

Multi-layer Cyclic Universe with number of layers $N = 12$

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Abstract

An attempt to construct a phenomenological cyclic 12-layer model of the universe.

$$e^0 = +1$$

$$e^{i\pi} = -1$$

$$1+2+3+4+\dots = -1/12$$

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The first multilayer cyclical models of the universe were presented by A. D. Sakharov in articles[1,2].

In authors phenomenology [3,4] some dates were given in favor of models of this type where the universe possibly subject of tangential cycle in articles[5,6,7,8,9,10].

We call such a model

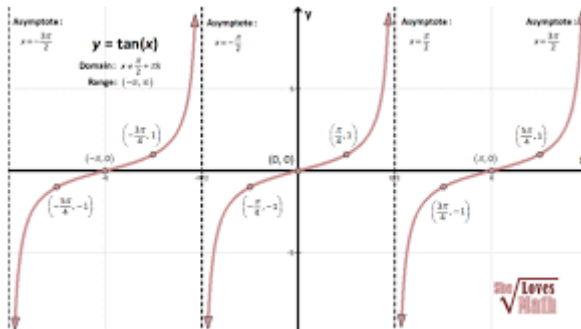
Numerological cyclic Universe. (NCC)

Space is represented by dimensionless numbers, (the vertical axis)

Time is represented by dimensionless angles(horizontal axis).

Period of variation $-\pi/2$ to $+\pi/2$. Pic1

Time in has an asymmetric nature and with each step time is compressed as we will show below. .



Pic.1

Notice next sequence....

arc tan 1=45deg. arc tan 2=63.43deg, arc tan 3=71.56deg, arc tan 4=75.96deg, arc tan5=78.69deg,
arc tan6=80.53deg, arc tan7=81.86deg. arc tan8=82.93, arc tan9=83.65, arc tan10=84.28deg,
arc tan11=84.80deg, arc tan12=85.23deg

Consider how the difference d (Δ) between these angles decreases with each step.

All numbers are degrees

$$d_1 = 63,43 - 45 = 18,43$$

$$d_2 = 71,56 - 63,43 = 8,13$$

$$d_3 = 75.96 - 71.56 = 4.4$$

$$d_4 = 78.69 - 75.96 = 2.73$$

$$d_5 = 80,53 - 78,69 = 1,84$$

$$d_6 = 81,86 - 80,53 = 1,33$$

$$d_7 = 82,93 - 81,86 = 1,07$$

$$d_8 = 83,65 - 82,93 = 0,72$$

$$d_9 = 84,28 - 83,65 = 0,63$$

$$d_{10} = 84,80 - 84,28 = 0,52$$

$$d_{11} = 85,23 - 84,8 = 0.43$$

Contraction of time d decreased from 18.43 to 0.43

The gap in degrees are compressed by an order of magnitude.

Attention should be paid to values of 18 degrees both in the case of elementary particles [3] and in the transition from the dimension $D=N_01$ to the $D=N_02$. Number of dimensions is $N=12$ [4]

Apparently 18 degrees is the angular unit of time in our epoch?

What does an angular measure mean? What is the meaning of an angle of 18 degrees?

Age of Universe 10^{17} sec, or 10^{-17} sec, time of life elementary particle.

What mean the same 18 degrees? Our epoch is the transfer from $D N_01$ to $D N_02$ and 18 deg is his Sign.

Other dimensionless quantity is redshift.

The redshift is an increase in the wavelength, and corresponding decrease in the frequency and photon energy, of electromagnetic radiation (such as light)

Maximum discovered redshift $Z=11.1$ Z of CMB are neglected. Paying attention to surprisingly often the numbers 11- 12 appears in our calculations, which is close to the maximum number $Z=11$. As we assume this is not a coincidence.

The value of a redshift Z , corresponding to the fractional change in wavelength (positive for redshifts),

And

by the wavelength ratio $1 + z$ (which is >1 for redshifts).

The correlation between redshifts and distances is required by all such

models that have a metric expansion of space. One interpretation of this effect is the idea that space itself is expanding. Consensus among astronomers is that the redshifts they observe are due to some combination of the three established forms of Doppler-like redshifts. Expansion of space is basic argument of Big Bang theory.

Alternative to the Big Bang theory is Static universe model, the density of matter in the expanding universe remains unchanged due to a

continuous creation of matter, thus adhering to the perfect cosmological principle, a principle that asserts that the observable universe is practically the same at any time and any place.

Let us return to our NSS cosmology and recall the time in it non-symmetric, or asymmetric, has different "density" (the term of the Russian astronomer Nikolay Kozyrev).

Consequently, the speed of light increases when time contracts. For example, if time contract to one order speed of light increases from 3×10^{10} cm/c to 3×10^{11} cm/c

Does the supporters of the static Universe are right? They see only abstract $Z= 1, Z = 2, Z = 3, \dots Z= 11$?

They actually see the only transitions from one dimension to another.

Again repeating:

The value of the proton mass [4] increases by an order of magnitude and transfer to other dimension.

Every step is hit for the next dimension. We have multi-layer space with difference 12 dimensions.

The proton mass increases with every next spatial step. Electron mass increases by e-fold law

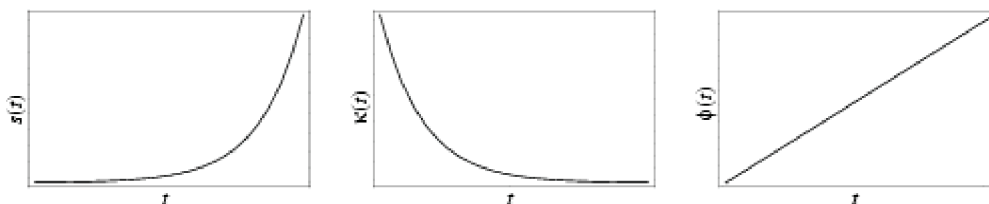
Accordingly, the hydrogen atom undergoes all changes and gradually changes its structure, as evidenced by

the complex structure of the levels of the hydrogen atom, as well as the existence [5] of the “electron future brothers”, the muon and the taon, and of course the second and third generation of quarks.

The cycle ends with a Big Bang, when the mass and charge of the proton and the electron become equal.

Only the neutron survives, which, due to the weak interaction and the appearance of the proton, electron and neutrino, gives birth to the next cycle of the Universe.

In conclusion, consider a table with 3 pictures, from left to right



Pic.2 Mass of Electron rising from 1 to 22 000

Pic.3 Time Deg.(delta) increasing from 18 to 1

Pic.4 Mass of Proton linear rising from N=1 to N=12 and reach to 22 000

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Consider some amazing numbers given by in the references:

- 1.Number of fundamental fermions 12. [8]
 - 2.Number of fundamental bosons 12. [8]
 3. Number of dimensions of space 12.[4]
 - 4.Maximum redshift Z=11.
 - 5.tan 18 deg =1/3 [3]
 6. Fundamental forces 3 : 1. Ratio 3:1 [9]
 - 7.ln1839=7.5, ln22050=10.00
10-7.5=2.5 7.5:2.5 =3:1 [4,9]
- All given numbers cannot be coincidence.

References

1. Sakharov A.D. // Letters ZhETF. 1967.Vol. 5, p. 32.
2. Sakharov A.D. // ZhETF. 1979, vol. 76, p. 1172.
- 3.<https://vixra.org/abs/1806.0382>
- 4.<https://vixra.org/abs/2107.0118>
5. <https://vixra.org/abs/2107.0108>
6. <https://vixra.org/abs/2107.0126>
7. <https://vixra.org/abs/2107.0142>
8. <https://vixra.org/abs/2111.0003>
9. <https://vixra.org/abs/0907.0008>