

A Brief Introduction to the *Architecture of Time*

by Leonardo's Arrow



Reconciling Science & Faith

By Leonardo's Arrow (*ghost author*) and Lorence G. Collins (*contributor*)

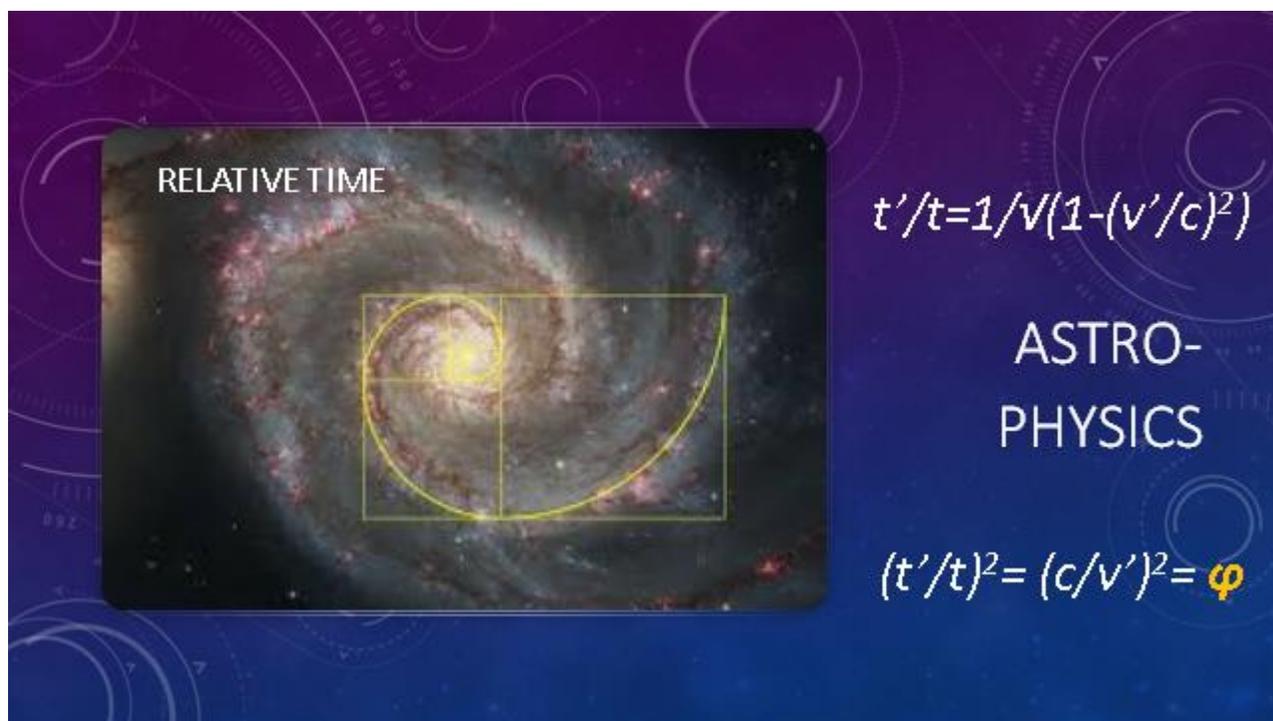
Correspond to both leonardosarrow@gmail.com and lorencecollins@gmail.com

January 7, 2018

A special number denoted by the Greek letter *phi* (ϕ) connects astronomy to physics,¹ biology to chemistry,² and geometry to the universal language of math.³ It is a unique irrational constant⁴ that can be found almost *everywhere* in nature. From the helical arms of distant galaxies to the double helix in our DNA, the course of time tends to twist and grow by the same factor—phi per quarter turn. That is why in the architecture of time, “divine proportion” arguably represents *the Great Architect’s signature*—a numerical reminder that we are *physically, chemically, and biologically* connected to our Creator and each other by the *golden spiral of time*.⁵

Footnotes

¹In 1905, **Einstein**^A accurately predicted that a moving object could dilate time by a factor of x that equals the inverse square root of $1 - (v/c)^2$, where v represents the velocity of a moving object in relation to the speed of light c . When x equals $(c/v)^2$, it also *equals phi*.



RELATIVE TIME

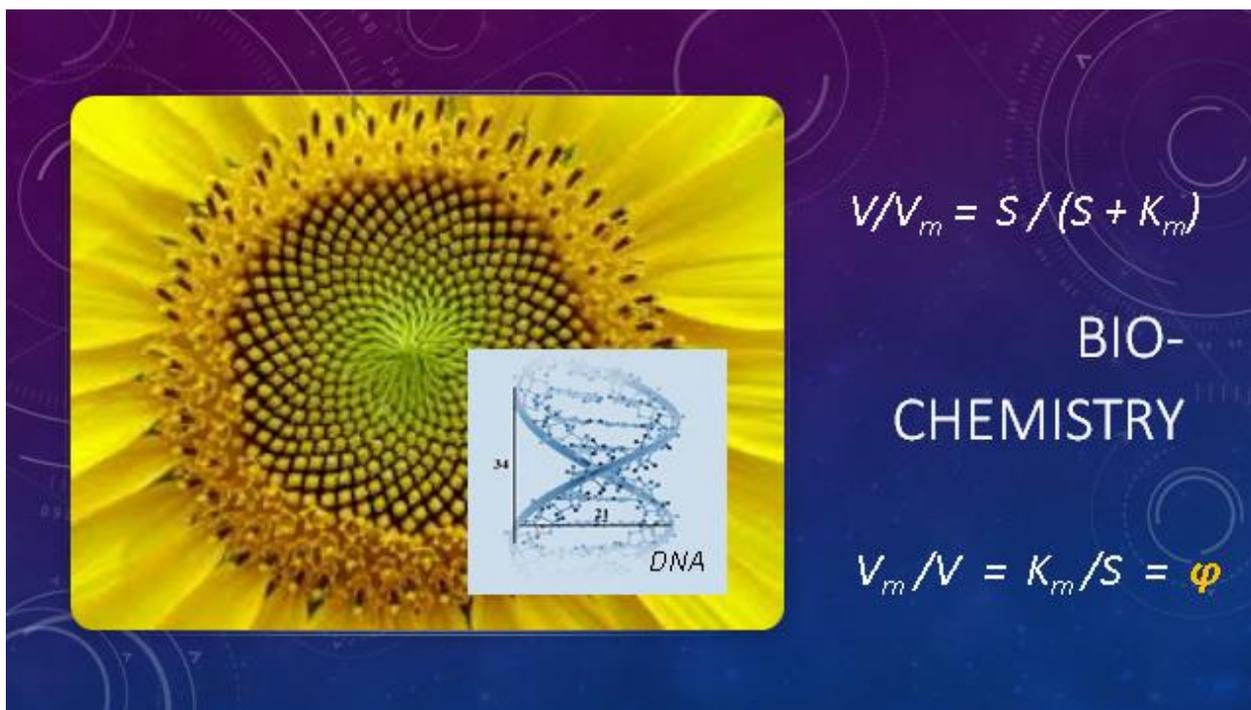
$$t'/t = 1/\sqrt{1 - (v'/c)^2}$$

ASTRO-PHYSICS

$$(t'/t)^2 = (c/v')^2 = \varphi$$

²In 1913, *Michaelis and Menten*^B derived an important equation for the relative velocity V of a biochemical reaction equals $S / (K_m + S)$, where S represents the concentration of a substrate and K_m its binding constant. When x equals K_m/S , it also *equals phi*.

In 1953, *Watson and Crick*^C discovered the golden spiral of DNA—a double helix 21 Angstroms wide and 34 Angstroms long per revolution of ten base pairs — exhibit a ratio that also *equals phi*.

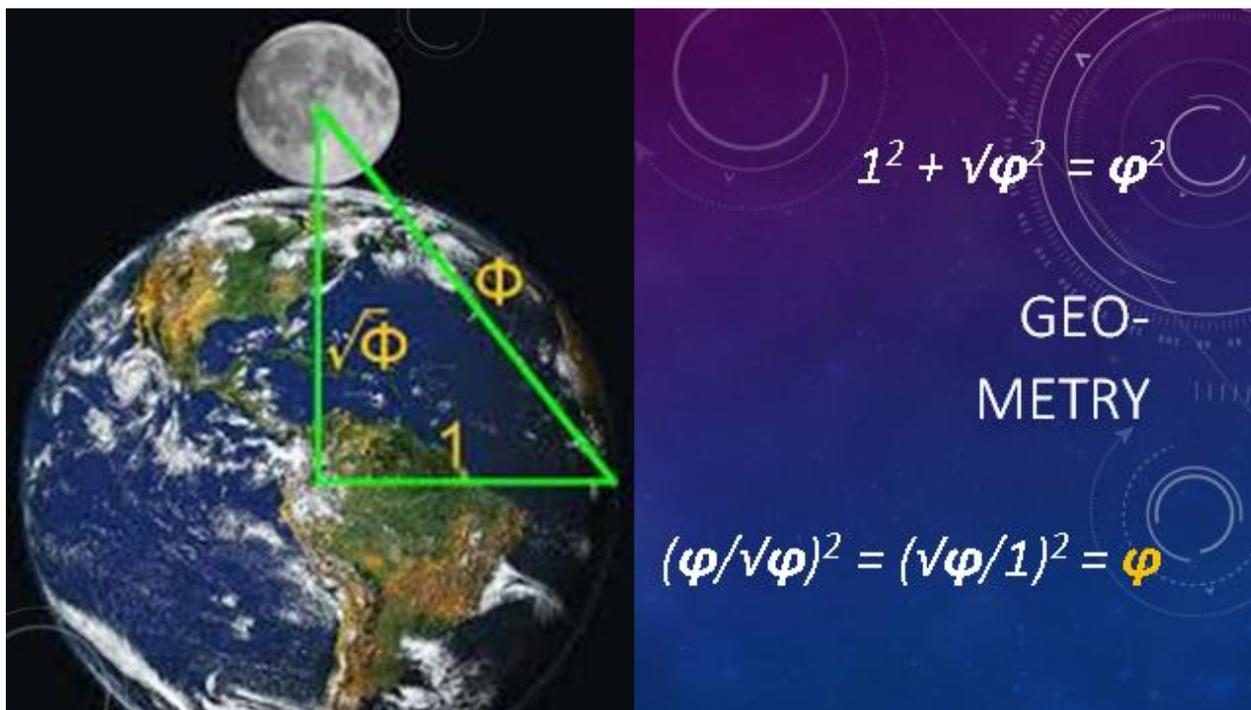


$$V/V_m = S / (S + K_m)$$

 BIO-
 CHEMISTRY

$$V_m/V = K_m/S = \varphi$$

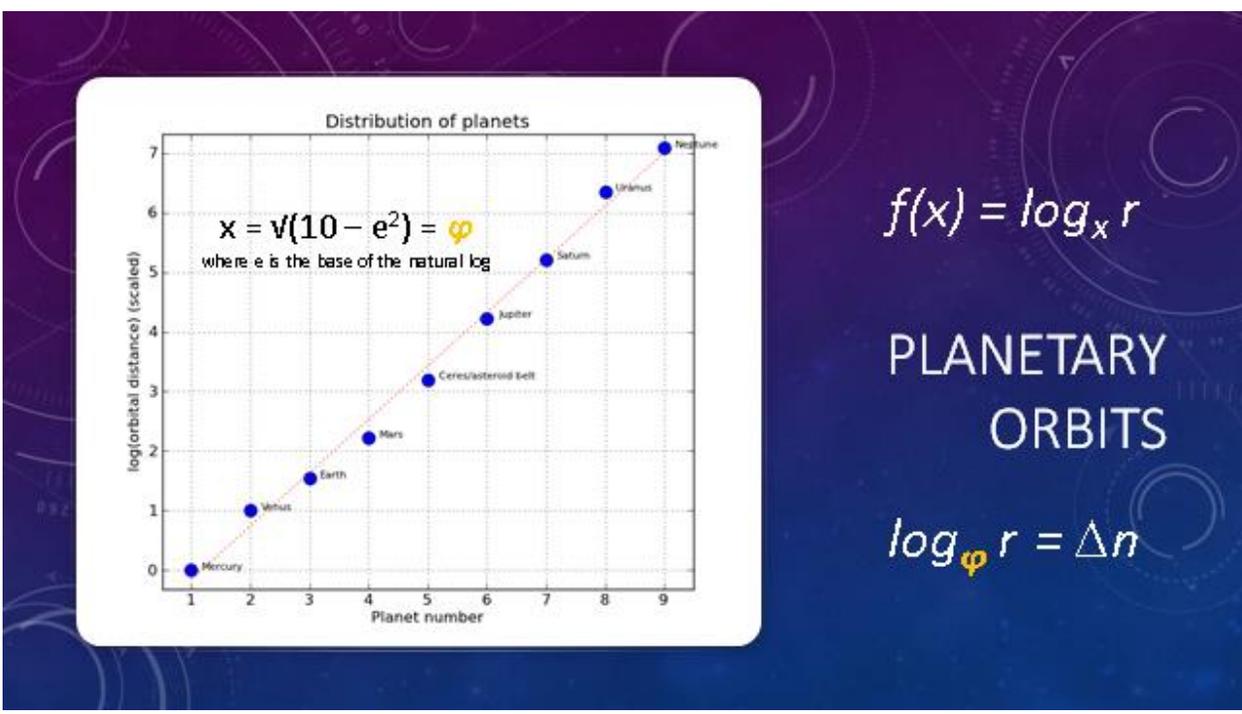
³In 530 B.C, *Pythagoras* proved that the square of the hypotenuse of a right triangle equals the sum of the squares of its sides, but in 1606, *Kepler*^D described a special case: When the squared ratio of the hypotenuse to the smaller side equals the squared ratio of the two sides, it also *equals phi*.

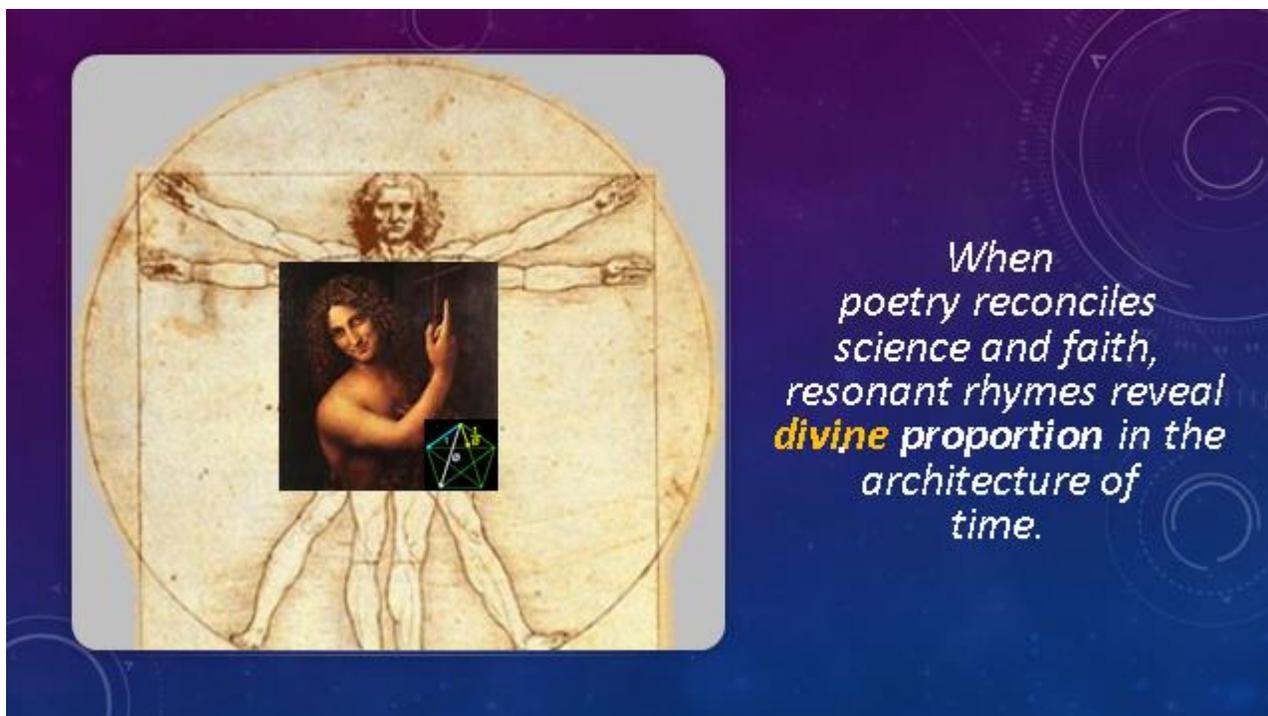


⁴This number is unique because it *defines itself* with a quadratic equation, $(\phi + 1)$ $(\phi - 1)$, the solution to which *stretches to infinity, never repeats, and converges on* 1.6180338..., a special ratio for a series of numbers that **Leonardo Fibonacci**^E and **Leonardo da Vinci** showcased for all mankind to "see" how, "Everything comes from everything and everything returns to everything."



⁵We live in a remarkable **time!** Measurements taken by **NASA^F** and the **IAU** suggest that our solar system is truly unique. Phi connects **all** the planets in our solar system to the sun and each other according to the relationship, $f(x) = \log_x r \sim n$, where n represents the orbital position of a planet, r the radius of its orbit, and $f(x)$ a logarithmic function that converges on **phi**. In other words, our solar system is “a family of ten connected by phi.” On December 17, 2018 (or **phi¹⁸** years since Genesis), the **IAU^G** announced the discovery of IAU 2018 VG 18, a dwarf planet at the edge of our sun's sphere of influence, $123 = \text{phi}^{10}$ atomic units away from it.





When poetry reconciles science and faith, resonant rhymes reveal **divine** proportion in the architecture of time.

References

^AAlbert Einstein's 1905 paper.

https://en.wikipedia.org/wiki/Annus_Mirabilis_papers.

^BMichaelis and Menten 1913 paper.

<https://pubs.acs.org/doi/10.1021/bi201284u>.

^CWatson, J. D. and Crick, F. H. C., 1953, Molecular Structure of Nucleic Acids – A Structure for Deoxyribose Nucleic Acid; *Nature*, v. 171, April 25, p. 737-738.

<http://www.sns.ias.edu/~tlusty/courses/landmark/WatsonCrick1953.pdf>.

^DJohannes Kepler, 1606. The Kepler triangle.

https://en.wikipedia.org/wiki/Kepler_triangle.

^ELeonardo Fibonacci, 1202, Liber Abaci. <https://en.wikipedia.org/wiki/Fibonacci>.

^F<https://nssdc.gsfc.nasa.gov/planetary/factsheet>

^GRyan Whitwam, 2018, Astronomers Discover ‘Farout’ Dwarf Planet at Edge of Our Solar System, IAU (International Astronomical Union), December 18, VG₁₈.
<https://www.extremetech.com/extreme/282521-astronomers-discover-farout-dwarf-planet-at-edge-of-our-solar-system>.