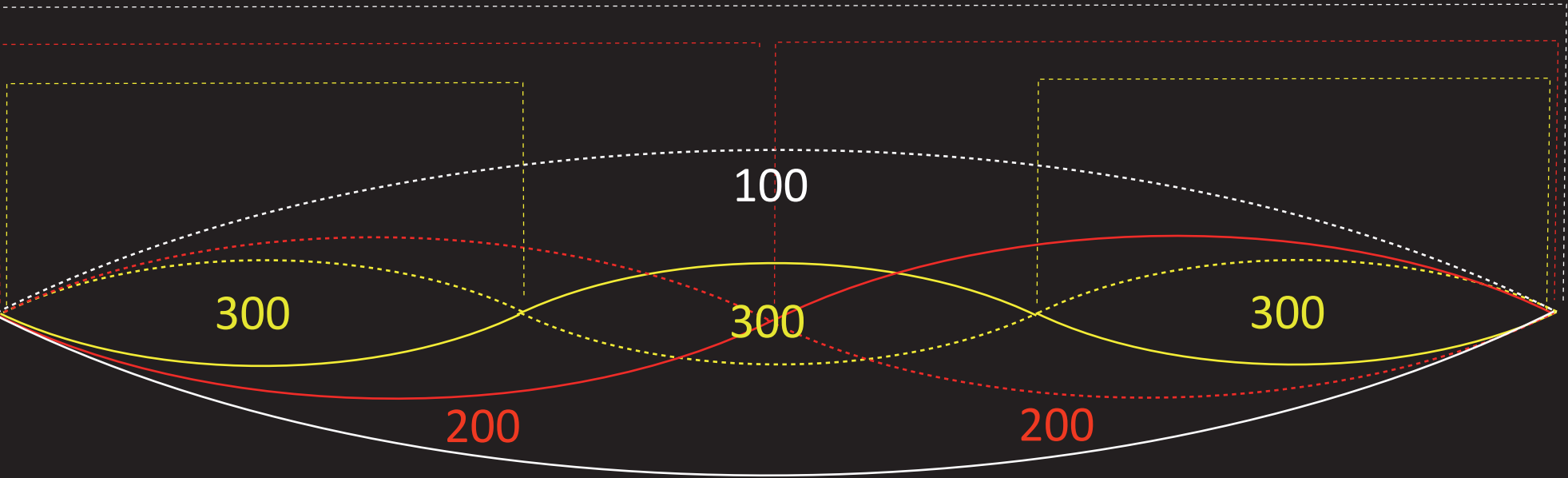# The simple functionality of 'Stringularity'

Khufu was about 2000 years old when Pythagoras studied in Egypt around 535 BC.
He conducted his 'String Experiment', probably in Crotone, a few years years later.
Stephen Hawking called this experiment *the first instance of theoretical physics'*.

It has a simple, robust and precise functionality in space-time thus: -

Divide a string of constant length at constant tension (Fundamental)
in two halves & the frequency (Hz) is doubled (Perfect Octave)

Divide a string of constant length at constant tension in three thirds
& the frequency (Hz) is trebled (Perfect Octave & Perfect 5th)

100
300   300   300
200   200

The functionality of this simple 3:2:1 'hemiola' structure is axiomatic, sounding thus: -
http://www.gci.org.uk/movies/Stringularity_First_Law_of_Theoretical_Physics.mp4

The 'Pythagorean Comma'

7 Perfect Octaves or 'Doublings' (2^7)
7 Perfect Octaves do not 'commute' with or exactly equal 12 Perfect 5ths
7 Perfect Octaves do 'commute' with & so exactly equal 12 'Well Tempered 5ths.

The Hz differences betwen
12 Perfect 5ths & 12 Well Tempered 5ths
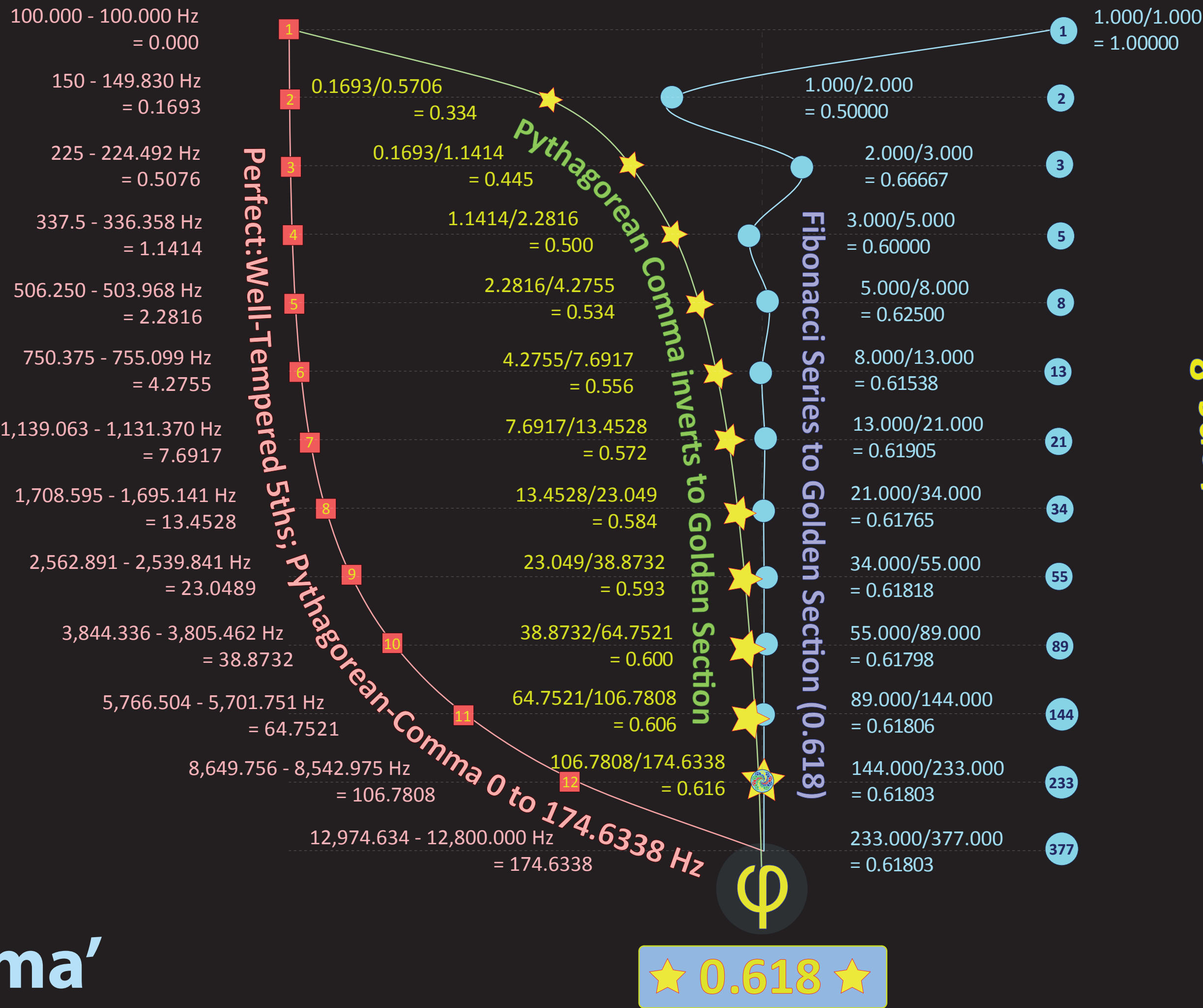give rise to the 'Pythagorean Comma'.

The simple 'rate derivation of Phi'
Neg-Entropy from the 'Pythagorean Comma'

These Hertz differences fed back on themselves, create in 12.618 steps a negative-entropic curve between
0.618 & zero, the path-integral of which is the axiomatic derivation of Phi' or the 'Golden Rate' (Meyer 2015).
'Phi' as a rate, gives rise to the 'Golden Spiral', ubiquitous in Nature at all scales, from the tiniest to the most vast: -
Syntax: - https://www.youtube.com/watch?v=MGGfpa4XkO8 Model: - http://www.gci.org.uk/movies/Phi_Control.xlsx
It is close to the photon-electron exchange at the Fine Structure Constant: - http://www.gci.org.uk/images/PC_FSC_GS_c.pdf

'From 1 comes 2, from 2 comes 3 & from 3 come the 10,000 Things' Lao Tse

The 'rate derivation of Phi' from the emergent
'Pythagorean Comma' is a rate-axiom from the latent
functionality of stringularity made patent, at the 'Big Bang'.
Put simply, it is at least as old as Providence itself.

In the example shown here, the base-value in Hertz is 100 Hz (i.e. vibrations per second)
However, from very large to very small, any Hz value entered always returns the Golden Rate.
To demonstrate this, use the model here: - http://www.gci.org.uk/movies/Phi_Control.xlsx
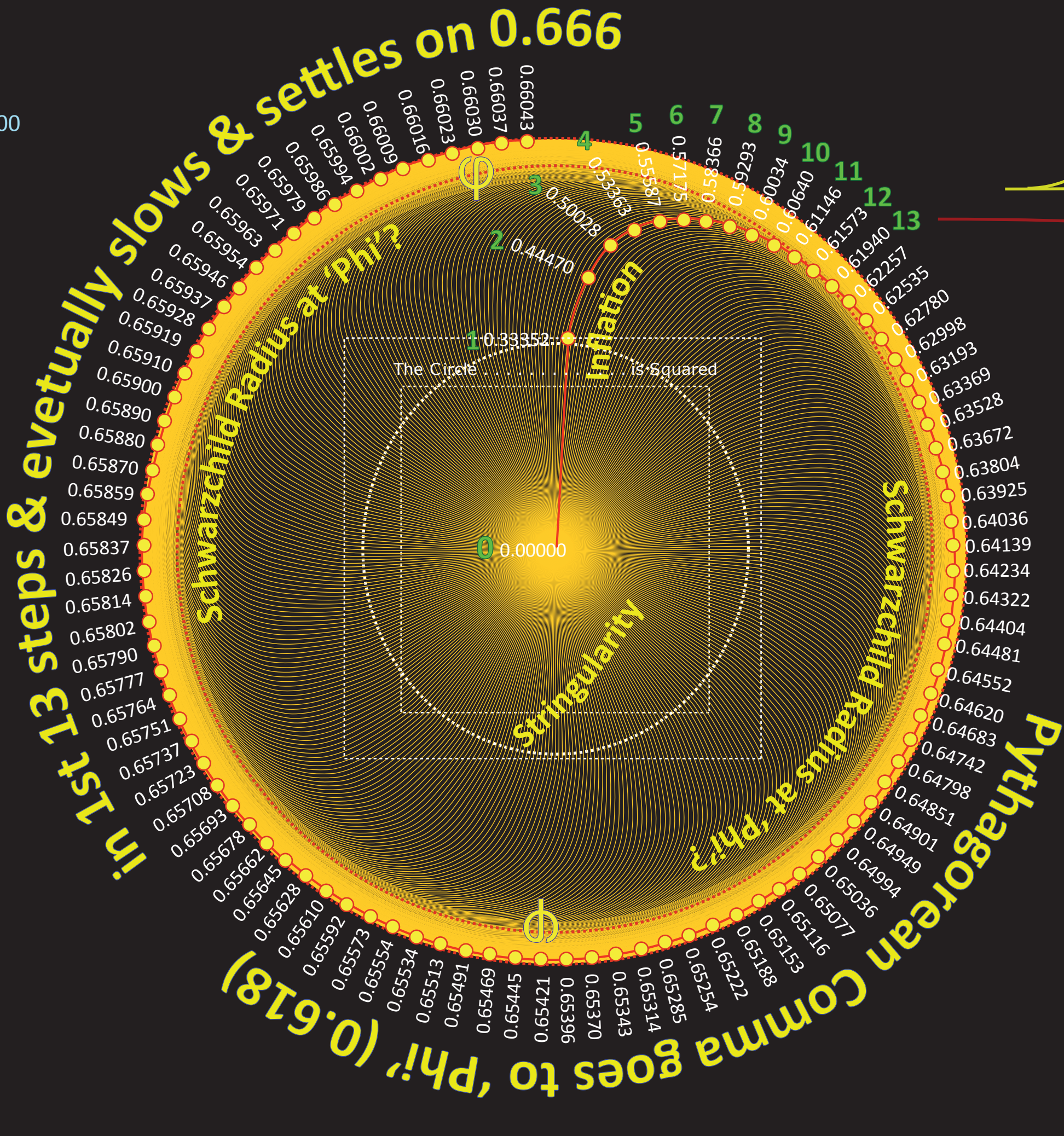
100.000 - 100.000 Hz = 0.000	1.000/1.000 = 1.00000
150 - 149.830 Hz = 0.1693	1.000/2.000 = 0.50000
225 - 224.492 Hz = 0.5076	2.000/3.000 = 0.66667
337.5 - 336.358 Hz = 1.1414	3.000/5.000 = 0.60000
506.250 - 503.968 Hz = 2.2816	5.000/8.000 = 0.62500
750.375 - 755.099 Hz = 4.2755	8.000/13.000 = 0.61538
1,139.063 - 1,131.370 Hz = 7.6917	13.000/21.000 = 0.61905
1,708.595 - 1,695.141 Hz = 13.4528	21.000/34.000 = 0.61765
2,562.891 - 2,539.841 Hz = 23.0489	34.000/55.000 = 0.61818
3,844.336 - 3,805.462 Hz = 38.8732	55.000/89.000 = 0.61798
5,766.504 - 5,701.751 Hz = 64.7521	89.000/144.000 = 0.61806
8,649.756 - 8,542.975 Hz = 106.7808	144.000/233.000 = 0.61803
12,974.634 - 12,800.000 Hz = 174.6338	233.000/377.000 = 0.61803

0.1693/0.5706 = 0.334
0.1693/1.1414 = 0.445
1.1414/2.2816 = 0.500
2.2816/4.2755 = 0.534
4.2755/7.6917 = 0.556
7.6917/13.4528 = 0.572
13.4528/23.049 = 0.584
23.049/38.8732 = 0.593
38.8732/64.7521 = 0.600
64.7521/106.7808 = 0.606
106.7808/174.6338 = 0.616

Pythagorean Comma inverts to Golden Section
Perfect/Well-Tempered 5ths; Pythagorean-Comma 0 to 174.6338 Hz
Fibonacci Series to Golden Section (0.618)

1 2 3 5 8 13 21 34 55 89 144 233 377

φ
⭐ 0.618 ⭐

For ultra-precise position of 'Phi' see: -
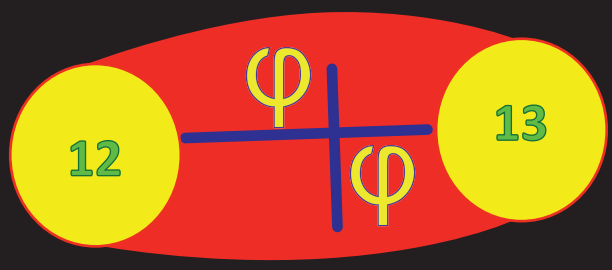http://www.gci.org.uk/images/Famous.pdf

The 'shape of the curve'

Axiomatic derivation of Inflation, Schwarzchild Radius,
Phi & Fine Structure Constant from the Pythagorean Comma
from 'Stringularity'   the '1st Law of Theoretical Physics'.

Not at odds with the basis of any science or of any religion & confirming Lao Tse.

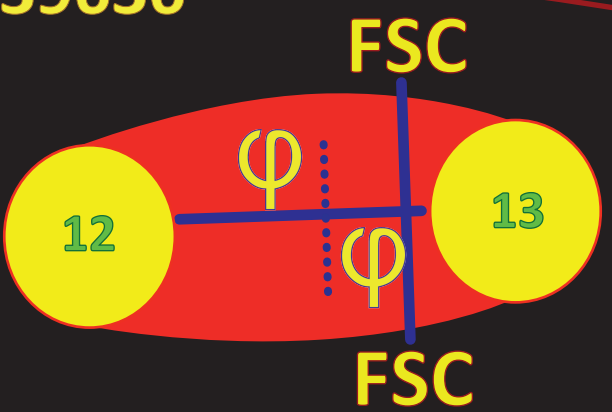'Phi' is between PC Steps 12 & 13 at 137.5079° or 0.61803

12 φ 13   http://www.gci.org.uk/images/King.pdf

0.61803   http://www.gci.org.uk/movies/Phi_Control.xlsx
http://www.gci.org.uk/images/Famous.pdf

0.61939636

12 φ 13
FSC
FSC

Feynman quotes FSC as 137.03597 or 0.61934452

in 1st 13 steps & evetually slows & settles on 0.666
Schwarzchild Radius at 'Phi'?
Inflation
The Clock
is-squared
0.33352
0.44470
0.50028
0.00000
Stringularity
Schwarzchild Radius at 'Phi'?
Pythagorean Comma goes to 'Phi' (0.618)

	Pythagorean Comma Stage 2	0.333521542		120°
	Pythagorean Comma Stage 12	0.615731358		
Golden Section	At Golden Section between PC 12 & 13	0.618033399		137.50797641°
Fine Structure Constant	**Pythagorean Comma Stage 12.99999**	**0.61934452**		**137.03597104°**
	Pythagorean Comma Stage 13	0.619396360		137.01731048°
	Pythagorean Comma Stage ~ 1700	0.666547204		240°

"I have often made the hypothesis that ultimately physics will not require a methematical statement, that in the end the machinery will be revealed, and the laws will turn out to be simple, like the chequer board with all its apparent complexities."

Richard Feynman

"It is my opinion that everything must be based on a simple idea. And it is my opinion that this idea, once we have finally discovered it, will be so compelling, so beautiful, that we will say to one another, yes, how could it have been anything different."

John Archibald Wheeler