CYCLES AND FREQUENCIES

URVIB1.WP6 September 25, 1995

THE UR VIBRATIONS

Some recent ideas in modern physics have pointed to the underlying structure of the physical world as being not matter but rhythm. Some physicists, such as J.A. Wheeler, even hold that the ultimate or ur reality is thought. Similar ideas have been around for a few decades:

> "The cosmic diagram suggests some form of resonance as the process of morphogenesis, as sand collects at the nodes on a vibrating drum head, matter concentrates at nodes corresponding to the set of frequencies ${}^{s3/2-0}f_{o}$. This raises many physical questions. Most importantly what is it that is pulsating or vibrating at these frequencies--some substratum, matter itself, or what? Analogies to familiar equations suggest that from the cosmic diagram, we have a set of eigen values representing mass levels, energy levels, or frequencies that are solutions to some 'cosmic wave equation'."

from Hierarchical Structures in the Cosmos, 1969
Hierarchical Structures, Whyte, Wilson and Wilson

[The following from notes Santa Fe, New Mexico, 95/07/13]

The ur vibrations in the world result in infinite bonding and dissolving combinations. This is the nature of Sunyata, the ur process manifesting as impermanence and sustaining change.

In the absence of iteration of this repetitive bonding-dissolving operation nothing permanent occurs. A 'Parmenidean" factor beyond the fundamental bonding-unbonding must be present. Some bonds must survive to serve as the elements of more complex bondings. We then ask, what processes can sustain a bonding? What is there that renders iteration possible?

One candidate is two level bonding. One level bonding is forever immediately dissolved. But two level bonding can be both sustainable and iteratable. The Tathagata Akshobya symbolizes the processes leading to sustainment and allowing iteration. We may think of the 'Akshobya operation' as self-reference, naming, sealing, mirroring (but not cloning).

Another process lies in the domain of the Tathagata Ratna Sambhava. This consists giving an address to a bonding, a reference to space and time, thus establishing two levels, address and content.

A triple bonding is also one capable of sustainment. While the probabilities of single encounters or two element bonding are high, the probability of three element bonding is remote.

Levels of bonding have different orders of lifetimes. This is apparent in the meso and macro worlds, the more massive structures having the longer lifetimes. It presumably is also true in the micro and micro-micro worlds. The elemental bonding to which we have been referring may have a lifetime of the order of a few planck units, i.e. the order of 10^{-42} seconds.

It also appears that at higher levels the bonded structures acquire a certain exclusiveness, that is respond only to certain eigen values. We see this in atomic and molecular spectra and in a different form, but conceptually the same, in the ability of diverse species to mate only with 'eigen-species'. This is a boundary condition for natural selection.

At a certain level of sophistication, the bonding structures acquire the ability to replicate and to beget. [Replication or cloning produces identical elements, while begetting is capable of creating variant elements that are also capable of replication and inter-bonding.]

Recapitulating:
Sustainment is effected by
1. Two or more levels or dimensions
2. Some form of self reference, such as mirroring
3. Simultaneous triple or higher encounter bonding
4. Additional sustainment is effected by linking to other bonded structures.

[1,2 and 3 are Vairacona-Akshobya, 4 is Ratna Sambhava]

Are bonds intersects or unions and what role does the degree of overlap play?

[Add material on standing waves]

NOTE29.WPD November 9, 2004

BASIC TIMES AND FREQUENCIES

[UPDATE BASEFREQ.WPD, 2002-11-27, # 62]

ITEM	FORMULA	LOG_{10} Seconds	Hr-Min-Sec	HERTZ
electron Schuster	$2\pi\sqrt{}(r_e^3/Gm_e)$	-0.918814	0.120555 s	8.294954
baryon Schuster	$2\pi\sqrt{}(r_e^3/Gm_p)$	-2.550769	0.002813 s	355.442210
hydrogen Schuster	$2\pi\sqrt{}(a_o^3/Gm_p)$	+3.859735	2h 0m 39.94 s	0.0001381
earth Schuster	$2\pi\sqrt{}(R_e^3/GM_e)$	+3.704223	84m 20.84 s	0.0001976
earth Schumann	$2\pi R_e/c$	-0.874433	0.133526 s	7.489158
earth Schwarzschild	GM_e/c^3	-10.829925	1.479364×10^{-11} s	6.759662×10^{10}
earth Schwarz2	$2GM_e/c^3$	-10.528896	2.958721×10^{-11} s	3.379839×10^{10}
orbit Schumann	2π(A.U.)/c	+3.496286	52m 35.35 s	0.0003189
earth rotation ⊙		+4.9365137	86400 s	1.157407×10^{-5}
earth rotation ☆		+4.9353263	23h 56m 4.09 s	1.160576×10^{-5}
earth geosync*	$2\pi R_g/c$	-0.052906	0.885307 s	1.12955
neutron star	$\alpha\mu S t_p$	-2.785412	0.001639 s	610.1154
sun Schuster	$2\pi\sqrt{}(R_s^3/GM_s)$	+4.000163	2h 46m 43.75 s	0.00009996
sun Schumann	$2\pi R_s/c$	+1.163661	14.576760 s	0.068602
Sun Schwarzschild	GM_s/c^3	-5.307523	0.000004928026	203012.6031
Sun Schwarz2	$2GM_e/c^3$	-5.006494	0.000009851583	101506.5343
Univ Schuster	$\sqrt{}(R_u^3/GM_u)$	+17.456065	9.056346 gyr	
Univ Schumann	R_u/c	+17.456065	"	
Univ Schwarzschild	GM_u/c^3	+17.456065	"	
½ Univ			4.428173 gyr	
3/2 Univ			13.584519 gyr	

* This is the Schumann period at the distance R_g, = 42241 km (26,247 miles) from the center of the earth. The earth's equatorial radius is 6378 km, ∴ the synchronous orbit level is 35,863 km (22,284) miles above the surface.

Notes:

(earth Schuster)^4 = (earth rotation ⊙)^3, 14.817 = 14.810 Δ = 0.007

OK ~~(earth Schuster)/(hydrogen) = 0.699017 or 7/10~~ ~~0.75~~7 Δ = 0.001

(log day) = (log hydrogen) x (log 19) 4.9365 = 4.9357 Δ = 0.0008

(log hydrogen) = (log earth Schuster) x (log 11) 3.860 = 3.858 Δ = 0.002

The Compton wavelength $\lambda_C = h/2\pi m_e c$; log λ_C = -10.413234 [cm]; log $f_C = \log c/\lambda_C$ = 20.890055 [hz]

E' 3c

C' 2c

E 3/2 c

C c

④

$\frac{C'}{E} = \frac{4}{3} = \frac{Rot}{SCH}$

NOTE29.WPD November 9, 20004

BASIC TIMES AND FREQUENCIES

[UPDATE BASEFREQ.WPD, 2002-11-27, # 62]
ITEM
FORMULA
LOG$_{10}$ Seconds
Hr-Min-Sec
HERTZ

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3.379839×10^{10}

orbit Schumann

8TIMES.WPD February 19, 2000

FUNDAMENTAL TIMES

Dimensional considerations lead to the discrimination of ten basic times or frequencies.
These are: $R \to L$

t 1) $t = \overset{L}{\cancel{R}}/c$
This time is based on motion and change. It involves a linear dimension, R, or distance.
It is also radar time. It is the basis of Aristotle's concept of time, so **Aristotle** time.

τ 2) $\tau = \sqrt{}(R^3/GM) = (G\rho)^{-1/2}$
This time is based on density. It involves both a mass, M, and a volume, R^3.
This equation is Kepler's third law, so we term it **Kepler** time.

T 3) $T = GM/c^3 = Mc^2/(c^5/G)$
This time involves only mass, M.. It is equivalent to energy/power.
The Energy is Einstein's energy, Mc^2, appropriately, let us call this **Einstein** time.

K 4) $\cancel{Z} = \hbar/Mc^2$
This time derives from Heisenberg's relation, energy x time = action or $\hbar$
The energy used is Mc^2. We might term this **Heisenberg** time.

5) $\zeta = \hbar R/GM^2$
This time also derives from the Heisenberg relation with the energy being gravitational.
In honor of the father of gravity, this might appropriately be called **Newton** time.

6) $\Phi = \sqrt{}(MR^3\alpha/e^2) = \sqrt{}(MR^3/\hbar c)$
This time involves electric charge, as well as mass and volume.
Perhaps it could be called **Coulomb** time.

7) $\phi = MR^2/\hbar$
This time also derives from the quantum relations.
So to leave no one out, call this **Schrodinger** time.

8) k $\cancel{K} = G^2M^2/Rc^5 = GM/c^2R \text{ x } T$
This time is also energy/power, gravitational energy this time.
Since GM/c^2R defines the Schwarzschild limit, let's call this **Schwarzschild** time

Z 9) $\cancel{K} = G\hbar/Rc^4$
This time derives from the fundamental constants, let's call it **Bohr** time.

10) $t_o = (G\hbar/c^5)$
This is the time associated with the Planck particle. It is the **Planck** time.

When the Planck mass and the Planck time are substituted in the above equations, their value in each case is the same = the planck time = −43.268366 sec

$$\eta = \sqrt{G^3\hbar^2M/c^{10}L^3}$$

$$\left[M^{1/2}, R^{-1/2}\right]$$

$$\left[\frac{1}{2}, \frac{1}{2}\right]$$

~~EPIONTOLOGY~~ 32a

COSMOLOGY

SPMAFREQ.WPD MARCH 9, 2001

COPY TO ART 01/11/05

SPACE, MATTER, AND FREQUENCY

Space and matter breathe, they ~~are~~ vibrat~~ory~~e. Both space and matter oscillate at many frequencies and interact by resonating, interfering, and modulating. Space oscillates between expansion and contraction [expansion and contraction may even include changes in the number of dimensions]. Matter oscillates between fragmenting and merging; and space and matter together oscillate between existence and non-existence. Minkowski joined space with time to create “space-time”. Einstein then showed that the existence of space-time depended on the existence of matter. Space-time is an attribute of matter and matter is an attribute of space-time, they are mutually causal. And an empty space-time would not exist. $\exists \{ \text{space times} \}$

The relations between the Planck particle and the baryon give us an example of interactions between space-time and matter. We shall here assume that the Planck particle, whose mass, $m_o = -4.662199$ gm, and whose size. $l_o = -32.791545$ cm , fragments into a baryon and three other particles. We take the mass of the proton to be $m_b = -23.776602$ gm; and the Radius to be $r_e = -12.550068$ cm (All values are $\log_{10}$ values)

TABLE I

Particle	mass gm	size cm	M x R cgs	M/R cgs
[1] baryon $\sigma \simeq S$	–23.776602	–12.550068	–36.326670	–11.226534
[2] mini black hole ?	+15.579276	–51.905964	–36.326670	+67.~~458~~485240
[3]	–23.776602	–51.905964	–75.682566	+28.129362
[4]	+15.579276	–12.550068	+3.029208	+28.129344

$= c^2/G$

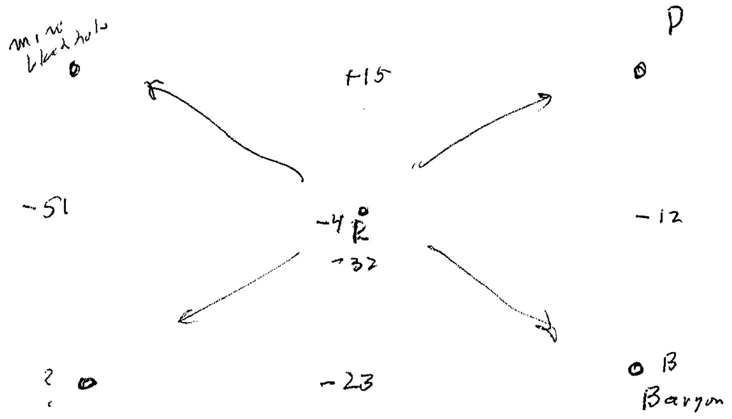
$= c^2/G$

TABLE II

Particle	MxR Planck values	M/R Planck values	Quadrant
[1] baryon	$\alpha\mu\hbar/c$	$S^{-1}\, c^2/G$	1°
[2] mini black hole ?	$\alpha\mu\hbar/c$	$S\, c^2/G$	2°
[3]	$S^{-1}\, \alpha\mu\hbar/c$	c^2/G	On S.B. 3°–4°
[4]	$S\, \alpha\mu\hbar/c$	c^2/G	On S.B 1°–2°.

Where, $\hbar$ is Planck’s constant, = –26.976924 cgs units; α is the fine structure constant, = –2.136835; μ is the proton/electron mass ratio = 3.263909; and S is the coulomb/gravitational force ratio = +39.355878. α, μ, and S are dimensionless constants.
S.B. = the Schwarzschild Boundary, where M/R = $c^2/G = +28.129362$ cgs

S.B. = Schwarzschild Bound

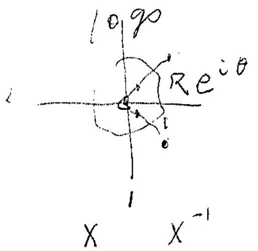


Adding logarithms

symmetry about 1 not 0

$x \cdot \frac{1}{x} = 1$ $x + (-x) = 0$

symmetries ~ conservation laws



axis symmetry

$\log R + i\theta \sim Re^{i\theta}$

$-\ln R + i\theta \sim R^{-1}e^{i\theta}$

$\ln R - i\theta \sim Re^{-i\theta}$

$-\ln R - i\theta \sim R^{-1}e^{-i\theta}$

$= Re^{i\theta} \cdot i^2$

$i^2 = -1$

rotation her 180°

origin symmetry

$a + ib$

axis symmetries

$-a + ib$ (y axis)

$a - ib$ (x axis)

point symmetry or rotation

$-a - ib$ $(\times i^2)$

FOUR QUADRANTS

The cosmos may be divided into four quadrants according to the following rules:

	S.B.	H.B.	
First quadrant:	$M/R < c^2/G$;	$MR > \hbar/c$	(Normal matter, atoms, stars, etc)
Second quadrant:	$M/R > c^2/G$;	$MR > \hbar/c$	(Black holes)
Third quadrant:	$M/R > c^2/G$;	$MR < \hbar/c$	?
Fourth quadrant:	$M/R < c^2/G$;	$MR < \hbar/c$	(photons, etc.)

H.B. = the Heisenberg Boundary, where $\hbar/c = -37.453745$ cgs.

Baryons reside in the first quadrant, where those such as protons are relatively stable. Particle 2 resides in the second or black hole quadrant where it is relatively stable. However particle 3 and particle 4 lie on the Schwarzschild boundary, an unstable watershed, where a perturbation into the first quadrant would result in expansion or into the second quadrant resul~~ting in~~ contraction.

into

ENERGY

TABLE IIIa The Mc^2 or Mass Energy [1,0]

Particle	Mc^2 cgs	Mc^2 Planck units	Mc^2 Planck values
[1] baryon	−2.822960	−19.114402	$(\alpha\mu/S)^{1/2}$
[2] mini black hole	+36.532916	+20.241474	$(\alpha\mu S)^{1/2}$
[3]	−2.822960	−19.114402	$(\alpha\mu/S)^{1/2}$
[4]	+36.532916	+20.241474	$(\alpha\mu S)^{1/2}$
sum of values	+67.419912	+ 2.254144	$(\alpha\mu)^2$

$c^2 = 20.953642$ cgs units The brackets [p,q] refer to the exponents M^p and R^q

TABLE IIIb The $\hbar c/R$ or Space Energy [0,−1]

Particle	$\hbar c/R$ cgs	$\hbar c/R$ Planck units	$\hbar c/R$ Planck values
[1] baryon	−3.950034	−20.241474	$(\alpha\mu S)^{-1/2}$
[2] mini black hole	+35.405862	+19.114402	$(S/\alpha\mu)^{1/2}$
[3]	+35.405862	+19.114402	$(S/\alpha\mu)^{1/2}$
[4]	−3.950034	−20.241474	$(\alpha\mu S)^{-1/2}$
sum of values	+62.911656	−2.254144	$(\alpha\mu)^{-2}$

$\hbar c = -16.500102$ cgs units

ENERGY (continued)

TABLE IIIc The $\hbar c^3/GM$ Energy [−1,0]

Particle	$\hbar c^3/GM$ cgs	$\hbar c^3/GM$ Planck units	$\hbar c^3/GM$ Planckvalues
[1] baryon	+35.405862	+19.114402	$(S/\alpha\mu)^{\frac{1}{2}}$
[2] mini black hole	−3.950034	−20.241474	$(\alpha\mu S)^{-1/2}$
[3]	+35.405862	+19.114402	$(S/\alpha\mu)^{\frac{1}{2}}$
[4]	−3.950034	−20.241474	$(\alpha\mu S)^{-1/2}$
sum of values	+62.911656	−2.254144	$(\alpha\mu)^{-2}$

$\hbar c^3/G = + 11.629246$ cgs units

Pc

TABLE IIId The c^4R/G Energy [0.1]

Particle	c^4R/G cgs	c^4R/G Planck units	c^4R/G Planckvalues
[1] baryon	36.532921	+20.241474	$(\alpha\mu S)^{\frac{1}{2}}$
[2] mini black hole	−2.822975	−19.114402	$(\alpha\mu/S)^{\frac{1}{2}}$
[3]	−2.822975	−19.114402	$(\alpha\mu/S)^{\frac{1}{2}}$
[4]	36.532921	+20.241474	$(\alpha\mu S)^{\frac{1}{2}}$
sum of values	67.419892	2.254144	$(\alpha\mu)^2$

$c^4/G = 49.082989$ cgs units

From the above four tables, we have the first order energy sums for the four particles: Mc^2 energy = $(\alpha\mu)^2$; $\hbar c/R$ energy = $(\alpha\mu)^{-2}$; $\hbar c^3/GM$ energy = $(\alpha\mu)^{-2}$; c^4R/G energy = $(\alpha\mu)^2$ The total of these four energies = 0; and since the total energies of the Planck particle is zero, we conclude that in the decay of the Planck particle into a baryon and particles [2], [3], and [4], energy has been conserved.

However, there are numerous 'higher order' energies, $\hbar\nu$, corresponding to all allowable frequencies, ν. These involve further integral and fractional exponents [p,q] of M and R. From symmetry considerations, these may be paired to that the energies sum to zero, as for example, in TABLE IIIe and TABLE IIIf.

Example of [p,q] energy symmetry:

TABLE IIIe The GM^2/R or Gravitational Energy [2, -1]

Particle	GM^2/R cgs	GM^2/R Planck units	GM^2/R Planck values
[1] baryon	–42.178842	–58.470284	$(\alpha\mu S)^{-3/2}(\alpha\mu)^2$
[2] mini black hole	+75.888810	+59.597368	$(\alpha\mu S)^{3/2}/(\alpha\mu)^{-1}$
[3]	–2.822960	–19.114402	$(\alpha\mu/S)^{1/2}$
[4]	+36.532916	+20.241474	$(\alpha\mu S)^{1/2}$
sum of values	+67.419912	+ 2.254144	$(\alpha\mu)^2$

G = –7.175706 cgs units

TABLE IIIf The $c^5\hbar R/G^2M^2$ Energy [-2, 1]

Particle	$c^5\hbar R/G^2M^2$ cgs	$c^5\hbar R/G^2M^2$ Planck	$c^5\hbar R/G^2M^2$ values
[1] baryon	+74.761729	+58.470286	$(\alpha\mu S)^{3/2}(\alpha\mu)^{-2}$
[2] mini black hole	–43.305931	–59.597375	$(\alpha\mu S)^{-3/2}/(\alpha\mu)$
[3]	+35.405833	+19.114389	$(\alpha\mu/S)^{-1/2}$
[4]	–3.950035	–20.241479	$(\alpha\mu S)^{-1/2}$
sum of values	+62.911596	–2.254144	$(\alpha\mu)^{-2}$

$c^5\hbar/G^2$ = 39.758593 cgs units

If we consider the dimension *length* as consisting of two species, space, R, as being a "separation" and matter, M, as being an "extension", we may write,

$f = c/R$ where f is a frequency associated with space or separation and

$\nu = c^3/GM$ where ν is a frequency associated with mass or extension.

Here, c is the velocity of light and G is Newton's gravitational constant. It is to be noted that when the values of R and M are such that the entity is on the Schwarzschild boundary, then

$$f = \nu$$

In particular for the Planck particle, (which is on the Schwarzschild boundary), each of these frequencies is equal, $f_o = \nu_o =$ ~~45~~ 43.268364 hertz, However for a baryon, $f_b = c/r_e = 23.026889$ hertz, [0,1]; and $\nu_b = c^3/Gm_b = 62.382770$ hertz, [1,0]; Where $r_e = -12.550068$ cm and $m_b = -23.776602$ gm. Baryons lie well within the first quadrant quite removed from the S.B. (All values are $\log_{10}$).

In the interplay of space and matter, either can be exchanged for the other within certain limits. In the foregoing example: Planck particle to baryon Space was increased (-32 to -12) at the expense of decrease of mass (-4 to -23), but with the side effect of the creation of a mini-black hole and two symmetric particles [3] and [4] residing on the Schwarzschild boundary.

TIME TABLE: T=T(G,M,R,ħ,c)

[T] = 1

c = 0

G = 1

M	b 0	b 0.5	b +1	b 1.5	b +2	b +2.5	b +3
a +3	G^2M^3/hc^4		$\surd G^3M^6R^2/h^3c^5$		GM^3R^2/h^2c		$\surd GM^6R^6c/h^5$
a +2.5		$\surd G^3M^5R/h^2c^6$		$\surd G^2M^5R^3/h^3c^3$		$\surd GM^5\cancel{R^5}/h^4$	
a +2	$\surd G^3M^4/hc^7$		GM^2R/hc^2		$\surd GM^4R^4/h^3c$		M^2R^3c/h^2
a +1.5		$\surd G^2M^3R/hc^5$		$\surd GM^3R^3/h^2c^2$		$\surd M^3R^5c/h^3$	
a +1	T GM/c^3		3 $\surd GM^2R^2/hc^3$		φ $M\cancel{R}^2/h$		$\surd M^2R^6c^3/Gh^3$
a +1/2		ψ $\surd GMR/c^4$		π $\surd MR^3/hc$		$\surd MR^5c^2/Gh^2$	
a 0	t_0 $\surd Gh/c^5$		t R/c	[illegible]	$\surd R^4c/Gh$		R^3c^2/Gh
a -1/2		σ $\surd Rh/Mc^3$		τ $\surd R^3/\cancel{G}M$		$\surd R^5c^3/G^2Mh$	
a -1	K h/Mc^2		$\surd R^2h/GM^2c$		λ R^2c/GM		$\surd R^6c^5/G^3M^2h$
a -3/2		$\surd Rh^2/GM^3c^2$		$\surd R^3hc/G^2M^3$		$\surd R^5c^4/G^3M^3$	
a -2	$\surd h^3/GM^4c^3$		δ Rh/GM^2		$\surd R^4hc^3/G^3M^4$		R^3c^3/G^2M^2
a -5/2		$\surd Rh^3/G^2M^5c$		$\surd R^3h^2c^2/G^3M^5$		$\surd R^5hc^5/G^4M^5$	
a -3	h^2/GM^3c		$\surd R^2h^3c/G^3M^6$		R^2hc^2/G^2M^3		$\surd R^6hc^7/G^5M^6$

$G\frac{3}{2}+\frac{1}{2}$

G = 0

h = -2

G = $-\frac{1}{2}$

h = $-\frac{3}{2}$

G = -1

h = -1

h = $-\frac{1}{2}$

h = 0

h = $\frac{1}{2}$

h = 1

Notation: In the above table h is used for ħ, the Planck constant / 2π .

√ is for entire expression

√6 , G , √6

h √2 c

$\frac{1}{2}$, 3 ½

$$\sqrt{\frac{ML^3c^5}{\hbar^3G^2}}$$

$3\frac{1}{2}, -\frac{1}{2}$

TIMATRX3.WPD 2003-01-18

TIME TABLE: $T=T(G,M,R,\hbar,c)$

$[T] = 1$

M	-3	-2.5	-2	-1.5	-1	-0.5	0
+3	$\surd G^{7}M^{6}h/R^{6}c^{17}$		$G^{3}M^{3}/R^{2}c^{7}$		$\surd G^{5}M^{6}/R^{2}hc^{11}$		$G^{2}M^{3}/hc^{4}$
+2.5		$\surd G^{6}M^{5}h/R^{5}c^{15}$		$\surd G^{5}M^{5}/R^{3}c^{12}$		$\surd G^{4}M^{5}/Rhc^{9}$	
+2	$G^{3}M^{2}h/R^{3}c^{8}$		$\surd G^{5}M^{4}h/R^{4}c^{13}$		$G^{2}M^{2}/Rc^{5}$		$\surd G^{3}M^{4}/hc^{7}$
+1.5		$\surd G^{5}M^{3}h^{2}/R^{5}c^{14}$		$\surd G^{4}M^{3}h/R^{3}c^{11}$		$\surd G^{3}M^{3}/Rc^{8}$	
+1	$\surd G^{5}M^{2}h^{3}/R^{6}c^{15}$		$G^{2}Mh/R^{2}c^{6}$		$\surd G^{3}M^{2}h/R^{2}c^{9}$		GM/c^{3}
+1/2		$\surd G^{4}Mh^{3}/R^{5}c^{13}$		$\eta\surd G^{3}Mh^{2}/R^{3}c^{10}$		$\surd G^{2}Mh/Rc^{7}$	
0	$G^{2}h^{2}/R^{3}c^{7}$		$\surd G^{3}h^{3}/R^{4}c^{11}$		Ƶ Gh/Rc^{4}		$\surd Gh/c^{5}$
-1/2		$\surd G^{3}h^{4}/MR^{5}c^{12}$		$\surd G^{2}h^{3}/MR^{3}c^{9}$		$\gamma\surd Gh^{2}/MRc^{6}$	
-1	$\surd G^{3}h^{5}/M^{2}R^{6}c^{13}$		$Gh^{2}/MR^{2}c^{5}$		$\surd Gh^{3}/M^{2}R^{2}c^{7}$		k h/Mc^{2}
-3/2		$\surd G^{2}h^{5}/M^{3}R^{5}c^{11}$		$\surd Gh^{4}/M^{3}R^{3}c^{8}$		$\surd h^{3}/M^{3}Rc^{5}$	
-2	$Gh^{3}/M^{2}R^{3}c^{6}$		$\surd Gh^{5}/M^{4}R^{4}c^{9}$		$h^{2}/M^{2}Rc^{3}$		$\surd h^{3}/GM^{4}c^{3}$
-5/2		$\surd Gh^{6}/M^{5}R^{5}c^{10}$		$\surd h^{5}/M^{5}R^{3}c^{7}$		$\surd h^{4}/GM^{5}Rc^{4}$	
-3	$\surd Gh^{7}/M^{6}R^{6}c^{11}$		$h^{3}/M^{3}R^{2}c^{4}$		$\surd h^{5}/GM^{6}R^{2}c^{5}$		$h^{2}/GM^{3}c$

Notation: In the above table h is used for ħ, the Planck constant / 2π .
√Is for entire expression

NOTES:

The Planck time is $t_o = \sqrt{G \hbar / c^5}$

At all levels: $t = t_o^2/Z$ $T = t_o^2/K$ $K = t_o^2/T$ $Z = t_o^2/t$ $\tau = t_o^2/\eta$ $\eta = t_o^2/\tau$

$[T \tau^2 = t^3]$, $[K \eta^2 = Z^3]$, $[RZ^2 = L \eta^2]$, $[RK = LZ]$

$RK = LZ = \hbar/$ the planck force, or $KRc^4/G = ZLc^4/G = \hbar$

Invariants:

If $E = M c^2$ and time = T, then the power, $P = Mc^2/T = c^5/G$ at all levels. related to Avogadro?

If $E = \hbar/Z$, then the force, $F = c^4/G$ at all levels.

If time = $t = L/c$, then velocity = c at all levels

Conversions:

Dark matter ⇒ Baryon: $+ \Rightarrow -$, $- \Rightarrow +$ An inversion with the Planck values as fulcrums

Stellar ⇒ Universe: $n \Rightarrow 3/2\, n$ A magnification in scale.

Baryon ⇒ Stellar: Complex

RESONANCES

TIME = TIME	$t = L/c$	$T = GM/c^3$	$K = \hbar/Mc^2$	$Z = G\hbar/c^4L$	$\tau = \sqrt{L^3/GM}$	$\eta = \sqrt{G^3\hbar^2M/c^{10}L^3}$
$t = L/c$	$1 = 1$	$M/L = c^2/G$	$ML = \hbar/c$	$L = l_O$	$M/L = c^2/G$	$L^5 = R\, l_O^4$
$T = GM/c^3$		$1 = 1$	$GM^2 = \hbar c$	$ML = \hbar/c$	$M/L = c^2/G$	$ML^3 = m_O l_O^3$
$K = \hbar/Mc^2$			$1 = 1$	$M/L = c^2/G$	$ML^3 = m_O l_O^3$	$M/L = c^2/G$
$Z = G\hbar/c^4L$				$1 = 1$	$L^5 = R\, l_O^4$	$M/L = c^2/G$
$\tau = \sqrt{L^3/GM}$					$1 = 1$	$L^6 = R^2\, l_O^4$
$\eta = \sqrt{G^3\hbar^2M/c^{10}L^3}$						$1 = 1$

NOTES: $[R = GM/c^2]$, $[(M/L = c^2/G)$ is the same as $(L = R)$, which is the Schwarzschild bound.]

$[GM^2 = \hbar c)$ indicates (gravity = coulomb)]

54b
bnk

allometry

It would be strange to say,
my hand is 20 years old, my ears are 10 years old,
my legs are 15 years old ... etc.
The parts of our body are all the same age.
But are we correct in projecting the likeness
to our body onto the universe?

The data (Hodge) from Leo II indicates that some galaxies are of different ages — we know this is also true for stars.

Our problem is with a part being older than the whole. But relations between parts + wholes for the universe may not be analogous to those of the more familiar, such as our bodies.

It is not necessarily strange to say,
My mind is 20 years old, my body is 60 years old (⇒ I'm immature), my genitals are 16 years old (⇒ I'm sexually active), or I am an old soul...
Here parts + wholes have a freer relationship.
Maybe the universe is like this.

Certainly we have the experience of the variation of subjective time with clock time. ⇒ 2 times with not only different rates, but at least one of which has a variable rate. The rate at which subjective time runs with respect to the other seems to be related to consciousness or better, awareness. Yogi's can stop to second hand of a clock with intense awareness. (i.e. the unit of subjective time becomes so short that a second becomes an age). Do we have something analogous in T and τ? Level of energy rather than awareness.

[awareness ⇒ higher energy]

The Planck Particle is a quantum black hole
See Harrison's Cosmology p 333

54a
back

ibid p. 329

Unit of length = fermi = size of nucleon = 10^{-13} cm (= r_e?)
Unit of mass = nucleon = mass of proton = 10^{-23} g (= m_p?)
Unit of time = jiffy = $\frac{1\,\text{fermi}}{c}$ = 10^{-23} ~~sec~~

Universe: Size 10^{40} fermis $\qquad 10^{60}\,\ell_L$
Mass 10^{80} nuclean $\qquad 10^{60}\,\ell_M$ $\qquad$ all $S^{3/2}$
Age 10^{40} jiffies $\qquad 10^{60}\,\ell_T$

fermi = $10^{20}\,\ell_L$ $\qquad$ probably $\sqrt{S}\;\ell_L$
nucleon = $10^{-18}\,\ell_M$ $\qquad 1/\sqrt{S}\;\ell_M$
jiffy = $10^{20}\,\ell_T$ $\qquad \sqrt{S}\;\ell_T$

jiffy = −23.026889 sec
ℓ −43.268366
20.241477 = $(\alpha M S)^{1/2}$

nucleon = −23.776602
ℓ −4.662199
−19.114403 = $\left(\frac{\alpha M}{S}\right)^{1/2}$

fermi = −12.550068
ℓ −32.791545
20.241477 = $(\alpha M S)^{1/2}$

Hodge's evidence on
the age of LEO II

General Relativity employs "proper time", a universal
Local times may proceed at different rates
allowing stellar evolution to take place at faster
or dynamics
(than @ proper times)
rates. Explaining why parts of the universe
appear older than the whole.

It is a matter of $\frac{\text{local rates}}{\text{proper rate}}$

01/11/10

PRIMARY DIMENSIONAL MATRIX
FOR T=1

TIME TABLE

COMBINATIONS FOR [T = 1]

$\sqrt{\frac{G^5M^4\hbar}{R^4c^{13}}}$		K $\frac{G^2M^2}{c^5R}$ ✓		$\sqrt{\frac{G^3M^4}{c^7\hbar}}$		$\frac{GM^2R}{c^2\hbar}$ ✓		$\sqrt{\frac{GM^4R^4}{c\hbar^3}}$	2
	$\sqrt{\frac{G^4M^3\hbar}{c^{11}R^3}}$		$\sqrt{\frac{G^3M^3}{Rc^8}}$		$\sqrt{\frac{G^2M^3R}{c^5\hbar}}$		$\sqrt{\frac{GM^3R^3}{\hbar^2c^2}}$		3/2
$\frac{G^2M\hbar}{R^2c^6}$ ✓		$\sqrt{\frac{G^3M^2\hbar}{c^9R^2}}$		T $\frac{GM}{c^3}$ ✓		$\sqrt{\frac{GM^2R^2}{\hbar c^3}}$		$\frac{MR^2}{\hbar}$ ✓ Φ	1
	$\sqrt{\frac{M\hbar^2G^3}{c^{10}R^3}}$		$\sqrt{\frac{G^2\hbar M}{c^7R}}$		$\sqrt{\frac{GMR}{c^4}}$		Φ $\sqrt{\frac{MR^3}{\hbar c}}$ ✓		1/2
$\sqrt{\frac{\hbar^3G^3}{c^{11}R^4}}$		k $\frac{\hbar G}{c^4R}$ ✓	$\sqrt[4]{\frac{G^3\hbar^3}{R^2c^{13}}}$	t_0 $\sqrt{\frac{G\hbar}{c^5}}$ ✓	$\sqrt[4]{\frac{G\hbar R^2}{c^7}}$	t $\frac{R}{c}$ ✓	$\sqrt[4]{\frac{R^6}{cG\hbar}}$	$\sqrt{\frac{cR^4}{G\hbar}}$	0 M a
	$\sqrt{\frac{G^2\hbar^3}{c^9R^3M}}$		$\sqrt{\frac{G\hbar^2}{MRc^6}}$		$\sqrt{\frac{\hbar R}{c^3M}}$		τ $\sqrt{\frac{R^3}{GM}}$ ✓		-1/2
$\frac{G\hbar^2}{c^5MR^2}$ ✓		$\sqrt{\frac{G\hbar^3}{M^2R^2c^7}}$		Z $\frac{\hbar}{Mc^2}$ ✓		$\sqrt{\frac{\hbar R^2}{cGM^2}}$		$\frac{R^2c}{GM}$ ✓	-1
	$\sqrt{\frac{G\hbar^4}{M^3R^3c^8}}$		$\sqrt{\frac{\hbar^3}{c^5M^3R}}$		$\sqrt{\frac{\hbar^2R}{Gc^2M^3}}$		$\sqrt{\frac{\hbar cR^3}{G^2M^3}}$		-3/2
$\sqrt{\frac{G\hbar^5}{M^4R^4c^9}}$		$\frac{\hbar^2}{c^3RM^2}$ ✓		$\sqrt{\frac{\hbar^3}{c^3M^4G}}$		ζ $\frac{\hbar R}{GM^2}$ ✓		$\sqrt{\frac{\hbar c^3R^4}{G^3M^4}}$	-2
-2	-3/2	-1	-1/2	0	1/2	1	3/2	2	

R

b

ORIGINAL SIX
Additional 4 Feb 2000

Z = COMPTON = $\frac{\hbar}{Mc^2}$

T = Schwarzschild = $\frac{GM}{c^3}$

τ = KEPLER = $\sqrt{\frac{R^3}{GM}}$

MAKE TABLE FOR $[T^2]$
INSTEAD

or represent all with $\sqrt{\ }$

COMMON FREQUENCIES

Several diagonals

		e	B	P	D	NS	U	MU
-78.780498						-78.(3)	-78.	
-37.697541						-37		-37.
-17.456065		-17.	-17.		-17.(3) di		-17.(3) diagonal	
2.785412		2.7			2.785	2.7(5)		
23.026888		23	23		23(5)			
43.268366		43	43	43	43	43	43	
63.509845		63	63		63(4)			
103.992800					103(2)		103(4) diag	

D ~ Fulcrum 83

$(\alpha MS)^{-3}\nu_0$								
$(\alpha MS)^{-2}\nu_0$								
$(\alpha MS)^{-3/2}\nu_0$								
$(\alpha MS)^{-1}\nu_0$								
$(\alpha MS)^{-\frac{1}{2}}\nu_0$								
ν_0								
$(\alpha MS)^{1/2}\nu_0$								
$(\alpha MS)^{3/2}\nu_0$								

83 $(\alpha MS)^{1}\nu_0$

MORE NOTES re FREQUENCIES

$R = \frac{GM}{c^2}$

T	Y	t	τ
$\frac{GM}{C^3}$	$\sqrt{\frac{GMR}{C^4}}$	$\frac{R}{c}$	$\sqrt{\frac{R3}{GM}}$

$tT = Y^2$ $\qquad$ $T\tau^2 = t^3$

$Y\tau = t^2$ $\qquad$ $\tau T^2 = Y^3$

$t = \frac{L}{c}$ $\quad T = \frac{GM}{C^3}$ $\quad \tau = \sqrt{\frac{L^3}{GM}}$ $\quad K = \frac{\hbar}{Mc^2}$ $\quad Z = \frac{G\hbar}{c^7 L}$ $\quad \eta = \sqrt{\frac{G^3\hbar^2 M}{c^{10} L^3}}$

$LT = Rt$

$\cancel{RT^2 = LY^2}$ $\quad Lt^2 = R\tau^2$

$\cancel{\Rightarrow R^4 = L^4}$

$\cancel{\Rightarrow R = L}$

$\cancel{LT^2 = R\tau^2}$

$\cancel{\Rightarrow R^2 = L}$

$RK = LZ$

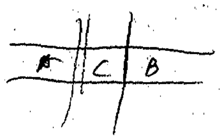
$RZ^2 = L\eta^2$ ✓

$\Phi^2 K = t^3$

$\Omega\omega = \sqrt{\frac{GM^2L^3}{4c^3} \cdot \frac{G^3M^2\hbar}{L^2c^9}} = M^2\frac{G^2}{C^6} = \left(\frac{GM}{c^3}\right)^2 = T^2$

$M^2 = \frac{G^2M^2}{C^6}$

All √ and no √



$AB = C$

The Two Frequencies f and ν

$\frac{GM}{C^3} = T$ $\qquad \frac{GE}{C^5} = T \ , \ f = \frac{C^5}{GE}$

$E = Mc^2$

$\frac{\nu}{f} = \frac{E}{\hbar}\frac{GE}{C^5} = \frac{E^3}{\frac{C^5\hbar}{G}} = \frac{E^3}{\mathcal{E}_0^2}$

$E = \hbar\nu \qquad \nu = \cancel{\hbar}\frac{E}{\hbar}$

$\nu f = \frac{E}{\hbar}\frac{C^5}{GE} = \frac{C^5}{G\hbar} = \nu_0^2$ = Planck frequency squared

---

set $f = \nu$

If $f = \nu \Rightarrow P$

$\frac{C^5}{GE} = \frac{E}{\hbar} \ , \ \frac{C^5\hbar}{G} = E^2 = \mathcal{E}_0^2$ – Planck enery squared

$\mathcal{E}_0^2 = 32{,}582\ 475\ 204$

$f_U = -17{,}455\ 656\ 313 \qquad = \qquad T_U = (\alpha\mu S)^{3/2} t_0$

$f_U\nu_U = \nu_0^2 = 86.536\ 323\ 064$

$f_u = \frac{1}{T_u} = (\alpha\mu S)^{-3/2}\nu_0$

$\cancel{\nu_u}$ $f_u = -17.\ 455\ 656\ 313$

$\nu_u = 103.991\ 979\ 377$

$\nu_u = (\alpha\mu S)^3 f_U$

$= (\alpha\mu S)^3 (\alpha\mu S)^{-3/2}\nu_0$

$\frac{\nu_u}{\nu_0} = 60.723\ 817\ 845 = (\alpha\mu S)^{3/2}$

$\nu_u = (\alpha\mu S)^{3/2}\nu_0$

$\frac{\nu_u}{f_u} = \frac{103{,}991\ 979\ 377}{-17{,}455\ 656\ 313}$

$121\ 447\ 635\ 690 = (\alpha\mu S)^3$

$$\boxed{\begin{array}{l} f_U\nu_u = \nu_0^3 \\ \frac{\nu_u}{f_u} = (\alpha\mu S)^3 \end{array}}$$ $(\alpha\mu S)^n$

$\frac{\nu_U}{f_U} = (\alpha\mu S)^3 = \frac{\mathcal{E}_U^3}{\mathcal{E}_0^3}$

$\mathcal{E}_U^3 =$ 121, 447 635 690
32. 582 475 204
154, 030 110 894

$\mathcal{E}_U =$ ~~77~~, 0~~2~~0 055 447

$M_U =$ 20. 953 ~~841~~ 406
641

$\left(\frac{S}{\alpha M}\right)^{3/2} = 57.342\ 595\ 500$

$m_0 = -4.662\ 403\ 804$

$M_U = 53{,}680\ 191\ 696$ $\qquad \neq \qquad$ $M_U = 56{,}\ \cancel{086}\ 414\ 041$
061

$B \quad f\cancel{\nu} = \frac{c^3}{GM} = 38{,}605\ 757\ 728$

$f_U \cancel{\nu_u} = \frac{c^3}{GM_U} = -14{,}074\ 433\ 968$
86.536 323 064
100.610 757 032

ν_u

☆ $M_U = 56.06\cancel{1}\ 414\ 041$
52.680 191 696
3.38~~1~~ 222 345
$(\alpha M)^3$

~~60~~

$(\alpha\mu S)^{3/2}$ 60. 723 817 845 $\qquad (\alpha\mu S)^{3/2}m_0$
4.662 403 804
56.061 414 041

$Z'_\star f_\star = Z_0'^2$

$f_\star = (\alpha MS)^{-1} Z_0 = 2.785\,616\,212$

$Z_\star f_\star =$

$86.536\,323\,064$

$Z_\star = 83.250\,706\,852$

$2.785\,616\,212$

$\frac{Z_\star}{f_\star} = 80.965\,090\,640 = (\alpha MS)^2$

$= \alpha MS = 40.482\,545\,320$;

$4.662\,403\,804$

$M_\star = 35.820\,141\,516$

$33.566\,194\,196$

$2.254\,947\,320$

$(\alpha M)^2$

$\left(\frac{S}{\alpha M}\right)$[illegible] $= 38.228\,397\,000$

$4.662\,403\,804$

$33\,566\,194\,196$

FULCRUMS

U 56
NS 35
D 15

The Schwarzschild Fulcrum $\frac{M}{R}$

value at $P = \frac{c^2}{G}$: 28.128347 $\qquad P - B = S$

value at B = -11.226534 $\qquad P - e = \mu S$

value at e = -14.490443

$P - e$			$P - B$	$P - U$	$P - NS$	$P - D$
$\alpha^{-3/2}(\mu S)^{-1/2}$	$M R^3$	=	$(\alpha\mu)^{-3/2} S^{-1/2}$	$(\alpha M S)^{-9/2}$	$(\alpha \mu S)^{-3}$	$(\alpha M S)^{-3/2}$
α^{-1}	$M R$	=	$(\alpha\mu)^{-1}$	$(\alpha M S)^{-3}$	$(\alpha M S)^{-2}$	$(\alpha M S)^{-1}$
$\mu(P-B) = \alpha^{-1}(\alpha\mu S)^{1/2}$	M	=	$(\alpha\mu)^{-1/2} S^{1/2}$	$(\alpha\mu S)^{-3/2}$	$(\alpha\mu S)^{-1}$	$(\alpha M S)^{-1/2}$
μS	$\frac{M}{R}$	=	S	$(\alpha\mu S)^{0}$	$(\alpha\mu S)^{0}$	$(\alpha M S)^{0}$
$\alpha^{1/2}(\mu S)^{3/2}$	$\frac{M}{R^2}$	=	$(\alpha\mu)^{1/2} S^{3/2}$	$(\alpha\mu S)^{3/2}$	$(\alpha M S)^{1}$	$(\alpha M S)^{1/2}$
$\mu(P-B) \equiv \alpha\mu^2 S^2$	$\rho : \frac{M}{R^3}$	=	$(\alpha\mu)\ S^{2}$	$(\alpha M S)^{3}$	$(\alpha M S)^{2}$	$(\alpha M S)^{1}$
$\alpha^{3/2}\mu^{5/2} S^{5/2}$	$\frac{M}{R^{n}}$	=	$(\alpha M)^{3/2} S^{5/2}$	$(\alpha\mu S)^{9/2}$	$(\alpha M S)^{3}$	$(\alpha\mu S)^{3/2}$
			$(\alpha\mu)^{-\frac{(n+1)}{2}} S^{\frac{1-n}{2}}$		$(\alpha M S)^{-n-1}$	$(\alpha M S)^{-\frac{(n+1)}{2}}$

Hypothesis:

related to abstraction

The larger the system, the fewer the available alternatives

There could be several "Hubble Universes", but fewer meta-universe
[parallel]

--- until only 1 $meta^n$-universe is possible.

Hypothesis:

∃ many fulcrums

ρ, $\frac{M}{R}$, $\frac{\hbar}{T}$, E·T

perhaps $\frac{cM}{R^3}$, U

Search for Fulcrums

TYPES OF FULCRUMS

$-$ $*$ 0 $+$ x

$\frac{1}{x}$ 1 x

$\ln x$ x e^x

$x^{\frac{1}{n}}$ x x^n

Verge, Intersect, = fuzzy fulcrums

non commutative

What R for a proton would ⇒ $\delta = \mu$?

we have [0,1] 63.509845
and with $R = r_e$ [-1,0] 62.382770 [M only]
δ = 1.127075 = α_M

62.832 770
3.263 909 = M
66.096 679 = R·(76.059913)

R_p = -9.963234 # -12.550068

~~δ = 2.586884~~

δ = 2.586 834

$[M, R]$

$[1, 0]$ $T = \frac{GM}{c^3}$ Mass or Schwarzschild Time

$[-\frac{1}{2}, \frac{3}{2}]$ $\tau = \frac{1}{\sqrt{G\rho}}$ Density or Kepler Time

$[0, 1]$ $t = \frac{R}{c}$ Motion or Aristotle Time

$[1, 0]$ $z = \frac{Mc^3}{\hat{p}}$ Power or Neyman Time

$[-1, 0]$ $\gamma = \frac{\hbar}{Mc^2}$ Action or Heizenberg Time

$[\frac{1}{2}, \frac{1}{2}]$ $\mu = \sqrt{\frac{GMR}{c^4}}$ Force or Newton Time

$\frac{G}{c^3} = -38,606168$

$c = 10,476821$

$c^2 = 20,953642$

$\hbar = -26,976924$

$G = -7,175705$

$\hat{p} = \frac{c^5}{G} = 59,559810$

$\frac{c^4}{G} = 49,082989$

$t_0 = -43,268366$

$t_0^2 = -86,536732$

also $\frac{\hbar z}{\hat{p}}$ when $z = \frac{1}{\text{any time}}$

$\sqrt{\frac{\hbar^2 G^3}{c^{10}}} =$

$Z \equiv \cancel{t} T$

$$\underset{\text{any of above}}{t_0^2} = \frac{1}{\text{time}} \cdot \frac{\hbar G}{c^5}$$

$\frac{\hbar}{\hat{p}} = -86,536234 = t_0^2$

$[-1, 0]$ $\frac{t_0^3}{T} = \frac{\hbar \cancel{\ }}{Mc^2} = \gamma$; $T\gamma = t_0^2$

$[\frac{1}{2}, -\frac{3}{2}]$ $\frac{t_0^2}{\tau} = \sqrt{\frac{\hbar^2 G^3}{c^{10}}} \sqrt{\rho} = \kappa$;

$[0, -1]$ $\frac{t_0^2}{t} = \frac{\hbar G}{c^4 R} = \psi$;

$[-1, 0]$ $\frac{t_0^2}{z} = \gamma \Rightarrow z \equiv T$

$[1, 0]$ $\frac{t_0^2}{\gamma} = T$

$\frac{t_0^2}{\mu} = \cancel{\hbar} \cancel{\sqrt{\frac{t_0^4}{MR}}} \sqrt{\frac{\hbar^2 G}{c^6 MR}} = \eta$

$\eta\mu = t_0^2$

$\gamma T = t_0^2$

$\gamma z = t_0^2$ } $\Rightarrow T \equiv z$

$\psi t = t_0^2$

$\tau\kappa = t_0^2$

8 times

η	μ	$[-\frac{1}{2}, -\frac{1}{2}]$	$[\frac{1}{2}, \frac{1}{2}]$
γ	z	$[-1, 0]$	$[1, 0]$
ψ	t	$[0, -1]$	$[0, 1]$
κ	τ	$[\frac{1}{2}, -\frac{3}{2}]$	$[-\frac{1}{2}, +\frac{3}{2}]$

UNIV $M = 56.062232$, $\overset{L}{R} = 27.932886$ EIGHT TIMES

$[{}^{\prime}M, R]$

$\eta\ [-\frac{1}{2}, -\frac{1}{2}]$ $\sqrt{\frac{\hbar^2 G}{C^6}} \cdot \frac{1}{\sqrt{MR}} = -103.992799 = (\alpha\mu S)^{-3/2} t_0$

$\mu\ [\frac{1}{2}, \frac{1}{2}]$ $\sqrt{\frac{G}{C^4}}\ \sqrt{MR} = 17.456064 = (\alpha\mu S)^{3/2} t_0$

$\zeta\ [-1, 0]$ $\frac{\hbar}{C^2} \cdot \frac{1}{M} = -103.992798 = (\alpha\mu S)^{-3/2} t_0$

$z\ [1, 0]$ $\frac{G}{C^3}\ M = +17.457064 = (\alpha\mu S)^{3/2} t_0$

$\psi\ [0, -1]$ $\frac{\hbar G}{C^4}\ \frac{1}{R} = -103.992799 = (\alpha M)^{-3/2} t_0$

$t\ [0, 1]$ $\frac{1}{c}\ R = +17.456065 = (\alpha\mu S)^{3/2} t_0$

$-\tau\ [-\frac{1}{2}, +\frac{3}{2}]$ $\frac{1}{\sqrt{G}} \sqrt{\frac{R^3}{M}} \overset{= \frac{1}{\sqrt{G\rho}}}{=} +17.456066 = (\alpha\mu S)^{3/2} t_0$ ✓

~~$K\ [\frac{1}{2}, -\frac{3}{2}]$ $\sqrt{\frac{\hbar^2 G^3}{C^{10}}}\ \sqrt{\rho} = \sqrt{G\rho}\ t_0 = -32.988006$~~

$\kappa\ [\frac{1}{2}, -\frac{3}{2}]$ $t_0^2 \sqrt{G\rho} \simeq -103.992797 = (\alpha\mu S)^{-3/2} t_0$

$G\rho = -34.912131$

$\sqrt{G\rho} = -17.456065\ [\frac{1}{1}]$

$$\overset{-103}{(\alpha\mu S)^{-3/2} t_0} \cdot \overset{+17}{(\alpha\mu S)^{3/2} t_0} = t_0^2 = -86.536732$$

$$\frac{17}{-103}\ \frac{(\alpha\mu S)^{3/2} t_0}{(\alpha\mu S)^{-3/2} t_0} = (\alpha\mu S)^3 = 121.448862$$

$\sqrt{\frac{G}{C^4}} = -24.541495$ $\sqrt{\frac{\hbar^2 G^3}{C^{10}}} = t_0^2 \sqrt{G}$

$\sqrt{\frac{\hbar^2 G}{C^6}} = -61.995240$

$\frac{\hbar G}{C^7} = -76.059913$

FREQUENCIES

The ~~Three~~ four most basic frequencies appear to be.

$\nu_S = \frac{c^3}{GM}$ $\nu_A = \frac{c}{R}$ ~~FIND 11,456 for 6~~

$\nu_K = \sqrt{G\rho}$ $\nu_5 \simeq \frac{c^4 R}{\hbar G}$

$\nu_H = \frac{E}{\hbar} = \frac{Mc^2}{\hbar}$ $\nu_6 = \frac{G\hbar}{c^2 R^3}$

THE VALUES FOR VARIOUS OBJECTS ARE

ν_6	cgs hertz	ν_S	ν_K	ν_H	ν_A	ν_5
-17.456067	B	24.153964	3.348949	24.153964 ~~62.382770~~	23.026889	63.509845
	E	43.268366	43.268366	43.268366	43.268366	
M 15.579278	D	23.026890	-14.623315 ~~-14.123315~~ 2	63.509844	23.026889	63.509845
35.820765 $\frac{M}{R}$ 7.691409	NS	2.785413	2.785412	83.751321	2.785412	
M=56.062232 R=27.932886	U	-17.456064	-17.456065	103.992798	-17.456065	103.992799

$U\nu_6 = -138.904929$

Planck Value

	$\left(\frac{\alpha M}{S}\right)^{1/2}$	$(S\sqrt{\alpha M})^{-1}$	$\left(\frac{S}{\alpha M}\right)^{1/2}$	$(\alpha MS)^{-1/2}$	
B	-19.114402	-39.919417	+19.114404	-20.241477	20.241478
E	1 $(\alpha MS)^0$	1	1	1	
D	-20.241476	$\left(\frac{\alpha G}{S}\right)^{3/2}$ 2 -57.891681	+20.241478	-20.241476	
NS	-40.482953 $(\alpha MS)^{-1}$	-40.482953	+40.482955	-40.482955	
U	-60.724430 $(\alpha MS)^{-3/2}$	-60.724630	+60.724432	-60.724630	

$\frac{C^4 R}{\hbar G} = \nu_5$ for re $= 63,509745$

$\frac{C^3}{GM} = \nu_S$ Schwartzschild

$\frac{C}{R} = \nu_A$ Aristotle

$\sqrt{G\rho} = \nu_K$ Kepler

$\sqrt{\frac{GM}{R^3}} =$

$\frac{Mc^2}{\hbar} = \nu_H$ Heisenberg for re $= -17,456067$

$\frac{G\hbar}{c^2 R^3} = \nu_6$

FREQUENCY TABLE

												$+5/2$
				$\frac{GM^2}{\hbar R}$				$\frac{c^3RM^2}{\hbar^2}$				$+2$
												$+3/2$
		$\frac{GM}{cR^2}$				$\frac{Mc^2}{\hbar}$				$\frac{c^5MR^2}{G\hbar^2}$		$+1$
			$\left[\frac{GM}{R^3}\right]^{\frac{1}{2}}$		$\left[\frac{c^3M}{\hbar R}\right]^{\frac{1}{2}}$							$+1/2$
$\frac{G\hbar}{R^3c^2}$				$\frac{c}{R}$		$\left[\frac{c^5}{G\hbar}\right]^{\frac{1}{2}}$		$\frac{c^4R}{\hbar G}$				0
												$-\frac{1}{2}$
		$\frac{\hbar}{MR^2}$		$\left[\frac{hc^3}{GM^2R^2}\right]^{\frac{1}{2}}$		$\frac{c^3}{GM}$				$\frac{c^6R^2}{G^2\hbar M}$		-1
												$-\frac{3}{2}$
				$\frac{c^2\hbar}{GM^2R}$				$\frac{c^5R}{G^2M^2}$				-2
												$-\frac{5}{2}$
-3	$-\frac{5}{2}$	-2	$-\frac{3}{2}$	-1	$-\frac{1}{2}$	0	$+\frac{1}{2}$	$+1$	$+\frac{3}{2}$	$+2$	$+\frac{5}{2}$	

M

R

L

DEFINITIONS of $[M, R]$

✓	$\left[\frac{c^5}{G\hbar}\right]^{1/2}$	$[0,0]$	$= 43.268366$ [PLANCK]
✓	$\frac{Mc^2}{\hbar}$	$[1,0]$	$M(47.930566)$
✓	$\frac{G\hbar}{R^3c^2}$	$[0,-3]$	$\frac{1}{R^3}($~~-65.583092~~$)$ (-55.106271)
✓	$\left[\frac{GM}{R^3}\right]^{1/2}$	$\left[\frac{1}{2}, -\frac{3}{2}\right]$	$\left[\frac{M}{R^3}(-7.175705)\right]^{1/2}$
✓	$\left\lceil\frac{C}{R}\right.$	$[0,-1]$	$\frac{1}{R}(10.476821)$
✓	$\frac{RC^4}{\hbar G}$	$[0,+1]$	$R(76.059913)$
✓	$\frac{GM}{CR^2}$	$[1,-2]$	$\frac{M}{R^2}(-17.652526)$
✓	$\frac{MR^2C^5}{G\hbar^2}$	$[1,2]$	$MR^2(113.513658)$
✓	$\frac{\hbar}{MR^2}$	$[-1,-2]$	$\frac{1}{MR^2}(-26.976924)$
✓	$\frac{C^3}{GM}$	$[-1,0]$	$\frac{1}{M}(38.606168)$
✓	$\frac{R^2C^6}{MG^2\hbar}$	$[-1,2]$	$\frac{R^2}{M}(104.189260)$
✓	$\frac{GM^2}{\hbar R}$	$[2,-1]$	$\frac{M^2}{R}(19.801219)$
✓	$\frac{RM^2C^3}{\hbar^2}$	$[2,1]$	$M^2R(85.384311)$
✓	$\frac{C^2\hbar}{GM^2R}$	$[-2,-1]$	$\frac{1}{M^2R}(1.152428)$
	$\frac{C^5R}{G^2M^2}$	$[-2,+1]$	$\frac{R}{M^2}(66,735515)$

BASE PAGE

$\left[\frac{C^3M}{\hbar R}\right]$	$\left[\frac{1}{2}, -\frac{1}{2}\right]$	$\left[\frac{M}{R}(58.407387)\right]^{1/2}$
$\left[\frac{\hbar C^3}{GM^2R^2}\right]$	$[-1,-1]$	$\left[\frac{1}{M^2R^2}(11.629244)\right]^{1/2}$

[M, R] Ref BASE PAGE

ELECTRON $M = -27.040511$
$R = -12.550068$

[1, 0] 20.890055

[0, 1] 63.509845 $(\alpha MS)^{1/2} Z_0$

[−1, 0] 65.646679 $\alpha^{-1}(\alpha MS)^{1/2} Z_0$

[0, −1] 23.026889 $(\alpha MS)^{-1/2} Z_0$

$[\frac{1}{2}, -\frac{3}{2}]$ ~~3.433988~~ 1.717044

[0, −3] −17.456067 $(\alpha MS)^{-3/2} Z_0$

[1, 2] 61.373011 $\alpha(\alpha MS)^{1/2} Z_0$

[2, 1] 18.753211

[1, −2] −19.592901

[−2, 1] 108.266469

[−1, 2] 106.129635

(14)

[2, −1] −21.729735

[−1, −2] +25.163723

[−2, −1] 67.783513 $\alpha^{-2}(\alpha MS)^{1/2} Z_0$

M^2 −54.081022
R^2 −25.100136
R^3 −37.650204

$[-\frac{1}{2}, -\frac{1}{2}]$ 21.958472 $\alpha^{3/2}$

[−1, −1] 45.405201 δ with [−1, 0]

Set. #1	Set #2	Set #3	Set #4
67	108	−17	25
65	106	−19	23
63		−21	20
61			18

3 + 17 = [1, 0]

all δ's = α = 2.136834

[M,R] REF BASE PAGE

PROTON $M = -23.776602$ $M^2 = -47.553204$
$R = -12.550068$ $R^2 = -25.100136$
$R^3 = -37.650204$

[1,0] 24.153964 $(\alpha M)(\alpha MS)^{-1/2} Z_0 = \sqrt{\frac{\alpha M}{S}}\, Z_0$ $[-\frac{1}{2}, -\frac{1}{2}]$ 33.590426

[0,1] 63.509845 $(\alpha MS)^{1/2} Z_0$ [-1, -1] +42,241292

[-1,0] 62,382770 $(\alpha M)^{-1}(\alpha MS)^{1/2} Z_0 = \sqrt{\frac{S}{\alpha M}}\, Z_0$

[0,-1] 23.026889 $(\alpha MS)^{-1/2} Z_0$

$[\frac{1}{2}, -\frac{3}{2}]$ $(6.697897)/2 = 3.348948 = (\alpha M)^{1/2}(\alpha MS)^{-1} Z_0$

[0,-3] -17.456065 $(\alpha MS)^{-3/2} Z_0$

[1,2] 64.636920 $(\alpha M)(\alpha MS)^{1/2} Z_0$

[2,1] 25.281039 $(\alpha M)^2(\alpha MS)^{-1/2} Z_0$

[1,-2] -16.328992 $(\alpha M)(\alpha MS)^{-3/2} Z_0$

[-2,1] 101.738651 $(\alpha M)^{-2}(\alpha MS)^{3/2} Z_0$

[-1,2] 102.865726 $(\alpha M)^{-1}(\alpha MS)^{3/2} Z_0$

[2,-1] -15.201917 $(\alpha M)^2(\alpha MS)^{-3/2} Z_0$

[-1,-2] 21.899814 $(\alpha M)^{-1}(\alpha MS)^{-1/2} Z_0$

[-2,-1] 61,256695 $(\alpha M)^{-2}(\alpha MS)^{1/2} Z_0$

~~[-2,+1] 77.962049~~ ?

frequencies
$(\alpha MS)^n$

$n = \pm\frac{1}{2}, \pm 1, \pm 3/2$

[ ] $103.992800 = (\alpha MS)^{3/2} t_0^{-1}$

D $M = 15.579278$ $M^2 = 31.158556$

$R = -12.550068$ $R^2 = -25.100136$

$R^3 = -37.650204$

$[1, 0]$	63.509844	$(\alpha\mu S)^{1/2} \nu_0$	$[-\frac{1}{2}, -\frac{1}{2}]$	43.268336	$(\alpha\mu S)^{0} \nu_0$
$[0, 1]$	63.509845				
$[-1, 0]$	23.026890	$(\alpha\mu S)^{-1/2} \nu_0$	$[-1, -1]$	2.785412	$(\alpha\mu S)^{-1} \nu_0$
$[0, -1]$	23.026889				
$[\frac{1}{2}, -\frac{3}{2}]$	23.026888				
$[0, -3]$	-17.456067	$(\alpha\mu S)^{-3/2} \nu_0$			
$[1, 2]$	103.992800	$(\alpha\mu S)^{3/2} \nu_0$			
$[2, 1]$	103.992799				
$[1, -2]$	23.026888				
$[-2, 1]$	23.026891				
$[-1, 2]$	63.509846				
$[2, -1]$	63.509843				
$[-1, -2]$	-17.456066				
$[-2, -1]$	-17.456065				

frequencies

$(\alpha\mu S)^n$

$n = 0, \pm \frac{1}{2}, \pm 1$

$[M, R]$

NEUTRON STAR $M = 35.820755$ $M^2 = 71.641510$
$R = 7.691409$ R^2 15.382818
R^3 23.074227

$[1, 0]$ $83.751321 = (\alpha M S)\nu_0$
$[0, 1]$ $83.751324 = (\alpha M S)\nu_0$
$[-1, 0]$ $2.785413 = (\alpha M S)^{-1}\nu_0$
$[0, -1]$ $2.785412 = (\alpha M S)^{-1}\nu_0$
$[\frac{1}{2}, -\frac{3}{2}]$ $2.785416 = (\alpha M S)^{-1}\nu_0$
$[0, -3]$ $-78.180498 = (\alpha M S)^{-3}\nu_0$
$[1, 2]$ $164.717231 = (\alpha M S)^{3}\nu_0$
$[2, 1]$ $164.717230 = (\alpha M S)^{3}\nu_0$
$[1, -2]$ $2.785411 = (\alpha M S)^{-1}\nu_0$
$[-2, 1]$ $2.785414 = (\alpha M S)^{-1}\nu_0$
$[-1, 2]$ $83.751323 = (\alpha M S)\nu_0$
$[2, -1]$ $83.751320 = (\alpha M S)\nu_0$
$[-1, -2]$ $-78.180497 = (\alpha M S)^{-3}\nu_0$
$[-2, -1]$ $-78.180496 = (\alpha M S)^{-3}\nu_0$

$[\frac{1}{2}, -\frac{1}{2}]$ $43.268371 = \nu_0$
$[-1, -1]$ $-37.697547 = (\alpha M S)^{-2}\nu_0$

---

④ 83
⑤ 2
② 164
③ -78

For N.S.
Frequencies
$(\alpha M S)^n \nu_0$
$n = 0, \pm 1, \pm 2, \pm 3$

Densities

Densities

Copy to Pyth + CosCur Notebooks

Proton 13,873602 $= \rho_B \doteq (\alpha\mu\delta^2)^{-1}\rho_P$

35 Neutron star 12.746528 $= (\alpha\mu)^{-1}\rho_B$

34 Neutron Star 15,000676 $= (\alpha\mu)\rho_B$

33 Neutron star 17.254824 $= (\alpha\mu)^3\rho_B$

$$\left[\frac{R^{3/2}}{M^{1/2}}\right]\frac{1}{\sqrt{\rho_u}} \doteq \rho_B\left[\frac{M}{R^3}\right]$$

Cosmic Curiositie $\Rightarrow M \sim R^3$

$\rho_u = -27,736426$

13,868213 ~ 13,873602

$\delta \approx 0,005389$

$\rho_B^2\,\rho_u \doteq 1$

V 56 values

$$\frac{\rho_B}{\rho_u} \doteq \cancel{\alpha\mu\delta}\cdot(\alpha\mu)^2\delta, \quad \frac{\rho_P}{\rho_u} \doteq (\alpha\mu\delta)^3$$

$$\frac{l_0^2}{m_0} \doteq -60.920891$$

cf. $(\alpha\mu\delta)^{-3/2}$ $\delta = 0.196460$

UNIVERSE $M = 56.062232 = (\alpha M S)^{3/2} m_0$ $\quad M^2$ 112.124464 $\quad \rho_U = 27.73642$
$R = 27.932886 = (\alpha M S)^{3/2} \ell_0$ $\quad R^2$ 55.865772
R^3 83.798658 $\quad \sigma_U = 0.196460$
R^4 111.731544

$[1,0]$ 103.992798 $(\alpha M S)^{3/2} \nu_0$
$[0,1]$ 103.992799 $(\alpha M S)^{3/2} \nu_0$ $\quad [\frac{1}{2}, -\frac{1}{2}]$ 43.268366 $= \gamma_0$
$[-1,0]$ -17.456064 $(\alpha M S)^{-3/2} \nu_0$ $\quad [-1,-1]$ $-78.180496 = (\alpha M S)^{-3} \gamma_0$
$[0,-1]$ -17.456065 $(\alpha M S)^{-3/2} \nu_0$
$[\frac{1}{2}, -\frac{3}{2}]$ -17.456065 $(\alpha M S)^{-3/2} \nu_0$
$[0,-3]$ -138.904929 $(\alpha M S)^{-9/2} \nu_0$
$[1,2]$ $+225.441662$ $(\alpha M S)^{9/2} \nu_0$
$[2,1]$ $+225.441661$ $(\alpha M S)^{9/2} \nu_0$
$[1,-2]$ -17.456066 $(\alpha M S)^{-3/2} \nu_0$
$[-2,1]$ -17.456063 $(\alpha M S)^{-3/2} \nu_0$
$[-1,2]$ 103.992800 $(\alpha M S)^{3/2} \nu_0$
$[2,-1]$ 103.992797 $(\alpha M S)^{3/2} \nu_0$
$[-1,-2]$ -138.904928 $(\alpha M S)^{-9/2} \nu_0$
$[-2,-1]$ -138.904927 $(\alpha M S)^{-9/2} \nu_0$

For U
Frequencies
$(\alpha M S)^{\frac{n}{2}} \nu_0$
$n = \pm 3, \pm 6, \pm 9, 0$

$(\alpha M S)^{3/2}$ 60.724431 $\quad (\alpha M S)^{3/2} \nu_0 = 103.992797 \quad \nu_1$
$(\alpha M S)^3$ 121.448862 $\quad (\alpha M S)^{-3/2} \nu_0 = -17.456065 \quad \nu_2$
ν_0 43.268366 $\quad (\alpha M S)^{-9/2} \nu_0 = -138.904927 \quad \nu_3$
$(\alpha M S)^{9/2}$ 182.173293 $\quad (\alpha M S)^{9/2} \nu_0 = +225.441659 \quad \nu_4$

$\nu_1 \cdot \nu_2 = \nu_0^2$ $\quad \frac{\nu_2}{\nu_3} = (\alpha M S)^3$ $\quad \frac{\nu_1}{\nu_2} = (\alpha M S)^{-3}$ $\quad \frac{\nu_1}{\nu_3} = (\alpha M S)^6$
$\nu_3 \cdot \nu_4 = \nu_0^2$

$\nu_1 \cdot \nu_3 = \nu_2^2$
$\nu_2 \cdot \nu_4 = \nu_1^2$ $\quad \frac{\nu_2}{\nu_4} = (\alpha M S)^{-6}$ $\quad \frac{\nu_1}{\nu_4} = (\alpha M S)^{-3}$ $\quad \frac{\nu_3}{\nu_4} = (\alpha M S)^{-9}$
$\nu_1 \cdot \nu_4 = (\alpha M S)^6 \nu_0^2$
$\nu_2 \cdot \nu_3 = (\alpha M S)^{-3} \nu_2^2$

$-78.180496 = (\alpha M S)^{-3} \nu_0$

⤢ $\Delta = (\alpha M S)^{3/2}$

⤡ $A = 0$

METAVERSE

$M = 76.303709$ $M^2 = 152.607418$

$R = 48.174363$ $R^2 = 96.348726$

$R^3 = 144.523089$

$[1,0]$

$[0,1]$

$[-1,0]$ -37.697541 $(\alpha\mu s)^{-2}\gamma_0 = (-17.356065) * (\alpha\mu s)^{-1/2} = (\alpha\mu s)^{-3/2}\gamma_0 \cdot (\alpha\mu s)^{1/2}\gamma$

$[2,-1] = -199.629358 = (\alpha\mu s)^{-6}\gamma_0$

a b c

$ac = b^2$

a b c d $a^2 d = b^3$

ad = bc

FREQUENCY
VALUES

ELECTRON

$\updownarrow \triangle \quad \frac{\mu S}{\alpha}$

$\underset{\leftrightarrow}{\triangle} \quad \alpha \mu S$

$\nearrow\!\!\swarrow \triangle = \alpha$

$\nwarrow\!\!\searrow \triangle = 42.619790 = \mu S$

													+3	
				-21.729				18.753					+2	
		-19,592				20.890				61,373			+1	
			1.7173 ~~3,434~~											
-17,456		2.785		23,026		43,268		63,509					0	M
		n2		n3				n5						
		25,163				65,646				106,129			-1	
				67,783				108,266					-2	
													-3	
-3		-2		-1		0		+1		+2		+3		

R

													+3
													+2
						$\left(\frac{\mu s}{\alpha}\right)^{+\frac{1}{2}}$							+1
				$(\alpha \mu s)^{-\frac{1}{2}}$		$(\alpha \mu s)^{0}$		$(\alpha \mu s)^{1/2}$					0
						$\left(\frac{\mu s}{\alpha}\right)^{\frac{1}{2}}$							-1
													-2
													-3

all x ~~λ_0~~ ν_0

FREQUENCY VALUES
PROTON

↕ $\frac{S}{\alpha M}$ αM ↗ ↘ S αMS ↔

													3
				-15,201	~~-15201~~			25,281					2
		-16,328	~~-1[illegible]~~			24,153				64,636			1
-17,456				23,026		43,268		63,509					0 M
			3,348		33,590								
		21,899		42,241		62,382				102,865			-1
				61,255				101,738					-2
													-3
-3		-2		-1		0 R		1		2		3	

FREQUENCY VALUES
NEUTRON STAR

													3
				83.791				164.71					2
		2.785				83.751				164.71			1
			2.785		43.268								
-78.180				2.785				83.751					0 M
		-78.180		-37.697		2.785				83.791			-1
				-78.180				2.785					-2
													-3
-3		-2		-1		0		1		2		3	

R (2)

VELOCITIES
OF TIME TYPES

$\frac{G\hbar}{Lc^4}$

	LENGTH	$t = L/c$	$T = GM/c^3$	$k = \hbar/Mc^2$	$Z = \frac{G\hbar}{c^4 L}$	$\tau = \sqrt{L^3/GM}$	$\eta = \sqrt{G^3\hbar^2 M/c^{10} L}$
D	-53.082612	-63.509433	-24.153960	-62.382361	-23.026889	-83.187168	-3.349154
~~D~~		~~-24.153960~~	~~-62.382361~~	~~-23.026889~~	~~-83.187168~~		
D velocity		10.476821 c	-28.878652	$c/\alpha M$ 9.349749	-30.005723	-30.154556	-49.683458
P	-32.791340	-43.268161	-43	-43	-43	-43	-43
P velm		c	c	c	c	c	c
B	-12.550068	-23.026889 ~~-62.382358~~	-62.382358	-24.153963	-63.509433	-3.349154	-83.187168
B velm		c	+49.832290	$c*(\alpha M)$ +11.603895	+49.959365	-9.200914	+70.637100
A	7.691205	-2.785617	-5.039761	-81.496560	-83.750706	-1.658543	-84.877779
A Velm		c	$c\cdot(\alpha M)^2$ 12.730966	+73.805355	76.059501	$c/\alpha M$ 9.349748	77.186574
U	27.932478	17.455655	14.074438	-100.610759	-103.991979	19.146267	-105.682591
U velm		c	$c(\alpha M)^3$ 13.858040	+72.678281	+76.059501	$c/(\alpha M)^{3/2}$ 8.786211	+77.750113

8x11

for $t = \frac{L}{c}$ and $E = Mc^2$
velocity is bounded ≡ c
For $Z = \frac{G\hbar}{c^4 L}$ and $E = \hbar/\text{time}$
Force is bounded ≡ $\frac{c^4}{G}$
for $T = \frac{GM}{c^3}$ $E = Mc^2$
Power is bounded ≡ $\frac{c^5}{G}$

What does this ⟹ for redshift?

different form, but conceptually the same, in the ability of diverse speci
'eigen-species'. This is a boundary condition for natural selection.

At a certain level of sophistication, the bonding structures acquire the a
to beget. [Replication or cloning produces identical elements, while beget
creating variant elements that are also capable of replication and inter-b

Recapitulating:
Sustainment is effected by
1. Two or more levels or dimensions
2. Some form of self reference, such as mirroring
3. Simultaneous triple or higher encounter bonding
4. Additional sustainment is effected by linking to other bonded structu

[1,2 and 3 are Vairacona-Akshobya, 4 is Ratna Sambhava]

Are bonds intersects or unions and what role does the degree of overlap pl

[Add material on standing waves]

See DIMENSIONS NOTE BOOK
FOR BASIC DERIVATIONS

STATIC FREQUENCIES

~ PARTICLES

~ STABILITY

Involve Mass

e.g. $\nu = \frac{c^3}{GM}$

Density

$\nu = \sqrt{\frac{GM}{L^3}}$

EXTENSION

$\nu = \frac{c}{L}$

$\nu = \frac{Mc^2}{\hbar}$

Mass Frequencies

e.g.

DYNAMIC FREQUENCIES

~ WAVES

~ CHANGE

$\nu = \frac{c}{L}$

Electri-

e^2

λ_c

no 2π's

09-02-21

$T\tau^2 = t^3$

		T	τ	t
U	M = 52.680191	14.074433	19.146882 ~~16.696882~~	17.456065
	L = 27.932886	$\frac{t}{T} = (\alpha\mu)^3$	$\frac{\tau}{t} = (\alpha\mu)^{3/2}$	$\Delta_3 = 20.241682$
	R = 24.551254			
	If R all = 14.074433	$\Delta_1 = 19.114198$	$\Delta_2 = \Delta_1 (\alpha\mu)^{3/2} = \Delta_3 \sqrt{\alpha\mu}$	
☆	M = 33.565993	−5.039765	−1.658543	−2.785617
	L = 7.691204	$\frac{t}{T} = (\alpha\mu)^2$	$\frac{\tau}{t} = \alpha\mu$	
	R = 5.440056			
D	M = 14.451795	−24.153963	−22.463352	−23.026889
	L = −12.550068			
	R = −13.677142			
⊙	M = 33.299	−5.306	2.661	0.366
	L = 10.842			
	R = 5.170			
P	M = −4.662404			
	L = −32.791341 = R	−43.268162 =	−43.268162 =	−43.268162
			Δ 39.919009 = $\delta\sqrt{\alpha\mu}$	
B	M = −23.776602	−62.382180	−3.349153	−23.026889
	L = −12.550068 s			
	R = −51.905539			
D'	M = 14.451795	−24.153963	−83.187784	−63.509854
	L = −53.033023 s			
	R = −13.677142			
D'+B		−86.536145	−86.536937	−86.536743

$P^2 = -86.536324 = t_0^2$ $D' \cdot B = t_0^2$ for all T, τ, t

H $M = (m_p + m_e) =$

$L = a_0 =$

O M

		T	τ	t
⊕	M = 27.776243	−10.829515	2.906568 ~ 806 ×2π = 84.449 m	−1.672127 ~ 0.0213 sec
	L = 8.804694			cf τ ☆
	R = −0.352694			

Whenever $L = R = \frac{GM}{c^2}$, $T = \tau = t$ e.g. P

$$T = \frac{GM}{c^3} = \frac{R}{c} = t$$ i.e. all = T

$$\tau^2 = \frac{R^3}{GM} = \frac{(GM)^2}{c^6}$$

$$\tau = \frac{GM}{c^3} = T$$

CLOCK RATES [FREQUENCIES] 11-20-2010

Cf MUSIC RESONANCE, HARMONICS (OCTAVES)
→ HARMONY
[e.g. Richard Ward's OM.—]

ONTIC certain frequences and their combination
→ EXISTENCE

LIFE certain frequences enhance life and health
(eg- Tibetan gong bowls)

On the other hand

∃ certain frequencies and combination that are destructiv
MUSIC NOISE
ONTIC Non - Existenc
LIFE ~ "DEATH RAY"

BEING is accessing and tuning to those frequencies that enhance life.

Meditation frequencis: Pulse, Breathing, Metabolism

also ~ ⊕ frequencies and CHON

FUNDAMENTAL TIME OR FREQUENCY RATIO

05-05-09

A basic mass ratio $\frac{M_B}{M_e} = \frac{\text{Banyon}}{\text{Electron}} = \mu = 3.263909$ (log10)

A basic length ratio fine structure constant $\alpha = -2.136835$

A basic force ratio $\frac{\cancel{\text{Gravity}}}{\cancel{\text{Electric}}} = \delta^{-1} = -39.355880$

A basic time ratio can be derived

dimensions ~ ratios

Force $= \left[\frac{MR}{T^2}\right]$ or $T = \sqrt{\frac{MR}{F}} \sim \tau = \sqrt{\frac{\alpha\mu}{\delta^{-1}}} = \sqrt{\alpha\mu\delta} = 20.241477$

~~The~~ basic time ratio $\tau = 20.241477$
(or frequency ratio)

Note also ∴ by c/c
$\frac{r_e}{l_0} = 20.241477$
planck length

Note $T_B = -23.026889$

$T_P = -43.268366$ $\qquad \frac{T_B}{T_P} = 20.241477 = \tau = \sqrt{\alpha\mu\delta}$

$T_U = 17.456065$ $\qquad \frac{T_U}{T_P} = 60.724431 = \tau^3 = (\alpha\mu\delta)^{3/2}$

$\frac{T_U}{T_B} = 40.482954 = (\alpha\mu\delta)^1 = \tau^2$

Hypothesis $\exists \{\hbar\text{'s}\}$

Planck's Constant $\hbar = -26.976924$ for Planck Level $= (\alpha\mu\delta)^0\hbar$

$M \cdot R = \frac{\hbar}{c}$ or $M \cdot R \cdot c = \hbar$

Baryon Level $m_B \cdot r_e \cdot c =$ ~~13.506031 = (αμδ)¹ħ = ħ_B~~ $-25.849859 = (\alpha\mu)\hbar = \hbar_B$

D Level $m_D \cdot r_e \cdot c = 13.506031 = (\alpha\mu\delta)^1\hbar = \hbar_D$

Star Level $m_\star \cdot R_\star \cdot c = 53.988985 = (\alpha\mu\delta)^2\hbar = \hbar_\star$

Universe Level $m_U \cdot R_U \cdot c = 94.791939 = (\alpha\mu\delta)^3\hbar = \hbar_U$

There is a different "Action Constant" at each level

Case of the Sun

$M_\odot \cdot R_\odot \cdot c = 53.617768$

~~(αμ)^{1/3} = 0.376~~

$\log_{10}\left(\frac{\odot}{\hbar_\star}\right) = \frac{\pi}{5}$

$\hbar_\star = 53.988984$

$\odot = 53.617768$

$\delta =$ ~~0.372 ≐ (αμ)^{1/3}~~

$0.628784 \doteq \frac{\pi}{5} = 0.628319$

$\frac{\odot}{\hbar_\star} = 10^{\pi/5}$

τ is like octave in music

$(\alpha\mu)^x \sim$ notes

All stars will have octave $(\alpha\mu\delta)^2\hbar$, but their "note" will be some power of $(\alpha\mu) * \hbar_\star$

Note: $\frac{M_v R_v}{T_v^2} = \frac{c^4}{G}$ [Planck Force] $= 49.082988$

$S \cdot \frac{M_B r_e}{T_B^2} \leq \frac{c^4}{G}$

$\frac{M_\pi R_\pi}{T_\pi^2} = \frac{c^4}{G}$ eq to $\frac{M}{R} = \frac{c^2}{G}$

Action $\frac{MR^3}{T}$ increases as $(\alpha\mu s)^{*} t$

Force $\frac{MR}{T^2}$ invariant

$MRc \propto \tau^2$

$\frac{M}{T} c$ $\alpha\mu$ n

$(\alpha\mu s)^{*} l_0$

TIME RATIOS

P -43.268366

B -23.026889

τ_1 $20.241477 = (\alpha\mu s)^{1/2}$

$T = \frac{GM_B}{c^3} = -23.776602$

-38.606168

-62.382770

-43.268366

τ_2 $-19.117404 = \left(\frac{\alpha\mu}{S}\right)^{1/2}$

$\frac{r_e}{c}$

-12.55068

10.476821

-23.026889

$\tau_1 \cdot \tau_2 = \alpha\mu$

$\frac{\tau_1}{\tau_2} = 5$

$T = \sqrt{\frac{R^3}{GM}}$ = for B, $T = +3.348948$

$T = \frac{G}{c^3} M$ for B $= -62.382770$

-23.026889

$+3.348948$

$-19.677941 = \frac{1}{\sqrt{S}} = \tau_3$

-43.268366

-3.348948

$39.919418 = S\sqrt{\alpha\mu} = \tau_4$

BARYON TIMES

$\frac{R}{c} = -23.026889 = T_1$

$\frac{GM}{c^3} = -62.382770 = T_2$

$\sqrt{\frac{R^3}{GM}} = 3.348948 = T_3$

$\frac{T_1}{T_2} = S = \tau_1$

$\frac{T_1}{T_3} = \frac{1}{\sqrt{S}} = S^{-1/2} = \tau_2$

$\frac{T_2}{T_3} = S^{-3/2} = \tau_3$

-62.382770

-23.026889

$-39.355881 = S$

$\frac{T_1}{t_0} = (\alpha\mu S)^{1/2} = \tau_4$

$\frac{T_2}{t_0} = \left(\frac{\alpha\mu}{S}\right)^{1/2} = \tau_5$

$\frac{T_3}{t_0} = \sqrt{\alpha\mu}\, S = \tau_6$

$\tau^2 = 4\pi^2 \frac{R^3}{GM}$ The Schuster Time [or Kepler Time]

$t = \frac{2\pi R}{c}$ The Shuman Time [Aristotle's Time]

$T = 2\cancel{R}\frac{GM}{c^3}$ The Schwarzschild Time

$\frac{t}{\tau} = \frac{\frac{2\pi R}{c}}{2\pi\sqrt{\frac{R^3}{GM}}} = \sqrt{\frac{GM}{c^2R}}$

ON THE SCHWAR~~Z~~SCHILD BOUND $\frac{M}{R} = \frac{c^2}{G}$

$\therefore \frac{t}{\tau} = 1$ or $t = \tau$ on the Schwarzschild Bound

$T\tau^2 = t^3$
everywhere

and $2\pi\frac{GM}{c^3} = T = \frac{2\pi R}{c} = t$

$\therefore$ on the Bound $\tau = t = T$

From General Relativity
R_c = curvature of space

$\frac{R_s R_c^2}{R^3} = K = 1$ or $\frac{1}{2\pi}$

$\frac{GM}{c^3} \cdot \frac{R^3}{GM} = t^3$

and $\frac{T\tau^2}{t^3} = 1$

$\Rightarrow R_c^2 \sim c^2\tau^2 = \frac{c^2}{G\rho}$ ✓

$R_c \propto \frac{c}{\sqrt{G\rho}}$

$K = 1$
or $f(2\pi)$

$\cancel{\frac{GM}{c^3} \cdot \frac{c^2 R^3}{GM} \frac{t^3}{c^3} = \frac{c^3}{t^3} = R^3}$

$R_s = \frac{GM}{c^3}$

$R = \frac{c}{\cancel{c}} t$

$\cancel{\frac{GM}{c^2} \frac{t^3}{c} \cdot R_c^2 = K}$

$\cancel{t^3 GM R_c^2 = K}$ $\Rightarrow R_c = \frac{c}{G\rho}$

$\cancel{t^3 GM \frac{R^2 c^2}{GM} R^3 =}$

These 3 times do not correspond to x, y, z
but to R_s, R_m, R_c

ADDED

NOTES

Propositions: $G = \frac{8\pi^2}{2^E} \frac{e^2}{m_p m_e}$

On the basis of numerical value the gravitational coupling constant

$$G = \frac{8\pi^2}{2^{1/\alpha}} \frac{e^2}{m_p m_e}$$

, given ~~correctly~~ currently as follows:

			log₁₀	
for	$\alpha =$	7.29720×10^{-3}	-2.13684376	$8\pi^2 = 78.95680$
	$e =$	4.80298×10^{-10} esu	-9.318489	$\log_{10} 8\pi^2 = 1.89739$
$(^{12}C=12)$	$m_p =$		-23.776392 ?	$E = \frac{1}{\alpha} = 137.0388$
	$m_e =$	9.10908×10^{-28} g	-27.040526	

The $\log_{10}$ of the right member $= -7.17546$ $\quad E \log 2 = 41.252789$

← Rev Mod Phys 1965 for $G = 6.670 \times 10^{-8}$ dyn cm²/g²

$\log_{10} G = -7.175874$

corresponds to 6.676×10^{-8}

Note $m_p/m_e = 1836.12 = 6\pi^5$

The electric charge is invariant under motions

But The mass $m(\beta) = \frac{\overset{m(0)}{m(\text{rest})}}{\sqrt{1-\beta^2}}$, $\beta = \frac{v}{c}$

~~Assume~~ If The values in the equation are rest masses

Then, $G = \frac{8\pi^2 e^2}{2^E} \cdot \frac{1}{m_p(\beta)\, m_e(\beta)\, (1-\beta^2)} =$ constant

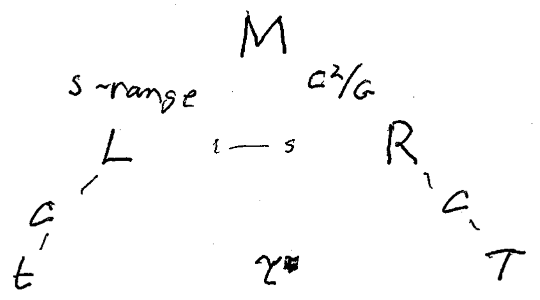
But, if masses are $m(\beta)$ which = rest mass when $\beta = 0$

then $G = \frac{8\pi^2 e^2}{2^E} \frac{1-\beta^2}{m_p(0) \cdot m_e(0)}$ $\quad \overset{\beta \to 1}{m}$

and G would tend to zero as $v \longrightarrow c$

An experiment to determine whether a high energy plasma is gravitationally coupled in a different manner to stationary matter could be performed by studying the effects of large mass on the target positions of very high velocity beams.

An alternative is to look for astrophysical confirmation of the result.



$T\tau^2 = t^3$

The proportion $\frac{M}{R} = \frac{c^3}{G}$, $\frac{GM}{c^2} = R$, the Schwartzschild radius

What is this physically? Nucleus density?

The $\frac{M}{L}$ ratio at ℓ level $\frac{m_0}{l_0} = \frac{c^2}{G} = 28.128\,937\,025$ $\left(\frac{M}{L}\right)_{\odot}$

at B level $\frac{m_p}{r_e} = -11.226\,534\,090 = \frac{c^2}{GS}$ $\left(\frac{M}{L}\right)_{\oplus}$

$$\boxed{\frac{\ell}{B} = S = 39.355\,471\,115}$$

$\left(\frac{M}{L}\right)_{\star}$

The $\frac{M}{L}$: ℓ —— range — B

Range $\frac{c^2}{G} \geq \frac{M}{L} \geq \frac{c^2}{GS}$ i.e. $\frac{c^2}{G} \gtrsim \frac{M}{L} \gtrsim \frac{c^2}{GS}$ $\left(\frac{M}{L}\right)_W$

The $\frac{L}{R}$ range ℓ ——— B

$1 \leq \frac{L}{R} \leq S$

$R_B = \frac{Gm_p}{c^2} = -51.905\,539\,329$

$L_B = r_e = -12.550\,068\,214$

$\frac{L_B}{R_B} = S$

$\left(\frac{M}{R}\right)_B = \frac{c^3}{G}$

ℓ ——— B

$\frac{c^2}{G} \leq \frac{M}{R} \leq \frac{c^2}{G}$

$R_\odot = +5.672$

$\left(\frac{M}{L}\right)_\odot = \frac{33.299}{10.842} = 22.457 < \frac{c^2}{G}$ $\quad -5.672\ \frac{\hbar^2}{c}$ $\quad$ ~~$\frac{\frac{1}{2}(\alpha\mu s)}{22.457} = -2.246$~~

$\Delta = 20.203 \sim 20.241 = \frac{1}{2}(\alpha\mu s)$

$\left(\frac{M}{L}\right)_\star = \frac{\frac{s}{\alpha\mu} m_0}{(\alpha\mu s)\, l_0} = {}^{-2}(\alpha\mu)\frac{c^2}{G} < \frac{c^2}{G}$ $\quad -2(\alpha\mu)$ $\quad -2.254\ \frac{\hbar^2}{c}$

$\left(\frac{M}{L}\right)_U = \frac{\left(\frac{s}{\alpha\mu}\right)^{3/2}}{(\alpha\mu s)^{3/2}}\frac{m_0}{l_0} = {}^{-\frac{3}{2}}(\alpha\mu)\frac{c^2}{G} < \frac{c^2}{G}$ $\quad -\frac{3}{2}(\alpha\mu)$

$\left(\frac{M}{L}\right)_\oplus = \frac{27.776}{8.805} = 18.971 < \frac{c^2}{G}$ $\quad -9.158\ \frac{\hbar^2}{c}$ $\quad \frac{\frac{1}{2}(\alpha\mu s)}{18.971} = 1.270 = (\alpha\mu)^3$

$R_\oplus = -0.353$

$M_U = \left(\frac{s}{\alpha\mu}\right)^{3/2} m_0 = \left(\frac{s}{\alpha\mu}\right)^{3/4}\left(\frac{\hbar c}{G}\right)^{1/2}$

$R_U = \frac{GM_U}{c^2} = \left(\frac{s}{\alpha\mu}\right)^{3/2} l_0$

$L_U = (\alpha\mu s)^{3/2} l_0$

$\frac{M_U}{L_U} = \frac{m_0}{l_0}\cdot\left(\frac{s}{\alpha\mu}\ \frac{1}{\alpha\mu s}\right)^{3/2} = \frac{1}{(\alpha\mu)^{3/2}}\frac{c^2}{G}$

$\frac{M_U}{R_U} = \frac{m_0}{l_0}\left(\frac{s}{\alpha\mu}\cdot\frac{\alpha\mu}{s}\right)^{1/2} = \frac{c^2}{G}$

$\odot$ 5.672
$\star$ 2.254
3.418

$\oplus$ 9.158
$\star$ 2.254
6.904 $\times \frac{1}{2} = 3.452$

$\oplus$ 9.158
$\odot$ 5.672
3.486

Collapse limit

$\frac{c^2}{8G} \le \frac{M}{L} \le \frac{c^2}{G}$

L↓ to R

Black hole: $L < R$!!

EXPANSION OF THE UNIVERSE

$\frac{M_U}{L_U} = 24.747\ 714\ 680$

$M_U = \left(\frac{s}{\alpha\mu}\right)^{3/2} m_0 = 52.680\ 191\ 696$

$R_U = \frac{G}{c^2} M_U = \left(\frac{s}{\alpha\mu}\right)^{3/2} l_0 = 24.551\ 254\ 671$

$L_{U\,\mathrm{Max}} = sR_U = \frac{s^{5/2}}{(\alpha\mu)^{3/2}} l_0 = 63.906\ 725\ 785$ cm $\quad$ [no mass change]

L_U max

present $L_U = (\alpha\mu s)^{3/2} l_0$ $\quad$ 60.723 817 845
-32.791 340 829

$= L_U = 27.932\ 477\ 016$ cm = L_U present
63.906 725 785 cm
35.974 248 769 ← present $L_U \cdot s \cdot (\alpha\mu)^3 = L_U$ max
39.355 471
3.381 223 $= (\alpha\mu)^3$

ρ_U present
-31.117 240
ℓ -124.828

ρ_U at max -139.039 984
[M constant]
ℓ -232.751

Δ 108
107.923

ARCHIMEDES' METAPHOR

ICE - WATER - STEAM

MATTER ≠ SPACE ≠ EMPTINESS

2 particle fluid

FIELDS

FERMIONS BOSONS NUTRINOS

SPACE IS THE FLUID IN ARCHIMEDES' TUB

i.e. both 1 and 0 exist,

It is particulate, space particles = 1

Uniform density 1's, space element of no particles ~~around at~~ is 0

both 1 and 0 can aggregate

Both 1's and 0's can aggregate

Aggregates of 1's → quarks etc. → ↗ electron ↘ protons → molecules → ...

But $\exists$ also an hierarchy of aggregates of 0's → ... dark matter

We have densities of 1's and of 0's

The level of fluid [space] in the tub ↑ when $\underset{\text{ice}}{\{1's\}}$ or $\underset{\text{steam}}{\{0's\}}$ form.

i.e. the universe expands

Either ~~Both~~ matter ↑ or ~~and~~ dark matter ↑ ⇒ expansion

FOAM

Baryonic Matter = a certain density of 1's

Dark Matter = a certain density of no 1's
absence of 1's

$F = \frac{ML}{\tau^2}$ $T^2 = \tau^2 = \frac{L^3}{GM}$ $F = \frac{GM^2}{L^2}$ = gravity

$\tau = t = \frac{L}{c}$ F $\frac{Mc^2}{L}$ c as v ~ centrifugal

$\frac{ML}{T^2}$ $\tau = T = \frac{GM}{c^3}$ $F = \frac{MLc^6}{G^2M^2} = \frac{c^4}{G}\frac{L}{GM} = \frac{c^3}{G}$ $\frac{c^4}{G}\frac{1}{\dot{c}^2}$

$\frac{L}{GM} = \frac{Lt^2}{L^3} = \frac{T^2}{\tau^2}$

$F = \frac{Mc}{t} = \frac{Mc^2}{L}$

c is alway $\frac{L}{t}$

ϖ $\frac{Mc}{T} \rightarrow \frac{c^4}{G}$

$\dot{c} = \frac{L}{T} = \frac{L}{\frac{GM}{\dot{c}^3}} = \frac{L\dot{c}^3}{GM}$

$\dot{c}^2 = \frac{GM}{L}$ $\frac{c^2}{\dot{c}} = ?$

∃ several velocities

$\frac{L}{\tau}$

$\frac{L}{T} = \dot{c} = \sqrt{\frac{GM}{L}}$

$\frac{L}{t} = c$

NEED a charge - L TABLE for T, τ

ϖ M - L

e^2 - M TABLE

$\frac{ML}{T^2}$ $\frac{MR}{Tt}$ etc

Charge 1

−18.795290 = conversion factor from Coulomb to ~~electron~~ $\sqrt{\hbar c}$

ampere/sec

C = SI coul

ELECTRON

* The value in the shaded cell is the Gev for the Planck particle:

$\epsilon_o = 2.795290 + 16.\ 291442 = 19.086732$

The other values in this column can to be added to or subtracted from ϵo^N where N = −1,0,1,2,4, to give the values in the $\log_{10}$ cgs column. These $\log_{10}$ Gev values are valid not only for the Planck constant but in general for other ϵ_o's.

** The Boltzman constant $\sigma = 1.380658 \times 10^{-16}$ ergs/K° ; $\log_{10}$ value = −15.859914

SOME FORCES

$\frac{\hbar}{c}$

$F = \left[\frac{ML}{T^2}\right]$ ① use $\tau^2 = \frac{L^3}{GM}$ $F = \frac{GM^2}{L^2}$ .. Gravity

---

④ $F = \frac{\hbar}{ct^2}$ use $\tau^2 = \frac{L^3}{GM}$ $F = l_0^2 c^2 \rho$

$F = t_0^2 c^4 \rho$ weak? ~~strong?~~ weak?

⑤ $F = \frac{\hbar}{cT^2}$ $T^2 = \frac{G^2M^2}{c^6}$ ∘ $F = \frac{\hbar c^6}{c\, G^2 M^2}$

$F = \frac{c^4}{G} \frac{\hbar c}{G} \frac{1}{M^2}$

$F = \frac{c^4}{G} \frac{m_0^2}{M^2}$ strong ?

④ $F = \frac{h}{ct^2}$ $t^2 = \frac{L^2}{c^2}$ $F = \frac{\hbar c}{L^2}$ ✓ (electric) or $\frac{\hbar \alpha c}{L^2} = \frac{e^2}{L^2}$

⑥

$\frac{ML^2}{TL}$

$F = \frac{Mc}{T}$ ② $T = \frac{GM}{c^3}$ $F = \frac{Mc^4}{GM} = \frac{c^4}{G}$ = Planck

$\boxed{\text{six forces}}$

F $\frac{Mc}{t}$ ③ $t = \frac{L}{c}$ $F = \frac{Mc^3}{L}$ or $\frac{Mv^2}{L}$ ~ centrifugal

L extension ?
or separation?

The $\hbar$ Forces

$F = l_0^2 c^2 \rho$ weak?

$F = \frac{c^4}{G} \frac{m_0^2}{M^2}$ strong?

$F = \frac{\hbar c}{L^2}$ electric?

$\frac{ML^2}{T} \rightarrow \frac{ML}{T^2}$

$hc = \frac{ML^2}{T} \cdot c = \frac{ML^3}{T^2} = e^2$

6 Horizontal

Ladder involve M, ρ, L

For $t = \frac{L}{c}$

velocity $v \leq c$

is bounded

For $z = \frac{G\hbar}{c^4 L}$ and $E = \frac{\hbar}{\text{time}}$

Force is bounded $\leq \frac{c^4}{G}$

$T = \frac{Gm}{c^3}$ Power is bnd

0

ELECVOLT.WPD February 20, 2000, January 18, 2001,March 25, 2006, September 18, 2006

ELECTRON VOLT UNIT CONVERSIONS

The electron volt has been found by particle physicists to be a useful unit with which to measure several parameters. Although the electron volt is basically a unit of energy, it can be used to measure mass, frequency, wavelength, and other physical parameters. Energy can be used as a basic measure whenever another physical parameter, such as mass or frequency, can be dimensionally equated to energy through functions of the fundamental constants, c, G, ħ. That is, E^n = function(c,G,ħ), where n is an exponent of the energy, E, c is the velocity of light, G is the gravitational constant, and ħ is Planck's constant. ~~Specifically~~: In the case of the Planck Particle:

Planck energy, $E = \sqrt{(\hbar c^5/G)}$.
Planck frequency, $\nu_o = \sqrt{(c^5/\hbar G)} = E/\hbar$
Planck wavelength, $\lambda_o = \sqrt{(\hbar G/c^3)} = \hbar c/E$
Planck mass, $m_o = \sqrt{(\hbar c/G)} = E/c^2$
Planck power, $p_o = c^5/G = E^2/\hbar$
Planck force, $f_o = c^4/G = E^2/\hbar c$
Planck density, $\rho_o = c^5/\hbar G^2 = E^4/\hbar^3 c^5$

whence e-v value?

volt = $\frac{c^2}{\sqrt{G}}$

$e = \sqrt{\hbar\alpha c}$

e·volt = $c^2\sqrt{\frac{\hbar\alpha c}{G}} = \alpha M c^2$

PART I ENERGY UNIT CONVERSIONS:[1]

One electron volt = 1.602 177 x 10^{-12} ergs or 1.602 177 x 10^{-19} joules.

[Note this value = $10\sqrt{(\hbar\alpha c)}$ joules] ✓

$10\sqrt{\hbar\alpha/c}$ = [$\sqrt{Mc}$]

whence?

In terms of logarithms to base 10,

a) one ev = −11.795290 ergs = −18.795290 joules
b) one Mev = 10^6 ev = − 5.795290 ergs = −12.795290 joules
c) one Gev = 10^9 ev = − 2.795290 ergs = −9.795290 joules

Hence, to convert:

Energy in ev to ergs subtract 11.79529; to joules subtract 18.79529
Energy in mev to ergs subtract 5.79529; to joules subtract 12.79529
Energy in Gev to ergs subtract 2.79529 to joules subtract 9.79529
Energy in ergs to ev add 11.79529 Energy in joules to ev add 18.79529
Energy in ergs to mev add 5.79529 Energy in joules to mev add 12.79529
Energy in ergs to Gev add 2.79529 Energy in joules to Gev add 9.79529

For example, the log value of the energy of the Planck Particle is 16.291442 ergs.

16.291442 + 11.795290 = 28.086732 ev = 22.086732 mev = 19.086732 Gev

---

[1] The electron volt is the amount of work required to move a unit charge through a potential difference of one volt. Other units commonly used to measure energy:

The erg = 1 dyne centimeter (cgs)
The joule = 10^7 ergs (SI),
The kilowatt-hour = 3.60 x 10^{13} ergs, $\log_{10}$ = 13.556303
The calorie = 4.19002 x 10^7 ergs, $\log_{10}$ = 7.622216
The BTU = 1.05587 x 10^{10} ergs, $\log_{10}$ = 10.023610

2009 DOWNLOAD

1 ev = 1.602 176 46 x 10^{-19} J

Conversion factor C ↔ e

= −18.795289

e expressed as Coulomb SI

~~$S = 8\pi$~~

$8\pi^2 S = 2^{1/\alpha}$

$S = \alpha^{-23}\mu^{-3} = \frac{2^{1/\alpha}}{8\pi^2}$

$\mu^{-3} = \frac{\alpha^{23} 2^{1/\alpha}}{8\pi^3}$

$\frac{\alpha^{22} \log 2}{8\pi^2} = \left(\frac{m_e}{m_p}\right)^3$

$\left(\frac{m_e}{m_p}\right)^3 = \mu^{-3} = \alpha^{23} S = \alpha^{23} \frac{\hbar \alpha c}{G m_p m_e}$

$\frac{m_e^4}{m_p^2} = \alpha^{24} \frac{\hbar c}{G} = \alpha^{24} m_0^3$

$\frac{m_e^2}{m_p} = \alpha^{12} m_0$

$$\boxed{\frac{m_p m_0}{m_e^2} = \alpha^{12}}$$

$\alpha^3 m_e \cdot \alpha^3 m_e = \alpha^{-3} m_p \, \alpha^{-3} m_0$

$\alpha^{22} = -47.010362806$

$\alpha \log 2 = -14.1515$

$\log 8\pi^2 = 1.89$

78.956 $= 8\pi^2$

w 78.710 $= S^2$

0.246

$8\pi^2 \doteq \log S^2$

$8\pi^2 = 78.956$

$\log S^2 = 78.710$

0.246

$\mu^3 = 9.791\,726\,364$

14.152

4.311

23.943

-23.776

-41.662

-28.438

-14.219

9.792

-4.427

-24.011

$S^2 = 78.710\,942$

$$\boxed{\frac{\alpha^{23} 2^{1/\alpha}}{8\pi^2} = \mu^{-3}}$$

$\frac{\alpha^{22} \log 2}{S^2} = \left(\frac{m_e}{m_p}\right)^3$

$\frac{S^2}{\alpha^{22} \log 2} = \mu^3$

$\frac{78.710942}{-47\,010\,363} = \mu^3 \log 2$

$+125.721305 = 9.71$

131.977

Periodic Table of the Elements

Source: © 1996 Lawrence Berkeley National Laboratory

Parentheses indicate undiscovered elements.

atomic number
atomic weight
14 28.09
Si
Silicon
symbol
name

alkali metals
alkaline earth metals
transitional metals
nonmetals
other metals

1 1.01 H Hydrogen																
3 6.94 Li Lithium	4 9.01 Be Beryllium											5 10.81 B Boron	6 12.01 C Carbon	7 14.01 N Nitrogen	8 15.999 O Oxygen	9 18.998 F Fluorine
11 22.99 Na Sodium	12 24.31 Mg Magnesium											13 26.98 Al Aluminum	14 28.09 Si Silicon	15 30.97 P Phosphorus	16 32.06 S Sulfur	17 35.45 Cl Chlorine
19 39.10 K Potassium	20 40.08 Ca Calcium	21 44.96 Sc Scandium	22 47.90 Ti Titanium	23 50.94 V Vanadium	24 51.996 Cr Chromium	25 54.94 Mn Manganese	26 55.85 Fe Iron	27 58.93 Co Cobalt	28 58.70 Ni Nickel	29 63.55 Cu Copper	30 65.37 Zn Zinc	31 69.72 Ga Gallium	32 72.59 Ge Germanium	33 74.92 As Arsenic	34 78.96 Se Selenium	35 79.90 Br Bromine
37 85.47 Rb Rubidium	38 87.62 Sr Strontium	39 88.91 Y Yttrium	40 91.22 Zr Zirconium	41 92.91 Nb Niobium	42 95.94 Mo Molybdenum	43 98 Tc Technetium	44 101.07 Ru Ruthenium	45 102.91 Rh Rhodium	46 106.40 Pd Palladium	47 107.87 Ag Silver	48 112.41 Cd Cadmium	49 114.82 In Indium	50 118.69 Sn Tin	51 121.75 Sb Antimony	52 127.60 Te Tellurium	53 126.90 I Iodine
55 132.91 Cs Cesium	56 137.33 Ba Barium	57 138.91 La Lanthanum	72 178.49 Hf Hafnium	73 180.95 Ta Tantalum	74 183.85 W Tungsten	75 186.21 Re Rhenium	76 190.20 Os Osmium	77 192.22 Ir Iridium	78 195.09 Pt Platinum	79 196.97 Au Gold	80 200.59 Hg Mercury	81 204.37 Tl Thallium	82 207.19 Pb Lead	83 208.98 Bi Bismuth	84 209 Po Polonium	85 210 At Astatine
87 223 Fr Francium	88 226.03 Ra Radium	89 227.03 Ac Actinium	104 261 Rf Rutherfordium	105 262 Db (Ha) Dubnium (Hahnium)	106 266 Sg Seaborgium	107 267 Bh Bohrium	108 269 Hs Hassium	109 268 Mt Meitnerium	110 271 Ds Darmstadtium	111 272 (Rg) Roentgenium	*112*	*113*	*114*	*115*	*116*	(117)

Lanthanide series	58 140.12 Ce Cerium	59 140.91 Pr Praseodymium	60 144.24 Nd Neodymium	61 145 Pm Promethium	62 150.35 Sm Samarium	63 151.96 Eu Europium	64 157.25 Gd Gadolinium	65 158.93 Tb Terbium	66 162.50 Dy Dysprosium	67 164.93 Ho Holmium	68 167.26 Er Erbium	69 168.93 Tm Thulium	70 173.04 Yb Ytterbium	71 174 Lu Lutetiu
Actinide series	90 232.04 Th Thorium	91 231.04 Pa Protactinium	92 238.03 U Uranium	93 237.05 Np Neptunium	94 244 Pu Plutonium	95 243 Am Americium	96 247 Cm Curium	97 247 Bk Berkelium	98 251 Cf Californium	99 252 Es Einsteinium	100 257 Fm Fermium	101 258 Md Mendelevium	102 259 No Nobelium	103 Lr Lawrenc

$\frac{\hbar}{c^2 t} = M = \frac{c^3 T}{G}$, $\frac{c^2 M}{\hbar} = \frac{1}{t}$, $\frac{1}{T} = \frac{c^3}{GM}$

ⓥ Set $t = T = 17.455656$

$M_1 = \frac{\hbar}{c^2 t} = \frac{-47.930565}{17.455656} = -65.386221$

$M_2 = \frac{c^3 T}{G} = \frac{38.605758}{17.455656} \simeq +56.061414$

$\frac{M_2}{M_1} = \frac{56.061414}{-65.386221} = 121.447635 = (\alpha\mu s)^3$

$M_1 \times M_2 = -9.324807 = m_0^2$

$m_0 = -4.662404$

Set $M = -65.386221$

$t_1 = \frac{\hbar}{c^2 M} = \frac{-47.930565}{-65.386221} = 17.455656$

$t_2 = \frac{GM}{c^3} = \frac{-38.605758}{+65.386221} = -103.991979$

$\frac{t_1}{t_2} = \frac{17.455656}{-103.991979} = 121.447635 = (\alpha\mu s)^3$

$t_1 \times t_2 = -86.536323 = t_0^2$

$t_0 = -43.268162$

Set $t = T = -103.991979$

$M_1 = \frac{\hbar}{c^2 t} = \frac{-47.930565}{-103.991979} = 56.061414 = (\alpha\mu s)^{3/2} m_0$

$M_2 = \frac{c^3 T}{G} = \frac{38.605758}{103.991979} = -65.386221 = (\alpha\mu s)^{-3/2} m_0$

Set $M = +56.061414$

$T = t_1 = \frac{\hbar}{c^2}\frac{1}{M} = \frac{-47.930565}{56.061414} = -103.991979 = (\alpha\mu s)^{-3/2} t_0$

$t = t_2 = \frac{GM}{c^3} = \frac{-38.605758}{-56.061414} = 17.455656 = (\alpha\mu s)^{3/2} t_0$

$\frac{t^3}{T} = \tau^2 = (\alpha\mu s)^6 t_0^2 = 156.358947$

$\tau = 78.179474 = (\alpha\mu s)^3 t_0 = \frac{121.447636 \quad 43.268162}{78.179474} ✓$

Set $t = 78.179474$

$M_1 = \frac{\hbar}{c^2 t} = -126.110039$

$\frac{M_1}{M_2} = (\alpha\mu s)^6$ $\quad M_1 \cdot M_2 = m_0^2$

$M_2 = \frac{c^3 t}{G} = +116.785232$

$\frac{c^2}{\hbar} = 47.930565$, $\frac{G}{c^2} = -28.128937$, $\frac{G}{c^3} = -38.605758$

CONCEPTS

Computability

Provable ~ undecidable

Incompleteness Paul Cohen, Kurt Gödel

TDMA, ADMA, CDMA,

☆

$M = (\alpha MS)^{1} m_0 = \begin{array}{r} 40.482\,545 \\ \underline{-4.662\,404} \\ 357\,820\,141 \end{array}$

SET $M = 357\,820\,141$

$t_1 = \frac{h}{c^2}\frac{1}{M} = \frac{-47.930\,656}{+35.820\,141} = -83.750797$

$\frac{t_1}{t_2} = (\alpha MS)^2$

$t_2 = \frac{GM}{c^3} = \frac{-38.605\,758}{-35.820\,141} = -2.785617$

$t_1 \cdot t_2 = t_0^2$

SET $t = -2.785617$

$M_1 = \frac{h}{c^2 t} = \frac{-47.930656}{-2.785617} = -45.145039$

$\frac{M_2}{M_1} = (\alpha MS)^2$

$M_2 = \frac{c^3 t}{G} = 35.820141$

$M_1 \times M_2 = m_0^2$

$M_1 = (\alpha MS)^{-1} m_0$

$M_2 = (\alpha MS)\, m_0$

$t_1 = (\alpha MS)^{-1} t_0$

$t_2 = (\alpha MS)\, t_0$

1

WINERYLIST.WPD September 21, 2008

NAME	LOCATION	PHOTOS D520-xxx C 3030
ARISTA	west side	182
ARMIDA	west side	182
C. DONATIELLO	west side	182, 186
CASTELLO DI AMOROSA	calistoga	181✓
CHATEAU MONTELLENA	calistoga	4✓, 34✓ 115✓
CHATEAU SOUVERAIN	alexandervalley	26, 32, 34, 113
CLOS PEGASE	calistoga	91
HANNA	alexander, seb	166, Gardens 134, 153
LAMBERT BRIDGE	west side ext	26, 60
LEDSON	sonoma valley	1✓, 181✓ ⊙1-winery✓
LYNMAR	graton	168✓, 178✓
MADRONA MANOR	west side	182
MATANZAS CREEK	bennet valley	129, 130, 146
OPUS ONE	st helena	26✓, 101✓, 117✓ 147✓
PARADISE RIDGE	santa rosa	6, 58, 114, 128, 138
RUSSIAN RIVER	forrestville	6, 133
RUSSIAN HILL	air port	107
STERLING	calistoga	115✓, 121✓, 147✓
SIME		186

Ⓑ

$\bar{M}_B = m_p = \left(\frac{g}{\alpha\mu}\right)^{-1/2} m_o = -23.776602$

$\frac{c^2}{h}\bar{M}_B = \bar{\nu}_B =$ 47.930563
-23.776602
24.153961 $= \bar{\nu}_B$

$\nu_B = (\alpha\mu s)^{-1/2}$

$\frac{r_e}{c}$ -12.560068
10.476821
-23.026889

$\nu_B = 23.026889$

$\frac{\bar{\nu}_B}{\nu_B} = \frac{24.153961}{23.026889} = \alpha\mu$
1.127072

$\frac{\bar{M}_B}{M_B} = \frac{-23.776602}{-24.903676} = \alpha\mu$
1.127074

$M_B = \frac{h}{c^2}\nu_B = -24.903676$

= -47.930565
23.026889
24.903676

$\bar{R}_B = \frac{G\bar{M}_B}{c^2} =$ -23.776602
-28.128937
$\bar{R}_B =$ -51.905539
-53.032613

1.127086

$$\boxed{\frac{\bar{R}_B}{\alpha\mu} = R_B}$$

$R_B = \frac{GM_B}{c^2}$ -24.903676
-28.128937
$R_B =$ -53.032613

$\bar{L}_B$ $(\alpha\mu s)^{+1/2} l_o$
+20.241273
-32.791341
12.550068

$\bar{L}_B = L_B$

$L_B = \frac{c}{\nu_B} =$ -12.550068

$L_B = \bar{L}_B$
$\bar{R}_B = \alpha\mu R_B$
$\bar{M}_B = \alpha\mu M_B$
$\bar{\nu}_B = \alpha\mu \nu_B$

$\frac{L}{c} =$

-23.026889 sec B
17.465656 U
40.482545 $= \alpha\mu s$

60.723818
4.662404
56.061414

80.965090
~~4.662404~~
~~6.302686~~
78.710
1.127
79.837

-23.976602 M_B
56.061414 M_U
79.838016
80.965090
1.137074

$\frac{M_U}{M_B} = \frac{(\alpha\mu s)^2}{\alpha\mu}$

$= \alpha\mu s^2$

FLDISKS2.WPD **February 24, 2006** **March 30, 2007** **August 2, 2007**

Wordperfect 3 ½ inch disks:

60 BOOK
700 TEMP1
ATHROISMATICS
BUDDHISM
COGITANS ORDINANS
CONCEPTS
CONTROL
COSMIC CURIOSITIES
COSMIC NUMBERS CLOCKS
DESIGN OF WORLDS
DIALECTICS
DOWNLOADS
DYADS
ECONOMICS AND CAPITALISM
EPIONTOLOGY IN SCRAPS
EPIONTOLOGY
EPIONTOLOGY II
EPIONTOLOGY III
FULCRUM NUMBERS
GREAT DIALECTIC
HISTORY
INTRODUCTIONS
JOURNEY OF THE YEAR TIME
JOURNEY OF THE YEAR
KAIROS
LAST PISCEAN
LAWTHINK
LI KIANG
MATH, MYTH, METAPHOR
[[MATHCAD DISKS]]
NATURE
NOTHINGNESS
ORISONS
ORTHOGONAL DAO
ORTHOGONAL DAO BKUP
ORX-ORDINANS
POLITICS SOCIO
PERSONAL–LETTERS
PSYCHOLOGY
PYTHAGOREAN COSMOLOGY
[[QUOTES DISKS]]
SCIENCE
[[SCRAPS DISKS]]
SEARCH
SOS ORTHOGONAL SYNTHESIS
TERRORISM
THEOLOGY AND RELIGION
THEOLOGY AND RELIGION BKUP
THEOLOGY AND RELIGION II
THINKTANKS
TIME WEEK CHON
UNITS
USA–AMERICA

$\frac{\hbar \nu}{c^2} = [M]$ $\frac{c^2}{\hbar} M = \nu$ $\frac{c^3}{\hbar} = 47.930565$ $\frac{G}{c^2} = -28.128937$

Ⓤ $(\alpha\mu s)^{3/2} t_0 = \begin{array}{r} 60.723818 \\ -43.268162 \\ \hline 17.455656 \end{array} = 17.455656 = T_\upsilon ,$ sec $\nu_u = -17.455656$

$\left(\frac{s}{\alpha\mu}\right)^{3/2} m_0 = \begin{array}{r} 57.342596 \\ -4.662404 \\ \hline 52.680192 \end{array} = 52.680192 = \bar{M}_\upsilon$ gr

$\frac{h}{c^2} \nu_u = \frac{-47.930566}{-17.455656} = M_\upsilon = -65.386222$ g

$\frac{c^2}{\hbar} \bar{M}_\upsilon = \bar{\nu}_u = \begin{array}{r} 47.930563 \\ 52.680192 \\ \hline 100.610757 \end{array} = \bar{\nu}_u$

$\frac{\bar{\nu}_u}{\nu_u} = \frac{100.610757}{-17.455656} = 118.066413 = s^3$
118.066413

$\frac{\bar{M}_\upsilon}{M_\upsilon} = \frac{+52.680192}{-65.386222} = 118.066414 = s^3$
118.066414

$\frac{\bar{\nu}_u}{\nu_\ell} = \frac{100.610757}{43.268162} = 57.342595 = \left(\frac{s}{\alpha\mu}\right)^{3/2}$

$\frac{M_\upsilon}{m_0} = \frac{-65.386222}{-4.662404} = -60.723818 = (\alpha\mu s)^{-3/2}$

$\frac{G\bar{M}_\upsilon}{c^2} = \bar{R}_\upsilon = 24.551255$ $\frac{G}{c^2} M_\upsilon = R_\upsilon = -93.515159$

$\frac{\bar{R}_\upsilon}{R_\upsilon} = 118.066414 = s^3$

$\frac{\bar{R}_\upsilon}{l_0} = \frac{24.551255}{-32.791341} = 57.342296 = \left(\frac{s}{\alpha\mu}\right)^{3/2}$
57.342596

$\frac{R_\upsilon}{l_0} = \frac{-93.515159}{-32.791341} = -60.723816 = (\alpha\mu s)^{-3/2}$
60.723818

$\bar{L}_\upsilon = (\alpha\mu s)^{3/2} l_0 = 27.932477$

$L_\upsilon = \frac{c}{\nu_u} = \frac{10.476821}{-17.455656} = 27.932477$
27.932477

$\frac{L_\upsilon}{l_0} = (\alpha\mu s)^{3/2}$

DO
D
B
☆
and Forces

$\boxed{L_\upsilon = \bar{L}_\upsilon}$

$\boxed{\bar{R}_u = s^3 R_\upsilon}$

$\boxed{\bar{M}_u = s^3 M_\upsilon}$

$\boxed{\bar{\nu}_u = s^3 \nu_u}$ 17.455

FLDISKS.WPD February 2, 2006 August 2, 2007

THREE AND ONE HALF INCH FLOPPY DISKS:

3 ½ INCH DISKS

- CONTROL
- PERSONAL–LETTERS

MATHCAD DISKS

- SKETCHES POLYSTARS
- GENERAL MATHCAD
- MATHCAD POLYSTAR

ASKSAM DISKS

- DBQUOTES.ASK DISK I
- DBQUOTES.ASK DISK I BACKUP
- NOVQUOT MASTER
- NOVQUOT INPUTS
- NOTES ASK FILES
- SUMMARY EMBRIES.ASK DISK I
- SUBSCRAPS CODICES ASKSAM
- SUBSCRAPS CODICES ASKSAM BACKUP
- BOOKS ASKSAM
- BUDDHIST BOOKS ASKSAM
- ASKSAM VIDEOS
- ASKSAM ROLODEX

SCRAPS DISKS

≤1990, 1991, 1992-1993, 1994, 1995, 1996, 1997, 1998, 1999
2000, 2001, 2002, 2003, 2004, 2005, 2006,

Times [frequencies] - no $\hbar$

$[T_1 \times T_2]$ TABLE

Not times	$\frac{G^2M^2}{RC^5}$	$\sqrt{\frac{G^3M^3}{RC^8}}$	$\frac{GM}{C^3}$ (T)	$\sqrt{\frac{GMR}{C^4}}$	$\frac{R}{c}$	$\sqrt{\frac{R^3}{GM}}$ (z)	$\frac{R^2c}{GM}$	$\sqrt{\frac{R^5C^4}{G^3M^3}}$	$\frac{R^3C^3}{G^2M^2}$
.	W	X	Y	Z	t	z	y	x	w
W	W^2	WX	X^2	XY	Y^2	Xt	Z^2	Zt	t^2
X	WX	X^2	XY	Y^2	Xt	Z^2	Zt	t^2	zt
Y	X^2	XY	Y^2	Xt	Z^2	Zt	t^2	zt	z^2
Z	XY	Y^2	Xt	$Yt = Z^2$	Zt	t^2	zt	z^2	xt
t	Y^2	Xt	Z^2	Zt	t^2	zt	z^2	xt	y^2
z	Xt	Z^2	Zt	t^2	zt	$yt = z^2$	xt	y^2	yx
y	Z^2	Zt	t^2	zt	z^2	xt	y^2	yx	x^2
x	Zt	t^2	zt	z^2	xt	y^2	yx	x^2	wx
w	t^2	zt	z^2	xt	y^2	yx	x^2	wx	w^2

81 entries

17 distinct values in table

Symmetries

$W y^2 = t^3$

$Y^2 w = t^3$

$T z^2 : \; Y z^2 = t^3$

$Z^2 y = t^3$

$W z^4 = t^5$

$Z^4 w = t^5$

$X^2 x = Z^3$

$X x^2 = z^3$

ASTDATA.WPD October 10, 2007

ASTRONOMICAL VALUES

Allen's Astrophysical Quantities 4th Ed 2000 [Cox ed]

$\frac{M}{V} = 0.71172$

		log$_{10}$(cgs) values	
mass of earth	5.597 42 x 10^{27} g	~~27.776 243~~ ?	27.747 988 ✓
radius of earth	6.378 14 x 10^8 cm	8.804 694	8.804 694 ✓
density of earth	5.5148 g/cm^3	0.741 53	Vol = 27.036 171
mass of sun	1.989 x 10^{33} g	33.299	33.2986
radius of sun	6.955 08 x 10^{10} cm	10.842 30	
density of sun	1.409 g/cm^3	0.148 9	
mass of moon	7.353 x 10^{25} g	25.866 5	MOON + EARTH =
radius of moon	1.738 2 x 10^8 cm	8.240 1	27.753 656
density of moon	3.341 g/cm^3	0.523 9	
mass of Mercury	0.330 22 x 10^{27} g	26.518 80	
radius of Mercury	2.439 7 x 10^8 cm	8.387 34	
mass of Venus	4.8690 x 10^{27} g	27.687 44	
radius of Venus	6.051 8 x 10^8 cm	8.781 88	
mass of Mars	0.64191 x 10^{27} g	26.807 47	
radius of Mars	3.397 x 10^8 cm	8.531 10	
mass of Jupiter	1898.7 x 10^{27} g	30.278 46	
radius of Jupiter	71.492 x 10^8 cm	9.854 26	
mass of Saturn	568.51 x 10^{27} g	29.754 74	
radius of Saturn	60.268 x 10^8 cm	9.780 09	
mass of Uranus	86.849 x 10^{27} g	28.938 76	
radius of Uranus	25.559 x 10^8 cm	9.407 54	
mass of Neptune	102.44 x 10^{27} g	29.010 47	
radius of Neptune	24.764 x 10^8 cm	9.393 82	

M ☆ observed $\frac{1}{10}$ ☉ to 1200 ☉

32.299 35.378

$\oplus_{sch} = 2\pi\sqrt{\frac{R^3}{GM}}$

= 5056.6745 sec

$= 84^m 16.67$ ÷ 16.67^{sec}

$= 84^m.2779$

EARTHCYC.WPD November 28, 2010

EARTH CYCLES

I. CYCLES > 1 YEAR

ORBITAL ECCENTRICITY CYCLE	93,408 ANOMOLYSTIC YEARS
OBLIQUITY OF THE ECLIPTIC 23° 27' 8.26"	40,032 YEAR INCLINATION CYCLE
PRECESSION OF EQUINOXES	25,725 YEAR CYCLE
ZERO CHECK CYCLE	4,668 YEARS (LAST LINE UP 1437)
4 PULSE	556 YEARS (LAST 1996)
SOTHIC CYCLE	1,461 YEARS
DIONYSIAN CYCLE	532 YEARS
METONIC CYCLE	235 LUNATIONS = 19 YEARS
SAROS	223 LUNATIONS = 18.03 YEARS = 6585.33 DAYS

BASEFREQ1.WPD JUNE 15, 2008

BASIC TIMES AND FREQUENCIES

ITEM	FORMULA	LOG$_{10}$ VALUE	SECONDS	HERTZ
electron Schuster	$2\pi\surd(r_e^3/Gm_e)$	-0.918814	0.120555	8.294954
baryon Schuster	$2\pi\surd(r_e^3/Gm_p)$	-2.550769	0.002813	355.442210
hydrogen Schuster	$2\pi\surd(a_o^3/Gm_p)$	+3.859735	7239.9405	0.0001381
earth Schuster	$2\pi\surd(R_e^3/GM_e)$	+3.704223	5060.8446	0.0001976
earth Schumann	$2\pi R_e/c$	-0.874433	0.133526	7.489158
earth Schwarzschild	GM_e/c^3	-10.829925	1.479364×10^{-11}	6.759662×10^{10}
orbit Schumann	$2\pi(A.U.)/c$	+3.496286	3135.3498	0.0003189
earth rotation $\odot$		+4.9365137	86400	1.157407×10^{-5}
earth rotation ☆		+4.9353263	86164.09054	1.160576×10^{-5}
earth geosync*	$2\pi\ R_g/c$	-0.052906	0.885307	1.12955
neutron star	$\alpha\mu S\ t_p$	-2.785617	0.001638	610.5000
sun Schuster	$2\pi\surd(R_s^3/GM_s)$	+4.000163	10003.7539	0.00009996
sun Schumann	$2\pi R_s/c$	+1.163661	14.576760	0.068602
Sun Schwarzschild	GM_s/c^3	-5.307523	0.000004926	203012.6031
Univ Schuster	$\surd(R_u^3/GM_u)$	+17.455657	9.056346 gyr	
Univ Schumann	R_u/c	+17.455657	"	
Univ Schwarzschild	GM_u/c^3	+17.455657	"	
1/2 Universe			4.428173 gyr	
3/2 Universe			13.584519 gyr	

* This is the Schumann period at the distance R_g, = 42241 km (26,247 miles) for synchronous satellites in equatorial orbits.

Log 2π = 0.798179868

Notes:

(earth Schuster)^4 = (earth rotation $\odot$)^3, 14.817 = 14.810 $\Delta = 0.007$

(earth Schuster)/(hydrogen) = 0.699017 or 7/10 $\Delta = 0.001$

$(\alpha\mu S) t_0 = (\alpha\mu s) \frac{l_0}{c}$ $\quad t_0 = \left(\frac{G\hbar}{c^5}\right)^{1/2}$

log 528

= 2.722634

$S = \frac{\alpha\mu\hbar c}{G m_p^2}$

$\left(\alpha^2\mu^2 \frac{\hbar c}{G m_p^2}\right)\left(\frac{G\hbar}{c^5}\right)^{1/2}$

$A = \frac{\alpha^2\mu^2\hbar^{3/2}}{m_p^2 c^{3/2}} \cdot \frac{1}{G^{1/2}} = -2.785617$ when $G = 1.175296$ G_1

antilog = 610.4034

610.4034

528

$\Delta = 92$ hertz

$\frac{A}{G_1^{1/2}} = -2.785617$

$\frac{A}{G_2^{1/2}} = -2.722634$

$\frac{G_2^{1/2}}{G_1^{1/2}} = 0.062983$

~~7.175 296~~

~~8 279~~

G_1 -7.175296

$G_1^{1/2}$ -3.587648

0.062983

-3.650631

$-7\ 301262$

A = -1.785617

-3.587648

~~A = 265~~

A = -6.373265

$\frac{A}{\sqrt{G_2}} = -2.722637$

$\sqrt{G_2} =$ -6.373265

-2.722637

3.650628

-7.361256 $= G_2$

Hi John,

1. Sharon and I have been on an information desert island for several days. I am tossing this bottle into the ocean hoping it will reach its destination.

Message:

Our internet connection is dead, please come help us.

Today is the first day we have been connected, but we probably should go to a better server.

Looking forward to rejoining the Eomegans when rescued.

AL

$\log_{10}$(cgs)

$1.5 < \nu_0 = 43.268162$ sec

$\nu_u = 43.092071 \Rightarrow$ Age $= 13.571723$ gyr $\Rightarrow H_0 = 72.04658$

$(\mathrm{AMS})^{3/2} = 60.723818$

sec/yr $= 7.499112$

$\nu_u = \frac{2}{3}\nu_0$ Symmetric to a fifth $\frac{3}{2}\nu_0$

0.0 BB

$2<$ 43.569192 $2\nu_0$ — 4.523910 GYR $\star_1$ $\frac{1}{2}\nu_0$

43.268162 ν_0 — 9.047821 GYR $\star_2$ ν_0 $\sim \nu_p$ fulcrum

$2<$ 43.092071 $\nu_u = \frac{2}{3}\nu_0$ — 13.571723 GYR Age $\frac{3}{2}\nu_0$

$2<$ 42.967132 $= \frac{1}{2}\nu_0$ — 18.095033 Gyr gyr $\frac{4}{2}\nu_0$ END?

42.791041 $f = \frac{1}{3}\nu_0$

$2<$ 43.870222 2.215560 Gyr

43.569192 $2\nu_0$ 4.523910 gyr

43.268162

42.628785 — 18.095033

0.639377

43.268162

.30103

42.967132

60.723818

42.967132

17.756686

7.499112

10.257574

1.257574 — 18.095642

BASIC TIME TABLE TIMATRX WPP

$KT = t_0^2$

$tZ = t_0^2$

$\eta \tau = t_0^2$

$\gamma \psi = t_0^2$

$T \tau^2 = t^3$

$\tau T^2 = \psi^3$

$K \eta^2 = Z^3$

$\eta K^2 = \gamma^3$

$T \tau = \psi^2$

$\psi \tau = t^2$

$\tau \varphi = \pi^2$

$T \tau = \psi t$

$K \eta = \gamma Z$

$\gamma \xi = \psi t_0$

$\xi t_0 = \psi^2$

0, ~1

With Time = $Z = \frac{G\hbar}{LC^4}$ and $E = \frac{\hbar}{Z}$ $F = \frac{E}{L} = \frac{\hbar}{L} \frac{LC^4}{G\hbar} = \frac{C^4}{G}$ ✓

F = $F = \frac{C^4}{G}$ for ℓ, B, ☆, U For all levels

With Time = $T = \frac{GM}{C^3}$ and $E = MC^2$ $P = \frac{E}{T} = \frac{MC^2}{GM} C^3 = \frac{C^5}{G}$ ✓

$P = \frac{C^5}{G}$ for ℓ, B, ☆, U for all levels

?

In the TIME TABLE

$\frac{1}{2}, \frac{1}{2}$ $\psi = \sqrt{\frac{GML}{C^4}}$ $F_\psi = \frac{C^4}{G}$ for all levels

contrary
consistency
conforming
paradox

contrary
contradictory
consistencies
contrarying
conformity

THE REAL COLD WAR

USA vs CCCP

~~Uniform~~ Ubiquitous
Superficial ~~Scheming~~
Aphorisms ~~Attorneys~~
~~Adages~~

controversial
conformity

Constant consistent
Changing contradiction
Consistent Contra
Paradoxes Perversion

EINSTEIN'S PROBLEM AND SOLUTIONS

MULTIPLE
MA^2 M~~ETAPHO~~RIC APOPHATIC ABSTRACTIONS = ELLIPSIS

MISSING
MB^2 MISPLACED BOSONS AND BARYONS = EMERGENCY

MC^2 MEASURABLE CONTIGUOUS CONTRAR~~IE~~S = ERGODICS
consistencies
MULTIPLE

$Z = \frac{G\hbar}{Lc^4}$ $K = \frac{\hbar}{Mc^2}$ $\eta = \sqrt{\frac{G^3 M \hbar^2}{L^3 c^{10}}}$

$t = \frac{L}{c}$ $T = \frac{GM}{c^3}$ $\tau = \sqrt{\frac{L^3}{GM}}$

	Z/t	$Z \cdot t$	K/T	$K \times \mathcal{T}$	τ/η	$\mathcal{Z} \times \eta$		
D	$(\alpha M S)^1$	t_0^2	$(S/\alpha M)^{-1}$	t_0^2	$(\alpha\mu)^{-1} S^{-2}$	t_0^2		
P	$(\alpha M S)^0$	t_0^2	$(S/\alpha M)^0$	t_0^3	1	t_0^2		
B	$(\alpha M S)^{-1}$	t_0^2	$(S/\alpha M)^{+1}$	t_0^2	$\alpha\mu S^2$	t_0^2		
A	$(\alpha M S)^{-2}$	t_0^2	$(S/\alpha M)^{-2}$	t_0^2		t_0^2		
U	$(\alpha M S)^{-3}$	t_0^2	$(S/\alpha M)^{-3}$	t_0^2	$(\alpha M)^3 S^3$	t_0^2		
	$\left(\frac{l_0}{L}\right)^2$	$\frac{G\hbar}{c^3}$	$\left(\frac{m_0}{M}\right)^2$					