

THE RECIPROCAL INERTIA TIME AS THE ALPHA CONDITION FOR THE UNIVERSES
The final scaling for Genesis (the beginning of 2025)

Summary

In the previous papers, see ref's at 'introduction', to prove the eternal steady state of our cosmos based on the begin 'alpha' and end 'omega' condition, due to lack of physics insight, some misconception turned up. The onset of the time sequence for each of the WR/BH galaxies of the event horizon of 24 hrs was thought of at zero time of the 'Big Bang'. In this paper this is remedied. The sequence for the onset of the galaxies is derived to be after a precursor period of 4.29 hundred million years of the reciprocal inertia time, strongly slowing down the time cycle of angular momentum for dark matter. During the precursor period the overall energy of the twelve universes was involved. At the end of this cycle the separation into five symmetric opposing time directions generated the onset for the sequence of the galaxies from a Cartesian coordinate system for every time direction. The sixths paired time direction does not come in the scaling calculations. The expansion of our cosmos is the predetermined end condition of our steady state of the universes.

Par 1 Introduction

The physics for the jump transformation derived in [ref 1](#) and [ref 2](#) was wrongly assessed. Mainly for reasons of not understanding how the begin and end condition for this concept worked for the model of the eternal state of our cosmos. Firstly, one has to ask what does it mean, a jump transformation of $8640 = 5 \times 1728$ of which one hour in our reckoning transforms into 8640 years of delayed progress in time? It could mean, everything at the onset of the universes slows down considerably, determining dark matter generates enormous amounts of inertia. Probably because the conjugated neutron state of dark matter had to be triggered because neutrons are not affected by gravity generation by the external mediating medium of dark matter. Consequently gravity due to the group symmetry of dark matter separates into five pairs of opposing time directions for the ten universes. (The pyramid symmetry requires twelve universes). Since the angular momentum of dark matter is a consequence of forward acceleration into a time direction or the symmetric anti time direction. A second difficulty in understanding is the sequential release of WR/BH galaxies. The onset of a galaxy is supposed to begin in the formation of a super massive white radiator then converting into the black hole state. The sequential release of these tends to exceed the end condition of the steady state universes.

Comment Due to supposition of the equivalence equality in par 4, the 4th root of all the masses of the super massive white radiators is equal to the universe time of steady state, was needed to explain the cosmic background radiation, which tends to make this scaling exercise not scientifically correct. The strong point of this proof is that exact numbers are used, hopefully preventing scientific arguments. See par 5 for discussion.

Definition and discussion of the precursor model

According to the definition of the pseudo vector cells for dark matter adhere to a Cartesian coordinate system located in the centre of an equilateral pyramid 'time' frame. This frame connects to opposing crossing ribs, the phase space time axes consequently giving the onset to six paired opposing time directions due to the 'dark matter' acceleration of the pseudo vector components. These in the cubic symmetry exchanges continuously in position then breaking up in smaller pseudo vector parts maintaining group symmetry overall. This is of course a coarse impression of the 'mechanics' of decomposition for the inertia time interval.

Par 2 Discussion of the scaling relations

As a start, begin with the relation deriving the number of galaxies per universe ($27.7128 \times 10^6 \times 8640 = 3.913768 \times 10^{12}$) yrs giving $3.913768 \times 10^{12} / 27.7128 = 1.412266 \times 10^{11}$ galaxies. With $24\sqrt{4/3} = 27.7128$ hrs as the event horizon in hours where $\sqrt{4/3}$ is the maximum relativistic energy drive for the medium and due to the transformation of 8640 above from hours into years.

The ratio $3.913768 \cdot 10^{12} / 1.375941 \cdot 10^{10} = 284.4443 / 27.7128 = 10.26400$. It shows the correct relation between for both times, one enigmatic and the other the cycle time of the universes of 13.76 billion years and the ten universes had to be considered. With $(24^3 \times \sqrt{2} \times 6)^2 = 1.375941 \cdot 10^{10}$ yrs with the power of six for the number of paired time axes.

The factor $27.7128^6 = 4.529835 \cdot 10^8$ yrs, due to 8640 hrs into yrs, is still somewhat enigmatic and supposed to be the start for the 4th root reduction scaling together with the cycle time of the universes which is the following table.

	T_{un}	yrs	ratio	T_{rec}	reciprocal yrs
		$1.375941 \cdot 10^{10}$			$4.529835 \cdot 10^8$
Sq root		$1.173005 \cdot 10^5$			$2.12834 \cdot 10^4$
Cub root		2396.256			768 $(27.7128)^2$
4 th root		342.4916	$2.347628 = 2 \times 1.173815$		145.8882
		171.2458×2			$103.1585 \times \sqrt{2}$

Substitution product:

$$\begin{aligned} & 2.347628 / (171.2458 \times 145.8882) = 1 / 103.1585^2 \text{ yrs} \\ \text{Or} & 1.173815 \times \sqrt{2} / (171.2458 \times 103.1585) = 1 / 103.1585^2 \text{ yrs} \\ \text{As onset:} & (1.375941 \cdot 10^{10})^{1/4} / 16 = 171.2435 \quad \text{and} \quad (4.529835 \cdot 10^8)^{1/4} / 4 = 103.1585 \end{aligned}$$

Take the quadrate of:

$$\begin{aligned} 103.1585^2 &= 1.064167 \cdot 10^4 \times 1728 = 1838.882 \cdot 10^7 \text{ yrs} \\ &\text{The neutron block in yrs compared to the electron as a unit.} \end{aligned}$$

Again take the quadrate:

$$\begin{aligned} (103.1585^4 \times 1728)^2 &= 3.381485 \cdot 10^{14} \quad \text{The sq root for the reciprocal: } 5.438088 \cdot 10^{-8} \\ \text{Planck mass } m_{pl} &= 5.456035 \cdot 10^{-8} \text{ kg. Observed deviation } 5.45... / 5.43... = 1.003303 \end{aligned}$$

Take again the 2nd power of $(3.381485 \cdot 10^{14})^2 = 1.143444 \cdot 10^{29}$

$$\begin{aligned} &\text{The electron rest mass of } 9.1094 \cdot 10^{-31} \text{ kg} \quad \text{Reciprocal } 1.097767 \cdot 10^{30} \text{ defined as} \\ &\text{as inertia kilograms. Ratio } 1.097767 \cdot 10^{30} / 1.143444 \cdot 10^{29} = /9.600530 \\ \text{Compare } 9.600530 &\text{ to } 9.727806 \text{ from relation } m_{pl}^4 = M^3 m_e \quad M^3 = 9.727806 \text{ kg}^3 \text{ (cube)} \\ &\text{Ratio } 1.013257. \text{ Compare } 1.031585^3 = 1.097779 / 1.097767 = 1.000011 \text{ deviation observed to} \\ &\text{electron. The hour to kilogram equivalence is in par 4.} \end{aligned}$$

Comment Why are the stable atomic parameters shown in the scaling? Without the reciprocal of the jump transformation of 8640, these cannot be understood as the reciprocals of Planck's mass or electron.

Consider the inertia conversion $1 \text{ sec} = 8640 / 3600 = 2.4 \text{ yrs}$. Take 4 times giving 9.6 yrs and compare to the 10 time directions of the ten knowledgeable universes, the twelve does not come in the scaling calculations.

$$\begin{aligned} \text{So } 10 / 9.6 &= 1.041666 \text{ while the genuine metric deviation of time is } 8766 / 8640 = 1.014583. \\ \text{Above } 9.600508 / 9.6 &= 1.000052, \text{ although this real deviation is neglected in the following.} \\ \text{Further note that } 1.041666 &= 1.020620^2 \text{ with the ratio } 1.020620 \text{ related to the genuine pyramid} \\ \text{deviation. The pyramid height is divided into four equal nodes: } 5 / 1.020620 &= 4.898982 \text{ with} \\ \text{reciprocal } 0.204124 &\text{ as the node.} \end{aligned}$$

Now again 9.727806 to be boxed in:

$$\begin{aligned} 10 / 9.727806 &= 1.027981 \text{ and } 9.727806 / 9.6 = 1.013313^2 = 1.026803 \\ \text{giving an exact ratio: } & 1.001146 . \end{aligned}$$

Show that the factor $1.173815 = 1.016552 \times \sqrt{4.3}$ will become $\sqrt{4/3}$.

The nominator value of $2.347628 = 1.016552 \times 2 \times \sqrt{4/3}$. So to show that the cycle time of the universes is not correct, this number of 1.375941×10^{10} yrs has to be divided by the factor $1.016552^4 = 1.067870$ then the nominator becomes exactly $2 \times \sqrt{4/3} = 2.30940$ with $m/m_0 = \sqrt{4/3}$ and $\beta = 1/2c_{\text{eff}}$ the effective momentum of the maximum velocity of the mediating dark matter. In that case the above substitution product stays the same as 103.1585 because the factor 1.016552 comes also in the denominator while the nominator is 2.3094. So the cycle time has to be divided by 1.067870 to keep the new substitution product.

Having found the parameter 1.067870, find the link to the integer 1836 of the proton:

1.062500×1728 . With $1.067870 / 1.062500 = 1.005054$ and $1.067870 / 1.063167 = 1.004423$
 With ratio 1.000628 and the H atom of $1837.153 m_e$. $1837.153 / 1728 = 1.063167$
 Take the square root of $1.067870 = 1.033380$. Then $1.033380^3 = 1.103513$ and $(144/137.036 = 1.050818)^2 = 1.104218$, ratio 1.000639. The internal ratio of the fine structure constant of the electron.

Take again from above the mass energy of $M^3 = 9.727806 \text{ kg}^3$. The cubic root gives

$M = 2.134707 \text{ kg}$. Divide by two giving 1.067353 to be compared to 1.067870 with deviation 1.000483. This should explain the necessity of the parameter 1.067860 because M turns up
 In the conjugation exchange of the coherent degenerated matter of the hollow black holes.

[Ref 2](#)

Derivations for the jump transformation:

1 hr = 8640 yrs where 8766 yrs is the real time metric, deviation 1.014583. Then define the genuine time interval. The 1 sec = $8640 / 3600 = 2.4$ yrs. One year is 3.155760×10^7 sec giving $2.4 \text{ yrs} = 7.573824 \times 10^7$ inertia seconds. Or one second represents 7.574 kg of dark matter energy or rest mass. Or one real second is $2.4 / 1.014583 = \underline{2.365503}$ yrs

Consider the momentum uncertainty for the electron: $m_e \lambda_e = h / c = 2.2105 \times 10^{-42} \text{ [kg m]}$

For the old data: $h = 6.626176 \times 10^{-34} \text{ [kg m/sec]}$ $c = 2.9979245 \times 10^8 \text{ m/sec}$

	(old)	$h/c = 2.21245 \times 10^{-42}$	(new)	2.2105×10^{-42}
The 4 th root		$(3.855765 \times 10^{-11})^3$		$(3.855872 \times 10^{-11})^3$ and cubic power
Reciprocal		1.744489×10^{31}		1.744343×10^{31}
Recip. electron		1.097767×10^{30}		1.097767×10^{30}
Ratio		15.89125		15.88992
Mean				15.89058

Take the square root of 2.365503 is 1.538019 making $15.89058 / 1.538019 = 10.31585$

Compare 1.031585 to $1.033380 = 1.016552^2$. Both should be independent from each other.

Meaning the division by 10 as the integer for the separation into ten universes, seems correct. Also compare the nominator in the table above of 2.347628 with the metric time inertia of 2.365503.

Deviation $1.007614 = 1.002531^3$ and 1.002531 close to genuine Monster deviation (1.002453)

Par 3 Substitution product scaling. The roots for 103.1585 of the square power in above table

As the above three derivations of scaling show, Planck's mass, the electron rest mass and the h/c constant, these are directly related to the inertia reciprocal time interval. However the substitution product of both time scales at the onset inspires to derive the mass ratios with respect to the electron as the heavy unit, ten times normal.

Following now, are all examples:

Take $(2.3094 = 2 \times \sqrt{4/3}) / 103.1585 = 1/44.66891$ $\sqrt{1728} = 41.56921$
 Ratio 1.074569 with $(4/3)^{1/4} = 1.074569 = \underline{2.481607} / 2.3094$
 giving the confirmation.

The heavy electron

$2 / 103.1585 = 1 / 51.57925$ subtracted with 41.56921 gives 10.01004 supposed to be the electron rest mass by the 10 for the ten universes. Dev. 1.001004

With $2.000389 / 103.1585 = 1 / 51.56921$ the heavy electron is exactly 10 times heavier.

$\underline{2.481607} / 103.1585 = 1 / 41.56921$ making $\underline{2.481607} / 2.000389 = 1.154475$

$\sqrt{4/3} / 1.154475 = 1.000194$

The factor ten again, multiply 41.56921 and 51.56921 by 103.1585 and

$103.1585^2 = 1.064167 \cdot 10^4$:

	51.56921	5319.802	5.487828 10^5
	41.56921	4288.217	4.42366 10^5
Subtract	10.0	1031.585	1.064160 10^5

Divide by respectively 103.xx or $(103.xx)^2$ then it results in the 10-factor.

Derive the twelve parameter for $12^3 = 1728$, for it seems that the quark block is fundamental for the reciprocal inertia time. Reciprocal of $\sqrt{12} = 0.288675$.

$0.2886751 / 103.1585 = 1 / 357.3515$ $357.3515 / 103.1585 = 3.464101 = \sqrt{12}$

With $\sqrt{12} = 3 \sqrt{4/3}$ and $\sqrt{12} \times 103.1585 = 357.3515$

The quark block of 1728 and proton integer of 1836 to electron unit:

$0.05969820 / 103.1585 = 1 / 1728$ $(1 / 0.05969820 = 16.75092) / 16 = 1.046932$

$0.05446623 / 103.1585 = 1 / 1836$ $(1 / 0.05446623 = 17.79785) / 17 = 1.046932$

Also $17.79785 - 16.75092 = 1.04693 / 1.046932$ (or 1) = 1.000003 giving the electron as unit.

Find $108 = 1836 - 1728$ multiply respectively by 103.1585:

$(1.893990 - 1.782578) \cdot 10^5$ Ratio: 1.062500 as expected.

Subtract and multiply by 1.046931 (or 2):

$1.114120 \cdot 10^4 \times 1.046932 = 1.166407 \cdot 10^4 = 108.0003^2$

Subtraction can give small deviations to the ratio of the powered numbers.

Pseudo τ - scaling and multiply by 103.1585 :

$3.011135 / 103.1585 = 1 / 34.259$ $3534.107 / 3.011135 = 1173.679$

$3.0 / 103.1585 = 1 / 34.38618$ $3547.225 / 3.0 = 1182.408$

Subtract: 8.7287 dev. to 9 gives 1.031081 quadrate:

$1.063129 \times 1728 = 1837.09$ (H atom)

Cross multiplication: $3534.107 / 3 = 3547.225 / 3.011135 = 1178.035$

Deviation: $3.011135 / 3 = 1.003711$

Paired τ -pseudos

$1.5 / 103.1585 = 68.77233$ $1.505567 / 103.1585 = 1 / 68.518$

$2.3094 / 103.1585^2 = 1 / (67.88212)^2$

End cap scaling

$(1 / 17.79785) / 103.1585 = 1 / 1836$ (17 triplets internally)

$(1 / 17.81724) / 103.1585 = 1 / 838$ $18 / 17.81724 = 1.010257^2 = 1.020619$

Again resulting in the genuine pyramid deviation

As a rule, any substitution scaling of atoms or subatomic particles cannot be changed by the substitution product of 103.1585 hrs given above. As an example Higgs' scaling:

$1 / 137.036 - 1 / (2 \times 1728) = 1 / 142.6940$

Set these parameters up for 103.1585:

$(0.7527839 - 0.029847) / 103.1585 = 0.722937 / 103.1585$

With Higgs' energy of $142.6940 \times 1728 m_e = 126 \text{ GeV}$

Conclusion

By these reciprocal calculations it becomes clear that if no integers due to the symmetry group condition are involved then the whole of all above scaling calculations cannot become a reality. All the

deviations by dividing by 103.1585 can only be adapted by an intermediate medium taking care of these deviations with respect to the integer states for the internal dynamics of the atoms.

Par 4 Optimisation of the universe end time

The mass for all WR/BH galaxies is $4.4587 \cdot 10^{41}$ kg multiplied by ten due to the ten universe. Take the 4th root giving $2.584046 \cdot 10^{10}$ kg. Divide the guessed universe time of $1.375941 \cdot 10^{10}$ yrs by the derived parameter of 1.067870 giving $1.288491 \cdot 10^{10}$ years.

Then subtract to get the time interval of $(1.375941 - 1.288491) \cdot 10^{10} = 8.74499 \cdot 10^8$ yrs

Compare to $4.529835 \cdot 10^8$ as the reciprocal inertia time interval.

Divide by $8.74499 \cdot 10^8 / 2 = 4.372484 \cdot 10^8$ making $4.529835 / 4.372484 (10^8) = 1.035984$

While $2.584046 \cdot 10^{10} / 2 = 1.292028 \cdot 10^{10}$ kg giving a ratio of $1.292028 / 1.288491 (10^{10}) = 1.002745$.

The factor 2 is due to the momentum of $\frac{1}{2} c_{\text{eff}}$ of the mediating dark matter medium.

The ratio $1.035984^2 = 1.073263$ smaller than 1.074569 giving 1.002745 and close to 1.002453, the genuine Monster deviation which invites further calculations.

Equivalence conjecture

What can be deduced from this scaling is that the inertia time of the 4th root of the WR/BH is in mass energy of kilograms, equivalent to the evolving time of dark matter solely for all the galaxies in a universe. Namely 12.9 billion kilograms are equivalent to years, it is the new omega condition interval for the steady state which seems to be also the cycle time of dark matter.

Playing with the factors 1.067870 and the 1.002453 to optimize

Repeat above with $1.292028 \cdot 10^{10}$ kg is the fixed number. $1.067870 / 1.002453 = 1.065225$

Divide $1.375941 \cdot 10^{10} / 1.065225 = 1.291690 \cdot 10^{10}$ hrs and subtract giving the interval $8.425051 \cdot 10^8$, divide by 2 gives $4.212525 \cdot 10^8$ and the ratio $4.529835 / 4.212525 (10^8) = 1.075325$ with $1.075325 / 1.074569 = 1.000703$.

Take a different universe time $1.379316 \cdot 10^{10}$ yrs due to multiplying by 1.002453.

Divide by 1.067870 gives $1.291651 \cdot 10^{10}$ yrs. Subtract $8.766422 \cdot 10^8$ then divide by giving $4.383211 \cdot 10^8$ making $4.529835 / 4.383211 (10^8) = 1.033451^2 = 1.068021$ gives less than 1.074569.

The new factor 1.065225 and the universe time of $1.375941 \cdot 10^{10}$ yrs seem to be the choice because $1.075325 > 1.074569$. The 4th root of 1.065225 is 1.015921. Compared to the above paragraph the factor of 1.015921 does not affect the substitution product of $(2.3094 / 103.1585^2)$ because the ratio 1.015921 comes in both nominator and denominator.

Now the educated guess, because of the fine structure ratio of $144 / 137.036 = 1.050818$ within the electron, is fundamental, and determines that the product can be $1.067870 = 1.016227 \times 1.050818$. making $1.016227^4 = 1.066505$. Re do the above calculation:

$1.375941 \cdot 10^{10} / 1.066505 = 1.290140 \cdot 10^{10}$ yrs subtract $8.580084 \cdot 10^8$ yrs

Divide by $4.290042 \cdot 10^8$ $4.529835 / 4.290042 (10^8) = 1.055895$

Dev.1: $1.292028 / 1.290142 (10^{10}) = 1.001463$ Dev.2: $1.055895 / 1.050818 = 1.004831$

Compare the relation to fundamental quark block of $1728 m_e$:

$1836 / 1728 = 1.062500$ dev. $1.066505 / 1.062500 = 1.003769$

Compare to dev. 2: $1.004831 / 1.003769 = 1.001057$

Compare to $\sqrt[4]{3}$ as total turnover for 1.074567:

$1.154700 / 1.055895 = 1.030266^3 = 1.093575$

$1.030266^2 = 1.061448 \times 1.001057 = 1.062569 / 1.062500 = 1.000065$

Further $1.003769^2 = 1.007553 = 1.002511^3$ $1.002511 / 1.002453 = 1.000058$

From the above options for the omega age, which is the correct one? The scaling with the factor 1.065225 looks likely but is not correct, for in the sense of physics, the electron as the rest mass unit

had to appear first before gravity could be triggered according to the weak gravity condition. Therefore the scaling for the factor 1.066505 is the correct one given in the last calculation as is shown. The 2nd consideration is that because 1.075325 is greater than $(\sqrt{4/3})^{1/4}$, all dark matter is contained in itself as a group symmetric block which has not been subjected to time symmetry. Time symmetry is the paramount requirement from which a tiny qubit might be deviated. See [ref 3](#) 'Planck photon scaling by giant symmetry numbers'. Namely, the photon contraction to separate the block of self contained dark matter group symmetry.

Final conclusion for the alpha and omega conditions of steady state

The at first instance plausible idea of 12.9 billion years for the cycle time of dark matter, suggests a to be reiterated. Namely 4.29 hundred million years should be the precursor of the reciprocal inertia time of dark matter while 12.9 billion years is the time interval and cycle time per universe of our time reckoning. So the precursor period as reciprocal inertia time plus the 12.9 billion period makeup the age of the steady state cosmos. Then it is possible to define the alpha period as the precursor while omega is the steady state period of our cosmos.

Par 5 Discussion of the used method for the proof

In the paper of [ref 1](#) Reciprocal transformation of the alpha and omega condition' the problem of the compressed volume in which the sequence of released WH/BH galaxies was treated, gave some insights but was not scientifically correct. Further, make a distinction between genuine and observed deviations. Namely, here the most calculated deviations are genuine except the observed ones such as Planck mass, electron and the uncertainty ratio (h/c).

From the equivalence conjecture follows that the used calculation procedure for the 4th root is consistently applied. However the conjecture can be resolved by a common shared space for all the galaxies released in time sequence. Apparently in ref 1 the time sequence for release was converted into cubic spatial space for dark matter supposedly under group symmetric consideration. Similarly one can take the interval of 12.9 billion yrs by taking the 3rd root. The mass density between 3D space in years is expressed by the conjecture resolving the problem of the cosmic background radiation for the steady state model of the universes.

Amazingly, the Dev 1 of 1.001463 above represents the mass density of 1.001463 kg per cubic metre which compares to 'air density'. The exchange volume is a cube of 2345.4 cubic light years and this is close to the one derived in [ref 1](#) of 2398 lyrs.

The onset of the cubic volume of 2345 light years is supposed to be at the end of the 4.29 hundred million period. Further realize that the 24 hours event horizon of the galaxy super massive black holes is reckoned at our present-day time scale together with the cycle time of these BH's of $7 \times 24 = 168$ (about 6×27.7128) hours. To figure out these numbers for the reciprocal inertia time scale is not straightforward due to nonlinearity leaving this exercise to the interested student.

[Ref 1](#) The reciprocal transformation between alpha and omega condition. etc.

[Ref 2](#) Genesis completed! The steady state universes.

[Ref 3](#) Planck scaling by giant symmetry group numbers.