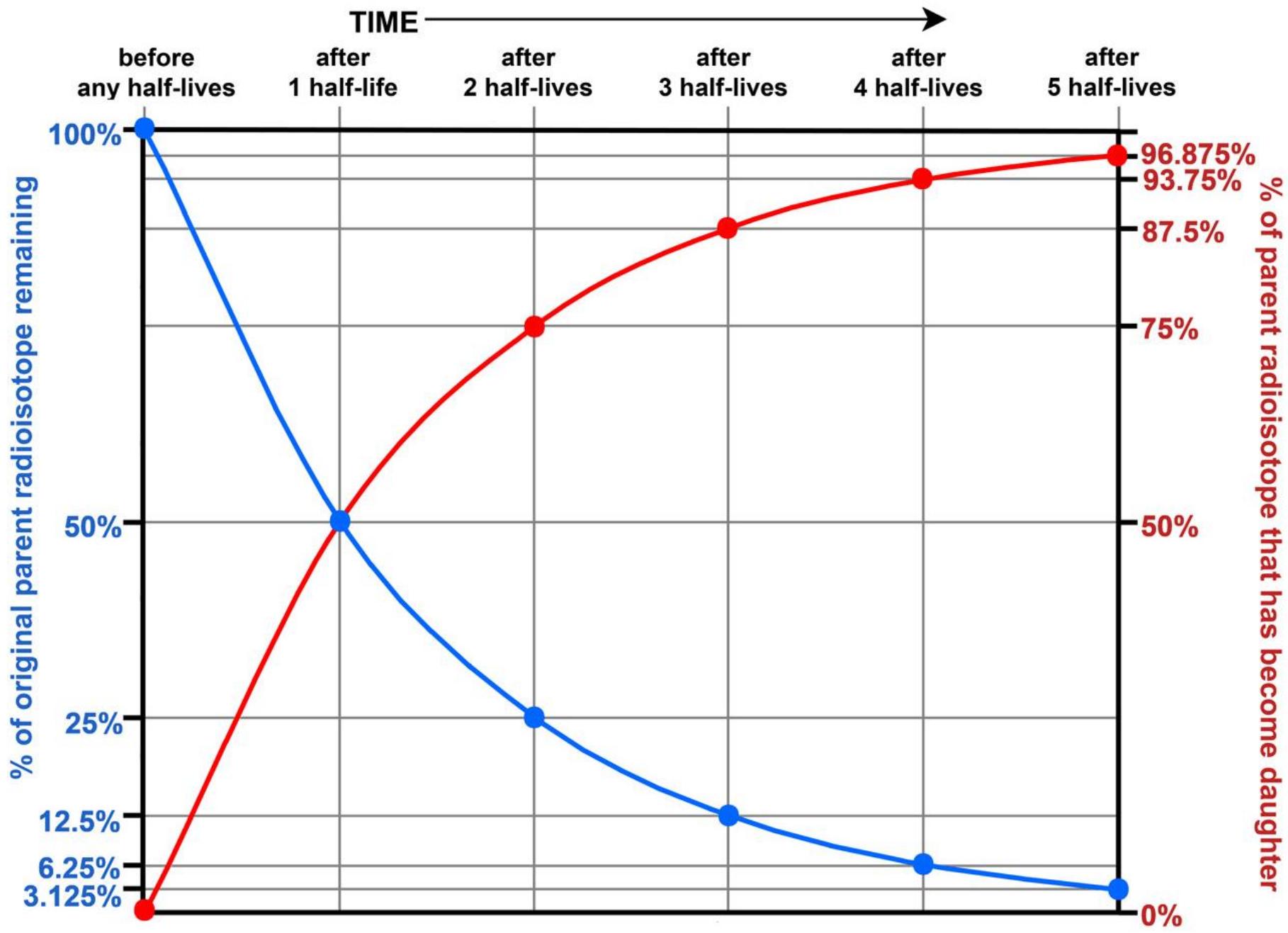


<http://www.miller-mccune.com/science-environment/core-of-the-problem-4036/>

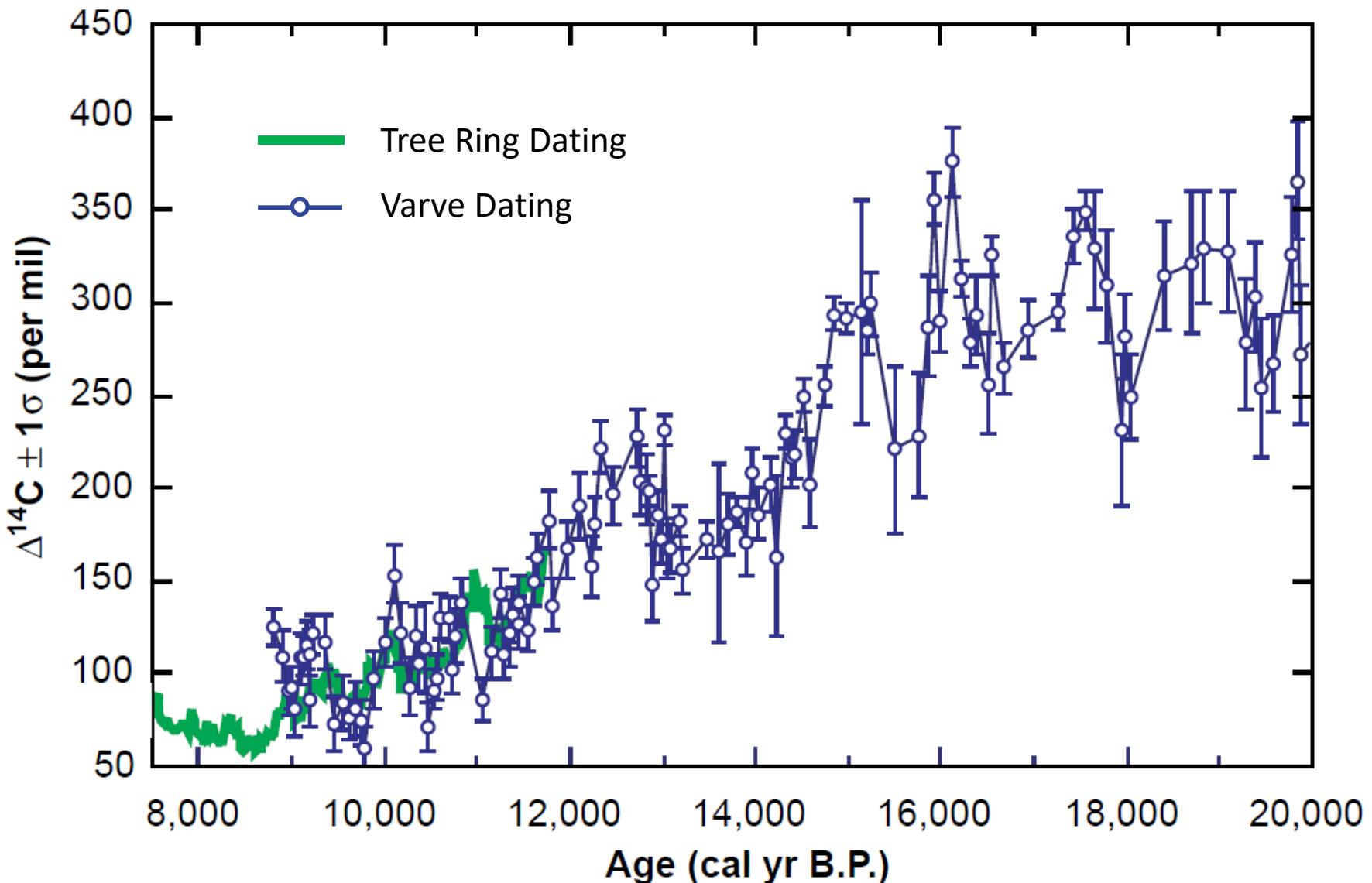
Carbon Dating: Carbon-14 generation and decay



- C-14 generated by cosmic rays interacting with the atmosphere
- Half-life of 5730 years
- Chemically nearly identical to C-12
- C-14 incorporated into living organisms
- Upon death, C-14 content is “locked in”



Historical C14 Abundance Comparison



tree ring and varve count

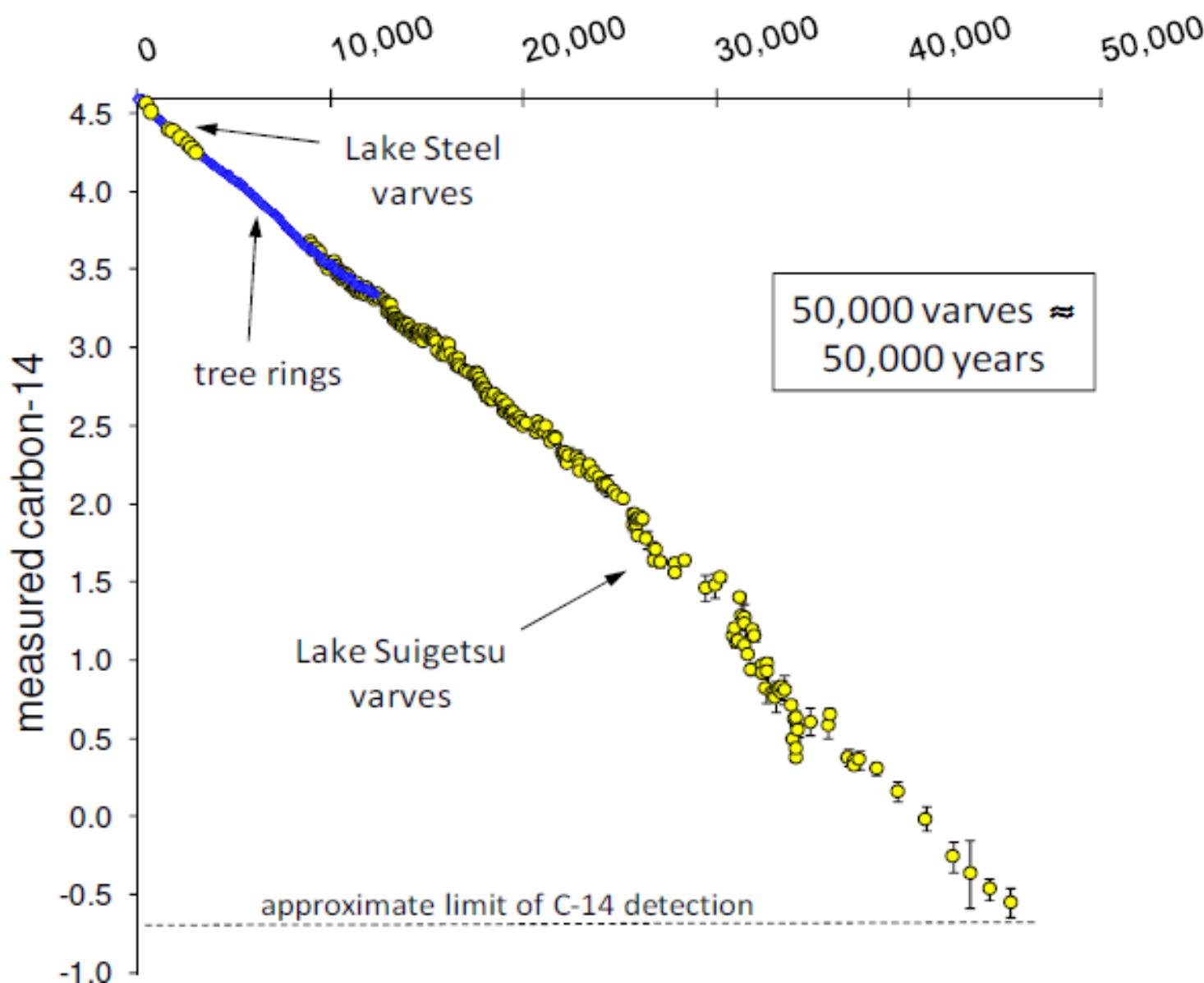


Table I Some Naturally-Occurring Radioactive Isotopes and Their Half-Lives

Radioactive Isotope (Parent)	Product (Daughter)	Half-Life (Years)
Samarium-147	Neodymium-143	106 billion
Rubidium-87	Strontium-87	48.8 billion
Rhenium-187	Osmium-187	42 billion
Lutetium-176	Hafnium-176	38 billion
Thorium-232	Lead-208	14 billion
Uranium-238	Lead-206	4.5 billion
Potassium-40	Argon-40	1.26 billion
Uranium-235	Lead-207	0.7 billion
Beryllium-10	Boron-10	1.52 million
Chlorine-36	Argon-36	300,000
Carbon-14	Nitrogen-14	5715
Uranium-234	Thorium-230	248,000
Thorium-230	Radium-226	75,400

Most half-lives taken from Holden, N.E. (1990) Pure Appl. Chem. 62, 941-958.

Radiometric Dating

A Christian Perspective

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Age of Greenland Rocks

Technique	Age Range
uranium-lead	3.60 ± 0.05
lead-lead	3.56 ± 0.10
lead-lead	3.74 ± 0.12
lead-lead	3.62 ± 0.13
rubidium-strontium	3.64 ± 0.06
rubidium-strontium	3.62 ± 0.14
rubidium-strontium	3.67 ± 0.09
rubidium-strontium	3.66 ± 0.10
rubidium-strontium	3.61 ± 0.22
rubidium-strontium	3.56 ± 0.14
lutetium-hafnium	3.55 ± 0.22
samarium-neodymium	3.56 ± 0.20