

Unification theory: quantization of gravity from frequencies

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Abstract

Quantum science requires a unification of the small magnitudes of interactive energies and forces, from the size of Planck's tiny dimensions to astronomical magnitudes. If someone wants to innovate a new worldview that reconciles the macroscopic and the microscopic, then they must assume that there are dimensionless quantities that apply regardless of the scale at which a particular formulation is used, so that all laws previously discovered cumulatively are also considered and integrative, so that all historical contributions in the field of physics are taken advantage of and that in this way applied will encompass all possible different perspectives. In this way, I propose a brief philosophical incursion and a mathematical approach that considers the relationships established from the previous publication "Speed of Universe's expansion" available here on Figshare, as an explanation for the use of the exponent -0.5 used in the equation suggested below that applies both forces of gravitational attraction between the electron and the proton as well as the sun and the earth.

"A bit of thinking":

If someone wants to understand the universe in order to reconcile both macroscopic and small aspects at the quantum level, this person must consider that the expressions of physical quantities must be made in an ambiguous way, in order to consider that the usual units used in broadly by formulations of the past should be normalized both in order to avoid singularities and the need to seek relationships that do not have unitary physical quantities that limit the use of these possible formulations, and that in this way can be applied to essential and primordial conditions first when the universe was not yet defined by palpable or manipulable physical quantities, with physical significance only, but which also possesses a high power of abstraction and which can be understood at purely abstract and timeless or immaterial levels. What would in fact be a holy grail for the understanding of how the universe behaves when considering both dimensions of reality and that can also consider the previous advances in the field of experimental physics with all the theoretical considerations already tested and still covering, if possible, all of the aforementioned approaches, especially on that cornerstone, which is considered to be the most primordial relationship between objects, which is then also considered the most tenuous and wide-ranging force, which can be considered to be gravity.

Thus pursuing it through a mathematical relationship, which is both applicable to known and measurable physical quantities, as well as to dimensionless quantities, which cannot be expressed in units but which is ambiguously representable or liable to be correlated with some calculable and known force that serves as a parameter merely comparative of its application once determined, it would be of extreme value, unique for general and unrestricted application on the reality of scientifically verifiable facts. When one thinks in this way, one can summarize the understanding of atomic particles in another way as does string theory, when considering a Hilbert space where the relative frequencies of strings that vibrate and produce different levels of energy that can be considered be equated and serve as a model for calculations already

systematically proven by classical physics, so that one model corroborates the other despite becoming more comprehensive and unrestricted when we normalize the calculations for dimensionless quantities. When considering this new approach model, and considering the expressions already known from classical physics and even from relativity, or even Newton's gravity equations, we can use a complementarity of the various formulations among themselves, so that can calculate the force of gravitational attraction, based on the dimensionless relations of the proportional equations of the gravitational force, in these new terms expressed in the form of energy and related to Planck constants for calculating frequencies, their wavelengths relative to the masses, and singular energies, if we can consider the fact that we make their respective mathematical relations dimensionless as an event that, although singular, still has mathematical proportions that avoid tendencies to infinity, as is very common observed throughout the history of physics, so that limited and finite results are obtained for calculating grand physical things that would otherwise be considered impractical.

Calculations that obtain values compatible with other classical calculations but that result in dimensionless quantities for their units must be considered as of broader application, and therefore more widely used without losing logic or reason for their application. With their due explanations and arguments, one can calculate the gravitational pull force of the proton in relation to the electron and the sun in relation to the earth, demonstrating the breadth of application generalization, from micro to macro by a single formula expressed in terms of matrices of proportional values of frequencies relative to the masses, on which these forces are imposed, but in order to consider the extreme of the singularity or simply the normalization of the results to express itself in the form of dimensionless quantities, without representation units, but that they are correlated, their values, to those calculated in other ways, and obtaining very precise values for the due variations in the values of the masses to which one wants to relate.

So keeping in mind that a value equivalent to 10^{-47} N is obtained for the attraction between the proton and the electron, once this value is obtained, without the units or better free of Newton's units, it can be applied to moments in which time and space were still represented in their smallest aspects close to the Planck scales. In the same way, if the referred calculation is correct, it should serve in the same way to calculate the forces of gravitational attraction between objects of astronomical values in order to not only prove the effectiveness of the formula, but also to demonstrate its amplitude of application, and of fact, by the method described by the programming lines below, the value of 10^{22} N can be reached for the attraction between the masses of the sun and the earth, and only the masses should be varied, so that when calculated it can be expressed in terms of dimensionless units, that is, without Newton's "N", only as numerical values corresponding to the appropriate quantities.

In this calculation, the energy in newtons corresponding to the electron was considered when its square root was extracted, as if it were two points that join a string, so that a relationship could be obtained where gravity was proportional to an inverse amount of space, in meters, also considering the Schwartzchild radius for the respective masses to be considered in the calculation. Hence, it was considered a relationship between the frequencies for the due masses based on the Planck constant and a speed equal to that of light, and established a relationship between these values in a matrix that represented the Hilbert space, widely used in quantum, for to obtain a value without corresponding units, but which had a value identical to the gravitational force calculated by the masses in Newtons, this time however without any representative unit of physical magnitude by the international system of measurements, thus

obtaining a dimensionless and unrestricted value, which can be considered about several possible situations, namely if not also the beginning of the Universe.

$$h = 6.6 * 10^{-34} \text{ "Planck constant"}$$

$$m = 9.109 * 10^{-31} \text{ "mass of the electron in Kg"}$$

$$m1 = 1.67 * 10^{-27} \text{ "mass of the proton in Kg"}$$

$$v = \text{RandomReal}[300000000, \{200\}]$$

$$v1 = \text{RandomReal}[300000000, \{200\}]$$

$$v111 = \text{RandomReal}[300000000, \{200\}]$$

$$v11 = \text{RandomReal}[300000000, \{200\}]$$

$$s = \text{RandomReal}[2.0 * 10^{-11}, \{200\}]$$

$$c = 300000000$$

$$G = 6.7 * 10^{-11} \text{ "gravitational constant in Kg}^{-1} * \text{M}^3 * \text{s}^{-2}$$

$$r1 = G * m / c^2 \text{ "schwartzchild radius"}$$

$$r2 = G * m1 / c^2 \text{ "schwartzchild radius"}$$

$$g1 = (1.6 * 10^{-7}) * G / (c^4 * r1) \text{ "square root of the electron energy expressed in terms of string"}$$

$$g2 = (1.5 * 10^{-19}) * G / (c^4 * r2) \text{ "energy in newtons of the electric charge of the proton"}$$

$$g = g1 + g2 / 2 \text{ "average severity"}$$

$$l1 = h / m * v1 \text{ "mass wavelength" m ""}$$

$$l2 = h / m1 * v \text{ "wavelength of mass" m1 ""}$$

$$fx = c / l1 \text{ "mass wave frequency" m ""}$$

$$fy = c / l2 \text{ "wave frequency of mass" m1 ""}$$

$$l3 = \text{Sqrt}[l1^2 + l2^2]$$

$$fz = c / l3 \text{ "Pythagorean relationship of the two frequencies of m and m1"}$$

$$l11 = h / m * v11$$

$$l21 = h / m1 * v111$$

$$fx1 = w / l11$$

$$fy1 = w / l21$$

$$l31 = \text{Sqrt}[l11^2 + l21^2]$$

$$fz1 = w / l31$$

$g_i = g - g * \text{Power}[g, (g)^\wedge - 1]$ "gravity expressed as a real number closer to the imaginary value of gravity"

$gg = (f_x^\wedge -0.5 * f_y^\wedge g_i * f_z + f_y^\wedge -0.5 * f_z^\wedge g_i * f_x + f_z^\wedge -0.5 * f_x^\wedge g_i * f_y) - (f_x * f_y^\wedge g_i * f_z^\wedge -0.5 + f_y * f_z^\wedge g_i * f_x^\wedge -0.5 + f_z * f_x^\wedge g_i * f_y^\wedge -0.5)$ "3X3 matrix of the frequencies with one raised to " g_i " .

$gg1 = gg / 0.1$

Result gg1:

-3.02847*10⁻⁴⁶, -4.49528*10⁻⁴⁹, -3.31133*10⁻⁵⁹, -6.05579*10⁻⁵⁹, \

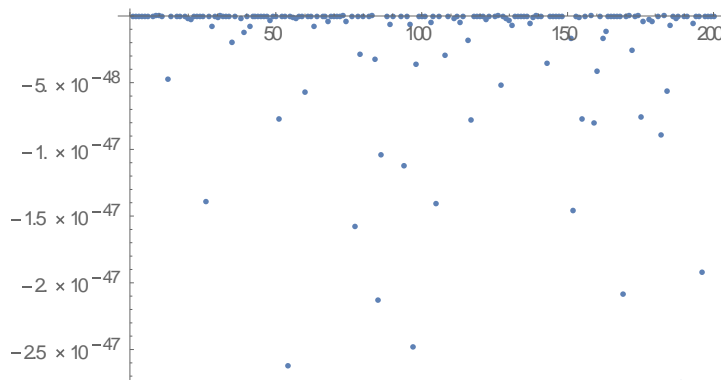
-3.09859*10⁻⁵⁸, -1.17486*10⁻⁵⁰, -1.75569*10⁻⁴⁶, -9.12472*10⁻⁵¹, \

-2.26953*10⁻⁵⁰, -6.82873*10⁻⁵¹, -2.76075*10⁻⁴⁷, -1.60783*10⁻⁶⁶, \

-5.96496*10⁻⁴⁷, -3.21924*10⁻⁵², -8.22186*10⁻⁴⁸, -1.01535*10⁻⁴⁸, \

-4.44208*10⁻⁵¹, -6.55426*10⁻⁵⁸, -6.25233*10⁻⁵³, -1.93681*10⁻⁵⁵, \

-9.03403*10⁻⁵⁹, -5.74435*10⁻⁵⁴, -2.06304*10⁻⁵⁰, -9.96583*10⁻⁴⁷,



$h = 6.6 * 10^\wedge -34$ "Planck constant"

$m = 1.96 * 10^\wedge -30$ "mass of the sun in Kg"

$m1 = 5.97 * 10^\wedge 24$ "mass of the earth in Kg"

$v = \text{RandomReal}[300000000, \{200\}]$

$v1 = \text{RandomReal}[300000000, \{200\}]$

$v111 = \text{RandomReal}[300000000, \{200\}]$

$v11 = \text{RandomReal}[300000000, \{200\}]$

$s = \text{RandomReal}[2.0 * 10^\wedge -11, \{200\}]$

$c = 300000000$

$G = 6.7 * 10^\wedge -11$ "gravitational constant in $\text{Kg}^\wedge -1 * \text{M}^\wedge 3 * \text{s}^\wedge -2$ "

$r1 = G * m / c^\wedge 2$ "schartzchild radius"

$$r2 = G * m1 / c^2 \text{ "schartzchild radius"}$$

$$g1 = (1.6 * 10^{-7}) * G / (c^4 * r1) \text{ "square root of the electron energy expressed in terms of string"}$$

$$g2 = (1.5 * 10^{-19}) * G / (c^4 * r2) \text{ "energy in newtons of the electric charge of the proton"}$$

$$g = g1 + g2 / 2 \text{ "average severity"}$$

$$l1 = h / m * v1 \text{ "mass wavelength" m ""}$$

$$l2 = h / m1 * v \text{ "wavelength of mass" m1 ""}$$

$$fx = c / l1 \text{ "mass wave frequency" m ""}$$

$$fy = c / l2 \text{ "wave frequency of mass" m1 ""}$$

$$l3 = \text{Sqrt} [l1^2 + l2^2]$$

$$fz = c / l3 \text{ "Pythagorean relationship of the two frequencies of m and m1"}$$

$$l11 = h / m * v11$$

$$l21 = h / m1 * v111$$

$$fx1 = w / l11$$

$$fy1 = w / l21$$

$$l31 = \text{Sqrt} [l11^2 + l21^2]$$

$$fz1 = w / l31$$

$$gi = g - g * \text{Power} [g, (g) - 1] \text{ "gravity expressed as a real number closer to the imaginary value of gravity"}$$

$$gg = (fx^{-0.5} * fy^{gi} * fz + fy^{-0.5} * fz^{gi} * fx + fz^{-0.5} * fx^{gi} * fy) - (fx * fy^{gi} * fz^{-0.5} + fy * fz^{gi} * fx^{-0.5} + fz * fx^{gi} * fy^{-0.5}) \text{ "3X3 matrix of the frequencies with one raised to" gi "}$$

$$gg1 = gg / 0.1$$

Results gg:

$$\begin{aligned} &6.03946 * 10^{22}, -1.80317 * 10^{24}, -9.77677 * 10^{21}, -1.77089 * 10^{22}, \backslash \\ &-5.60781 * 10^{21}, -1.76807 * 10^{23}, -6.50801 * 10^{22}, -2.25318 * 10^{24}, \backslash \\ &-2.55803 * 10^{24}, -1.18862 * 10^{23}, -6.21425 * 10^{23}, -4.47334 * 10^{22}, \backslash \\ &-2.26886 * 10^{23}, -3.46232 * 10^{23}, -9.11546 * 10^{22}, -8.04278 * 10^{21}, \backslash \\ &-6.83254 * 10^{23}, -3.04371 * 10^{22}, -7.82326 * 10^{22}, -1.88526 * 10^{22}, \backslash \end{aligned}$$

-2.1799*10²³, -6.12247*10²², -7.15734*10²¹, -7.97859*10²³, \
 -9.73988*10²¹, -2.80391*10²¹, -1.71118*10²⁴, -7.25787*10²², \
 -6.85066*10²², -7.10292*10²², -1.11912*10²³, -5.60135*10²², \
 -9.96032*10²², -6.81483*10²³, -4.00002*10²³, -2.43723*10²³, \
 -4.41366*10²³, -8.20578*10²³, -5.83286*10²², -6.19811*10²², \
 -1.55287*10²⁶, -1.32448*10²², -4.52868*10²², -3.1876*10²³, \
 -1.2802*10²², -2.24635*10²³, -3.09352*10²², -1.20978*10²³, \
 -3.19714*10²³, -3.14543*10²⁴, -4.72652*10²³, -1.38816*10²³, \
 -1.64646*10²³, -6.17044*10²², -3.08983*10²², -7.92749*10²², \
 -2.06682*10²³, -1.69291*10²⁴, -1.09279*10²³, -4.72237*10²², \
 -2.00193*10²³, -1.81562*10²³, -1.12682*10²³, -1.64877*10²³, \
 -5.68252*10²², -6.95996*10²², -6.71554*10²², -7.78635*10²³, \
 -4.59794*10²³, -9.13852*10²², -7.22513*10²², -3.16659*10²³, \
 -6.24422*10²², -1.33347*10²³, -1.18746*10²³, -3.88355*10²³, \
 -2.43064*10²³, -1.13922*10²³

If I want to treat the units in the matrix in order to cancel each other out, then i must consider the minus sign as a division or else equate the values of the units to those I want to use which will be the force in newtons to the unit in the matrix.

$$(s^{-1})^{-0.5} * (s^{-1})^{\sqrt{m} * s^{-3}} * \frac{s^{-1}\sqrt{2}}{2} = s^{\frac{3\sqrt{2m}}{s^4} - 2} = Kg * m * s^{-2}$$

$$\frac{3\sqrt{2m}}{s^4} = -2 \Rightarrow \frac{92m}{16s^8} = 1 \Rightarrow s^8 = 5.75 \rightarrow 1.24 = 1$$

$$10^{22} = x$$

$X \cong$

0.85 the value of the force that is proportional to the dark matter

And to the dark energy composition.

Either that or we can consider, as shown below that the units can be divided by each other without offending the logic of mathematics resulting in a adimensional construct for which the values of the forces will be considered to have the same units in newtons.

$$e^{ix} = \cos x + i \sin x$$

Consider that $\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$ so $e^{ix} = \cos x + ix$ because $\sin x = x$ and $x \rightarrow 0$ $e^{ix} = 1$

$$1 = 1 + ix \quad \therefore ix = 0$$

$$1 = \frac{\sin x}{x} + ix \rightarrow x = \sin x + ix^2 \rightarrow x - \sin x = ix^2 \quad \text{sinc } \sin x = x \text{ then } 0 = ix^2$$

$$x^2 = \frac{0}{i} \quad x = \sqrt{\frac{0}{i}} = \frac{\sqrt{0}}{\sqrt{i}} * \frac{\sqrt{i}}{\sqrt{i}} \rightarrow \frac{\sqrt{0*i}}{i} = \frac{i^{\frac{1}{2}}}{i} * 0^{\frac{1}{2}} = -1 \quad \therefore 0^{\frac{1}{2}} = \frac{-1\sqrt{i}}{\sqrt{i}*i} \rightarrow \frac{-i^{\frac{1}{2}}*i^{-1}}{\sqrt{i}*i} = -i^{-1/2}$$

$$\int -i^{-1/2} di$$

$$\frac{-i^{\frac{1}{2}}}{\frac{1}{2}} = -2i^{\frac{1}{2}} = 2^{\frac{1}{2}} = \sqrt{2} = 0$$

Substituting the result of the integer for xi we get " $e^{\sqrt{2}} = 1 + \sqrt{2}$ " and through the use of calculator one can get the result of an equality between $e^{\sqrt{2}} - (1 + \sqrt{2}) = \frac{e^{\sqrt{2}}}{(1 + \sqrt{2})}$ which is

$$\cong 1.7 \pm 0.01$$

If I consider that the average value between 2 consecutive prime numbers is equal to the average value of the non-prime numbers between them, and recognizing that the average of the sum of the extremes is equal to the average of the sum of the terms between these two extremes as in: $13, 14, 15, 16, 17 = \frac{13+17}{2} = \frac{14+15+16}{3} \Rightarrow 13 < 17 =$

14, 15, 16 would be the same as if I wrote $\frac{\frac{P1+P2}{2} + P1 - P2 - 1}{P1 - P2 - 1} = \frac{P1 + P2}{2}$ where P1 = first prime

$$P2 = \text{second Prime; making } P1 = x \text{ and } P2 = y \Rightarrow \frac{\frac{x+y}{2} + x - y - 1}{x - y - 1} = \frac{x+y}{2} \Rightarrow$$

Now lets search for a pattern to identify primes and non primes

Examples:

1) Between 23 and 29 (both primes)

$$\frac{\frac{23+29}{2} + 23 - 29 - 1}{23 - 29 - 1} = \frac{23+29}{2} \Rightarrow \frac{26 + (-7)}{-7} = 26 \Rightarrow \frac{19}{-7}$$

= 26 observing the numbers it is clear that by subtracting the denominator from the numerator

the left it is equal the value of the right: $19 - (-7) =$

26 but adding gives $19 - 7 = 26 \Rightarrow 12 = 26$ which is equal $6 =$

13 a relation that establishes an equality between a prime and non prime

For the relation above to be true then $x-y=x/y$ So it is possible when we consider the interaction between the extremes of a list of numbers to the inside, that it is possible to consider that the units can be canceled according to the fact that the subtraction in the matrix can be considered a division as well, which is a condition to cancel the units, so the calculus become unidimensional.

As expected for a calculation on a quantum reality, the probability of variations occurs when considering multiple possible interactions, such as when considering the interaction of multiple parallel universes that sometimes cause a plausible result to emerge.