

# The thermal/sensory gravity “S.O.S.” the last phase (40<sup>0</sup>–50<sup>0</sup> C) of global warming

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MOTTO: “In a bounded quantum (complex) world humans just have exceeded the critical measure (8 billions)”.

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**Abstract:** The gravitational buckling is an ice hole or black hole in the frozen quantum binary space penetrated by the light ignition, the backscattering of radiant thermal energy, where the quantum light barrier ( $c_s = 10^{10}$  m/s) breaks together with the thermal field polarisation (conventional positive and negative charges) in an internal gravitational field. The light ignition triggers off the quantum recurrent autocatalytic reactions, whose metastable phase equilibrium is controlled by gravity to hold down fixed warming thresholds levels inside/ within the solar system. In the out-order working function, a limit and critical gravity switches the thermal regime until the catalytic equilibrium is restored. The  $\pi$  – quantum automorphism of light functions as NTC thermistors or gravity protective shield neutralizing PTC thermistors ( $e$  – quantum automorphism) when their reaction rate will increase rapidly with overheating of their products. Physically, the role of NTC thermistor or thermal gravity is played by the mixture of  $C^{12}$  and  $C^{14}$  carbon isotopes of critical solar mass found in satellites (terrestrial and Galilean moons), concentrated in two gravitational metastable equilibrium centres: one warm centre,  $g_0$ , (the Earth, 273<sup>0</sup> K – temperature and another cold centre,  $g_{th} = \frac{g_0^2}{4}$  (the Jupiter, 173<sup>0</sup> K – temperature). The terrestrial, warm metastable catalytic climate is given by the warm focus ( $g_0$ ) with the seawater temperatures (15–20<sup>0</sup> C) and the equinox-solstice temperatures (25–40<sup>0</sup> C), where the solar reactive mass is at the limit of the  $C^{12}$  – carbon isotope, with the light flux  $\Phi_L = e^3 \pi^3 c_s = 6 \times 10^{12} \frac{m^2}{s^3}$  ( $c_s = 10^{10} \frac{m}{s}$ , the self-ignition velocity). The equilibrium catalyst of the dual quantum automorphism for frozen chemistry is considered to be the so-called the Lesser Bear or UMI asterism. The Jovian cold non-equilibrium critical climate is the result of the thermal/cold focus ( $g_{th} = \frac{g_0^2}{4} = 25 \frac{m}{s^2}$ ) with the equinox temperature (20–25<sup>0</sup> C) and the summer-solstice temperature (42–50<sup>0</sup> C). When the cold focus exceeds  $g_{th,lim} = e g_0$  m/s<sup>2</sup>, the last phase of global warming is produced, i.e. the thermal radiation displacement of the solar mass from the  $C^{12}$  – carbon isotope to the  $C^{14}$  – carbon isotope is achieved, along with the light flux limit:  $\Phi_{L,lim} = e^4 \pi^3 c_s = 3/2 \times 10^{13} \frac{m^2}{s^3}$ , beyond the solar reaction products results in a thermo-nuclear explosion. The Jovian critical climate is associated with thermo-gravity waves, felt as intense

*thermal circulation with worse predictions (less three days), strong winds/vortices and abnormal temperature increases (towards red spectrum). These severe warming effects will continue without interruption until their cause is understood and eliminated: the tendency of such self-contained system to exceed its limits in relation to the overpopulated human habitat and its restoration by severe effects of global warming.*

**Key Words:** *thermal gravitational waves, dual quantum isomorphism, gravity as natural thermistors, global warming, astrophysics*

## 1. INTRODUCTION

Cosmology, the study of the Universe as a whole, has developed in conjunction with Einstein's General Theory of Relativity (an extended theory including gravity), using misconceptions and/or ill-defined concepts of light, gravity and relative/regenerative mass [1] and thereby the interpretation of measurements from astrophysics is confused and worthless, especially the understanding of the warming problem vital for human existence and its perpetuation.

The bounded quantum self-contained space, which harbors life on about 1/3 of the Earth, is constantly being reshaped in the symbiosis with over 8 billion humans and their consumption of the Earth's natural resources. Humans increasingly impact the Earth's hydrology along with atmospheric processes releasing heat. The global warming is a quantum recurrent autocatalytic reaction that will not stop until the demographic equilibrium balance of the planet is restored. The former slow shear mode of the warming process in a frozen metastable equilibrium with predictable seasonal periods, for a population mostly around 7 billion, is displaced towards a heat pumping mode with (40<sup>0</sup>-50<sup>0</sup> C) red color thermal spectrum and prolonged summer solstice periods, as a result of the quantum mutations of gravity/black energy of the satellitary (or satellite) structure.

The warming associated with its severe multiple consequences, as to mention only the physical phenomena of hurricanes, floods, forest fires, periodic droughts, landslides and earthquakes, has an effect of reducing the rising rate of population. This is the reaction of the solar medium against humans, the so-called Gaia thermo-gravity mechanism of self-regulation of a human structure out of order.

## 2. THE QUANTUM NATURE OF LIGHT

The understanding of the general character of light phenomena is very far from complete. Very few theoretical and experimental results obtained largely by analogy and controversial inference, have been wrong and/or misinterpreted. The basic properties of light of fundamental nature and the essential mathematical nature of the subject were only established by actual experience with the physical (and numerical) counterparts of these equations (Einstein's theories [1], [2], [3]). Most of these theories were aimed at finding similarities between real light and some "analogous" electromagnetic system (Maxwell's electromagnetic theory [4], [5]) such as evolution of some passive object in a prescribed random (usually Gaussian) velocity field. The difference between the electromagnetic/cold light and natural quantum (non-splitting)/warm light is given by their generation source: the electromagnetic is an artificial "man-made", while the natural light is a quantum, self-igniting and self-regenerating timeless cooperative phenomenon, as order-disorder mutation processes able to create humans (biological circuits).

Physically, the starting point for a binary quantum recurrent, completely self-contained universe is nothing other than the self-ignition of light at the velocity  $c_s = 10^{10}$  m/s, triggering

off quantum autocatalytic reactions in frozen metastable equilibrium, provided that the process does not disturb its recurrence of initial states [6]. The back-self-ignition of light, both flash light and flash heat are focused on a diathermal gravity center (focal point)  $g_0 \equiv e^3/2$ , and a thermal gravity center,  $g_{th} \equiv e^4/2 \cong g_0^2/4$  controlling the light-heat alternating flux for preserving the initial quantum states in frozen equilibrium or frozen chemistry. The quantum autocatalytic reactions for frozen chemistry can be seen as Lesser Bear (UMi) and Great Bear (UMa) asterism, described in the sequel along with the characteristic isoperimetric four-phase recurrence of quantum states (or  $e$ -PTC-thermistor and  $\pi$ -NTC thermistor). The quantum isoperimetric four-phase recurrence is fundamental in cosmology for understanding the light-phase work as daily light-phase lag and monthly heat-phase lag controlled by a bifocal gravity, viewed as light curves of repulsive  $e$ -quantum and attractive  $\pi$ -quantum, with its recurrent torsion potential called gravitational buckling potential.

The torsional fluctuation of the natural wavy light is described by the Euler dual quantum recurrent automorphism ( $e, \pi$ ), bound by a kind of torsional buckle which occurs both in the delay of light and heat, and in quantum and gravitational inertia, respectively. The Sobolev isoperimetric inequality,  $4\pi A(\text{area}) \leq P^2(\text{perimeter})$  is the base of gravitational control to protect the recurrent process of initial quantum states, against the excessive thermal radiation of light, i.e. its caustic effect of overheating.

### 3. THE GRAVITATIONAL BUCKLING OF LIGHT (OF ITS BRAKING)

The braking process of light self-ignition produces backscattering of dual automorphic quantum fluctuations or natural semiconductor-like (PTC, NTC) thermistors containing thermal radiant energy in the form of light (PTC thermistors) and heat (NTC thermistors) interpreted as light curves of the hot supernovae and seven-star asterism/constellation in frozen equilibrium.

The quantum recurrent universe is a bivalent thermodynamic field of light with  $p \equiv c_s^2 = 10^5 \text{ N/m}^2$  (1 barr, absolute pressure of a light, with  $P_{\text{vacuum polarization}} = 1 \frac{\text{N}}{\text{m}^2} = 1 \text{ Pa}$ ) and  $T_a \equiv \left(\frac{c_s}{g_0}\right)^{\frac{1}{2}} = 10^{4.0} \text{ K}$  polarized by dual quantum automorphism (or light fluctuation) bonded or focused on a bifocal gravity:

- 1) The diathermal gravity  $g_0 \equiv \frac{e^3}{\pi^3} \left(1 + \int_0^e e^x dx\right) = 9.815$  (Earth gravity),  $g_0 \equiv 10^0 \text{ K}$  is the threshold thermal energy (the minimum energy of quantum autocatalytic reaction), with  $\left(\int_0^e e^x dx\right) \div e^e \equiv 14.5^0 \text{ K/C to } 15.5^0 \text{ K/C}$ , the thermal unit called quantum calorie (cal) for both (Kelvin, Celsius) scales, where a predictable, periodical heat release is occurred surrounding the diathermal gravity up until  $T_c = \pi^3 \equiv T_{c,H_2}^0 \text{ K} \equiv 30^0 \text{ C}$ , the predictable/terrestrial climate (thermal capsule).
- 2) The thermal gravity,  $g_{th,c} = \frac{e^4}{2} = e g_0 \cong \frac{g_0^2}{4}$ , beyond this critical value the gravity is radiantly and temperature can fluctuate freely in a disordered manner with extremely sharp and irregular space-time variations, with the temperatures rising up to  $T_{lim} = e^4 \equiv 55^0 \text{ C}$ ; this is the warming/Jovian climate with the pumping mode of heat release (thermal radiant calotte), or in folk terms a global warming effect acting as long as the quantum recurrence of their initial states is restored. The  $g_{th,c}$  – the beginning of

thermal radiation is limited by  $g_{th,lim} = \frac{g_0^2}{3} = 33.3 \text{ m/s}^2$ , where  $g_{th,lim} \cdot g_0 \equiv 333 \text{ m/s}$  is the thermal wave for heat propagated with sound speed  $a \equiv 333 \text{ m/s}$  (thunders). The thunders are audio effect of the thermo-gravity field, a kind of interference fringes depending on temperature or cosmic winds. The misconception of constant light velocity postulated by Einstein's Theories of Relativity (true only in the restricted case of electrodynamics [3], and false in the extended case of curved-space-time of gravity [1], [2]) is a result of the actual long-lasting and continuing warming crisis/error of a paradigmatic nature. The warming crise is understood by the true postulate of wavy light with natural quantum automorphic fluctuations in frozen metastable equilibrium of a bounded space, in conjunction with the Sobolev critical isoperimetric inequality ( $4\pi A \leq P^2$ ). The isoperimetric inequality limits the quantum fluctuations over the topological focal gravity field,  $G \in [g_0, g_0^2]$ , where the natural PTC thermistors ( $L_e e^i$  ( $i = 1 - 4$ )) are immersed in NTC thermistors ( $L_\pi \pi^i$  ( $i = 1 - 4$ )),  $L_e \subset L_\pi$ , as:

- 1)  $e + e^2 \equiv g_0 \cong \pi^2$ , the torsion-free initial quanta (opposed and complementary),
- 2)  $(\int_0^e e^x dx) < e^3 = 2g_0 < \pi_c^3 (= 3g_0)$ , the reversible quantum torsion/twist,
- 3)  $e^4 = 2eg_0 < \pi_{lim}^4 (= g_0^2)$ , the quantum torsion limit.

The fluctuations of natural light recur with their initial states being in frozen four-phase equilibrium (or the hydraulic analogy of light) if and only if the conditions 1), 2), 3) hold.

The quantum-gravity recurrence like a perpetuum mobile (herein called a topological quantum-gravity compact) is given by

$$(e\pi)^{2/3} \rightleftharpoons \frac{\pi_c^3}{e^2} = \frac{\pi g_0}{e^2} = 4.196, \text{ the quantum buckling or entanglement} \tag{1}$$

(topological quantum compact)

$$(eg_0)^{1/3} \rightleftharpoons (eg_0^2)^{1/4} \cong 4, \text{ the gravity buckling (topological gravity compact)} \tag{2}$$

holds down provided if and only if the universal quantum equilibrium  $\frac{e^3}{\pi^3} = \frac{2}{3}$  (reversible torsion), and the constant light flux,  $\Phi_L = e^3 \pi^3 c_s \text{ m/s}^2$  exist.

The Yin/Yang symbol represents the quantum equilibrium of opposed and complementary aspects of nature as visibility of fringes (light and shadows), Fig. 1 (yin-shadow, heat absorption, yang-light penetration)

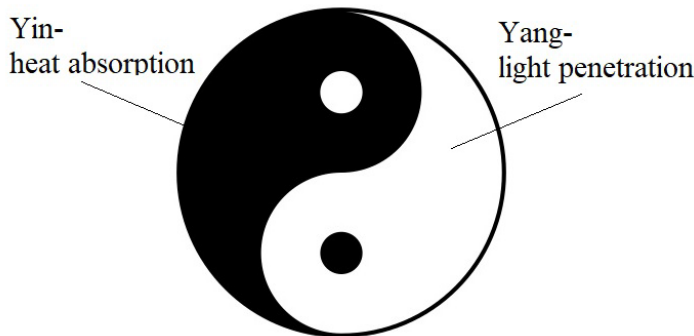


Fig. 1 The quantum buckling symbol (reversible pure torsion)

The non-splitting automorphic quanta (natural thermistors) bound by gravity to their initial states (torsion-free,  $e$ ,  $\pi$ ) in a bounded light create and maintain dual seven-quantum states in frozen metastable equilibrium of a perpetual torsion/twist process, alternately exchanging light and heat.

Mathematically, the quantum-gravity buckling lag of light (its deceleration with heat release) is a two-soliton coherent structure of the quantum completely self-contained space (including its boundaries), i.e. an Einsteinian space-time-like topological global form independent of time [6].

Physically, the quantum-gravity buckling is a torsional potential of light, mutually exchanging heat, in critical equilibrium in the bounded polarized thermal field, usually called thermodynamical field,  $T \in [0, \frac{c^2}{g_0} \equiv \frac{p_a}{g_0} = 10^4 K]$  with thermal singularity for no molecular structure (or thermal death)

$$T_a^K \equiv 0^0 K \equiv T_0^C = \frac{g_0 e^4}{2} = e g_0 \equiv g_0 \cdot g_{thc} = 272^0 C \quad (3)$$

the thermal polarization. Eq. 3 is nothing more than **the zeroth law of thermodynamics**.

Cosmologically, the postulate of wavy light with isoperimetric fluctuation is essential for the formation of constellations, the present classification by apparent magnitude and astronomical distance in light years (ly) being scarce and of little relevance for the quantum universe governed by the phase relativity of Cartesian dual structures.

#### 4. THE DEPTH OF THERMO-GRAVITY FIELD (BLACK HOLES)

Our critical world is created and sustained by the dual quantum automorphism of light, summarized as the rational critical (minimal) complex numbers of the binary quantum universe (transcendentally  $e$ ,  $\pi$  and  $e^{2/3} \cong \pi^{2/3}$ ) with their seven states of which there is one coherent configuration-structure in equilibrium.

$$z_1 = 1 + i, z_1 \bar{z}_1 = 2, z_{1/2} = \frac{1}{2} + i \frac{n}{m}, 1/4 \leq z_{1/2} \bar{z}_{1/2} \leq 1, n < m, (n, m) \in N$$

bounded by

$$\frac{1}{3} + \frac{2}{3} = 1; (e + e^2 \cong \pi^2), \text{ the early complementary phase of a state certain phase,}$$

$$\frac{1}{4} + \frac{3}{4} = 1; \left( \frac{1}{4} g_0 + \frac{3}{4} g_0 \right) = g_0 \cong \pi^2,$$

$$\left( \frac{1}{3} \right)^2 + 2 \left( \frac{2}{3} \right)^2 = 1; (\text{Eq. 1 – the coherent recurrence}), \text{ the mature equilibrium phase,}$$

$\left( \frac{1}{4} \right)^2 + 2 \left( \frac{3}{4} \right)^2 = 1.2; (\text{Eq. 2 – the coherence limit of recurrence}), \text{ the lately critical phase,}$   
 universally for the torsion quantum process associated with the coherent recurrence/regeneration of initial states and heat release.

Those even quantum states which made world, constitute what the so-called the thermo-gravity field or quantum thermodynamics, where  $c_s = \frac{k_B(\text{Boltzmann constant})}{h_P(\text{Planck constant})}$  is self-ignition light velocity.

The term depth of field refers to the temperature and gravity over which satisfactory definition or coherence is obtained when the lens like gravity is in focus for a certain temperature and gravity threshold of visibility.

The light functions as a breaker-ice for three roads of the quantum universe: the frozen road (0-120<sup>0</sup> K), the warm polarized road (120-272<sup>0</sup> K)  $\equiv (-975(\pi^4) - 54.5(e^4)^0 C)$ , and the hot road (750<sup>0</sup> K).

Now what is to do, is to identify the quantum-gravity dynamics (Eqs. 1, 2) associated with the phenomenological chemistry of photosynthesis processes induced by light. Lesser Bear (UMi) and Great Bear (UMa) asterism [7] is the frozen road of starting for the photosynthesis of molecular structure as reactive isotopes of hydrogen (<sup>1</sup>H, <sup>2</sup>H, <sup>3</sup>H - e), oxygen (O, O<sub>2</sub>, O<sub>3</sub> - e<sub>2</sub>, e<sub>3</sub>, e<sub>4</sub>) and Carbon (<sup>12</sup>C, <sup>14</sup>C, -  $\pi^2$ ,  $\pi^3$ ,  $\pi^4$ ) in crystalizing and amorphous structure ( $\log T(^0K) = 2$ ) scattering light ( $\Phi_L = e^3 \pi^3 c_s = 6 \cdot 10^{12} m^2/s^3$ ) and respectively heat ( $\Phi_H = \frac{e^2 c_s}{\pi^3 g_0}$  cal, calorific value)

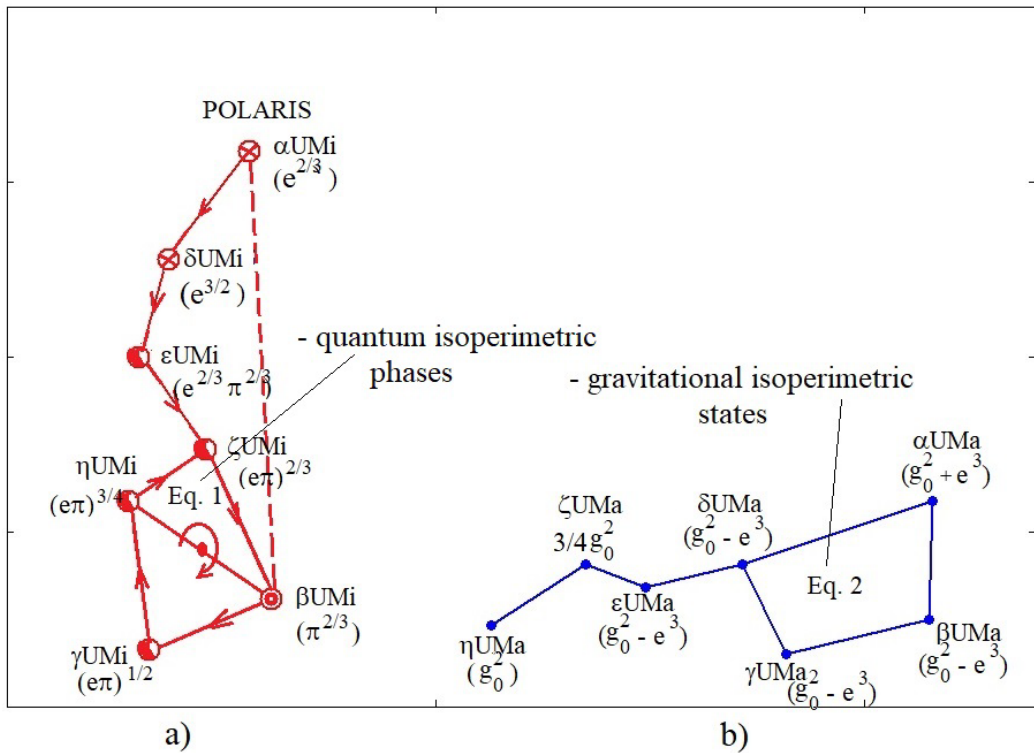


Fig. 2 The formation of thermo-gravity field: a) Lesser Bear (UMi):  $\tilde{g} \leq g_0, T_a \leq 50^0 K$ ; b) Great Bear (UMa):  $G \in [g_0, g_0^2], T_a \leq 120^0 K$

STAR	$(g_0 e^2 \pi^j)^0 K$	BRIGHTNESS $(e^3 \pi^3 \cong \frac{2}{3} g_0^3)^0 K$	STAR	$(i g_0^2 + e^j)^0 K$	Calorific value
$\alpha$ UMi (POLARIS)	19.47	I PHASE $\{ 3/4 e^3 \pi^3 = 450$	$\alpha$ UMa	120	$\Phi_H = \frac{e^2 c_s}{\pi^3 g_0}$ or BEAR'S
$\beta$ UMi	21.45		$\beta$ UMa	80	
$\gamma$ UMi	29.20		$\gamma$ UMa	85	
$\epsilon$ UMi	40.92	II PHASE $\{ 1/2 e^3 \pi^3 = 300$	$\epsilon$ UMa	80	
$\zeta$ UMi	41.78		$\zeta$ UMa	80	
$\delta$ UMi	44.82	III CRITICAL	$\delta$ UMa	75	

		PHASE $1/2 e^3 \pi^3 = 200$			POWER
$\eta$ UMi	49.95	RE-IGNITION		$\eta$ UMa	

The frozen road contains the "black hole" of thermal death.

**Solar regenerative system** from Milky Way spiral galaxy found at (0.4 – 40) a.u. ( $1 \text{ a.u.} = e^e c_s = 1.5 \times 10^{11} \text{ m}$ ) on Earth-planet is a fully catalytic system in frozen metastable equilibrium [5].

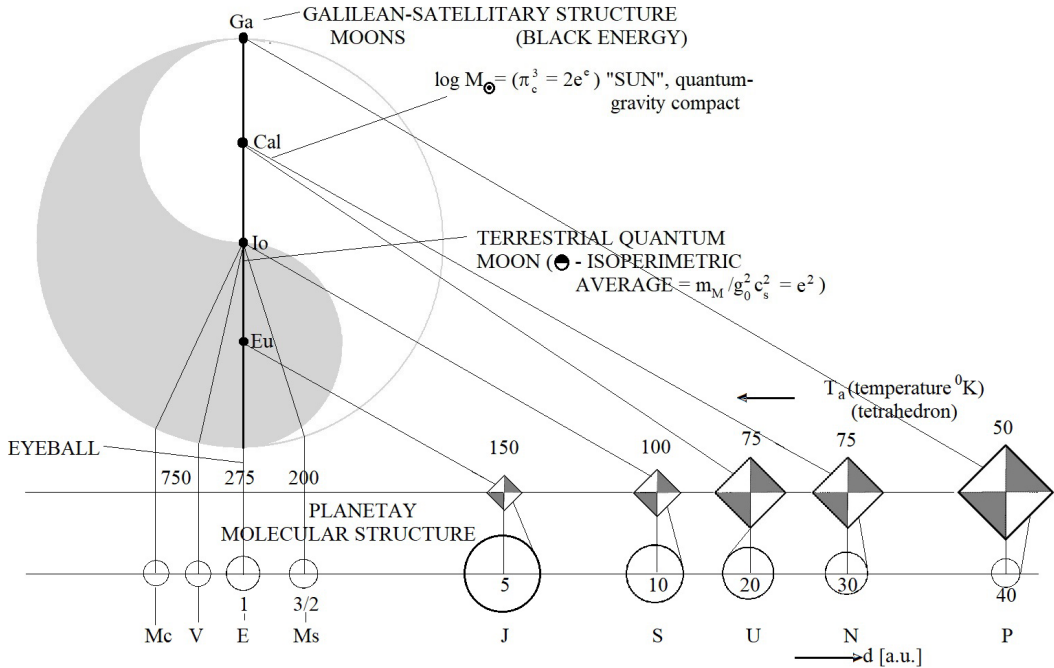


Fig. 3 The thermodynamical gravitational macrocosmos

It contains the planetary and satellitary movements (8 planets and 5 satellites,  $m_s \approx 10^{22} \text{ kg}$ ) [6] of the regenerative macrocosmos (Fig. 3) and the terrestrial molecular structure associated with the thermodynamic field of the microcosmos in metastable equilibrium (Fig. 4). The thermal instability produces vortical cosmic winds illustrated in Fig. 6 by the Hill spherical vortex type which can persist up to three months.

The perturbation thermal vortex is zero outside the circle (1) because the basic flow is potential there.

Since the first band of instability is oscillatory, the nodal structure varies during the oscillation period.

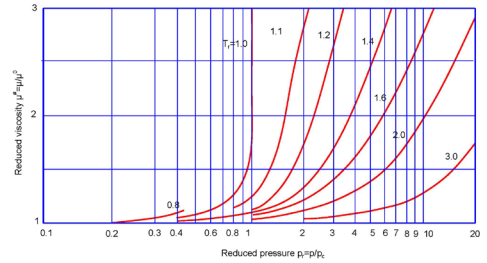
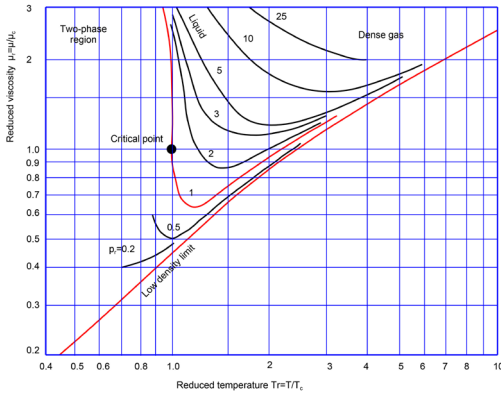
Two oscillation phases are shown in Fig. 6. The oscillation cycle consists mainly of an appearance/disappearance of two perturbed periodic vortex cores located at the center of each vortex of the pair (1).

This instability is characterized by a standing oscillatory out-of-phase bulging of each vortex core. The second mode is bulging instability masked by a more unstable non-oscillatory instability (2).

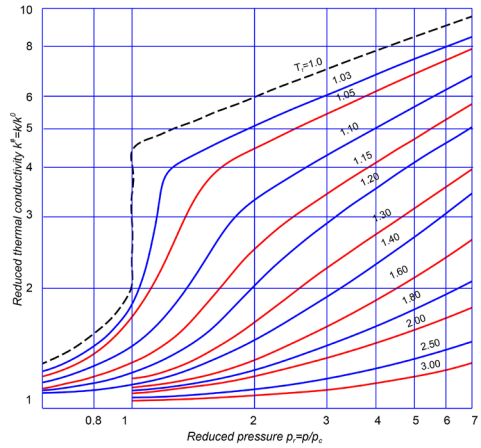
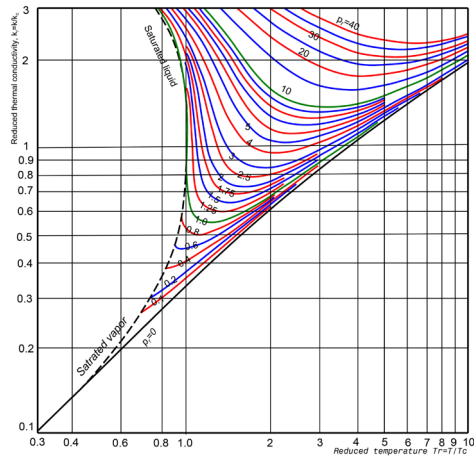
A black hole of the solar system is also the unbalanced planet Earth caused by its human regeneration in out of order, the so-called global warming and its reaction for the restauration of the universal quantum equilibrium.

The quantum phase mechanics of light is based on the Euler-like theorem: A coherent motion is a Euler cycle if and only if each of the four rotating bodies outside has three sensory imaginary phases inside.

The black holes of solar system are called the Halley's comet periodically (76 ys) restoring the mass flux and the century re-ignition of light at the Mercury-Pluto meeting where their masses exceed the solar critical mass, for the restoring light flux.



a)



b)

Fig. 4 The chemical thermo-molecular microcosmos. The thermal conductivity in fluid mixtures with critical phenomena of retrograde condensation: a) reduced viscosity  $\mu_r = \mu/\mu_c$  as functions of temperature and pressure; b) reduced thermal conductivity  $k_r = k/k_c$  as functions of temperature and pressure.

**Supernovas like hot road** is the closeness of oxygen-hydrogen and Mercury-Pluto and planets ( $750^0$  K), in non-catalytic equilibrium reaction which accumulate enough quantum amount to exceed the critical mass ( $\pi^3$ ) and they would no longer be able to support the bulk to its total mass and would periodically collapse in two distinct planets (Fig. 5) [8].



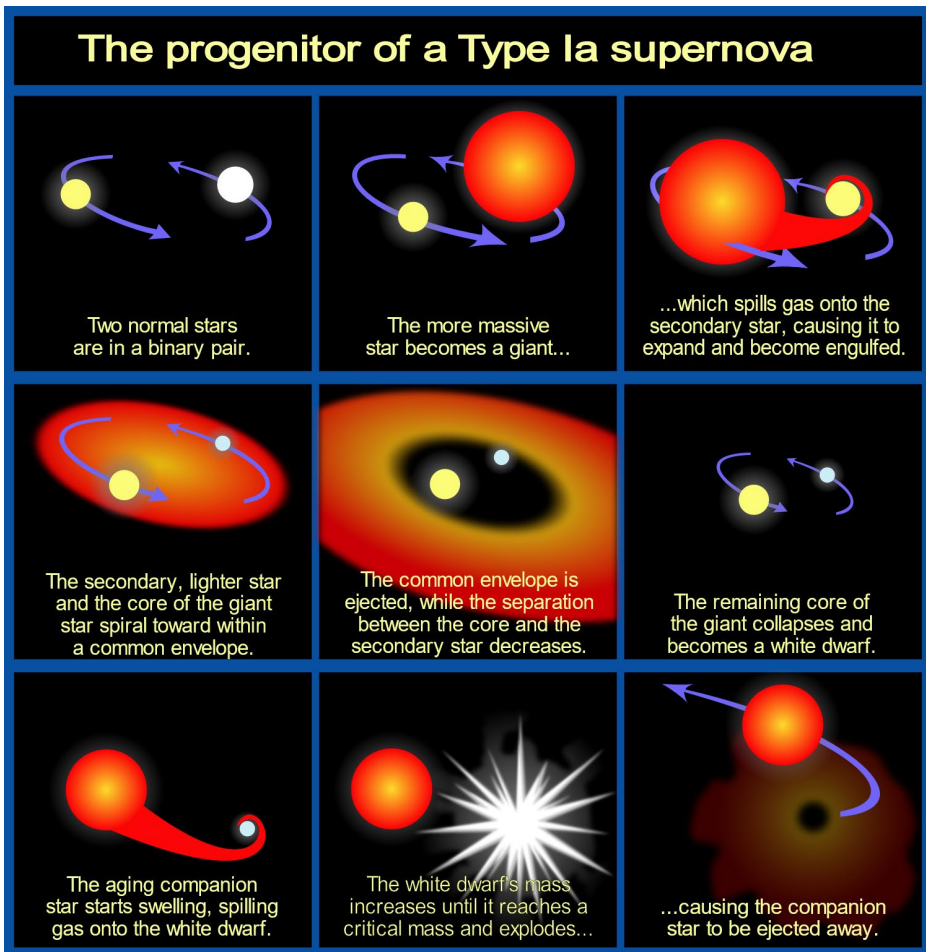


Fig. 5 The recurrence of binary quantum universe [8]

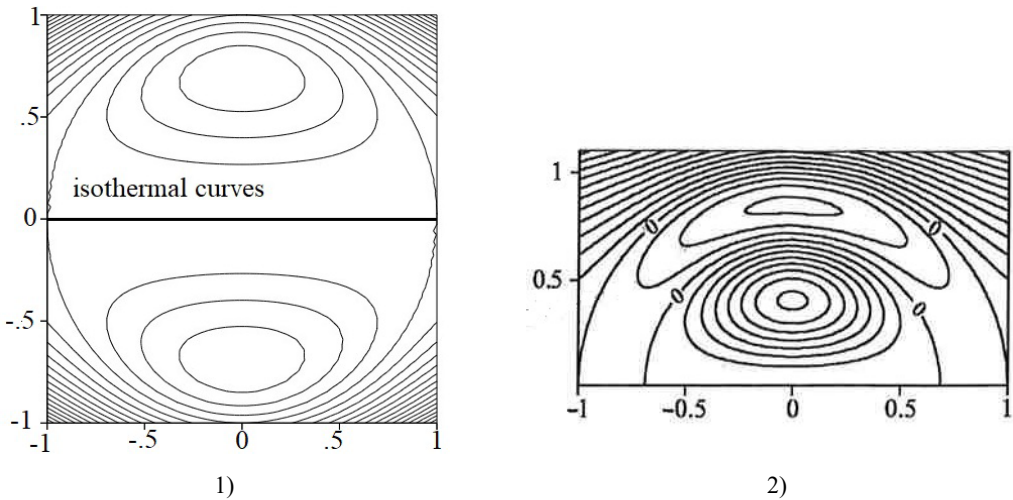


Fig. 6 The isoperimetric thermal radiation like Hill spherical vortex: 1) behavior of the vortex line and streamline [16]; 2) The two-cell structure of the stream surfaces in the Hill vortex [17]

## 5. CONCLUSIONS

The solar automorphic or holomorphic (complex, smooth and regenerative) universe comes back  $10^4$  years ago with amazing astral recurrences. However, Feynman's alternative way [9] of expressing quantum (non-splitting) mechanics by eschewing the description of nature in which quantum states change continuously in time via calculated probabilities, assigning to a quantum phase theory, was abandoning as being a naively realistic description of the world. But, Einstein's misconception of light and all other approaches based on Einstein's theory [11], [12], [13], [14] are nothing but a rational metaphysics far removed from the phenomenological physics of the real world. Without Euler's quantum phase (complex number) theory, there would be nothing of the sensory thermal world. This is the real, warm multi-colored world with its possible coherent histories, not the logical mathematics of white and black fringes, a too "dry landscape".

However, this critical wonderful world is cautioned against an in out order work, when it can become a "decoherent" heater until its quantum phase equilibrium is restored. A picture of Euler of us all as bees of the Master Euler is on my all [15].

This is the quantum (non-splitting) phase theory of wavy light with isoperimetric fluctuation that functions as periodic pyramidal binary constructions (two-soliton coherent structure followed by their collapse (black holes) and recurrence of initial states (a new beginning).

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