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Helium Diffusion and the Flood Evidence for Accelerated Decay

Helium diffusion in radioactive crystals shows that the earth is only about 6,000 years old, plus or minus 2,000 years.

Technical Definitions:

- **Helium Diffusion:** essentially the *leakage* of helium *out* of material, in this case, zircon crystals.
- **Zircon:** a crystal containing uranium and thorium common in granite. Zircons are radioactive and they make and lose helium.
- **Accelerated decay:** an increase in radioactivity during the early part of the creation week and the Flood.
- **Radioactivity:** the emission of particles from atomic nuclei.

Helium is a byproduct of uranium decay. **Helium** gas is trapped within granite and indicates a consistent rate of decay. When you look at a piece of granite there are flecks of mica in it. In those flecks of mica there are crystals called **zircons**, that are often much smaller than a grain of sand. In fact, these **zircon** crystals are found many places besides granite, including beach sand and even inside lunar rocks. These **zircons** are radioactive, were formed in molten rocks and are thought to be some of the oldest minerals on the earth. As the molten rock cools, the **zircons** form crystals and grab uranium atoms from the molten rock around it.¹³⁹



These uranium atoms are not completely stable. Every now and then they spit out an alpha particle (two neutrons and two protons). When this happens the alpha particle will go into the crystal a little ways and stop where it grabs two electrons and becomes a **helium** atom. **Helium** is a lightweight, fast moving, chemically slippery atom, which means *it doesn't like to stick to any other atoms*. It can wiggle right out of the **zircon** crystal. That is why **helium gas** is used to detect leaks, because it is such an effective escaper. The smaller the **zircon** is, the faster the leak, and the hotter the **zircon**, the faster the leak. **The rate at which this happens is very important because it gives us a way to estimate the age of the zircon from the helium leakage.**

By examining the **helium** leaked from **zircon** crystals that were produced by massive amounts of *radioactive decay*, we have evidence of a time when **accelerated decay** took place. Since **helium** leaks so easily and steadily out of **zircon** crystals, there should have been no **helium** left after 4.5 billion years (which is the most recent estimate of the scientists who believe in evolution). Such high levels of **helium** in the **zircon** cannot be sustained for more than a few thousand years. It should have all leaked out before now.

Because of the amount of **helium** we find today in **zircon** crystals, and given how quickly **helium** leaks out, it appears that massive amounts of *radioactive decay* happened only about 6,000 years ago at the time of the Flood. This evidence shows that nuclear decay did not happen slowly over an alleged 4.5 billion years, but rather an alleged 4.5 billion years of decay happened in about 6,000 years.

The fact that there are significant levels of helium still left in zircon crystals is evidence that God drastically sped up decay rates of long half-life nuclei during the Flood. Such accelerated decay collapses the uniformitarian "ages" down to the Scriptural timescale of thousands of years.¹⁴⁰ Therefore, if it is true that decay rates were once much faster than they are today, it stands to reason that there must be other signs to substantiate this evidence. Let's consider **fission tracks** and **radiohalos**, which

are other kinds of physical evidence from rocks.