

EXERCISES ON DARK MATTER MEDIATION FOR THE SOLAR PARAMETERS

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Abstract (overview)

The magnetic flux constant C_H based on Hartree potential of the H atom (*ref 1*) converted to the mediating mass of dark matter, is used to determine the momentary magnetic energy balance of the sun in which all atoms (proton to electron by dm) of the Sun's macro mass are contributing to Lamb's shift parameters of $\Delta\lambda = 5.1 \cdot 10^{-7}$ m at a quantum step of $5.87 \cdot 10^{-7}$ eV. The result of the balance gives a discrepancy of the summed input energy of all the atoms to the output one of magnetic coherent energy of the contributing magnetic flux strings of 21 cm suggesting the discrepancy to be a ratio of $4/3 = (\sqrt{4/3})^2$. In the sense of physics it means that the angular momentum in coherence of the atoms to the dark matter medium complies to $\frac{1}{2} c_{\text{eff}}$ due to the pseudo cell maximum acceleration up to $\frac{1}{2}\sqrt{2}c$. The other relativistic part of $(m/m_0) = \sqrt{4/3}$ is apparently needed to maintain the coherent magnetic state.

Continuation abstract, overview

The previous articles in *ref 1*, *ref 2* and *ref 3* served as preparation to apply Sakharov's induction law as a mediation medium, ultra fast and ultra light, of dark matter to Sun's gravity condition and parameters.

The momentary energy balance for all atoms in the exchange of the Lamb state shows that the substitution induction principle can be applied as a means of dynamic gravity generation by dark matter mediation. Further it can be shown that the energy balance is independent of the number of atoms of any kind.

In par 2 a second calculation is setup, an induction momentum equality is explored. At one side of the equality the number of mediating mass in coherence undergoes radial gravity at the sun's outward radius which is converted into angular momentum subjected to the square root wavelength of the event λ of the sun as rotation frequency. The contributing mediating atoms to gravity determine a rigid dark matter radius which corresponds to outward radius, here specifically for the sun. But in other situations, not Sun related, the rigid dm rotor can be smaller than the outer radius. This was the importance of the set up. Further the number of contributing atoms in this set up can change due to the decoupling of coherence either by the ionisation of the atoms or the escape velocity. All in all, especially due to the Sun's conditions, the ratios in momentum or energy with respect to the radial contributing number of atoms corresponded to the induction restrictive parameters of the dark matter medium. These ratio constants could have never been discovered without the specific state of the Sun's gravity. By educated guess these ratio constants determined two dynamic states of gravity generation by the exchange of three rigid rotors of dark matter maintained by cells of magnetic strings. Par 2 worked out these equality considerations.

In par 3 the dynamic gravity process is defined and explained but not derived or proven. See therefore (*ref 4*)

*Par 1 The magnetic flux string energy balance for solar parameters**1.1 Calculation of the magnetic energy flux constant C_g*

Set up the classic energy balance in magnetic for the H atom giving the constants for conservation in flux for the two situations.

$$\frac{1}{2} m_m m_e v^2 4\pi 10^{-7} = B^2 \pi a_0^2 \lambda$$

Bohr's radius $a_0 = 5.3 \cdot 10^{-11}$ m rotation velocity v magnetic induction B

Length of flux tube λ : λ_g self conjugation photon length $5.1 \cdot 10^{-7}$ m.

Vacuum permeability $\mu_0 = 4\pi 10^{-7}$ mass ratio mediation $m_m = 251$ and $m_e = 9.109 \cdot 10^{-31}$ kg

Calculate v : $2\pi a_0 = h / (m_e v)$ $v = 2.2 \cdot 10^6$ m/sec $(h/2\pi) = 1.054 \cdot 10^{-34}$ joule /sec

Flux constant C_g for m_m and λ_g : $C_g = B^2 \lambda_g = 7.88 \cdot 10^{-26}$

Comment: Other options for C_g were explored such as $C_f = 7.88 \cdot 10^{-26} / 251 = 1.31 \cdot 10^{-28}$ but not further considered here.

1.2 Exercise 4. The overall energy balance

Calculate the momentary magnetic field B under average conditions of the geometric mean for the line density of N at/m. Use Hydrogen as medium for the solar mass. Discovery of the 21cm magnetic flux strings.

Data of Sun:

$R_o = 710^8$ $R_g = 4.43 \cdot 10^8$ m gyration radius rotation 25.4 dd per turn
Mass $2 \cdot 10^{30}$ kg.

Calculate the gravity at R_o and G universal: $6.75 \cdot 10^{-11}$ m³/kg

$g(R_o) = 6.75 \cdot 10^{-11} \times 2 \cdot 10^{30} / (7 \cdot 10^8)^2 = 276$ kg m/sec²

Number of atoms in Sun: $N = 2 \cdot 10^{30} / 251 \times 9.109 \cdot 10^{-31} = 8.75 \cdot 10^{57}$ at.

For self conjugation use the Lamb shift condition:

$5.87 \cdot 10^{-6}$ eV $\lambda(\text{begin}) = 5.1 \cdot 10^{-7}$ and $\lambda(\text{end}) = 0.211$ m.

Geom. mean: $\sqrt{(5.1 \cdot 10^{-7} \times 0.211)} = 3.28 \cdot 10^{-4}$ m

magnetic density: $n_g = 1 / (3.28 \cdot 10^{-4})^3 = 2.83 \cdot 10^{10}$ tubes /m³

Representing the number of atomic magnetic tubes with length λ over a cross section of λ^2 inverted into a cubic meter.

Take: $C_g = 7.88 \cdot 10^{-26} = B^2 \lambda_g$ as the energy balance of the magnetic field at length λ_g of the flux tube.

The contributing atoms for conversion: $3.28 \cdot 10^{-4} / 5.1 \cdot 10^{-7} = 643$ atoms.

The number of atoms to keep the magnetic field constant has a energy density:

$8.75 \cdot 10^{57} \times 5.87 \cdot 10^{-6} \times 1.602 \cdot 10^{-19} / 1.437 \cdot 10^{27} = 5.726 \cdot 10^6$ Joule/m³.

Volume: $4/3\pi R_o^3 = 1.437 \cdot 10^{27}$ m³ electric charge: $1.602 \cdot 10^{-19}$ Coulomb

The magnetic field at $n_g = 2.83 \cdot 10^{10}$ tubes /m³: $\sqrt{(7.9 \cdot 10^{-26} / 2.83 \cdot 10^{10})} = 1.67 \cdot 10^{-18}$ Tesla/ m³.

The number of contributing atoms: $8.75 \cdot 10^{57} / 643^3 = 3.29 \cdot 10^{49}$

Number of atoms contributing to the magnetic density: $3.4125 \cdot 10^{49} / 1.437 \cdot 10^{27} = 2.29 \cdot 10^{22}$ at/m³

Magnetic density: $2.29 \cdot 10^{22} \times 1.67 \cdot 10^{-18} = 3.825 \cdot 10^4$ T/m³

Conversion in to energy: $(3.825 \cdot 10^4)^2 / 4\pi \cdot 10^{-7} = 1.164 \cdot 10^{15}$ J/m³

Consider that the magnetic energy is quadratic, so we lack a volume factor of 643^3 .

Making: $1.164 \cdot 10^{15} / 643^3 = 4.38 \cdot 10^6$ J/m³

The self conjugation has to be equal to the one of the magnetic energy density, ratio:

$5.726 \cdot 10^6 / 4.38 \cdot 10^6 = 1.31$ which is discussed further on.

Check above calculation:

First limit, one dm atom generates flux tube:

$5.1 \cdot 10^{-7}$ m: n_g is reciprocal of $(5.1 \cdot 10^{-7})^3 = 7.54 \cdot 10^{18}$ per m³

$\sqrt{(7.9 \cdot 10^{-26} / 7.54 \cdot 10^{18})} = 1.022 \cdot 10^{-22}$ T/m³ atomic density: $6.09 \cdot 10^{30}$ at/m³

Magnetic field density: $6.09 \cdot 10^{30} \times 1.022 \cdot 10^{-22} = 6.23 \cdot 10^8$ T/m³

In energy: $3.09 \cdot 10^{23}$ J/m³

Second limit, maximum number of dm atoms contribute to the flux tubes:

0.211 m n_g is reciprocal of $(0.211)^3 = 106.4$ per m³

$\sqrt{(7.9 \cdot 10^{-26} / 106.4)} = 2.724 \cdot 10^{-14}$ T/m³ number of contributing atoms:

$0.211 / 5.1 \cdot 10^{-7} = 4.137 \cdot 10^5$ $(4.137 \cdot 10^5)^3 = 7.08 \cdot 10^{16}$ atoms

Magnetic density: $6.09 \cdot 10^{30} / 7.08 \cdot 10^{16} = 8.60 \cdot 10^{13}$ at/m³

$8.60 \cdot 10^{13} \times 2.724 \cdot 10^{-14} = 2.34$ T/m³

In energy $B^2/(4\pi \cdot 10^{-7})$: $4.37 \cdot 10^6$ J/m³

The magnetic field density is generated by $7.08 \cdot 10^{16}$ atoms while $8.60 \cdot 10^{13}$ dm atoms maintain the energy in a cubic metre. Therefore the calculation with the geometric mean is correct by taking the geometric mean of 1st and the 2nd limit.

What can be learned is that for gravity generation only the 2nd limit (21 cm magnetic flux strings, eventually in parallel or coherence) for the maximum of contributing atoms to the electromagnetic energy, is of relevance. Internally in a macroscopic mass the dm cells drive to the maximum of acceleration collisions in exchange to H atoms hardly without much dissipation.

The ratio of $5.726 / 4.38 = 1.31$ points to $4/3 = 1.1547^2$ gives an error in the calculation of 1.7 % for the 2nd limit. The work done to generate the magnetic energy can only be explained by the one factor of 1.1547 for the self conjugation of the electrons in the H atoms. The second self conjugation can be explained by the angular energy as is shown in exercise 5.

Check for a different $N = 8.75 \cdot 10^{57}$ at by taking $8.75 \cdot 10^{56}$ at. It shows that due to the quadrate in B for the energy the choice of the mass for the dm atom is correct.

Comment: Redo exercise 4 for $N_0 = 2 \cdot 10^{30} / 1837.153 m_e = 1.195 \cdot 10^{57}$ H atoms and $C_8 = 7.325 \times 7.9 \cdot 10^{-26} = 5.77 \cdot 10^{-25} = B^2 \lambda$. The ratio of 1.31 in input/ output for B does not change. Only the separate values change slightly. Still exercise 10 shows the correctness of N_0 for dm atoms because the angular momentum due to gravity determines an absolute number of dm atoms.

Comment 2021 The *powerful end conclusion* is that the atomic number of $6.09 \cdot 10^{30}$ in fact drops out in the above calculation making the static energy ratio an absolute constant for gravity coherence. So a density of one kg/m³ represents also the potential static ratio of conjugated coherence for a whole star or planet which is a typical dark matter feature used in chap 2 par 4.1 to show the sole validity of the magnetic equality for ($C_g = B^2 \lambda_g$) of the mediation medium. The analysis of the ($C_g = B^2 \lambda_g$) equality for $R_{med}(Z)$ is tricky and does not agree to the λ_g range of $5.1 \cdot 10^{-7}$ to 0.211 m by placing the factor R_{med} or the reciprocal in front to of this range to generalise it for any Z atom. It makes this product unrealistic. So the statement that Hydrogen or the generalised proton of the Z atom is the only state 'known' to the dark matter medium is the powerful supposition. In exercise 10 this reasoning reappears again making the above correct again. See (ref 1)

1.3 Exercise 5

Compare the angular momentum balance macroscopically and atomically

Guessed for the induction rule of the dm medium:

Angular momentum $b = m g \lambda$ and work $\lambda g = \frac{1}{2} c^2$ with $m \lambda = h/c$ gives $b = g h/c$

Macroscopic per atom: $b = R_0 M / 8.75 \cdot 10^{57} = 7 \cdot 10^8 \times 2 \cdot 10^{30} / 8.75 \cdot 10^{57} = 1.60 \cdot 10^{-19}$ kg m

Apply above: $b = g(R_0) h/c$: $b_a = (276 \times 2.21 \cdot 10^{-42} = 6.1 \cdot 10^{-40}) 8.75 \cdot 10^{57} = 5.34 \cdot 10^{18}$ kg m

One is the reciprocal of the other: $1/5.34 \cdot 10^{18} = 1.874 \cdot 10^{-19}$ kg m.

Meaning valid for any angular velocity between these because this velocity is ignored in the calculation.

The important ratio: $1.874 \cdot 10^{-19} / 1.60 \cdot 10^{-19} = 1.17$

Which parameter is missing? $m/m_0 = 1.154700$ dev.: $1.17 / 1.1547 = 1.4 \%$

Check for different $N = 8.75 \cdot 10^{57}$. Consequently, discover that $(7 \cdot 10^8 \times 2 \cdot 10^{30})$ is the reciprocal of $6.1 \cdot 10^{-40}$ giving the ratio of 1.17 and that all is independent of the mass or number of the atoms.

Now stick to the calculation above for reasons that with $N = 8.75 \cdot 10^{57}$ dm atoms this result complies to exer 4 energy wise.

Check for a different $g = 2.76$ m/sec² giving $R_0 = 7 \cdot 10^9$ m, mentioned in exer 10.

Then $b = g (h/c) = 6.1 \cdot 10^{-42}$ kg m and $R_0 M = 1.4 \cdot 10^{40}$ kg m. Product ratio 11.7. The ratio of 1.17 is only valid if the dark matter radius of $R_{dm} = R_0 = 7 \cdot 10^8$ m worked out in exer 10.

One angular momentum is the reciprocal to the other which means in the sense of physics two momentum states are possible over a time interval in between. And also was it shown that the physics process of self conjugation for gravity derived in chap 3 par 5 and 6, is correct. The quantum dark matter polarisation around the H atom, also valid for any other atom, is a consequence of the relativistic interaction with the electron which passes the $\sqrt{4/3} = 1.1547$ during the self conjugation on the pseudo medium. Hence the conversion of angular momentum to which all dm atoms are subjected. The alternating conversion is a continuous dynamic and each atom in the macro mass is subjected to it.

Comment and discussion about exercise 4 and 5

What is wrong in these calculations? The answer is simple, these treat gravity and therefore the intermediate medium as static or momentary constant in time while it is a dynamic process. In exer 4 one does not a division of n_g in the relation for C_g which apparently gives the right answer, the reason why it was worked out elaborately. In the real situation of inertia atoms the number of atoms contributing to the magnetic field is proportional to the B-value which procedure is also followed in the exercises 9 to 10. Like in exer 4 the reason is that all dm atoms have to contribute in self conjugation of the electron which again has nothing to do with the number of inertia atoms although there is a constant ratio of 7.325 for the H atom. In that manner it suggests that the other atoms are 'seen' by the dark matter as generalised protons with an effective mass of the electrons.

1.4 End conclusion

The macroscopic angular momentum complies to the hypothesis: $M g^* R_{dm} = \sqrt{4/3} = 1.154700$ in which $g^* = 1 / (g h/c)$ is the reciprocal of $g(R_o)$. It means that angular momentum is converted in to work and vice versa. For the present-day Sun $R_{dm} = R_o$ as discovered in exer 10. Otherwise $R_{dm} < R_o$ and for Earth $R_{dm} > R_o$ explaining above analysis of the calculations.

Par 2 Radial gravity equality to angular momentum of solar parameters

2.1 Exercise 10 The internal generation of gravity in the Sun

Show by applying the substitution principle that the angular momentum constitutes two double rotations one for $\lambda = 54.8$ and one for $\lambda = 38.7 \times 1.1547 = 44.7$ m as frequencies for the radii of respectively $9.9 \cdot 10^8$ and $8.08 \cdot 10^8$ m at $R_o = 7 \cdot 10^8$ m corresponding to energy wavelength of 3000, 2000 and 1500 m as event radius. These radii are composed of the contributing coherent states of the dm mediating atoms .

The work of the electron at the escape velocity is:

$$m_e g R_o = 9.109 \cdot 10^{-31} \times 276 \times 7.0 \cdot 10^8 = 1.76 \cdot 10^{-19} \text{ Joule divided by } 1.602 \cdot 10^{-19} \text{ Coulomb} \\ \text{gives } 1.099 \text{ eV with } g = 276 \text{ m/sec}^2 \text{ and } \frac{1}{2}v^2 = g R_o \text{ giving } v = 6.22 \cdot 10^5 \text{ m/sec.}$$

Calculate the angular momentum of the electron at 38.7 m wavelength:

$$b_o = m_e (2 \pi c/38.7) R_o = 3.106 \cdot 10^{-14} \text{ kg m}$$

Apply $b_o = g (h/c)$ which is from previous calculations $= (276 \times 2.21 \cdot 10^{-42} = 6.1 \cdot 10^{-40})$ kg m.

Determine the number of contributing atoms based on $251 m_e$ as mediating mass.

$N = 3.106 \cdot 10^{-14} / 6.1 \cdot 10^{-40} = 5.091 \cdot 10^{25}$ coherent contributing dm at. Remember the solar mass is $8.75 \cdot 10^{57}$ dm at. Follow above procedure for loss less free exchange to the dark matter cells to Lamb energy quant, the decoherence limits:

$$1.099 / 5.87 \cdot 10^{-6} = 1.871 \cdot 10^5 \text{ for the escape velocity of } 622 \text{ km /sec}$$

$$13.6 / 5.87 \cdot 10^{-6} = 2.32 \cdot 10^6 \text{ as the maximum loss free ratio for exchange (13.6 eV ionisation).}$$

Then

$$\sqrt{(8.75 \cdot 10^{57} / 1.871 \cdot 10^5)} = 21.623 \cdot 10^{25} \text{ at and } \sqrt{(8.75 \cdot 10^{57} / 2.32 \cdot 10^6)} = 6.141 \cdot 10^{25} \text{ dm at}$$

Determine the ratios to the radial state:

$$21.623 / 5.091 = 4.249 = 3.004 \times \sqrt{2} \qquad 6.141 / 5.091 = 1.21 = \sqrt{1.5} / 1.012$$

So if $N = 6.141 \cdot 10^{25}$ becomes less than $5.091 \cdot 10^{25}$ then gravity generation cannot work.

Both the factors 3 and $\sqrt{1.5}$ suggest that in relation to the wavelengths $\sqrt{2} \times 38.7$ and $38.7 / \sqrt{1.5}$ are important and common to any process of gravity generation.

2.2 Repeat the calculations for $R_o = 7 \cdot 10^9 \text{ m}$ giving $g = 2.76 \text{ m/sec}^2$

$$W = m_e g R = 9.109 \cdot 10^{-31} \times 2.76 \times 7 \cdot 10^9 = 1.76 \cdot 10^{-20} \text{ joule or } 0.1099 \text{ eV}$$

$$b = h/c g = 6.1 \cdot 10^{-42} \quad b = 2\pi c/38.7 \times 7 \cdot 10^9 = 3.106 \cdot 10^{-13} \quad \text{with } N = 5.091 \cdot 10^{28} \text{ at}$$

and

$$0.1099 / 5.87 \cdot 10^{-6} = 1.87 \cdot 10^4 \text{ giving } \sqrt{(8.75 \cdot 10^{57} / 1.87 \cdot 10^4)} = 6.84 \cdot 10^{26} \text{ at}$$

As expected $5.091 \cdot 10^{28} > 6.84 \cdot 10^{26}$ and $\sqrt{8.75 \cdot 10^{57}} = 9.3 \cdot 10^{28}$ is the other limit to $5.091 \cdot 10^{28}$.

2.3 Conclusion:

If $W < 1.099 \text{ eV}$ then $R_o > R_{dm}$ while at $R_o = 7 \cdot 10^8 \text{ m}$ then $R_{dm} = R_o$ with two options for the lossless exchange to the atoms:

$$N_2 = 21.63 \cdot 10^{25} \quad \text{and} \quad N_o = 5.091 \cdot 10^{25} \text{ at}$$

$$\text{ratio: } 21.63 / 5.091 = 3 \times \sqrt{2} \times 1.0014 \text{ with } 1.0014 \text{ as truncation deviation.}$$

And $N_1 = 1.641 \cdot 10^{25}$ and $N_o = 5.091 \cdot 10^{25}$ at

$$\text{ratio: } 1.21 = \sqrt{1.5} \times (1 / 1.012) \text{ with } 1.012 \text{ as deviation.}$$

Both these ratios of $3\sqrt{2}$ and $\sqrt{1.5}$ are important to exchange sequential pumping in gravity generation over a time interval.

So there are two options for gravity generation:

1. All those below the threshold of 1.099 eV
2. All those above this threshold up to $N_{max} = 9.354 \cdot 10^{28}$ at. Discussed in par 3 and derived in (ref 4).

2.4 Point 1 The supposition of quantum qubit exchange of the Lamb shifts

To bring point 1 and 2 in agreement, all atomic processes should be the same in both situations.

It means in the examples above:

$$13.6 / 5.87 \cdot 10^{-6} = 2.32 \cdot 10^6 \text{ quanta as maximum.}$$

$$\text{and } 1.099 / 5.87 \cdot 10^{-6} = 1.87 \cdot 10^5 \text{ or } 0.1099 / 5.87 \cdot 10^{-6} = 1.87 \cdot 10^4 \text{ quanta}$$

In that manner the production densities of $6.84 \cdot 10^{26}$ at:

$$b = 6.1 \cdot 10^{-42} N = m_e 2\pi c/38.7 R_{dm} \quad \text{giving } R_{dm} = 9.40 \cdot 10^8 \text{ m making:}$$

$$4.247 \times 6.84 \cdot 10^{26} \text{ and } \sqrt{1.5} \times 6.84 \cdot 10^{26} \text{ while } \{(4.247 = 3\sqrt{2}) \times 6.84 \cdot 10^{26}\} \text{ is the zero state and}$$

$\sqrt{1.5}$ belongs to the escape velocity or work done by the dark matter medium under gravity constrain giving ratio one the highest energy state. Note, if the mediating dm mass is different for the other atoms then an proportionality factor for correction should be introduced.

2.5 The magnetic energy apart from the balanced angular momentum

The two energy states of dm atoms contributing to the angular momentum are small, order of 10^{25} at, compared to the overall square root of the number of atoms of $\sqrt{8.75 \cdot 10^{57}} = 9.354 \cdot 10^{28}$ at.

2.6 Second conclusion: By introducing $N_o = 1.195 \cdot 10^{57}$ (was divided by 7.325) as solely H atoms the b_o determines $N = 5.091 \cdot 10^{25}$ atoms as an absolute threshold. The N 's for $21.6 \cdot 10^{25}$ and $6.1 \cdot 10^{25}$ atoms change value. The 1st slightly above and the 2nd below this threshold. So the choice of the mediating mass is correct. Further by using the mediating mass for N_o there is an overproduction of electrons between the states of the $\sqrt{\text{--}}$ atoms which maintains the statement that it is a fast dynamic network compared to the normal inertia state of the hydrogen. Show it. The square root of H atom and mediating mass is $\sqrt{7.235} = 2.71$. Now $4.2426 / 2.71 = 1.5565 N$ (ionisation) and $\sqrt{1.5} / 2.71 = 0.452 N$ (escape) then with N (electron) $5.091 \cdot 10^{25}$ then $1.5565 / 5.091 = 0.3101$ and $0.0452 / 5.091 = 0.08878$ with ratio 3.493 while $4.2426 / \sqrt{1.5} = 3.46$ (truncations). So equal. The H atom N 's are far below the need of the electrons.

Comment 2021, The product rule:

N_1 is the number of atoms in state 1 and N_2 the number of atoms in state 2 then with the $\sqrt{N_o}$ the product of $(\sqrt{N_o} - N_1) N_2 = (\sqrt{N_o} - N_2) N_1$ is constant. The two states of the solar mass are for two moments of time with N_1 and N_2 of the order of $\sqrt{N_o}$ maintaining the ratio for dynamic conjugated exchange..

As a static ratio N_1/N_2 is a constant but for the two time moments these are absolute with respect to the number of electrons in R_0 or dm radius for the angular momentum. So in fact the end conclusion of exer 4 and 5 is maintained, the sole hydrogen balance to time, but $\sqrt{N_0}$ can have for any mediating mass of a Z charged atom as a free parameter constant. Further note that the 2nd power of the production rule relates $\sqrt{N_0}$ to N_1 or N_2 keeping the ratio N_1/N_2 unperturbed. Note, as long as the 21cm magnetic flux string is generated a flux string of Z-charge length seems to be irrelevant as is determined in par 2 but Z charge induction discussed in (ref 3)

Par 3 Discussion on the results of par 2. The supposition of the existence of three rigid dark matter rotors controlling the dynamic gravity cycle

The second setup of an equality for the induction balance of the coherent number of mediating mass subjected to the radial gravity at the outward radius of the sun then balanced to the angular momentum at the outer radius at the square root of the event as rotation time interval determined the number of contributing mediating coherent states of the atoms. Two other options for the numbers of coherent contributing mediating states were determined, one the limit due to the escape velocity and the other limit of decoherence for the ionisation. So three parameters of the coherence mediating states were discovered which related as ratios to the radial gravity coherence number of atomic dark matter cells. For dynamic gravity generation these three states could express an alternation of at least two continuous cycles which according to Sakharov's induction are subjected to the product rule of inertia as the equilibrium states for relaxation. The "zero" state of inertia in the alternation should be the one of the non contributing atoms. As shown, always the square root of the macro mass has to be the reference of exchange in the dynamic alternation cycles. An additional supposition is needed that each of the three states carries its own time interval which then is related as a ratio to the square root of the event. All in all laid down due to Sakharov's law, the root of the event gives the square root of the macro mass (ref 2 or 3)

As in par 2 is shown the coherent length of the number of contributing mediating atoms gives also the outer radius of the sun as coherent length or dark matter radius. It is only valid for the sun this equality for the dark matter radius. The solar calculations are that important because the ratios for the three rigid rotors with the ratios of their time intervals consisting of the coherent contributing atoms give the ratios of the dark matter parameters. In other situations the parameters for dynamic gravity generation these ratios could never have been discovered. See (ref 4) for the dark matter radii of planets and moon. Further the angular momentum of the three coherent clusters of the rigid rotors spherical symmetry are determined by the time interval.

The ratios of exchange for momentum and energy of the rigid rotors is treated in (ref 5) . It is a parameter setup of nine variables and somewhat cumbersome.

References

Ref 1: <https://vixra.org/abs/2304.0227> Cosmic energy balance for the ultra fast and light dark matter medium

Ref 2: <https://vixra.org/abs/2305.0061> Sakharov induction law for dark matter explanation

Ref 3: <https://vixra.org/abs/2305.0067> Application of Sakharov's law on Coulomb induction for Z charged atoms

Ref 4: Soon to be published: Dark matter radii for planets and moon and interesting results.

Ref 5: Idem: Proof and derivation of the three states for the rigid rotors in gravity dynamics

Ref 6: <https://universal-creation.org/>
physics due to impact of mediating medium of dark matter on humanity

<https://vixra.org/abs/2302.0135> Provisional proof between Planck's parameters to the giant groups symmetries of Monster, Baby monster and Fischer 24.