TRIANGLE ASSOCIATION for the SCIENCE of CREATION

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TASC's mission is to rebuild and strengthen the foundation of the Christian faith by increasing awareness of the scientific evidence supporting the literal biblical account of creation and refuting evolution.

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July 2024

Origin of Radioactivity on Earth

By Ken Kovarik

Introduction

TASC

All elements with more protons than lead has, at 82 protons, are radioactive and decaying into something else. These elements are unstable. The nucleus, which has protons and neutrons, wants to rip itself apart. Just like the same poles of two magnets, North and North or South and South, repel each other, the positive protons in the nucleus repel one another. But there is a force that holds the nucleus together. It is called the strong nuclear force. It is very powerful, but only acts over a very short distance.

The typical mechanisms of decay are alpha, beta, and gamma decay. An alpha decay is a positive helium nucleus (He-4); a beta decay is a negative electron that is being kicked out of the nucleus; and a gamma ray is simply high energy light, with no charge, coming from the nucleus. With a beta decay, a neutron inside the nucleus is converted to a proton, and the electron is kicked out of the nucleus. The effect is that the number of protons increases, moving up the periodic table. Gamma decay does not change the number of protons. And finally, alpha decay reduces the number of protons by two, moving down the periodic table. While beta decay does move elements to greater numbers of protons and up the periodic table, typically the overall movement of the parent element is downward to end up at or below lead (Fig. 1).

So, if these large radioactive elements are moving downwards to a lower number of protons, what caused them to get larger in the first place? That is, what mechanism created uranium (92 protons) and other highproton elements.

Cosmologists and physicists suggest that these elements were created in the stars. For years, they suggested supernovas created elements heavier than iron, but the spectral image never supported that theory. New discoveries have indeed created these heavy elements by the interactions of two neutron stars. However, there are a host of problems associated with bringing these

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1A 1 H													http://chemistry.about.com ©2010 Todd Helmenstine About Chemistry				
1.00794 Hydrogen	2A											3A	4A	5A	6A	7A	4 002602 Helium
3 Li 6941	4 Be 9012182 Bentium											5 B 10.811 Brown	6 C 120107 Carbon	7 N 14 0067	8 0 15.9954 Ovysin	9 F 18.9904032	10 Ne 20.1797
11 Na 22 909769	12 Mg 24.3050											13 Al 26.9815365	14 Si 28.0855	15 P 30 973762	16 S 32.065	17 Cl 35.453	18 Ar 39.940
Sodum 19	Magnesum 20	3B 21	4B 22	5B 23	6B 24	7B 25	26	- 8B	28	1B 29	2B 30	Auminum 31	Silcon 32	Phosehorus 33	Sultur 34	Chiorne 35	Arpon 36
K 39 0983	Ca 40 078	Sc 44 955912	Ti 47.867	V 50.9415	Cr 51.9961	Mn 54 938045	Fe 55.845	Co 58 933195	Ni 58.0934	Cu 63.545	Zn 65.38	Ga 69.723	Ge 72.64	As 74.92160	Se 78.95	Br 79 904	Kr 83.798
Potessum 37	Caloum 38	Scandum 39	Titanum 40	Vanadium 41	Chromium 42	Manganese 43	Iron 44	Cobat 45	Nickel 46	Copper 47	Zinc 48	Gallum 49	Germanium 50	Arsenic 51	Selenium 52	Bromine 53	Kryston 54
Rb 85.4678 Rubidum	Sr 87.62 Stroeturn	Y ss.scsss Vitrum	Zr 91.224 Zroonam	Nb 92 90638 Noburn	Mo 95.96 Montoinun	Tc [98]	Ru 101.07	Rh 102 90550 Rhodum	Pd 106.42 Palladum	Ag 107 8682	Cd 112 411 Catrium	In 114.818 Indum	Sn 118.710 Tip	Sb 121 360 Actmony	Te 127.60	1 126.90447 Jados	Xe 131 293 Xenon
55 Cs	56 Ba	57-71	72 Hf	73 Ta	74 W	75 Re	76 Os	77 lr	78 Pt	79 Au	80 Hg	81 TI	82 Pb	83 Bi	84 Po	85 At	86 Rn
132 9054 519 Cesium	137.327 Barum	Laribandas	178.49 Hatsum	183 94788 Tantalum	183.84 Tungten	188.207 Rhenum	190.23 Osmium	192.217 Indum	195.084 Platnum	198.900569	200.59 Mercury	204.3833 Thalium	207.2	203 56040 Born (b)	(209) Polonium	[210] Astatine	[222] Radon
87 Fr (223)	88 Ra	89-103	104 Rf	105 Db	106 Sg	107 Bh	108 HS	109 Mt 12761	110 Ds (281)	111 Rg	112 Cn (205)	113 Uut [284]	114 Uuq	115 Uup	116 Uuh [293]	117 Uus	118 Uuo
Francium	Redum	Actnides	P.Pettrout	Dubnum	Seaborpum	Bohnum	Hassium	Methenum	Damstadium	Fortgenut	Cosemicium	Unurthum	Ununquadum	Unurperdura	Unurhexum	Ununsection	Ununoctum
	Lanthanides			58 Ce	59 Pr 140 90745	60 Nd	61 Pm	62 Sm 150.36	63 Eu	64 Gd	65 Tb 158 92535	66 Dy	67 Ho 964 93032	68 Er	69 Tm 168 93421	70 Yb	71 Lu 174.9558
	Actinides			Cenum 90	Praseodymaun 91	Neodymum 92	Promothum 93	Samanum 94	Europium 95	Gadolinium 96	Tertum 97	Dyspresium 98	Holmum 99	Ethum 100	Thulum 101	102	Lutetum 103
				Th 232.03805 Thorum	Pa 231.03588 Protectrium	U 238 02891 Uranum	Np (237) Neptunium	Pu [244] Plutorium	Am [243] Americum	Cm [247] Cunum	Bk (247) Berkelum	Cf [251] Californium	Es (252) Enstenum	Fm [257] Femum	Md [258] Mendelevium	No [259] Nobelium	Lr [262] Lavrenoum

Figure 1. Periodic table of the elements.

radioactive materials all the way to Earth. Supernovas are rare in our galaxy, with perhaps 300 to 400 out of 100 billion stars. After a supernova, either a black hole or neutron star may result. In either case, the density of the black hole or neutron star is so great that sending that material to Earth would be problematic even over billions of years.

Binary neutron stars have been discovered in other galaxies, but not so much in ours. Cosmologists believe that there may be ten such binary stars in our galaxy, but from Michelle Starr in ScienceAlert, "To date, we've only detected a handful of the kilonova explosions that follow such a collision, and none in our own galaxy."1 One final point in this matter; radioactivity is concentrated in the granitic crust of Earth's continents, not in the ocean floors made of basalt. Thus, while cosmologists have demonstrated that binary neutron stars can indeed produce heavy elements such as uranium, they have not demonstrated how those elements overcame the gravitational forces (neutron stars weigh one billion tons per teaspoon), traveled millions of light years; avoided the gas giants (such as Jupiter, which has over twice the mass of the other planets combined); avoided our sun; and

sciencealert.com/collision-between-2-neutron-starscould-be-deadly-for-life-on-earth Accessed 2024 Jun 03

¹ Starr M (2023 Oct 23) Collision between 2 neutron stars could be deadly for life on Earth. https://www.

ended up within the continental crust of Earth, avoiding for the most part the oceanic crust.

Another mechanism has been proposed by Walt Brown in his hydroplate theory, which explains how the biblical flood occurred and the flood's effects upon the Earth. His theory continues to gain support as the most consistent with the Bible and with scientific processes. Jane Albright performed an analysis of leading flood models and concluded the hydroplate theory has many advantages.² Brown breaks his theory into four phases; rupture, flood, continental drift (at roughly 100 mph with the resulting crash/compression event), and recovery phase. Radioactivity begins during the flood and compression phases according to his theory. This paper assumes that the reader is familiar with the basics of hydroplate theory.³

Overview of the Origins of Radioactivity via the Flood

During the flood, the continental crust was moving up and down in a fluttering motion as the fountains of the deep escaped from below the surface. The tension and compression within the fluttering crust generated huge voltages in the crust due to the piezoelectric effect of the quartz in the granite. These voltages discharged within the crust with electrons moving in one direction and the positive ions in the other. The positive ions moving parallel to each other resulted in an electromagnetic Z pinch force (explained later in this article) that drove the elements close to each other. In many cases the force was great enough to overcome the electromagnetic force of the positive nuclei and engage the strong nuclear force into a fusion event creating very heavy elements which were unstable and decayed or fissioned into the heavier-thaniron elements that we have today.

Granite Crust

An important key to following the evidence that we have is to understand that the continental crust made of granite is composed of hornblende, feldspar, mica and quartz. Indeed, granite is so named because these different rock types appear as grains within the granite. While some have called granite an igneous rock (meaning previously melted), it is probably better to describe granite as a mystery rock. While some small grain granite may have experienced some partial melting, hydroplate theory contends that no large grain granite has been previously melted. If granite is melted and not confined, the various rocks within it will separate out into various layers based upon their densities. If confined, and a full melting and mixing is achieved, the rock rhyolite is created. The granite is destroyed forever.

It is the quartz within the granite that has piezoelectric capabilities. When putting pressure on quartz, a voltage is generated. We actually use this technology in many of our lighters using the spark of voltage to ignite butane to set charcoal on fire.

We have also seen this in a phenomenon called earthquake lights. During earthquakes, there have been lightning discharges visible in the sky and on the ground. These have now been captured in videos and photographs. Brown contends that earthquake lights result from pressure in the crust that triggers this same piezoelectric effect. This lightning is probably less intense than that which occurred during the flood and perhaps not sufficiently strong enough to achieve fusion.

Z Pinch

As these voltages discharged in the crust in parallel paths a Z pinch effect was created. Any electrical path generates a corresponding magnetic field. These parallel paths create magnetic fields that interact with the moving charge creating a force upon the charged particle. That force draws the particles together in what has been called a Z pinch force. (The reason for the Z pinch name is that it occurs along the Z axis of a three-dimensional coordinate system, rather than the two-dimensional X-Y coordinate system.) While the two electrical right-hand rules come into play, perhaps a video or pictures from a video by New England University Steven Bosi can keep this relatively simple.⁴ Pictures from the video are shown in Figure 2.

While the video does not show fusion, it shows the Z pinch force. This force, if strong enough, can bring nuclei close enough to one another to allow the strong nuclear force within each nucleus to interact with the other nuclei and achieve fusion.

Flood, 8th ed. https://www.creationscience.com/ onlinebook/HydroplateOverview2.html Updated 2019 Sep 25

 ² Albright J (2016 Jul 22) Vapor Canopy and the Hydroplate Theory (Albright's Flood Models Controversy Series). https://kgov.com/vapor-canopy-theory-jane-albrightseries-on-global-flood-models-controversy Updated 2021 Aug 08)

³ Brown W (2008) "The Hydroplate Theory Overview," in In the Beginning: Compelling Evidence for Creation and the

⁴ UniServeScienceVIDEO (2013 Feb 16) PH EM MI PODS 70033A V0241 Pinch Effect Interaction between Current Carrying Wires. https://www.youtube.com/watch?v= ubOTTPD1GL0 Accessed 2024 Jun 4



Figure 2. Z pinch force resulting from parallel direct current paths

Strong Nuclear Force Completes the Fusion

The strong nuclear force is one of the four fundamental forces of nature. It is poorly understood, and we know about it primarily by comparing it to the known electromagnetic forces that we understand a bit better. We know that the nucleus of an atom should rip itself apart because of the positive protons repelling each other. But this does not happen. Thus, physicists in the early 20th century searched for another force to explain why any nuclei exist. A combination of the neutrons within the nucleus and the electron cloud surrounding the nucleus helps create the stability of the atom. As an atom gets larger, the strong nuclear force no longer covers the entire length of an atom. This is one of the causes of radioactivity.

The strong force only acts over very short distances. As Z pinch forces move the atoms closer, the coulomb force grows with shorter distance, and only a very strong Z pinch will be able to overcome the coulomb force to the point where this short distance strong nuclear force can be engaged. When this occurs, the strong nuclear force will bind the two atoms into one atom in a fusion reaction.

Fusion with Z Pinch Forces Has Been Demonstrated

The Electrodynamics Laboratory 'Proton 21' in Kiev demonstrated Z pinch forces to achieve fusion in February of 2000. The lab used various target electrodes with a Z pinch electron pulse that resulted in the rupturing of the diode and the production of a variety of superheavy elements, "some twice as heavy as uranium" and others "that last for a few months."⁵ Virtually every element in the Earth's crust was also created with isotopic signatures similar to those found in the crust.

Since then, many other laboratories in the world have confirmed their results and have achieved their own fusion reactions. Indeed, this line of enquiry has emerged as a leading contender to achieve fusion here on Earth for commercial power applications. Lawrence Livermore National laboratories has achieved fusion with a Z pinch approach.⁶

Conclusions/Implications

Radioactivity on Earth is concentrated in the Earth's granitic continental crust. With quartz inside the granite as the piezoelectric material, large voltages could easily be achieved. These voltages cause a flow of negative electrons and positive nuclei in opposite directions that resulted in a Z pinch force driving the nuclei towards each other. With a large enough Z pinch force, the positive coulomb force of the nuclei was overcome sufficiently for the strong nuclear force to engage, creating the radioactive elements that we have today. These elements are currently "winding down." The mechanism explained by the hydroplate theory explains how they were wound up.

Each of the steps of this process is well within our current understanding of the science involved and has been demonstrated at various laboratories.

If Brown is correct, with radioactivity beginning at the flood, then all radiometric dating results, with the exception of carbon-14 dating, are invalid. Brown likens the various stable elements as existing at the bottom of a valley of stability. During the flood's chaotic conditions, many elements were fused together, creating various isotopes, including uranium, which were exploded and landed on each side of the valley. Some elements high on the ridge have too many protons, others on the other slope have too many neutrons. Their location on the ridge determines the mechanisms and rate at which they will decay. But to quote Brown, "Wouldn't it be foolish to assume that the rubble at the bottom of this valley must have been accumulating for billions of years merely because it would take billions of years for all that rubble to collect at the very slow rate rocks roll down today?"⁵

thermonuclear fusion in a sheared-flow Z-pinch, https://www.llnl.gov/article/48501/llnl-scientistsconfirm-thermonuclear-fusion-sheared-flow-z-pinch Accessed 2024 Jun 06

⁵ Brown W (2008) "The Origin of Earth's Radioactivity," in *In the Beginning: Compelling Evidence for Creation and the Flood,* 8th ed. https://www.creationscience.com/ onlinebook/Radioactivity2.html

⁶ Evangelista B, Lawrence Livermore National Laboratory(2022 Mar 07) LLNL scientists confirm

While the hydroplate theory's explanation of the origin of radioactivity on Earth has clear step-by-step mechanisms that follow the laws of physics, the standard model explanation fails on many levels. The foremost failure is the ability to get from a distant galaxy to Earth. Even if we do discover binary neutron stars in our Milky Way galaxy, they still cannot explain why these radioactive isotopes are found primarily in the granitic crust rather than in the oceanic crust.

A greater awareness of this issue can be helpful to people seeking the truth about the origins of the Earth's radioactivity, the truth about the biblical flood, and the reliability of the scripture. While the hydroplate theory may not be exactly how elements beyond lead were created, it is the best explanation that has been proposed to date, secular or Christian.

COMING EVENTS

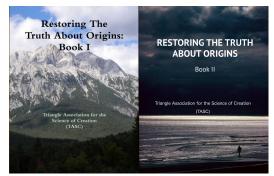
TASC Zoom Meeting, July 11, 7:00 pm EDT

Ken Kovarik will discuss the origins of radioactivity. All elements with more protons than lead are decaying towards lead. Most radioactivity is located in the Earth's granitic crust. The secular solution is highly problematic. Walt Brown's hydroplate theory discusses how radioactive elements were formed during Noah's flood.

Join Zoom meeting: https://us02web.zoom.us/j/4490299372

Meeting ID: 449 029 9372

Find your local dial-in number: https://us02web.zoom.us/u/kH4mqoXap



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