

To The Chairman, ISRO

**Request to ISRO to conduct three experiments in Space, to confirm a Scientific breakthrough in unifying Quantum Mechanics and General Relativity through Quantum Gravity as the Moolaprakriti, equivalent to Plancks energy constant and Einstein's Cosmological constant, derived for the first time through path-breaking axiomatic mathematics along with precise numerical proof, from Sankhya, composed by Kapillamuni in Vedic Science, all of which will lead to a quantum leap in the immediate and long-term technological developments of significant importance.**

Reference: ISRO seeking experiments to be carried out on Mars Orbiter Mission-2

A proposal in principle to conduct a significant experiment on Mars was sent some time ago to Dr. Radhakrishnan who was Chairmen then, but as he had retired it was not followed up.

Now that the government has requested for scientific projects to be carried out on Mars Orbiter Mission 2, I am sending this modified proposal that would enable ISRO to verify new findings (detailed herein), which, when confirmed experimentally by ISRO, will fundamentally change the present scientific understanding of Space, its mode of operation, and its derived characteristics. In so doing, such confirmation would place ISRO at the pinnacle of Space Science, Research and Exploration and pave the way for path-breaking advancements in science, engineering and technological development that can help create a better world for all, in the decades to come.

General Relativity (GR) and Quantum Mechanics (QM) are the two acknowledged pillars of modern physics, but they provide divergent mathematical derivations on the nature of the spectrum of forces, including gravity & "Space-time" forming the significant characteristics of Space. The Standard Model is seen as the link to unifying both GR and QM but without the inclusion of the ubiquitous gravitational force as a quantum, the mathematical divergence will continue.

The axiomatic mathematical algorithms from Vedic science, decoded from the unified field theory of Sankhyakarika, composed by Kapillamuni, (see [www.kapillavastu.com](http://www.kapillavastu.com)) identify the definable and measurable characteristics of the resonant quanta forming the holographic continuum of Space. Precise axioms govern the cyclic time intervals of self-similar & scale-invariant, simultaneous & sequential interactions between real components which form the dynamic quanta in a perpetual state of interactive balance. The perpetually dynamic quanta in a coherent & balanced state form the undetectable substratum in an un-manifest state, identified as Space.

The experimental confirmation of the new findings will show that the fundamental characteristics of Space are as derived axiomatically with precision, impeccable logic and theoretical proof through algorithms derived in Sankhya. It will validate the correctness of the algorithms, which unifies all forces through a single dynamic interactive process, establishing for the first time in the modern era, with unequivocal proof, that quantization of the definable elemental components in the continuum of Space forms the real foundation for all phenomena in a dynamic holographic state.

While the new findings based on Sankhya algorithms have already been tested and verified on Earth, further verification on or near the orbits of other planets would confirm it unequivocally. The successful confirmation of the principles, on which the experiments are based, would then lead to important developments, some of which are itemized in this proposal.

## **Experimental Project Request to ISRO: (1-Mar-2017)**

### **Experiment 1:**

The purpose of this first experiment is to measure the frequency or oscillatory cycle per second, of Electromagnetic Waves (EMW) of 1 meter wavelength on Mars, (and other planets too) for its change, relative to the constant underlying axiomatic oscillatory rate in Space C, is inversely proportionate to orbital distance from the Sun. The oscillatory cyclic rate of EMW of 1 meter wavelength will be different on each planet as predicted mathematically in Sankhya and confirmed on Earth. The 1 meter wavelength has been specified as the numerical value of velocity and frequency are identical at this wavelength but the principle applies to the entire spectrum of EMW frequencies.

This experiment is of fundamental importance since it will show that the velocity of light or EMW, in Space comprising dynamically quantised states as the transmigratory medium, is proportionate to its limiting density and metric elasticity whereas the axiomatic oscillatory frequency C in the continuum of space remains constant in order to maintain perpetual interactive balance and conserve its dynamic gravitational potential.

Experimental confirmation on other planets will prove that Space comprises dynamic components with quantum mass My (**my**) of volumetric dimension  $Lp^3$  with precise density DD, metric elasticity ST and Gravitational frequency constant G, all of which are axiomatically derived from the fundamental cyclic constant C, in Sankhya theory. Sankhya derivations prove that the axiomatic interactive oscillatory rate C is a universal constant.

The details of Experiment 1 are presented further on, with a theoretical abstract and suggested experimental method.

Experimental confirmation will identify that gravitational acceleration is created by a change in the resonant state of the dynamically quantised components comprising Space and will validate the calculated measurement data given below. It will also validate three cardinal principles in real Space as defined in Sankhya:

1. In the dynamically quantised medium of Space volumetric density per interactive cycle and area flux density per interactive cycle, equalize in an inversely proportionate ratio to maintain perpetual balance.

Therefore the inversely proportionate ratio of stresses in a state of balance in a dynamic medium is  $\rho\tau^2 = G$  as the constant of acceleration per unit interactive cycle-time, where the ratio  $\rho$  is the relative interactive density and the ratio  $\tau$  is the relative interactive time interval.

*The classical equation  $\rho v^2 = P$  as dynamic pressure which is proportionate to relative density  $\rho$  and relative displacement as velocity  $v$ , is axiomatically not applicable in a continuum with limiting density DD, limiting metric elasticity ST and frequency constant G, all of which are ratios per unit cycle-time, whereas velocity is a sequential transfer of stresses over a period covering many interactive cycles. Therefore the logical imperative in Physics is to maintain the fundamental cyclic time as the constant over velocity that is a subsequent event.*

2. Dynamic equations of balance must include the time interval of interaction in the proportion of  $1/x = 1+x=1.618034$  as the incremental ratio of time that is in harmonic balance.

A 1 meter long vehicle passing through a 10 meter long tunnel, at 1 meter per second, will take  $10+1=11$  seconds to clear it from the instant it enters the tunnel.

3. Dynamic potential states in Space, as defined above, follow the principle of maintaining a state of coherent balance with increasing rate of interactive states, by decreasing its oscillatory cyclic time interval proportionate to its reciprocal, as illustrated below:

$\left(\frac{1}{x}\right)^n \cdot (1+x)^{-n} = \left(\frac{1}{x}\right)^n =$		$(1+x)^{-n} =$
1	1.618034	0.618034
1	2.618034	0.381966
1	4.236068	0.236068
1	6.854102	0.145898
1	11.0901699	0.0901699

As an analogy the above axiomatic principle is represented by a computer screen where the pixels form the “dynamic quantum” constant. The fixed number of pixels at base of the screen forms the datum line in terms of distance and time, which is a constant. The number of pixels (as frequency) along any sloping line forming the hypotenuse as a longer line on the screen must contain a greater number of pixels (as frequency) than the datum line. The increase in number of pixels along the sloping line will indicate a smaller time interval as wavelength **with reference to the datum line that is the real and only measurement base** for the observer.

The foregoing is an axiomatic fact that will numerically prove the rise in frequency of interactions decreases its wavelength to maintain the rate of change constant as an oscillatory interaction per unit cycle-time. Further, this can be correct only in Space with real components having axiomatically defined characteristics, as shown above.

The two conceptual errors in measurement are explained in detail in the section analyzing Michelson's experiment to understand the null result and the frequency shift. The two important principles ascertain that the elemental components as dynamic quanta comprising the continuum of Space retains its physical characteristics constant, perpetually.

Experimental confirmation of the predicted difference in EMW frequency shift relative to the axiomatic oscillatory rate C, for the planetary orbital radius of Mars versus that for Earth, will also provide axiomatic reasons for validating mathematically the divergence in many scientific theoretical principles.

(a) Understand the theoretical reasons for the null results of the experiments conducted by Michelson / Morley's & others to detect the rate of change in EMW / Light velocity due to the translational velocity of the Earth through Space. Conducting the same experiment again will provide the needed evidence, by measuring the change in frequency with reference to the axiomatic constant oscillatory rate C.

(b) Establish precise mathematical validity for Einstein's equations in General Relativity, through axiomatic solutions, defining the real structure and characteristics of Space along with his suggested experiments. It will include the axiomatic derivation, with precise theoretical proof, of the Cosmological Constant that confirms it.

(c) Re-interpret Hubble's observation of the "Expansion hypothesis" of EMW wavelength with distance, as an existing axiomatic principle in dynamic Space that is related to the axiomatic constant oscillatory rate C and not the Michelson value of c.

(d) Establish the validity of Sankhyan axiomatic principles providing the foundation for Planck's Quantum Mechanics, by unifying all the forces including gravitation as a quantum phenomenon, through the perpetually dynamic quantised field potential existing in Space, in a state of interactive balance and hence undetectable.

(e) Analyse the validity of Einstein's Special Relativity concepts being founded on the constancy of the velocity of light as a principle, in order to complete the definition of time. The constancy of the axiomatic oscillatory rate C as "time" will establish the axiomatic mathematical principle that oscillatory displacement as wavelength varies in direct proportion to orbital distance in any real dynamic medium.

(f) Analysis of electromagnetic derivations based on the principles developed by Maxwell, Gauss, Faraday, Ampere and others will enable unification to validate the diverse set of equations through the single axiomatically derived Sankhya interactive algorithm.

(g) Identifying and analysing the mathematical equations in the spectrum of forces connected with gravitation, electromagnetic, thermal and nuclear phenomena to enable completion of the unification process in Physics through Sankhya axiomatic algorithms with a precise mathematical base devoid of logical diversities.

All the foregoing statements are supported with its respective mathematical formulation with numerical solutions as proof in the relevant section, further on.

### **Experiment 2:**

The purpose of Experiment 2 is to test and confirm the principle of levitation, in dynamic Space with oscillatory rate constant C, density DD and metric elasticity ST, by spinning mercury at above 40000 rpm, in the mode described below.

The Sankhya axiomatic theoretical derivation from basics predicts that an accelerative thrust or lift can be generated by spinning the heaviest atom in a liquid state, in dynamic Space with identified characteristics. Spinning rigid bodies create a variety of gyroscopic effects which delays local reactive forces from acting independently and effectively. Though mercury is readily available as the heaviest liquid element, it is possible that future developments will lead to synthesizing heavier liquids with appropriate properties. There are no identifiable records of such an experiment and **ISRO confirmation** would lead to path breaking new transport developments.

The theoretical justification is presented with precise mathematical proof based on axiomatic logic. Confirmation will lead to several innovative developments in Space technology and a few are listed below.

- (a) Levitating system fuel requirements will be several orders lower than high velocity jets / thrust engines / rockets.
- (b) Vehicles or crafts based on levitation can move anywhere and everywhere without the need for infrastructure like roads, rails, runways, launch pads and monitoring centers.
- (c) Line of sight maneuverability is possible in both Space and atmosphere, like helicopters.

### **Experiment 3.**

The purpose of Experiment 3 is to develop, test and characterize the design and performance of advanced propulsion system based on high voltage neutrino streams, generated from solar battery powered engines, which can provide thrust for orbiting Spacecraft in deep Space.

Sankhya axioms show that such a system comprising resonant pulse transforming coils of required ratio and form (details in principle are given below), pulsed at C cycles per second, will provide pulsed neutrino stream at above  $5 \times 10^{13}$  cycles / second to generate inertial thrust, in Space with density DD and metric elasticity ST.

Levitation systems, in conjunction with the neutrino jet stream propulsion, can remove the dependence on current fuels used as the primary propulsion systems to attain orbits. It would have the advantage and freedom to reach the orbit through direct upward lift in its own time or by gliding laterally into the orbital trajectory at lower velocities, like helicopters for Space has defined characteristic, very similar to the atmosphere.

### **Reference Documents:**

Sankhyakarika, the complete unified mathematical theory, derived axiomatically in Vedic Science, was composed by Kapillamuni and forms the core of the Bhagavadgita. Where in, Kshetrajna, as the unified fundamental field of Space, forms the source of all manifestation and is decoded and detailed in the book “Secret of Sankhya: Acme of Scientific Unification” on website [www.kapillavastu.com](http://www.kapillavastu.com).

Swami Vivekananda showered glowing tributes on the intellectual acumen of Kapillamuni and his incomparable derivation, the Sankhyakarika, when he spoke about it at world conferences. The S-Vyasa University in Bangalore, named after Swami Vivekananda, has quite appropriately validated, with a certificate, the book under reference. The necessary reference documents for this paper are mentioned and attached but additional background theoretical details of its unique axiomatic derivation, complete with internal proof, can be accessed on the website [www.kapillavastu.com](http://www.kapillavastu.com) which has been open to all visitors for over 20 years.

*Important note: The axiomatically derived formulations in Sankhya (which are totally from basics & without any empirical inputs), have precise numerical solutions and are shown as tabulations so that it could be understood at a glance. It eliminates the need for generalized graphics and extensive explanations. The constants, symbols and identities representing axiomatically derived values as data are given at the head of the tabulations. The complete axiomatic derivation from basics is in Absterview.pdf on website [www.kapillavastu.com](http://www.kapillavastu.com).*

### **Theoretical Abstract:**

Sankhya is the only axiomatic unified field theory in existence, based on the principle of self-similarity and scale invariance. The elemental components forming the continuum of Space is quantized dynamically by converting its resonant interactive stresses into elemental quanta in a coherent state that mediate all forces in the field of Space. It is derived as a dimensionless combinatorial mathematical theory using numerical ratios. Sankhya is based on comparative counting of the dynamically interactive oscillatory cycles as quantised ratios proportional to the unit constant MY (**my**) and the axiomatically constant dynamic oscillatory rate C.

Quantization is an axiomatic process, for any resonant **elemental volumetric** unit-state can only combine incrementally as  $1+1=2$  units and the next larger **self similar volume in resonant balance** would be  $2^3 = 8$  units. The logical axiomatic constraint is that incremental volumes from 2 to 7 require its length or radius to increase in fractions that **cannot**

**exist in a real and substantial field comprising elemental components.** Hence the elemental resonant quantum number as a dimensionless cyclic ratio (PHO) must be:

$$\left[ (1 + 1)^3 - 1 \right] + \frac{1}{\left[ (1 + 1)^3 - 1 \right]} = 7.1429 \blacksquare$$

This ratio forms the perpetual harmonic oscillator or PHO state in coherent balance forming the accelerative potential that sustains the fundamental oscillation frequency as derived axiomatically, through combinatorial mathematics. Sankhyan axioms prove it to be a universal constant.

The fundamental axiomatic principle in Sankhya is when two opposing states of compressive and expansive stresses are firmly constrained by a medium, its interaction leads to a resonant oscillatory state. Constrained by the elemental components forming the continuum, the compressive phase in a coherent state is balanced by the expansive phase in a harmonic state coupled by the interactive resonant phase, thereby forming the dynamic quantum. The constant fundamental rate of interactive oscillations C maintain a balanced resonant state, which therefore is not detectable but conserves it as the potential at source as the dynamic quantum of 7 coherent states to initiate all accelerative forces.

In Sankhya, complete and perpetual unification of all dynamic phenomena is derived axiomatically, from the elemental quantum state, through the three-term axiomatic interactive algorithm shown below:

**The 3 Guna PHO state: Coherent potential state = Resonant coupling state + Harmonic radiant state.**

$$\begin{aligned} M_{ps} &= 2.20369 \times 10^{-8} & PM &= 1.67442 \times 10^{-27} & P_n &= 1.67493 \times 10^{-27} & P_m &= 1.67262 \times 10^{-27} & P_x &= 20.94799 \\ Me &= 9.11023 \times 10^{-31} & M_{ep} &= 9.11406 \times 10^{-31} & M_{ee} &= 9.10938 \times 10^{-31} & C &= 2.96576 \times 10^8 & k &= 1.25992 \end{aligned}$$

Thama coherent potential	Raja resonant coupling quanta	Satwa harmonic radiant quantum
$\frac{M_{ps}}{PM \cdot P_x \cdot C^2} = 7.142857$	$\left[ (1 + 1)^3 - 1 \right] + \frac{1}{\left[ (1 + 1)^3 - 1 \right]} = 7.142857$	$\frac{PM - P_m}{P_n - PM} + \frac{M_{ep} - Me}{(Me - M_{ee}) \cdot k} = 7.142857$

The axiomatic spectrum of oscillatory states, (the Standard model in Physics has some of these in modified form), are derived with numerical precision from the fundamental elemental quantum state (see [Abstreview.pdf](http://www.kapillavastu.com) on web [www.kapillavastu.com](http://www.kapillavastu.com)) as shown below.

$$K_x = 0.91499 \quad my = 1.3446 \times 10^{-51} \quad L_p = 1.6896 \times 10^{-35} \quad Ne = 9.5287 \times 10^{-35} \quad h = 6.626 \times 10^{-34} \quad rs = 1.0204$$

The Purusha singularity as  $K_x$  and the Mahad as Planck mass  $M_{ps}$ . The Prakriti nuclear spectrum comprises the mass of the Neutron  $P_n$ , Nuclear  $PM$  and Proton  $P_m$ . The Vikriti lepton spectrum as  $M_{ep}$ ,  $M_{ee}$ , and  $Me$  comprise the three resonant phases of the lepton or electron states. The Vrithi as Neutrino  $Ne$  acts as the transmigrating stress quanta. The Vikharo formed by  $7Ne$  (equivalent to the Planck's constant  $h$ ), the radiant photon; and finally Moolaprakriti  $MY$  ( $my$ ) the elemental quantum in Space with  $L_p^3$  {Planck length  $L_p$ } unit volume. All numerical interactive-count values are dimensionless ratios of the dynamic elemental quantum Moolaprakriti  $MY$ , ( $my$ ) forming the unit interactive mass count and is proportional to the energy quantum  $h/C^2$ , the Planck's constant. The axiomatic solution rs in any equation represent a perpetually resonant dynamic state or decay in infinite time.

$$DD = 3.6311155 \times 10^{-25} \quad D_p = 4.569102 \times 10^{96} \quad ST = 3.8682437 \times 10^{35} \quad Pd = 1.2704356 \times 10^{16} \quad G = 1.4828798 \times 10^{10}$$

The dynamic state of Space is therefore axiomatically defined in terms of the constant oscillatory rate  $C$ , derived by the perpetual harmonic interactive PHO state, forming the cornerstone of perpetual dynamism, Sankhyan gravitational constant  $G$ , Space metric elasticity  $ST$ , Planck coherent density  $D_p$ , resonant nuclear density  $Pd$  and harmonic Space density  $DD$ , all of

which interactively balance dynamism in Space which forms the stable continuum, as the foundation for the entire spectrum of manifestation in a holographic mode.

The only variable is the interactive cyclic time duration of the oscillatory cycle forming the unit count ratio as a dynamic quantum, accounted for all the dynamic states of manifestation that are maintained in perpetual balance. Hence all detectable values of phenomena are necessarily confined to the three measurable states of interactive stresses as coherent, resonant and harmonic phases because it remains in a stable configuration at identifiable harmonic intervals. All other intermediary states of interactive stresses below the Ne threshold merge or are absorbed in the dynamic continuum of Space oscillating at C cycles/second. (Please see details of derivation below)

**Experiment 1 Details:**

Sankhya predicts that the frequency of electromagnetic wave of 1 meter wavelength received on each planet varies with the ratio of change in distance that is inversely proportionate to the logarithmic change in potential, at its source.

The axiomatically derived oscillatory rate in Space is C = 296575967 cycles per axiomatic cycle, and is the Universal constant that underpins all EMW, thermal, gravitation and related phenomena and processes in Space. It is the axiomatic “Universal clock” in Sankhya theory. The figures below show the variation in frequency from C in cps for Earth. The velocity of light as c = 299792458 m/sec is derived axiomatically as c3 below and equals the frequency value at 1 meter wavelength. It is the velocity of light measured by Michelson and others.

Since Sankhya is a dimensionless theory, gauge transformation of the interactive count is invariant at a meter wavelength with time in seconds. In a dynamic continuum that is in a balanced state, the perpetual interactive oscillatory cycle must remain constant.

In the numerical section below, Rs is the solar radius. Pz is the planet’s orbital radius where the number z identifies each as index. The index z, from 1 to 9 respectively, is: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. P3 and c3 are the orbital radius and frequency measured on Earth. (Please refer to the attached Abstreview pdf and / or website for details of axiomatic derivations which are from basics and has no inputs from Physics.)

	<b><u>Earth: Axiomatic Values.</u></b>			
	Harmonic	Constant Oscillatory cycle C		Solar Radius
	$x := \frac{\sqrt{1+2^2}-1}{2}$	$x = 0.618034$	$C := 10^{\frac{2}{x^3}}$	$C = 2.96576 \times 10^8$
				$R_s := \left(\frac{7 \cdot r_s}{2}\right)^{\frac{2}{3}} \cdot C$ $R_s = 6.929426 \times 10^8$
EARTH	$R_s = 6.929426 \times 10^8$	$P_3 = 1.492836 \times 10^{11}$	$c_3 = 2.997925 \times 10^8$	$c_3 - C = 3.216491 \times 10^6$
	$\frac{c_3}{C} = 1.010845$	$\frac{R_s}{c_3 - C} = 215.434333$	$\frac{P_3}{R_s} = 215.434333$	$\frac{P_3 \cdot (c_3 - C)}{R_s^2} = 1$

The axiomatic derivation of C is shown above. The axiomatically derived value of c3 given above is equal to the standard Michelson / Morley et al measured velocity in meters / second, of Electromagnetic waves on the Earth and is deemed a universal constant of velocity in the EMW spectrum. However c3 has the same numerical frequency value in cycles per second, at a wavelength of one meter.

On the Earth the differential value ΔC as **c3 – C is 3216491** meters, (as each cycle corresponds to one meter wavelength). The Rs is the axiomatic Solar radius and P3 the Earth’s measured orbital radius taken from standard published values, both in meters. The ratio **Rs / ΔC** equals ratio **P3 / Rs** exactly. The proof of the inverse proportionality being created the dynamic PHO state is given here:

$$\frac{(c_3)}{C} = 1.0108 \quad \left(\frac{c_3}{C} - 1\right)^{-1} = 92.2048 \quad \left[\frac{R_s}{(c_3 - C) \cdot 92.2048}\right] = 2.3365 \quad \left(\frac{7 \cdot r_s}{2}\right)^{\frac{2}{3}} = 2.3365$$

The above proof demonstrate the existence of a dynamic principle of balance in resonant Space further confirmed by density DD and metric elasticity ST, as predicted in Sankhya. The equations using Rs, DD, Ne, G and ST are also exactly proportionate to the same ratio, thereby establishing accurate mathematical validity to the Sankhyan derivation. The absolute temperature factor, as the volume change ratio Ka, further confirms its thermal characteristics too in Space.

$$Ne = 9.52873 \times 10^{-35} \quad DD = 3.63112 \times 10^{-25} \quad ST = 3.86824 \times 10^{35} \quad G = 1.48288 \times 10^{10} \quad Ka = 272.23928 \quad \left(1 + \frac{1}{Ka}\right)^2 = 1.00736 \quad rs = 1.02041$$

$$\left[ \frac{(c_3 - C) \cdot P_3}{Rs} \cdot \frac{Ne}{DD} \right] \cdot \left[ \left( \frac{7 \cdot rs}{2} \right)^{\frac{4}{3}} \right] \cdot \left( 1 + \frac{1}{Ka} \right)^2 = 0.9999999 \quad \left[ \frac{(c_3 - C) \cdot P_3}{Rs} \cdot \frac{Ne}{1 + \frac{2}{\frac{3}{x}}} \cdot \frac{ST}{G} \right] \cdot \left[ \left( \frac{7 \cdot rs}{2} \right)^{\frac{4}{3}} \right] \cdot \left( 1 + \frac{1}{Ka} \right)^2 = 0.9999999 \quad \blacksquare$$

**Mars: Axiomatic Values.**

$$MARS \quad x := \frac{\sqrt{1 + 2^2} - 1}{2} \quad x = 0.618034 \quad C := 10^{\frac{2}{x^3}} \quad C = 2.96576 \times 10^8 \quad c_4 = 2.986831 \times 10^8 \quad c_4 - C = 2.107117 \times 10^6$$

$$MARS \quad Rs = 6.929426 \times 10^8 \quad P_4 = 2.278798 \times 10^{11} \quad c_4 = 2.986831 \times 10^8 \quad c_4 - C = 2.107117 \times 10^6$$

$$\frac{c_4}{C} = 1.007105 \quad \frac{Rs}{c_4 - C} = 328.85815 \quad \frac{P_4}{Rs} = 328.85815 \quad \frac{P_4 \cdot (c_4 - C)}{Rs^2} = 1$$

The Mars  $c_4 = 2.986831 \times 10^8$  frequency/cycles/second, axiomatically derived value of the one meter wavelength on Mars as shown above, will be different from that received on Earth as  $c_3$ . On Mars therefore  $\Delta C$  value will also be different to the one on the Earth. The  $Rs$  is Solar radius and  $P_4$  the Mars orbital radius, are both in meters. Shown above and confirmed below is the exact equivalence of ratio  $Rs / \Delta C$  to  $P_4 / Rs$ , like that on Earth.

The untested proof below urgently needs the confirmation by testing on Mars as a compulsory event.

$$\frac{(c_4)}{C} = 1.0071 \quad \left( \frac{c_4}{C} - 1 \right)^{-1} = 140.7496 \quad \frac{Rs}{[(c_4 - C) \cdot 140.7496]} = 2.3365 \quad \left( \frac{7 \cdot rs}{2} \right)^{\frac{2}{3}} = 2.3365$$

The precise equivalence below confirms that the  $\Delta C$  proportionality is not an accidental event.

$$\left[ \frac{(c_4 - C) \cdot P_4}{Rs} \cdot \frac{Ne}{DD} \right] \cdot \left[ \left( \frac{7 \cdot rs}{2} \right)^{\frac{4}{3}} \right] \cdot \left( 1 + \frac{1}{Ka} \right)^2 = 0.9999999 \quad \left[ \frac{(c_4 - C) \cdot P_4}{Rs} \cdot \frac{Ne}{1 + \frac{2}{\frac{3}{x}}} \cdot \frac{ST}{G} \right] \cdot \left[ \left( \frac{7 \cdot rs}{2} \right)^{\frac{4}{3}} \right] \cdot \left( 1 + \frac{1}{Ka} \right)^2 = 0.9999999 \quad \blacksquare$$

The two equations show that like the Earth,  $\Delta C$  on Mars too has both DD and ST exactly proportionate to the same ratios, thereby establishing an accurate mathematical validity to the Sankhyan derivation. It is important and vital to confirm the  $c_4 = 2.9868246 \times 10^8$  cycles / sec and the ratio as  $c_4 / C = 1.007105$  on Mars as derived, in the same way as Earth's ratio  $c_3 / C = 1.010845$ .

It is also possible to verify the  $\Delta C$  changes on Earth at the Aphelion position in June and Perihelion in December, around the 3<sup>rd</sup> week in both cases, as given below:

APHELION

PERIHELION

$$\left[ \frac{\left[ \frac{PM - Pm}{Pn - PM} \cdot \frac{Mep - Me}{(Me - Mee) \cdot k} \right]^{\frac{1}{3}} \cdot C}{P_3 + R_s} \right]^2 + C = 2.997776 \times 10^8$$

$$\left[ \frac{\left[ \frac{PM - Pm}{Pn - PM} \cdot \frac{Mep - Me}{(Me - Mee) \cdot k} \right]^{\frac{1}{3}} \cdot C}{P_3 - R_s} \right]^2 + C = 2.998075 \times 10^8$$

But the frequency difference will be small (about +/- 15000 cp than c3) and can be checked by instruments with greater sensitivity. These two values are the limits and will be changing continuously in small steps from c3.

(Similarly the same proportionality of the ratio  $R_s / \Delta C$  exists on every Planet and applies with equal validity to all variations / combinations in gravitational equations. It is shown in the 9 planet tabulations below as proof.

The method of measurement and type of instrumentation needed, as far as is known, already exist within the ISRO system and as informed similar measurements are made as a matter of course to maintain operational control. Spectrum analyzers, Michelson interferometer and frequency / wavelength measuring instruments can record the  $\Delta C$  changes. Hence the re-organisation of the measurement and control protocol to conduct the measurements for the above experiment would be within the scope of the scientists who are in-charge of organizing / conducting the experiments. It would be possible to measure and detect the  $\Delta C$  variations on satellites orbiting around each planet, for each orbit would give twice the planet's radial distance as the change in the  $R_s / R_o$  ratio and would be recordable as a smaller differential. The competence of the ISRO teams in Space technology is admired and appreciated around the world and would be able to conduct these experiments successfully. However an across the table discussion with the concerned scientists can clear the ways and means.

### Experiment 2 Details:

**Abstract:** The continuum of Space as detailed above comprises neutrinos as stress quanta, communicating the interactive density changes at rate C as gravitational acceleration from the interactive PHO state, balanced by the density DD and metric elasticity ST. The DD value is about 216 times the nuclear particle Neutron Pn or nuclear boson PM or Proton Pm mass. The product of PHO ratio and Neutrino too equal the DD value at oscillatory rate C. Mercury is about 200 times Pm or the Proton mass and by increasing it to 216 times per cycle, it will levitate in Space. The fundamental reason is, Space is a medium of dynamic neutrino stress quanta in the interactive  $Lp^3$  states with mass **my** and has buoyancy characteristics like any other medium like air or water. The mathematical proof is given below.

Space is real and substantial not a void because, its balanced state C, absorbs stresses below 7 Ne mass. That is the important reason why a unit Neutrino has not been detected in any experiment. The DD state is the consequence of the absorption characteristic which provides a logical mathematical answer to a host of anomalies in Space, one of which shown above, is the blue shift factor, The foregoing explanation will highlight the fact that the recommended experiments have a very theoretical, logical and precise background based on axioms, to compel us to carry it out and provide further proof. Moreover the experiments are simple and easy to carry out,

**Analysis:** Any metal disc spun at a very high rpm displays gyroscopic effects. As a result any force applied to the axle reacts at an angle proportional to the momentum and direction that is not expected. In real terms, gyroscope effects are more complex and known mathematical models do not accurately reflect the actual deflections. But calculations of spinning fluids in the Space field indicate that it will react in predictable ways, as all the created forces are free to regain balance in flexible modes in the shortest time interval due to its freedom to act as very small independent particulate states in a medium.

**Details:** In Space, the continuum of stress quanta, comprising neutrinos, behave (as shown above,) in predictable ways. As an analogy a flat spinning disc in air or water does not create a lift or thrust whereas a propeller or helicopter blades do. The reason is that the static pressure in the medium, acting as a potential, creates a balancing force when disrupted.

Similarly the neutrino-field in Space, the medium through which gravity acts everywhere, when disturbed, will likewise create a force to regain balance. The important fact to understand is that neutrinos, being stress quanta, can pass through barriers, like sound waves across a barrier, Gravity as stresses cannot be shielded. But when stresses are accelerated its transmigration rate increases resistance. As shown in the Planet orbit case,  $\Delta C$  increases the C value when higher potential neutrinos transmigrate towards the lower C value.

As seen in the foregoing derivations, the dynamic state of Space remains at the PHO quantum level of 7.1428 ratio, when in balance. When any local accelerative event is created, which raises stresses above its normal rate as Cz, the increase will provide an accelerative force or thrust. The axiomatic theory predicts that gases and liquids will react but not solids due to its rigidity. Hence spinning mercury beyond a threshold value will create a force in the dynamic field. The formula below shows that Mercury with atomic weight ~ 200 needs above 40000 RPM to overcome the density DD parameter. Two methods of derivation are shown below. Overcoming DD requires 39000 RPM to create the volume of Ne states to increase adequately, for the temperature factor of 1/272 (k/7^3) volume changes, must also be exceeded.

The other mode shown in three steps, need the PM boundary radius to expand by increasing the Δ C factor by ratio 5.847, logarithmically, as a potential or mass increase ratio. These experiments should be conducted on Earth first to verify the equipment function and the lift factor. The first expression shows the equivalence of DD, which is the limiting parameter. The second shows that the Mercury atoms providing the thrust are due to the buoyancy factor (or Δ C cubed) above 39000 RPM.

$$\frac{\left[ \left[ \left[ \frac{PM - Pm}{Pn - PM} + \frac{Mep - Me}{(Me - Mee) \cdot k} \right] \right]^2 \cdot C \cdot \left( 1 + \frac{k}{7^3} \right)^2 \cdot Ne}{DD} = 1 \quad \left[ \left[ \left[ \frac{PM - Pm}{Pn - PM} + \frac{Mep - Me}{(Me - Mee) \cdot k} \right] \right]^2 \cdot Ne \right]^{\frac{-1}{3}} = 39042.59195$$

The next formulation shows, the creation of Δ C by extending the atomic boundary radius of mercury sufficiently, to increase the potential of the gravity field by a factor of 5.848.

Ratio of change in radius proportional to Mercury / PM	$\left( \frac{Pn \cdot 120 + Pm \cdot 80 + Mee \cdot 80}{PM} \right)^{\frac{1}{3}} = 5.847973$	Ratio of change of DD proportional to Mercury	$\left[ \frac{DD}{(Pn \cdot 120 + Pm \cdot 80 + Mee \cdot 80)} \right]^{\frac{1}{3}} = 1.027353$
Increase in oscillatory as a log ratio ref. C	$10^x \cdot \frac{2}{3} + \frac{1}{5.847973} = 4.396786 \times 10^8$	RPM required to equalise with Mercury / PM ratio	$\left( \frac{2}{10^x \cdot \frac{2}{3} + \frac{1}{5.847973}} - C \right)^{\frac{1}{3}} \cdot 1.027353 \cdot 60 = 3.224187 \times 10^4$

Mercury must be spun within the container which should be at rest. Rotating the rigid container will destroy the flexibility needed to create a lift or thrust. Electro-magnetic or thermodynamic methods of creating spin will not be suitable with Mercury.

Method:

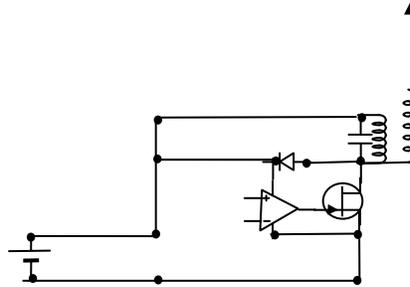
A special method is needed to spin the mercury within a stationery container that is closable and of a volume that is about 10 percent larger than the volume mercury intended to be used in the experiment. High pressure air or inert gas must be injected tangentially through at least two fine nozzles or needle jets, placed opposite each other and fixed at the required angle for maximum efficiency, which must be experimentally determined, in relation the container size. The tangential injection of gas at boundary will spin the liquid (the technique of micronising) within the saucer like container and the exhausting gas will exit upward from the central section through appropriate filters to trap the fine mercury droplets / vapour. The RPM will increase to the required level over an adequate period of time, when the container will rise above its resting place indicating a buoyant state, which can be detected and measured. The exhausting of the spent gas system must be free flowing, without causing any significant pressure rise within the container.

This experiment has been conducted earlier in a simple workshop, with a sturdy plastic container of 20 cm diameter and an air pressure of about 2500 lbs / sq. in. through two hypodermic syringe needles placed at opposite positions. The readily available grade of Mercury of about 3 kg forming approximately a 2mm layer with a clearance of about 1 mm was used.

It is advisable to discuss hands on with actual persons intending to conduct the experiment as there seems to be no record of such a procedure in the public domain and therefore it will be correct to dialogue on the ways and means at least for the first experiment. It is important to discuss and reach a mutual agreement on programming the process that can be carried out effectively. Then appropriate detailed specifications can be provided as needed.

### Experiment 3 Details:

The neutrino jet stream propulsion system is triggered by neutrinos as Ne with a minimum battery potential of 53 Ev potential and can be raised in steps of 53 volts as needed. Seven Ne form a coherent group or photon which is detectable as light etc but Ne jets are not visible. In the pulsed system described below, at above 28000 Ev the Ne stream creates a thrust or impulse in the Space field causing a reaction. It can be tested out on Earth to gauge the force created it. The simple diagram below represents the principle that has been tried out through in house experiments effectively. The design can be finalized across the table discussion to meet specific objectives. The typical diagram of one set is shown below.



The neutrino stream drive has 20 such sets of coils in a circular arrangement so that Ne streaming antenna is directed to create the thrust in one direction. The solar-charged battery of 53 volt or above up to 160 volts provides the potential. The transformer air core coils of secondary of  $2^{2/x^3} = 355$  turns with an inner ceramic former and 10 primary turns on outer former of non conducting material based on Hylam or phenol formaldehyde etc. is wound as a resonant oscillator in a specific mode. The diameter of the secondary single layer coil former with 355 turns with a former having a calculated radius R to suit power requirements forms the central unit and around it the primary coil with ten turns is wound on the Hylam former as its core, that has a radius of  $k = \text{cube root of } 2 \text{ times } R \text{ or } 1.26 R$  as radius.

The suggested coil transforming ratio is proportional to DD and ST at frequency C. The output pulse voltage will exceed 28000 volts at frequencies exceeding 172 kilocycles at which the neutrino stream will provide nanosecond square wave pulses with a potential of 532 / second times the local potential as a jet stream with the mass potential approaching nuclear particle or hydrogen nucleus as shown further on.

The super capacitor of calculated capacitance and voltage forms the potential oscillatory tank to trigger a massive inductive collapsing field that is proportional to the switch off pulse time. The IGBT is switched on and off in a nanosecond pulse rise and fall time as a square wave. The pulse width is determined by power requirements. The IGBT switching frequency can range from 532 to 1722 cps to raise the pulse voltage from 28000 to 90000 volts as the maximum for beyond that the reactive impedance 384 cps in the field of Space will form an electromagnetic wave that flattens the pulse into a sine wave and the thrust will be lost.

The IGBT switching driver should be a FET device operated by a controllable frequency square wave pulse generator. The on to off switching ratio should be between 10 and 20 depending on power output. The most important aspect of this design is that circuit resistance should be minimum, consistent with power output needs. All the 20 coils in the circular configuration can be triggered simultaneously for maximum Neutrino stream thrust. The coils can also be triggered sequentially to provide a rotary or spiraling thrust. The device has been developed and tested here and is presently used as the drive for an over unity self looped rotary generator driven only by NdFeB magnets as the input power source. The details of the Neutrino drive could be finalized at a discussion across the table.

### DISCUSSION

Analysis of the past scientific findings on the characteristics of Space provides an important reason and motivation to conduct these experiments. The history of scientific development is dotted with logical caveats and mathematical divergence.

It is necessary to state positively that every researcher in the scientific history of investigation is to be complemented, for their independent findings form the foundation for the real state of all detectable phenomena of manifestation in Physics but due to the lack of an axiomatically coordinated and unified mathematical system, scientists were compelled to arrive at divergent conclusions as a matter of expediency. Sankhya provides the perfect axiomatic solution that will transform and unify Physics in its entirety, and Science generally, at both fundamental and applied levels, in the years and decades to come.

As an analogy, the characteristics of Space are similar to the thermodynamic behavior of gases but not identical. As derived in Sankhya all particles are dynamically quantized coherent holographic states in the continuum of Space, with Planck length  $L_p^3$  as volumetric dimensions,  $tp$  as the Planck time and **my** Moolaprakriti mass proportional to Planck's quantum constant of energy as  $h/C^2$ .

$$my = 1.3446202 \times 10^{-51} \quad Lp = 1.6895596 \times 10^{-35} \quad tp = 5.6968863 \times 10^{-44} \quad Ne = 9.5287341 \times 10^{-35}$$

$$\frac{Kx}{C^6} = 1.3446202 \times 10^{-51} \quad \frac{my \cdot C^2}{7} = 1.6895596 \times 10^{-35} \quad \frac{Mps}{ST} = 5.6968863 \times 10^{-44} \quad my \cdot C^2 \left(\frac{2 \cdot \pi}{7}\right)^2 = 9.5287341 \times 10^{-35}$$

Plancks constant h as :

$$h = 6.626 \times 10^{-34}$$

$$\frac{my \cdot C^2 \cdot (2 \cdot \pi)^2}{7} \cdot \left(1 + \frac{1}{Tc}\right)^{-1} = 6.6265 \times 10^{-34} \quad \frac{tp \cdot C \cdot (2 \cdot \pi)^2}{7 \cdot Ne} = 1 \quad \frac{tp \cdot C \cdot (2 \cdot \pi)^2}{1 + \frac{1}{Tc}} = 6.6265 \times 10^{-34}$$

The above equations show it is an interactive field with precise parameters as PHO, DD, ST, G and C governed by axiomatic principles of self similarity and scale invariance. The axiomatic derivation from basics is given further below.

**(a) Light Experiment of Michelson.**

Michelson's experimental results of the value of  $c3 = 299792458$  m/s (equal to frequency at a meter wavelength), has not only provided **mathematical proof** in Sankhya to defining Space with density DD and metric elasticity ST but also set the logic for new and path breaking innovations.

Michelson's interferometer was designed to detect the motion of the Earth through Space, by calibrating the difference in wavelength that would have been created by the 29723 m/s Earth's velocity in the orbital direction with reference to an unchanging wavelength at 90 degrees. The null difference Michelson measured, even after many repeated attempts comparing change in wavelength, **is to be expected** as physical lengths cannot change in a real quantum field comprising elemental components but only the interval of time as frequency of dynamic interactions creating stresses as Ne, can vary.

The table below shows the axiomatic derivation (as stated for the ISRO experiment) that the oscillatory rate or frequency changes in inverse proportion to the change in orbital distance for the nine planets. The left table third row actual value 29723.9 m/s is exactly equal in the middle table 3<sup>rd</sup> row as  $\Delta C$  or  $(c3 - C) \times TR3$  as the orbital time period that is proportional to velocity. The last table shows that it is correct for all planets, thereby validating the principle as a standard characteristic. The field of dynamic oscillatory quantum states cannot change physically but only the oscillatory rate as frequency can rise as an increase in potential from the constant C thereby raising the number of oscillatory stresses per cycle.

$\frac{Pz}{TRz} =$	$\frac{Rs^2}{(c_z - C) \cdot (TRz)} =$	$\frac{Rs^2}{(c_z - C) \cdot Pz}$
4.7366 · 10 <sup>4</sup>	4.7366 · 10 <sup>4</sup>	1
3.4877 · 10 <sup>4</sup>	3.4877 · 10 <sup>4</sup>	1
2.9724 · 10 <sup>4</sup>	2.9724 · 10 <sup>4</sup>	1
2.4125 · 10 <sup>4</sup>	2.4125 · 10 <sup>4</sup>	1
1.3092 · 10 <sup>4</sup>	1.3092 · 10 <sup>4</sup>	1
9.6747 · 10 <sup>3</sup>	9.6747 · 10 <sup>3</sup>	1
6.8287 · 10 <sup>3</sup>	6.8287 · 10 <sup>3</sup>	1
5.4618 · 10 <sup>3</sup>	5.4618 · 10 <sup>3</sup>	1
4.7558 · 10 <sup>3</sup>	4.7558 · 10 <sup>3</sup>	1

Explaining it in detail, the constant resonant oscillatory rate C ensures balance of the PHO interactive stresses that remain at DD in the coherent state and any local change cannot exceed the ST harmonic boundary state as the limit of elasticity. All manifestation in the intervening field is holographic states of oscillatory stresses that quantize into larger

harmonic quantum fields without any change in the basic Space parameters. TRz are the orbital time values in seconds of the nine planets (**taken from published records**) from which the cz values have been derived axiomatically to obtain the Δ C parameter as a comparative ratio for all planets. It is very indicative of the correctness of Sankhya that even measured parameters from public records match exactly with axiomatic derivations.

$$\begin{aligned}
 T_o &= 1610.405 & TR_1 &:= (0.240844) \cdot \frac{yr}{2 \cdot \pi} & TR_2 &:= (.615183) \cdot \frac{yr}{2 \cdot \pi} & TR_3 &:= (0.999979) \cdot \frac{yr}{2 \cdot \pi} & TR_4 &:= (1.880711) \cdot \frac{yr}{2 \cdot \pi} \\
 TR_5 &:= 11.8565 \cdot \frac{yr}{2 \cdot \pi} & TR_6 &:= 29.4235 \cdot \frac{yr}{2 \cdot \pi} & TR_7 &:= 83.7474 \cdot \frac{yr}{2 \cdot \pi} & TR_8 &:= 163.723 \cdot \frac{yr}{2 \cdot \pi} & TR_9 &:= 248.02 \cdot \frac{yr}{2 \cdot \pi}
 \end{aligned}$$

$$c_z := 10^x \cdot \frac{2}{3} + \left( \frac{TR_z}{T_o} \right)^{\frac{-2}{3}} \quad R_s := \left( \frac{7 \cdot r_s}{2} \right)^{\frac{2}{3}} \cdot C \quad P_z := \frac{R_s^2}{c_z - C} \quad R_s = 6.929426 \times 10^8 \quad C = 2.96576 \times 10^8 \quad c_3 = 2.997925 \times 10^8$$

$c_z =$	$\frac{c_z}{C} =$	$\left( \frac{TR_z}{T_o} \right)^{\frac{2}{3}} =$	$\frac{R_s}{c_z - C} =$	$\frac{P_z}{R_s} =$	$c_z - C =$	$\frac{R_s^2}{(c_z - C) \cdot P_z} = \frac{c_z}{c_3} =$
3.0496·10 <sup>8</sup>	1.02826	82.6311	82.6845	82.6845	8.3806·10 <sup>6</sup>	1
3.0103·10 <sup>8</sup>	1.01502	154.4031	155.5104	155.5104	4.4559·10 <sup>6</sup>	1
2.9979·10 <sup>8</sup>	1.01085	213.4587	215.4343	215.4343	3.2165·10 <sup>6</sup>	1
2.9868·10 <sup>8</sup>	1.0071	325.238	328.8582	328.8582	2.1071·10 <sup>6</sup>	1
2.9719·10 <sup>8</sup>	1.00208	1.1099·10 <sup>3</sup>	1.1251·10 <sup>3</sup>	1.1251·10 <sup>3</sup>	6.159·10 <sup>5</sup>	1
2.9691·10 <sup>8</sup>	1.00113	2.0345·10 <sup>3</sup>	2.0632·10 <sup>3</sup>	2.0632·10 <sup>3</sup>	3.3585·10 <sup>5</sup>	1
2.9674·10 <sup>8</sup>	1.00056	4.086·10 <sup>3</sup>	4.145·10 <sup>3</sup>	4.145·10 <sup>3</sup>	1.6718·10 <sup>5</sup>	1
2.9668·10 <sup>8</sup>	1.00036	6.3884·10 <sup>3</sup>	6.4813·10 <sup>3</sup>	6.4813·10 <sup>3</sup>	1.0691·10 <sup>5</sup>	1
2.9666·10 <sup>8</sup>	1.00027	8.4264·10 <sup>3</sup>	8.5493·10 <sup>3</sup>	8.5493·10 <sup>3</sup>	8.1053·10 <sup>4</sup>	1

### The Error in Measurement

The first column table above shows the axiomatically derived frequency of a meter wavelength EMW that will be measured on each planet and the measured Michelson value on Earth is in the third row. The second column table shows the fractional ratio of the increase in potential as oscillatory cycles per interactive cycle, inversely proportional to orbital distance. The third column table shows the ratio of Orbital / Solar time in seconds and converted to ratio of orbital to Solar radius in meters. Kepler’s orbital log ratio of 2/3 provides the relationship of orbital time in seconds to linear distance of orbit in meter wavelengths. The fourth column table shows the new finding of the proportionality of Solar orbit Rs /ΔC and is larger than the values in column three. However it is identical to table in column 5 with values taken from published sources which confirms Rs / Δ C is correct. The sixth column table showing ΔC has extremely vital significance as it is related to radius of planet and its velocity in its orbit and confirmed on Earth, which is clearly shown below.

Solar radius	Earth radius	Earth velocity	Delta C
$R_s = 6.9294 \times 10^8$	$ER_3 = 6.378 \times 10^6$	$EV = 2.9724 \times 10^4$	$c_3 - C = 3.2165 \times 10^6$
Orbit Radius actual	Orbit Radius measured	Ratio of Solar/ Earth radius	
$\frac{(R_s - 215.43433)}{P_3} = 1$	$\frac{R_s - 213.45866}{P_3} + \frac{ER_3}{R_s} = 1$	$\frac{R_s}{ER_3} = 108.6458$	

$$\left[ \left[ \frac{[(R_s - 215.43433) - (R_s - 213.45866)]}{(P_3) \cdot EV} \right] \cdot (c_3 - C) \right] = 1 \quad \frac{\left( \frac{R_s}{ER_3} \right) \cdot EV}{c_3 - C} = 1 \quad \left[ \frac{P_3}{TR_3} \cdot \frac{R_s}{(ER_3)} \right] \cdot \left[ \frac{1}{(c_3 - C)} \right] = 1$$

The seventh column table proves the equality for planets orbit. The last column table shows why Michelson measured value is not a constant.

The detailed analysis shows in the last line that while  $\Delta C$  is proportionate to orbital distance, it is at the same time equal to the product of orbital velocity of Earth in meters/second and ratio of Solar radius / Earth radius. Thereby it establishes a new principle that planetary radius and its orbital velocity is directly related to  $\Delta C$  and it's not an independent parameter. Further, it can be shown that each Planet's period of rotation forming the diurnal cycle, the angle of tilt of its axis and the elliptic orbital period are all directly related to the  $\Delta C$  parameter.

The same experiment can be conducted successfully now by measuring the change in oscillatory rate in comparison with the axiomatic C forming the resonant oscillatory rate in a state of balance in Space with definable and measurable characteristics. **Michelson's null result confirmed the characteristics of Space as a definable and identifiable medium, where real lengths cannot change but only the interactive oscillatory cyclic rate can, as an interval of time.**

The equivalence of the  $\Delta C$  proportionality on all planets (shown above in the last table) is a **compelling factor** that proves Space has defined and identifiable properties that are totally balanced by the constant C, Ne, DD and ST parameters. Further the second column showing ratio  $cz / C$  is the logarithmic potential difference creating  $\Delta C$ . This factor is not evident in Physics but is equated to power / energy /potential indirectly as in Planck's, Wien's and Rayleigh Jean's derivations which were interpreted as the "ultraviolet collapse."

To reiterate, confirming it unequivocally will allow **Space technology to create a paradigm shift.** It also provides logical mathematical solutions to a number of unsolved divergences identified in Space. The ratio  $cz / c^3$  in the last column has been shown only to confirm that  $c^3$  as the Michelson Morley value does not fit the comparison of the proportionality factor.

**(b)Sankhya Axiomatic foundation unifies Einstein's GR & SR. Hubble's hypothesis, Plancks Quantum Mechanics and Maxwell equations:**

In order to clarify that Sankhya, though derived in Vedic times, is indeed the most precise and correct theory, a comparison with a very significant but ignored equation from Einstein's GR analysis is solved axiomatically, where the instantaneous area to volume ratio of a dynamic holographic quantum must equal 2/3 (Area/ Volume) as a log ratio to remain in a balanced state in real three dimensional Space. The axiomatically derived parameters as  $D_p$  is Planck density, DD the axiomatic equivalent of  $\rho$  as derived in GR,  $P_d$  is the axiomatic nucleon density, C the axiomatic oscillatory constant and  $x = \psi = 0.618034$ . The equations below confirm the real process of manifestation with certainty.

$$\left[ \left[ \left( \frac{D_p}{DD} \right)^{\frac{1}{3}} \cdot \frac{DD}{P_d} \right] + \left( \frac{2}{C^{1-x} \cdot x} \right) \right] = 0.666669 \quad \left[ \left[ \left( \frac{D_p}{DD} \right)^{\frac{2}{3}} \cdot \frac{P_d}{D_p} \right]^{-1} + \left( \frac{2}{C^{1-x} \cdot x} \right) \right] = 0.666669 \quad \frac{2}{3} = 0.666667$$

In his book "Meaning of Relativity", Einstein analyses the principles of the 3 possible geometries creating proportional changes in Space time curvature in General Relativity, with the equation (and its notations below have been taken from his book) , that has a number of uncertainties:

And changing  $\kappa G^{-2} = \left( \frac{1}{3} \kappa \cdot \rho \right) - (H^2)$  it to  $H = \frac{2}{3} \cdot \frac{1}{x^4}$  give the not so widely known

equation, he considered was closer to reality, by neglecting the 3 geometry curvature concepts.

It is identical in principle to the Sankhya equation with 2/3 as the constant, where in, the Hubble's boundary expansion parameter H is replaced with a **local ratio change** in the dynamic state as  $C^{1-x}$  as the "**expansion factor**", initiated by changes in the ratio of the limiting stress densities  $D_p / DD$  ( $D_p$ =Planck density and  $DD = GR \rho$ ) creating the difference in potential providing the perpetual dynamism through the oscillating potential  $DD/P_d$  ( $P_d$ =nuclear density) that transmigrated the stresses from a higher count rate  $cz$  to C the constant. If  $P_d$  the nuclear density varied beyond limits the nuclear state merged with the continuum in Space. The mathematically correct equation as a comparison has been introduced here at the very outset to highlight the depth of analytical logic existing in Sankhya as an axiomatic unified theory capable of giving correct solutions transparently.

The derivation above should not come as a complete surprise. The Space dynamic density DD was identified in GR, by Einstein, as critical matter density  $\rho$ , to balance the gravitational equations at the boundary of Space, so that “zero curvature” formalism would overcome the negative results of the Michelson Morley experiments. But it could not confirm its dedicated purpose of exposing the foundation of Space as a real and definable entity. The GR equation below was expected to be solved, by using the correct expansion and density parameters but the uncertainties in the Hubble parameter have left it without a solution.

$$\rho = \frac{3 \cdot H^2}{K} = 3.5 \cdot 10^{-28} \frac{\text{gms}}{\text{cm}^3} \text{ Sankhya} \quad DD = \frac{1 + \frac{2}{x^3}}{C^3} = 3.63112 \times 10^{-25} \frac{\text{kg}}{\text{m}^3}$$

The axiomatic Sankhya density derivation DD and the GR’s  $\rho$  are close. Hubble’s observation of H as the expansion factor was based on two assumptions that Space was a void, post Michelson’s experiment and the vacuous Space boundary was assumed to have three possibilities of closing in, expanding indefinitely and if neither, a stable state that resulted in a zero differential in the GR equation. Even the Hubble’s expansion constant of 55000 per mega parsec used in the GR equation has increased by about 50% from the original Hubble had proposed and that uncertainty needs an explanation which is given further below.

In GR the introduction of a Cosmological constant was abandoned by Einstein because the Hubble expansion parameter apparently satisfied his GR equation then. However Sankhya derivation has axiomatically derived the precise Cosmological constant Moolaprakriti the elemental quantum ratio MY (shown as **my** in equations) that satisfies every equation precisely and permanently. MY (my) is the smallest mass in Space with an elemental volume  $Lp^3$  giving the balanced volume of stresses extending radially to 20.7 billion years. The corollary is that the axiomatically calculated volume and radius is necessary to sustain dynamic manifestation.

$$\text{Moolaprakriti} = \text{my} = \frac{Kx}{C^6} = 1.3446202 \times 10^{-51} \quad \frac{\text{my}}{Lp^3} = 2.7879123 \times 10^{53} \quad \left(\frac{\text{my}}{Lp^3}\right)^3 \cdot \frac{1}{\text{yr} \cdot 10^9} = 20.7013346.$$

The ratio MY proportional to the energy quantum, photon or Planks constant h and Ne the stress quantum as the neutrino, is shown below as a precise parameter that matches both the mass and energy factor where Tc is the coupling constant.

$$\frac{h}{\text{my} \cdot C^2} \cdot \frac{7}{(2 \cdot \pi)^2} + \left(\frac{1}{Tc}\right) = 1 \quad \frac{h}{Ne \cdot 7} + \frac{1}{Tc} = 1$$

The vital importance of My (**my**) as the cosmological constant is proved by closing every equation of the Plank Mass spectrum of Mps (the maximum mass of a fundamental particle) which relationship has never been exposed in Quantum Mechanics as shown below. The proof that Einstein looked for is given below where the Cosmological constant MY (**my** in table) as the elemental quantum which controlled all dynamism in Space accurately. The GR’s  $\rho = DD$  is connected through **my** as the cosmological constant.

$$\begin{aligned} Mps &= 2.2036945 \times 10^{-8} \quad ST = 3.8682437 \times 10^{35} \quad G = 1.4828798 \times 10^{10} \quad DD = 3.6311155 \times 10^{-25} \\ Lp &= 1.6895596 \times 10^{-35} \quad \text{my} = 1.3446202 \times 10^{-51} \quad C = 2.9657597 \times 10^8 \quad 1 + \frac{1}{Tc} = 1.0065839 \quad 1 + \frac{2}{x^3} = 9.472136 \\ \frac{Mps \cdot \text{my}}{Lp^2 \cdot G \cdot 7} &= 1 \quad \frac{Mps \cdot \text{my}}{Lp \cdot G \cdot h} \cdot \frac{(2 \cdot \pi)^2}{7 \cdot \left(1 + \frac{1}{Tc}\right)} = 1 \quad \frac{Mps \cdot \text{my}}{Lp \cdot G \cdot Ne} \cdot \left(\frac{2 \cdot \pi}{7}\right)^2 = 1 \quad \frac{Mps}{ST} \cdot \frac{7}{\text{my}} \cdot \frac{1}{C} = 1 \quad \frac{Mps \cdot DD}{\text{my} \cdot C^2 \cdot 7 \cdot rs \cdot \left(1 + \frac{2}{x^3}\right)} = 1 \end{aligned}$$

The table below confirms with utmost certainty that the cubic parameters in Space are controlled by the  $\Delta C$  cubed parameter in every interactive state where the coupling constant Tc is proportional to Tck with MS the Solar Mass and Tcc the 4<sup>th</sup> momentum with **my** as the Moolaprakriti or Cosmological constant of each axiomatic cycle of 10 interactions. The single

algorithm of the PHO state is proved to be proportional in every manifestation process and at both the extreme limits **locally**, which has the merit of immediate verification and provides a solution to GR and Hubble's hypothesis axiomatically.

$$T_{ck} := \left[ \left[ 1 + \left( \frac{1}{T_c} \right) \right] \right]^{-\frac{3}{2}} \quad MS = 1.9894 \times 10^{30} \quad P_x = 20.948 \quad \left( \frac{10}{2 \cdot \pi} \cdot \sqrt{3} \right)^3 = 20.948 \quad T_{cc} := 1 + \frac{T_c}{10^4}$$

$$\frac{MS}{\left[ \left[ P_z \cdot (c_z - C) \right]^3 \cdot DD \cdot 7^2 \right]} \cdot T_{ck} \quad \frac{P_x \cdot 7 \cdot T_{cc}}{\left[ \left[ P_z \cdot (c_z - C) \right]^3 \cdot my \right]}$$

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The above equation with ΔC cubed, balanced by the Moolaprakriti as the Cosmological constant shows it is **volumetrically** stable in all the nine planetary orbital radii values and also because it is less than the radiation coupling constant 1.006584. Else the orbit would have decayed. The ΔC value beyond Pluto's orbital radius reaches the limit and decays thereafter, which is supported by the fact that no classical planetary bodies beyond Pluto have been detected so far.

The compelling theoretical derivation given above, displays consistent equality with every combination of factors, operating in Space. Mps is Planck mass, Lp is Planck length, h is Planck's constant, Dp is Planck density and G the Sankhyan equivalent of Newtonian G, DD is Space density or GR's ρ, ST is metric elasticity of Space, Tc coupling constant, 1+2/x3 = 9.4721 is the coherent state potential for stress transmission of Ne.

Hubble's expansion hypothesis, conceptually considered as being valid even today, is a misinterpretation of an axiomatic balancing phenomenon that maintains Pho, C, DD and ST all of which remained perpetually through the changing proportionality of ΔC with orbital distance. The axiomatically derived density DD as GR's ρ, the axiomatic metric elasticity of boundary as ST identified by Nobel L Chandrasekhar, the Sankhyan gravitational frequency constant G as the reciprocal of Newtonian G, and TT the axiomatic harmonic expansion constant replacing Hubble's H, Planck density Dp, the elemental Sankhyan quantum Moolaprakriti as **my** and Kx as the singularity forming the core of nuclear states, **rs** as the resonance parameter that maintains perpetual oscillations shown below in precise balance thus providing a dynamic but stable continuum forming the real continuum of Space.

$$\frac{G}{TT^2 \cdot DD} = 1 \quad \frac{TT^2 \cdot \left( 1 + \frac{2}{x^3} \right)}{ST} = 1 \quad \frac{DD \cdot ST}{G \cdot \left( 1 + \frac{2}{x^3} \right)} = 1 \quad \frac{Dp}{ST} \cdot \frac{my}{G} \cdot Kx \cdot rs = 1$$

In the background of the identical congruence of the 4 independently derived critical equations of balance in Sankhya, it becomes imperative to resolve the uncertainty mentioned above through the Sankhyan axiomatic derivations. Hubble's observation of a change in wavelength and frequency, as a red shift, proportional to distance, **was compared with c3 not C for the latter is still unknown.**

Comparing Mars ΔC, is a blue shift,  $c_4 - C = 2.1071 \times 10^6$  but  $c_4 - c_3 = -1.1094 \times 10^6$  with c3 it turns into a red shift with a negative sign. The fact that c3 ( the Michelson c ), was always used as the reference value in science, made it very clear that no blue shift would ever occur unless the ratio of distance was less than P3 / Rs = 215.43. As the ratio of orbital distances became larger, the ΔC increased when compared to c3, whereas it decreased with C. It is an axiomatic ratio that is applicable to all the nine planets which confirms its correctness (and all phenomena too) as shown below.

Potential ratio variance with orbital distance	BLUE SHIFT correct value	Differential decreasing with orbital distance	Differential increasing with distance but is negative after c3	REDSHIFT incorrect value Hubble effect
$\frac{c_z}{C} =$	$\frac{c_z - C}{C} + 1 =$	$c_z - C =$	$c_z - c_3 =$	$\frac{c_z - c_3}{c_3} + 1 =$
1.028258	1.028258	8.380558·10 <sup>6</sup>	5.164067·10 <sup>6</sup>	1.017225
1.015025	1.015025	4.455925·10 <sup>6</sup>	1.239434·10 <sup>6</sup>	1.004134
1.010845	1.010845	3.216491·10 <sup>6</sup>	0	1
1.007105	1.007105	2.107117·10 <sup>6</sup>	-1.109374·10 <sup>6</sup>	0.9963
1.002077	1.002077	6.159016·10 <sup>5</sup>	-2.600589·10 <sup>6</sup>	0.991325
1.001132	1.001132	3.358521·10 <sup>5</sup>	-2.880639·10 <sup>6</sup>	0.990391
1.000564	1.000564	1.671757·10 <sup>5</sup>	-3.049315·10 <sup>6</sup>	0.989829
1.00036	1.00036	1.069146·10 <sup>5</sup>	-3.109576·10 <sup>6</sup>	0.989628
1.000273	1.000273	8.105255·10 <sup>4</sup>	-3.135439·10 <sup>6</sup>	0.989541

The error in interpretation is shown in the tabulation above on all nine planets, for it is very logical that in the Solar planetary domain only a blue shift can occur when EMW radiation is received from the SUN, through Space with identified characteristics. In Sankhya all forces as stresses, from gravity to radioactivity, is operated by the single dynamic interactive PHO state.

This important factor cannot be verified in Physics using c3 but can only be deduced indirectly through the potential / thermal energy balance equations. Yet there is no record of this blue shift in explicit terms so far in physics though records of numerous red-shifts values from distant stellar objects exist by comparing c3. The ostensible reason is the Michelson value of c3 was recognised as the only constant of velocity whereas the axiomatic C is the oscillatory constant of interactions as the dynamic universal clock for the EMW, thermal and gravitational oscillatory fields as shown. In effect C is the “carrier oscillatory rate” that is modulated to create all detectable phenomena as holographic states in the dynamically quantised continuum as the real field in Space.

Furthermore since no oscillatory rate less than axiomatic constant C in a real plenum of elemental components can exist, all quantised stresses as photons or EMW waves from any source, however far it may be, must be blue shifted, because a change in potential is a must to initiate an acceleration or momentum in a substantial and dynamic continuum with DD and ST as operating parameters. In Sankhya the potential ratio is identified as the PHO oscillatory quantum state of 7rs = 7.142856, which defines that radiation can only be accelerated from stellar core radius that is greater than C in meters, as the PHO state is the potential, that radiates the quanta as stress waves ( shown in the derivation below).

PHO in Balance	PHO accelerated	Solar radius dynamiism
$\left[ \frac{PM - Pm}{Pn - PM} + \frac{Mep - Me}{(Me - Mee) \cdot k} \right] = 7.142857$	$\left[ \frac{PM - Pm}{Pn - PM} \cdot \frac{Mep - Me}{(Me - Mee) \cdot k} \right]^{\frac{1}{3}} = 2.336476$	$\frac{Rs}{2.336476 \cdot C} = 1$

In Sankhya the stresses are quantised by the PHO oscillatory state and transferred as waves of stress with the mass of Neutrinos through the elemental continuum; accelerated by ΔC through a Space operated by DD and ST parameters. Hence comparing the oscillatory rate of C forming the constant, the large value of red-shifts observed so far would show as smaller blue shifts if it is compared to C and not c3, thereby indicating clearly that the blue shift is caused by a potential drop proportional to distance, which happens in all wave phenomena in a field with definable characteristics.

In Quantum Mechanics the axiomatic Sankhya equations below highlight the potential in dynamic Space as the force in the radiation spectrum that is proportional to C and ΔC. The critical matter density in Space DD is proportional to the mass Ne as the transmigrating stress initiated by the PHO potential that creates the differential ΔC as 2.18 x 10<sup>6</sup>, which has important orbital ramifications too complex to be shown here.

$$\left[ \frac{DD}{Ne \cdot \left(\frac{7 \cdot rs}{2}\right)^2} - C \right] = 2.1829763 \times 10^6 \blacksquare$$

From that ΔC the range of Planck’s black body radiation equation are axiomatically derived as a thermodynamic interaction among the quanta in the continuum of Space and is shown as frequency 6.47 x 10<sup>14</sup> which is consistent with peak temperature and corresponding wavelength.

$$\left[ \frac{DD}{Ne \cdot \left(\frac{7 \cdot rs}{2}\right)^2} - C \right] C = 6.4741831 \times 10^{14} \quad \frac{C}{(6.4741831 \times 10^{14}) \cdot 10^{-9}} = 458.090175 \quad \left[ \frac{DD}{Ne \cdot \left(\frac{7 \cdot rs}{2}\right)^2} - C \right]^{\frac{1}{3}} = 6364.3624281 \quad \frac{DD}{\left(\frac{7 \cdot rs}{2}\right)^2 \cdot [C + (458.09 \cdot 10^{-9})^{-1}]} = 1$$

The peak temperature at 6364 K at 458 nm wavelength and frequency 6.47 e +14 is equal to the derivation in Wien’s equation displaying the axiomatic quantum expansion as 1/ 7<sup>3</sup> = .0029, (Wien’s .002898) the primary harmonic volume that resonentially expands in proportion to cube root of 2 as k. The tables below show the wavelength in nanometers, Temperature K in the second table is axiomatic and is equal to the classical derivation in Planck’s black body radiation formulation. The last table shows the frequency in cps compatible with the wavelength shown in first table.

$$\text{Wiens } \frac{1}{\tau^3} = 2.9154519 \times 10^{-3}$$

$$\text{Tk} := 4.8820768$$

$$\text{Freq} := 6.4741831 \times 10^{14}$$

Wavelength nm

Temperature K

Temperature K

Frequency cps

$(c_z - C)^{-1} \cdot 10^9 =$	$\frac{(c_z - C)}{\tau^3} =$	$\left[ \left[ \left[ (c_z - C) \cdot C \right] \cdot \frac{h}{K_b \cdot \text{Tk}} \right] \right] = (c_z - C) \cdot C =$
119.323795	2.4433114 · 10 <sup>4</sup>	2.4433114 · 10 <sup>4</sup>
224.4202929	1.2991035 · 10 <sup>4</sup>	1.2991035 · 10 <sup>4</sup>
310.8978	9.377525 · 10 <sup>3</sup>	9.377525 · 10 <sup>3</sup>
474.5820874	6.1431983 · 10 <sup>3</sup>	6.1431984 · 10 <sup>3</sup>
1.6236359 · 10 <sup>3</sup>	1.7956316 · 10 <sup>3</sup>	1.7956316 · 10 <sup>3</sup>
2.9775014 · 10 <sup>3</sup>	979.1605446	979.1605463
5.9817289 · 10 <sup>3</sup>	487.3928533	487.3928542
9.3532613 · 10 <sup>3</sup>	311.7043126	311.7043132
1.2337675 · 10 <sup>4</sup>	236.3047986	236.304799
		2.4854721 · 10 <sup>15</sup>
		1.3215203 · 10 <sup>15</sup>
		9.5393395 · 10 <sup>14</sup>
		6.2492027 · 10 <sup>14</sup>
		1.8266162 · 10 <sup>14</sup>
		9.9605651 · 10 <sup>13</sup>
		4.9580309 · 10 <sup>13</sup>
		3.1708295 · 10 <sup>13</sup>
		2.4038237 · 10 <sup>13</sup>

Importantly, the last table shows the derivation of the frequency 6.47 x 10<sup>14</sup> as a product of the balancing action of ΔC times C the constant which indicates the increase in density of interactions within the same cycle or simultaneously.

$$\left[ \frac{DD}{\left(\frac{7 \cdot r_s}{2}\right)^2 \cdot \left(1 + \frac{k}{\tau^3}\right)^2 \cdot C} \right] \cdot \frac{1}{\text{Ne}} = 1 \quad \left[ \frac{DD}{\left(\frac{7 \cdot r_s}{2}\right)^2 \cdot \left[(458.0902 \cdot 10^{-9})^{-1} + C\right]} \right] \cdot \frac{1}{\text{Ne}} = 1 \quad \frac{10^9}{(2.183 \times 10^6)} = 458.0852$$

Even more important is the above equation that shows exactly when the unit mass value of the Ne stress commences and increases in numbers inversely proportionate to ΔC as a result of the rise in frequency in terms of the mass value as an outward radiation in the quantised continuum of Space. The wavelength 458 nm is exactly proportionate to Ne at oscillatory rate C. As the frequency increases the number of Ne rises in direct proportion.

$$\frac{\tau^3}{k} = 272.2392804 \quad \left(\frac{7 \cdot r_s}{2}\right)^{\frac{2}{3}} \cdot C = 6.929426 \times 10^8 \quad R_s = 6.929426 \times 10^8$$

By the same logic the radius of the stellar radiating body or Sun must be R<sub>s</sub> shown above as its estimated peak temperature is about 6300 C and wavelength about 458 nm that Sankhya axiomatic derivation and Planck's & Wien's experimental findings match. Further the same radiation parameters must also explain Hubble's observation for any light coming from any distant stellar body as source must have a radial distance of R<sub>s</sub> meters or more.

Similarly the thermal spectrum has its source in DD, though it has not been derived in those terms in Physics. The Boltzmann constant K<sub>b</sub> is a direct derivative of DD as shown below with the confirmation of the "absolute temperature" as the linear rate of volume change:

$$\frac{\tau^3}{k} = 272.23928 \quad 1 + \frac{k}{\tau^3} = 1.00367 \quad \left[ \frac{DD}{\frac{P_m - P_n}{P_n - P_m} + \frac{M_{ep} - M_e}{(M_e - M_{ee}) \cdot k}} \right] \cdot \frac{\tau^3}{k} = 1.383945 \times 10^{-23}$$

Planck's parameter is shown further below as axiomatic values that close all equations transparently and is unified with GR through DD as ρ. The Gravitational constant G unifies the density DD through ST as shown:

$$\frac{G}{DD \cdot ST} \cdot \left(1 + \frac{2}{x^3}\right) = 1 \blacksquare$$

All values below have been axiomatically derived as dimensionless ratios from basics and details on website.

$$Mps = 2.203694 \times 10^{-8} \quad Lp = 1.68956 \times 10^{-35} \quad G = 1.48288 \times 10^{10} \quad my = 1.34462 \times 10^{-51} \quad DD = 3.631115 \times 10^{-25}$$

$$ST = 3.868244 \times 10^{35} \quad 1 + \frac{1}{Tc} = 1.006584 \quad 1 + \frac{2}{x^3} = 9.472136 \quad C = 2.96576 \times 10^8$$

$$\frac{Mps}{Lp^3 \cdot Dp} = 1 \quad \frac{Mps}{Lp^2 \cdot G} \cdot \frac{my}{7} = 1 \quad \frac{Mps}{Lp \cdot G} \cdot \frac{my}{h} \cdot \frac{(2 \cdot \pi)^2}{7 \cdot \left(1 + \frac{1}{Tc}\right)} = 1 \quad \frac{Mps}{Lp \cdot G} \cdot \frac{my}{Ne} \cdot \left(\frac{2 \cdot \pi}{7}\right)^2 = 1 \quad \frac{Mps \cdot C}{Lp \cdot ST} = 1 \quad \frac{Mps \cdot C}{Lp \cdot G} \cdot \frac{DD}{1 + \frac{2}{x^3}} = 1$$

The precise axiomatic equations above show two very significant equality and proportionality between Quantum Mechanics and General Relativity. Moolaprakriti **my** along with Ne and h as the energy/stress values), closes the maximum mass equation, which, in the current theoretical understanding, is mathematically impossible. Therefore the unification paradigm of Sankhya covers Planck's Quantum Mechanics from fundamentals, in conjunction with GR's  $\rho$  as DD. All of which is bound by the maximum and minimum densities, through the quantum constant **my** or Moolaprakriti as the elemental component with a volume  $Lp^3$  bound by the colossal gravitational acceleration shown below as the gravitational quantum at the very elemental or fundamental level.

$$\frac{Mps}{Lp^2 \cdot G} = 5.205931 \times 10^{51} \quad \frac{7}{my} = 5.205931 \times 10^{51}$$

The Sankhya theoretical derivations are based on analyzing activity that is detectable or measurable by the observer. The range or distance of the observer's horizon is dependent on the potential at the local source and is given below as about 20 billion yrs:

$$\frac{my}{Lp^3} = 2.7879 \times 10^{53} \blacksquare \quad \left[ \left( \frac{my}{Lp^3} \right)^{\frac{1}{3}} \right] \cdot \frac{1}{yr \cdot 10^9} = 20.7013 \blacksquare$$

The acceleration factor shown above is not from QM but is from the classical gravitational equation where by defining my or Moolaprakriti as the gravitational quantum equal to the Cosmological constant in GR while in QM it is the Planck's energy constant  $h/C^2$ . Hence by unifying it through a dimensionless axiomatic numerical theory of Sankhya all the divergence is logically closed.

### Hubble's Expansion Hypothesis

The foregoing equations lead to solving Hubble's puzzling observation of an expanding Universe as the  $\Delta C$  proportionality that varied the frequency inversely proportional to distance. Furthermore it emphasised the axiomatic fact that in a balanced, dynamic and definable Space the observers clock had no validity for oscillatory states existed only because there is a local perpetual fundamental quantum potential that changed the interval between interactions which the observer defined as time. Though it seemed Hubble's choice of mega parsec definition of distance was an arbitrary choice but it proved that his observation was valid for it is indeed equal to  $\Delta C$  on the Earth.

$$H := 3.2 \cdot 10^6 \cdot yr \cdot (c_3) \quad H = 3.0274 \times 10^{22} \quad \frac{H}{55000} = 5.5043 \times 10^{17} \quad c_3 - C = 3.2165 \times 10^6$$

The Sankhya axiomatic derivation based on G and DD as the measurable foundation that results in TT, is a precise equivalent to Hubble's observational value H, which replaces the expectation of an expansion of Space to TT (as the time in seconds) as the maximum possible increase in the orbital distant that the Ne stresses or Moolaprakriti **my** as the cosmological constant could transmigrate as EMW stresses in balance, based on the change in potential at source as Rs. The maximum orbital distance in time is 6.4 billion years.

$$TT := \sqrt{\frac{G}{DD}} \quad TT = 2.0208 \times 10^{17} \quad \frac{TT}{yr} = 6.4038 \times 10^9 \quad RU := TT \cdot C \quad RU = 5.9933 \times 10^{25}$$

Hubble's estimate is close and correcting 55000 to 65000 would equalize with the Sankhya TT. Hence both the GR solution and the Hubble's expansion uncertainty are resolved through precise axiomatic algorithms. In principle, the need for a Cosmological constant to balance the GR equation has proved correct while preserving the logical integrity of the GR equations.

### Special Relativity- Concept of Mass and Time

The corner stone of GR was the equivalence of inertial mass and gravitational mass. In Sankhya the coherent state displays consistent mass characteristics where all interactions act simultaneously within one interactive cycle. As defined in Sankhya and from the foregoing consistent equality of the equations show that mass is the number of simultaneous oscillatory states acting in one PHO cycle or 3.3 billionth of a second. The neutrino stress transfer rates created both the "types of masses" as coherent states at the same instant because there is only one dynamic PHO state to initiate it in Space with one single mode of dynamic interaction.

As shown in both the cases Earth and Mars the  $\Delta C$  equivalence also applied to the DD and Ne balance equations, as a stress equalisation process. At any oscillatory rate higher than C, due to any form of acceleration, the Ne stresses create the equivalent of the hydrogen mass for a duration less than a cycle or 3 nanosecond. Hence the observation by researchers that there is an abundance of hydrogen in Space is mathematically supported confirming Space is not a vacuous state.

$$P_n = 1.6749 \times 10^{-27} \quad PM = 1.674423 \times 10^{-27} \quad P_m = 1.6726 \times 10^{-27}$$

$$\left[ \frac{\frac{PM-P_m}{P_n-PM}}{\frac{M_{ep}-Me}{(Me-Mee)}} \cdot \frac{C^{1-x}}{C^x} + \frac{PM}{PM} \right] = 1.007937 \quad \left[ \frac{\frac{PM-P_m}{P_n-PM}}{\frac{M_{ep}-Me}{(Me-Mee)}} \cdot \frac{C^{1-x}}{C^x} + \frac{PM}{PM} \right] \cdot P_m = 1.685897 \times 10^{-27}$$

The equation above shows the interactive quantum states in Space rises to 1.00794 as the relative hydrogen mass shown in the second equation.

Einstein's SR was a balancing equation to keep distance "as velocity of light" constant in vacuous Space which consequently led to keeping time too as a constant, in order to measure the frequency of oscillations. The dichotomy was in dynamic Space with definable properties, wherein the number of dynamic interactions per cycle is the reciprocal of time in Physics. The most vital fact is that all the limiting parameters as My, C, DD, ST, Dp and **G exist even within the very first interactive cycle of about 3 billionth of a second forming the elemental quantum.**

There by it confirms the concept of self similarity and scale invariance where every subsequent cycle is an identical repeat except for a variation in the time interval between cycles. The axiomatic "clock time" is C but cannot be detected as it is in interactive balance in Space. Only a change in interactive rates would make it detectable but as a comparison with  $\Delta C$  which is proved by the above tabulations. In real Space velocity of stress transmigration is dependent on rigidity or ST. Stroking the first ball in a rigid row of 100 billiard balls would shoot only the last ball out instantly, thereby transmitting the stress through 98 balls within the time interval of one ball rebounding away. The key to velocity of stress transfer is the rigidity of contact which is ST in real Space.

**The foregoing, demonstrating the equivalence of GR, SR, Thermodynamics, Electrodynamics and Quantum Mechanics is a hallmark in unification brought about by the axiomatic derivations in Sankhya which equates the elemental continuum of Space with the elemental quantum in Space through perpetual dynamism that exchanges simultaneous states (density change) with sequential states (harmonic radial change) of time cyclically.**

### Justification

Further, Sankhya axiomatic logic confirms through numerical precision several important conceptual aspects in Physics. Einstein's axiomatic approach was correct but the non-algebraic mathematical methods compounded by dimensionality, prevented the realization that the Cosmological constant was in real terms the elemental mass quantum related to the Planck's energy quantum by  $C^2$ . Hubble's observation of expansion was indeed insightful for his choice of 3.2 million

light years confirmed the  $\Delta C = 3.2 \times 10^6$  but the change in “wavelength proportional to distance” comparison with the Michelson’s  $c_3$  changed the signs leading to the “expansion of the Universe” conclusion. Michelson and Morley’s experimental value of  $c_3$  was correct as it has fitted in perfectly with Sankhyan logic, but the “null relative velocity in Space” conclusion eliminated the merged & coherent characteristics of Space as the source of local dynamism that transmigrate the stress vortex as quanta or photon. The theoretical reason why measurement of  $c_3$  values were not the fundamental constant is because C is the dynamic resonant oscillatory state which is at rest or balance in the quantized elemental field. Analyzing Earth orbit with the elemental quantum concept shows clearly the PHO potential as the source of dynamism and the precise evaluation based merely on C provides the same solutions which is an unequivocal confirmation of the Earths observed parameters.

$$\frac{7 \cdot rs}{2} = 3.571429 \quad \left(\frac{7 \cdot rs}{2}\right)^2 = 12.755102 \quad \left(\frac{7 \cdot rs}{2}\right)^{\frac{2}{3}} = 2.336476 \quad \frac{P_3}{C} = 503.357135 \quad \frac{503.357135}{2.336476} = 215.434327$$

$$\left(\frac{c_3}{C} - 1\right)^{-1} \cdot \left(\frac{7 \cdot rs}{2}\right)^{\frac{2}{3}} = 215.434333 \quad \frac{C}{c_3 - C} \cdot \left(\frac{7 \cdot rs}{2}\right)^{\frac{2}{3}} = 215.434333 \quad \frac{P_3}{R_s} = 215.434333$$

The elemental quantum ratio is the cause of the change from potential to kinetic states in a log of time ratio  $1/T_c$  that is not measurable explicitly but emerges as a coupling constant equal to  $C^2$ , in equations of balance. When its resonant state is changed by an interaction, acceleration is initiated much below the Planck’s quantum or radiative photon state where neutrinos are accelerated at  $\Delta C$  as an accelerative force. The equations show that the perpetual existence of the oscillatory state is the fundamental cause that initiates accelerative movement in Space.

PHO in Balance	$\left[ \frac{PM - P_m}{P_n - PM} + \frac{M_{ep} - Me}{(Me - M_{ee}) \cdot k} \right] = 7.142857$	$\frac{R_s^2}{(P_3)} + C = 2.997925 \times 10^8$
PHO state accelerated	$\left[ \frac{PM - P_m}{P_n - PM} \cdot \frac{M_{ep} - Me}{(Me - M_{ee}) \cdot k} \right]^{\frac{1}{3}} = 2.336476$	$\frac{\left[ \left[ \frac{PM - P_m}{P_n - PM} \cdot \frac{M_{ep} - Me}{(Me - M_{ee}) \cdot k} \right]^{\frac{1}{3}} \cdot C \right]^2}{P_3} + C = 2.997925 \times 10^8$

To reiterate, these conclusions are based on the foregoing equations shown in brief and validates the need to conduct the experiment. The foregoing provides extremely compelling reasons to confirm with correct experimental result. Since the experiments are critically important, several important equations have been shown here again, (though it may seem superfluous) to enable comparisons at a glance, despite detailed derivations given on the website and attached papers. It is even more imperative, as all the masses of all stable particles are derived from basics in Sankhya with accuracy equal to those values measured and recorded in Physics.

Perhaps it may be appropriate to reiterate that axiomatic derivation of all masses from basics is impossible with present system of mathematics used in Science, which alone should be important enough to conduct the experiments. (mass.pdf on website).

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