The Creation Function: Harmonic Growth and Genesis Creation Day Sufficiency

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A harmonic threshold model motivated by Genesis 1 Half-Days

Abstract

The Creation Function (CF) models the night and day portions of each Genesis creation day using successive half-integer thresholds of the harmonic sum. Recording the term number at each threshold produces an expanding numerical sequence. We examine three growth correspondences: elemental structure, exponential growth, and finite-range Fibonacci agreement. Creation Sufficiency proposes that this elemental ordering supplies the materials needed for successive Genesis creation stages. Mathematics establishes the sequence's long-run exponential growth. Its proposed physical and scriptural significance requires further testing through predefined comparisons and independent replication.

Three correspondences and the central claim

1. Elemental: spiral endpoints 3, 10, 18, 30 mark proposed stages before crossings. Nuclear alignment 50, 82 is the strongest reported empirical result. [1]

2. Exponential: harmonic threshold indices grow asymptotically by √e per half-step. This follows mathematically from the construction. [2,3,7]

3. Fibonacci: eleven gaps closely track 1–144, in same range as common values seen in Nature, but geometric growth provides competing explanations. [2]

Creation Sufficiency proposes material provision in Genesis order. Testing it requires defining each stage's requirements independently of CF.

Harmonic threshold construction

$H_n = \Sigma_{k=1}^{n} 1/k$

$\tau(t) = \min\{n \geq 1 : H_n \geq t\}$

Threshold t	Crossing τ	Gap Δτ	Fibonacci
1.0	1	—	—
1.5	2	1	1
2.0	4	2	2
2.5	7	3	3
3.0	11	4	5
3.5	19	8	8
4.0	31	12	13
4.5	51	20	21
5.0	83	32	34
5.5	137	54	55
6.0	227	90	89
6.5	373	146	144
7.0	616	243	233

First crossings τ are shown above. Spiral endpoints use pre-crossing indices τ − 1: 3, 10, 30, 82. [1,2]

1. Elemental correspondence: reported random null tests

200,000/null. N1: growth-matched. N2: local ±1. Scores combine nearest-target distance and exact hits with chemical and nuclear orbital and shell numbers. [1]

Nuclear + chemistry	N1 joint p	N2 joint p
Landmarks	0.00014	0.0025
Gaps	0.0018	0.065

Nuclear shell alignment leads chemistry. Pre-crossing CF values used. These p-values are conditional on the chosen null sets and scoring, and give the probability that a null matches CF.

2–3. Exponential and Fibonacci growth

$H_n \sim \ln n + \gamma$ implies $\tau(t) \sim e^{(t - \gamma)}$. The ratio tends to $\sqrt{e} \approx 1.648721$ per half-step and e per full step. [2,3,7]

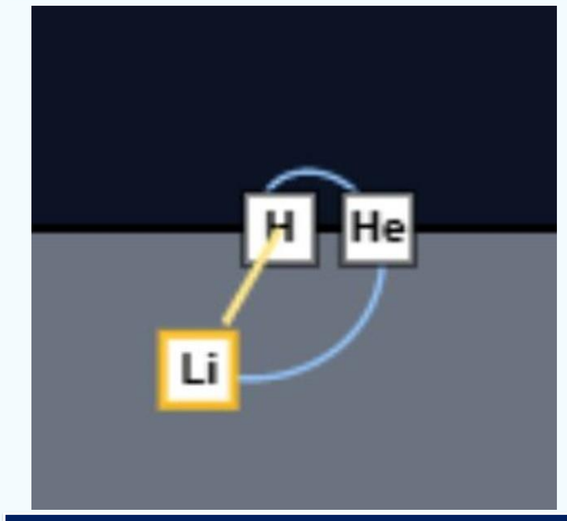
Finite-range tested, eleven paired gaps: r = 0.99982873, R^2 = 0.99965748. Nearest-Fibonacci scores: S = 9, H = 4. [2].

N1: noisy	N2: local	N3: smooth	N4: geometric
0.000270	0.357400	0.000800	0.043760

Joint p; 200,000/model. Agreement is model-dependent and nonunique. $\sqrt{e}$ exceeds φ by about 1.90%. The next gap is 243 versus Fibonacci 233. [2]

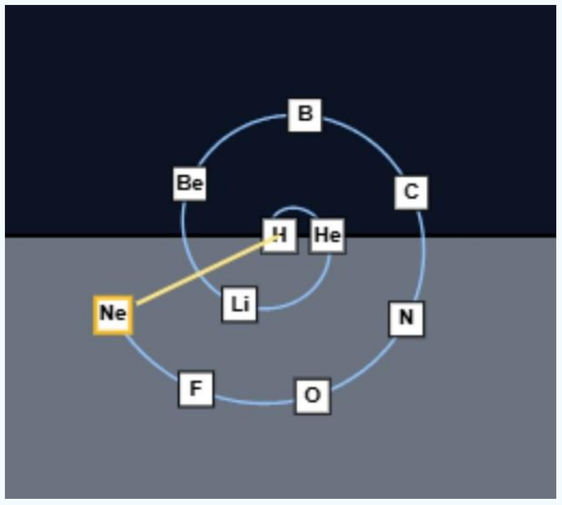
Day 1: Light

Z = 1–3: H to Li. The first rotation contains H and He, the principal stellar fuels, plus Li. CF interprets this as provision for light, a proposed sufficiency correspondence rather than a mechanism for producing light.



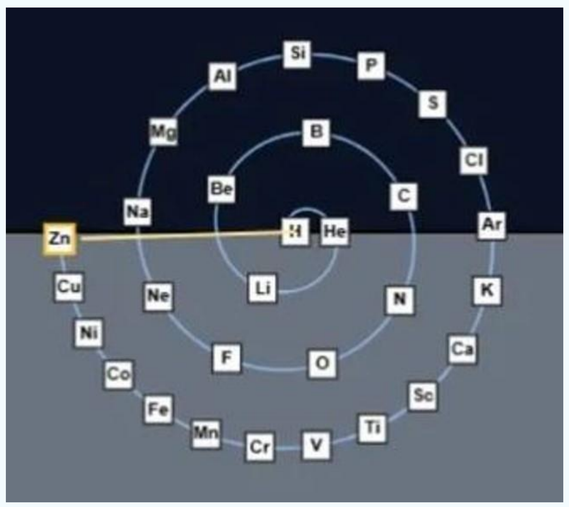
Day 2: Firmament

Z = 4–10: Be to Ne. This range adds C, N, and O. Carbon, nitrogen, and oxygen dominate today's atmosphere, motivating the firmament correspondence. A test must define the required atmospheric composition independently of CF.



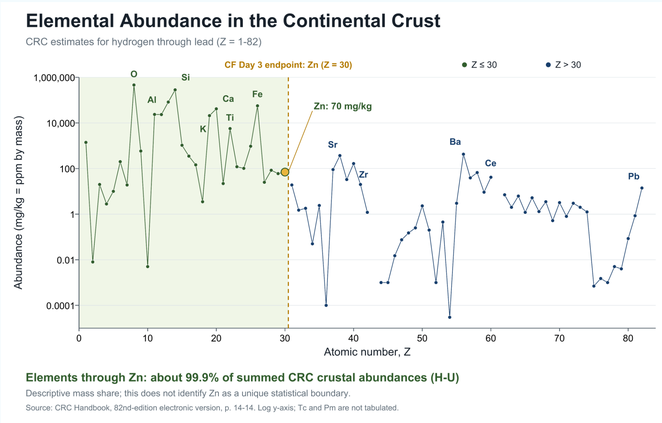
Day 3: Earth

Z = 11–30: Na to Zn. Together with earlier elements, this range supplies many abundant constituents of Earth's crust. CF identifies Zn as the endpoint of a proposed "terrestrial scaffold", before the fourth rotation adds heavier elements.



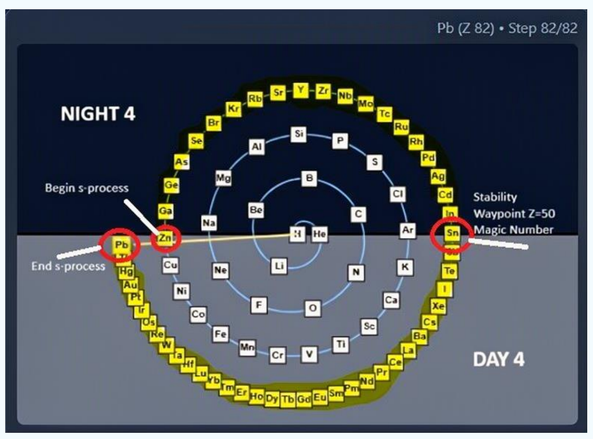
Crustal Mass Concentrated in Elements Through Zinc

Elements from hydrogen through zinc (Z = 1–30) account for approximately 99.9% of the summed CRC crustal abundance estimates. This concentration supports the material-coverage aspect of CF's proposed Day 3 terrestrial scaffold. The logarithmic scale preserves heavier-element peaks while showing their smaller contributions generally at or below 100 mg/kg. [6]



Day 4: Stars

Z = 31–82: Ga to Pb. The fourth CF rotation extends the proposed terrestrial scaffold to heavier elements. Neutron capture followed, where applicable, by beta-minus decay provides a physical pathway toward higher atomic numbers via stellar nucleosynthesis. CF landmarks at Sn (Z = 50) and Pb (Z = 82) coincide with closed proton shells. Separately, s-process bottlenecks involve neutron shell closures at N = 50, 82, and 126. Pb-208 combines both closures: Z = 82 and N = 126. [4,5]



Periodic Table of the Elements (PTOE)

After IUPAC Commission on Isotopic Abundances and Atomic Weights, 2019

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1 H Hydrogen 1.008																	2 He Helium 4.003
2	3 Li Lithium 6.94	4 Be Beryllium 9.012											5 B Boron 10.81	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180
3	11 Na Sodium 22.990	12 Mg Magnesium 24.305											13 Al Aluminum 26.982	14 Si Silicon 28.085	15 P Phosphorus 30.974	16 S Sulfur 32.06	17 Cl Chlorine 35.45	18 Ar Argon 39.948
4	19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.867	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.630	33 As Arsenic 74.922	34 Se Selenium 78.971	35 Br Bromine 79.904	36 Kr Krypton 83.798
5	37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.95	43 Tc Technetium [97]	44 Ru Ruthenium 101.07	45 Rh Ruthenium 102.905	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.414	49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.760	52 Te Tellurium 127.60	53 I Iodine 126.904	54 Xe Xenon 131.293
6	55 Cs Cesium 132.905	56 Ba Barium 137.327	57 La Lanthanum 138.905	72 Hf Hafnium 178.486	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.084	79 Au Gold 196.967	80 Hg Mercury 200.592	81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [209]	85 At Astatine [210]	86 Rn Radon [222]
7	87 Fr Francium [223]	88 Ra Radium [226]	89 Ac Actinium [227]	104 Rf Rutherfordium [267]	105 Db Dubnium [270]	106 Sg Seaborgium [269]	107 Bh Bohrium [270]	108 Hs Hassium [270]	109 Mt Meitnerium [278]	110 Ds Darmstadtium [281]	111 Rg Roentgenium [281]	112 Cn Copernicium [285]	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [293]	118 Og Oganesson [294]

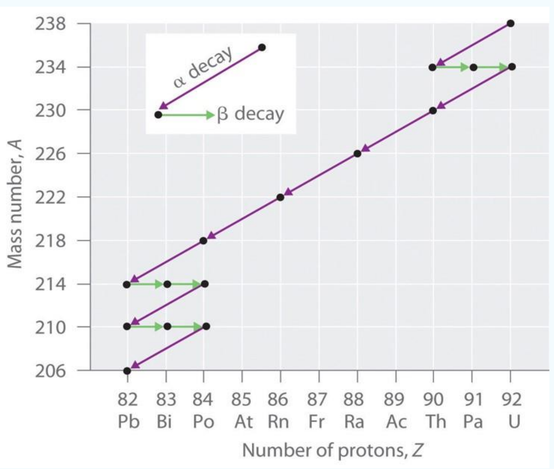
Colors match the day headings above and indicate proposed CF day ranges rather than standard periodic-table periods.

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	58 Ce Cerium 140.116	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.242	61 Pm Promethium [145]	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.259	69 Tm Thulium 168.934	70 Yb Ytterbium 173.045	71 Lu Lutetium 174.966
	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium [237]	94 Pu Plutonium [244]	95 Am Americium [243]	96 Cm Curium [247]	97 Bk Berkelium [257]	98 Cf Californium [251]	99 Es Einsteinium [252]	100 Fm Fermium [257]	101 Md Mendelevium [258]	102 No Nobelium [259]	103 Lr Lawrencium [262]

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Why Stop at Lead?

Lead combines nuclear stability with a recurring endpoint role. The three principal natural decay series of heavy elements terminate at lead: U-238 at Pb-206 (shown), U-235 at Pb-207, and Th-232 at Pb-208. These converging features motivate CF's proposed endpoint at Z = 82. Heavier elements exist, and these correspondences do not establish a creation mechanism. [4,5]



[1] Marshall, D. (2026). 3.18.26 WMCF presentation, CF slides 17–41. https://CreationFunction.com/presentations [2] Marshall, D. (2026). The Creation Function and Fibonacci: Beyond 99.9% Correlation. https://creationfunction.com/cog-journal [3] OEIS A226161 (strict > variant). [4] LBNL, The Shell Model.
[5] The AMBRE Project: Lead abundance in Galactic stars, A&A (2024), doi:10.1051/0004-6361/202450782. [6] Lide, D. R. (Ed.). CRC Handbook of Chemistry and Physics, 82nd edition (2001–2002), electronic version. "Abundance of Elements in the Earth's Crust and in the Sea," p. 14-14. CRC Press. [7] Marshall, D. (2026). On Threshold Crossing Indices of the Harmonic Series at Half-Integer Levels. https://creationfunction.com/cog-journal