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Considerations over the problem of the knowledge of the Universe

day/dialogue sixth

How the stars come to exist …

The next day was busy for us. I was under the necessity to communicate clearly and with this in mind I quickly started; since my purpose was nothing else than to present how the stars come to exist and why they dissipate M_{Heat}, the mass-energy produced internally as a final stage of internal transformations-degradations which the physical mass could not retain inside the atoms.
I also wanted to present how the m-e M_{Heat} coming out from the atoms was free but being compressed in the interstices between their outer shells was slowly coming out of the physical mass, and the various considerations needed in order to unify the subject under a convincing theoretic explanation.

I : the dr' that had been introduced as "orbital striction" affecting a physical mass in near circular orbit, can be interpreted as half of the sum per second of vibrations of elastic character whose amplitude being a geometric value run along the radial line , is associated to the gravitational transformation-degradation (unbundling) from M_{RM} into M_{ESCM} , which depends from the generation of the Starter Force in orbit opposed by the elastic characters of the physical mass and of the ESF.
Note: we have that to the striction dr' m/sec, corresponds a transformation-degradation of the amount, expressed in energy units :

$$F_D=F_{STARTER}\ 2dr' \text{ [kJ/sec]})$$

representing proof that an equivalent internal transformation (unbundling) of M_{RM} into M_{ESCM} is taking place, and when is intended as a geometric phenomenon if multiplied by 2π it gives with extreme precision the value of the geometric precession of the planet Mercury ($2\pi dr'/sec = v'$ m/sec), which when multiplied for the amount of seconds over a time interval of 100 years gives a value corresponding with the value of precession of the planet measured by the Astronomers between the two successive collimations which are observed at

time intervals of 100 years .

The existence of a transformation as such (continuous in time) tells me that the M_{ESCM} stored in Mercury during the course of its presumed existence is considerable, to the point that in monetary terms, every kg of physical mass of the planet Mercury has undergone internal transformation of M_{RM} into M_{ESCM} which if transformed in M_{Heat} is equivalent in value of energy in kJ to ± six kg of gold at current market prices (provided we could be able to extract all that accumulated M_{ESCM} and transform it into M_{Heat} in a thermonuclear power station).

On Earth this accumulation happens but in a much lower extent (circa $1/27^{th}$ of the value of transformation per unit of mass that we have in Mercury) and as said in both cases there is no indication that the m-e M_{ESCM} is subjected to direct transformation into Heat, a fact that made me postulate that all of it remains and is accumulated inside the physical mass of the atoms.

I must add that dissipation coming out from some of the planets of the solar system is sure sign that an unstoppable gravitational internal transformation is at work but almost certainly all of it is attributable to the own gravity of these planets and not to the precession phenomenon.

I presented my calculations in Ruggeri14 but here I do not judge necessary to do so, certainly those who read this presentation are not required to believe , therefore everyone is free to deepen its knowledge as he can, since essentially my purpose is to create an interest, and if presently I affirm something that is impossible to prove directly, those who read my papers will be able to realize that I presented indirect proofs, as for example the results obtained for these vibrations permit the calculation of consequent transformations-degradations which they produce in the physical mass affected (when I consider their presence in orbit or when I consider them inside a gravitational physical mass).

These results do not stand on their own but give satisfying values when applied to calculations regarding the precessions (geometric and temporal) and the M_{Heat} coming out of the Sun and generally from the stars and from large gravitational masses (see Ruggeri14)

I honestly can say from now on, that although my theory is based only on speculations, the results which I present are worth to be considered.

As previously mentioned, a physical mass at rest on top of the surface of another much larger one is principally subjected to the static Newtonian force and to the contact reaction and to our senses does not results that there is or there may be other phenomena to describe except a Static Force over a perfectly rigid object, but from interpretation of the precession (which was the phenomenon in which I could not bring myself to consider perfectly rigid the whole mass of the planet Mercury), it was possible for me to theorize the presence of an unstoppable transformation-degradation, of relativistic nature, giving a possible value of striction which since the case is orbital, is v_0 times greater than the striction in static conditions .

In essence there was a reversal of process whose intuition was facilitated by the simplicity of the formulations but I could not avoid being in doubt for very long time.

The value dr of striction is the sum of the true, but of unknown frequency, smaller values of strictions per second and in the above named case, considering a mass at rest on the virtual surface of the same radius of the orbit centered around another physical mass much larger (a mass M_{LGM}), the striction dr results tied to the other value of striction dr' in orbit in the following manner:

$$dr' = v_0 dr \quad \frac{m}{sec}$$

and the true value of dr/sec would be (see dialogue 5 Ruggeri24) :

$$\frac{dr}{sec} \cong \frac{v_0^2}{2c^2} \quad \frac{m}{sec}$$

Note: the above formulation is not returning a contradiction in terms of the relativistic time, due to the fact that dr/sec is a physical model (an analogy) of the time phenomenon and as such represented by a formula giving the same results, but only for $v_0 << c$, and for the universal time (or local absolute time, according to the case) of one second is:

$$\frac{dt}{sec} = \frac{dc}{c} \cong \frac{v_0^2}{2c^2}$$

Note: whereas for the time phenomenon dt/sec is retardation, in this analogy the formula represents a geometric positive value.

When I applied the formula of transformation-degradation giving the unbundling ($F_D = F_{STARTER}$ 2dr/sec) layer by layer, from its surface to the center, to the whole gravitational mass I obtained for the Sun a total value of transformation of M_{RM} into M_{ESCM} in energy equivalents (kJ/sec or kWatt) that transformed into the equivalent m-e (since I express in Ton the status of existence of the m-e M_{Heat} inside the mass of the Sun) resulted in a value of transformation of (see Ruggeri8):

$$\Delta M_{Heat}/sec = 6.52 \text{ e } 6 \text{ Ton/sec}$$

Generally we have that for physical masses, having substantial internal compression, the mass-energy M_{ESCM} produced by gravity is immediately transformed into m-e M_{Heat} which comes out as a value of dissipation, as presently, for our Sun, a value of dissipation of ~ 6.0 e 6 Ton/sec (very close to mine) has been measured and more precise measurements are planned.
We must accept the fact that the value obtained by me through formulation is reasonably approximated, and there is no reason to doubt that more accurate

measurements will confirm it.

We can consider from now on that this continuous quantity of m-e M_{Heat}/sec coming out of the Sun, although representing, for it, the loss of a small value, during a period of many billion years could amount to output of a noticeable percentage of its mass establishing, internally, prevalence of atomic elements responsible for conditions of instability followed by gravitational collapse of its interior which will suddenly release enormous amounts of M_{Heat} causing gigantic explosion.

After all in the scientific milieu the conclusion that the Sun eventually would explode was reached only through deductions that were made observing the behavior of similar celestial bodies.

Presently there is consensus that the Sun, eventually through explosion will become a Stella Nova and afterwards will collapse into a dwarf type of star.

Note: this result does not have the purpose to put aside the efforts made by the Scientists in order to justify with quantum theories the various reactions happening inside the solar mass and generally inside any star, since as must be intended, my formulation is general and does not take into account the particular internal atomic composition of a star, therefore is applicable to any star, whose interiors are in conditions similar to our sun, but my calculations do not permit to calculate explosions.

The cycle of degradation of the m-e at this point is clear to me and I have no doubts.

The absorption of ESF produces Real Mass (m-e M_{RM} or neutron mass) inside the physical mass M (or Heavy Mass, M_{HM}) , from m-e M_{RM} we have internal transformation-degradation of gravitational origin into m-e M_{ESCE} measured for $v<<c$ through equivalent value of Kinetic Energy, related to true movement of the physical mass or if movement is impeded related to elastic cyclical vibration of unstoppable nature, and this m-e M_{ESCE} , then during these phenomena of internal vibration, developed by a mass in orbit around a central m-e M_{LGM} but in greater quantity inside a (physical gravitational mass of large dimensions) M_{LGM}, is transformed-degraded into m-e M_{ESCM} which in this second case, cannot be retained by the atoms of the M_{LGM} and comes out of them as m-e M_{Heat} , and in turn when the m-e M_{Heat} reaches the external surface of the M_{LGM} is absorbed by the ESF as dissipation, which is the phenomenon at the end of the cycle of degradation under observation by us.

It must be added that the above striction affecting a gravitational mass and due to its own gravity, as introduced here, corresponds to vibrations present inside it and since the atoms of the said gravitational mass are under extreme compressions which affects their surface , made of the thin but extremely resistant fabric of the ESF, their capacity to contain the m-e M_{ESCM} produced results reduced and the m-e M_{ESLA} produced at the end of half cycle of vibration is transformed directly into m-e M_{Heat} , which escapes the atomic surface and though is free out of the atoms remains inside the physical mass, trapped between the atomic interstices etc…

Note: dissipation hitting a physical mass on its way gives rise to another series of phenomena of transformation-degradation (see Ruggeri14) mainly finding justification in Quantum Mechanics.

The formulations developed give a clear reason to the fact that for stars larger than our Sun the phenomenon of production of M_{Heat} is amplified, whereas for masses smaller than the Sun, like in the case of the large planets, we can clearly observe, as is the case for the surface of Jupiter, presence of continuous huge storms fostered by gravitational internal transformation showing (as suggested) that m-e M_{Heat} of internal origin is coming out in dissipation.

Earth, notwithstanding the prohibitive conditions of pressure in its interior is undergoing an internal gravitational transformation-degradation of m-e M_{RM} into M_{Heat} of about 220 g /sec that we assume essential in maintaining hot its central core and is entirely dissipated without side effects, given the relatively great surface of Earth over which dissipation takes place.

Note: on Earth this internal presence of m-e M_{Heat} is easily detected when measuring the increasing values of temperature encountered at increasing depths, and the fact that the m-e m-e M_{Heat} must be continuously replaced comes out from the consideration that without it the earth core should have cooled long time ago.

We must add that on Earth the other gravitational transformation in orbit per unit of physical mass of m-e M_{RM} into m-e M_{ESCM} , (the “unbundling” which is the one that does not comes out of the physical mass of the planets in orbit, and to which are associated the phenomena of geometric and temporal precession) is also a fraction of the one happening per unit of mass in Mercury.

Whilst the M_{ESCM} produced through the transformations-degradations taking place along the orbital paths could be responsible of limited presence of heavier atoms in the physical mass in orbit, the transformation-degradation due to the own gravity of a physical mass, is able to maintain hot its center.

Therefore the largest stars result to be the most active and during their life can dissipate enormous quantities of m-e per second, with the result that the lifespan of a star is shorter with the increase of its mass....

In conclusion the ESF absorbs from all the physical masses present in the universe, enough m-e in dissipation permitting the maintenance of a condition of balance with the amounts that the gravitational “neutronic” m-e M_0 contained inside the physical masses detracted from it.

We can loosely compare our physical Universe to a perennial forest in which along the ages there is a balance of biomass.

When the physical masses M are small and dispersed, the internal transformations-degradations due to gravity that end up into dissipation of M_{Heat} can be meaningless but when the action of mutual gravitational Starter forces coalesce these masses into a physical mass M_{LGM}, the internal transformations-degradations of gravitational origin causing dissipation become the main phenomenon.

In the initial conditions, when the gravitational masses are present as clouds made up of a fine dust in which the single neutrons are under formation, M_{Heat} is

not produced in large scale as it happens in the stars (therefore we only have black clouds made up of tiny clusters of neutron m-e M_{RM} that gradually become able to irradiate whilst these masses coalesce into clouds made up atoms of hydrogen etc…).

For masses not very large in size as in the case of the planets the amount of m-e absorbed through gravity far outstrips the amount of m-e M_{Heat} equivalent to Heat coming out as dissipation.

The phenomenon is inverted when gravity concentrates these clouds of gas (mainly made up of hydrogen) into stars, since the output of M_{Heat} (depending from the size and density) can be much greater than the value of absorption as m-e M_{RM} , in the case of the Sun, as already seen , there is an input of 18630 Ton/sec of ESF duly transformed into m-e M_{RM} , but at the same time 6.52 e 6 Ton/sec of m-e M_{RM} are transformed into M_{Heat} and dissipated.

P. : entry of ESF on the physical gravitational Mass M and the successive coexistent internal transformations, to the point in which the ESF reabsorbs as dissipation the m-e M_{Heat} internally released, should neither increase nor decrease the average ratio between the masses contained inside a large enough volume in the Universe and the amount of ESF also contained in that volume should remain constant, producing therefore an instant value of density obtained as a ratio between physical masses present in a particular region of the Space and the volume that contains them that remains more or less steady.

This cycle could never have had a beginning and apparently could have no end, since subtraction of m-e ESF from the space affects a substance present as an infinite value and return of m-e into it in the status of Speeding Particles SP or dissipation-dispersion, leaves us unable to assess what is the effect of this phenomenon since the m-e in that status is dispersed inside an ESF whose presence is unlimited.

In conclusion, since we are dealing with infinite quantities , we will never be able to exhaust the ESF and the steady status of the SP introduced in the ESF through dissipation is producing a change in this Universal machine that is the physical Universe which we are unable to evaluate.

But if there was, as many believe nowadays, a moment of origin …. I mean if there was a moment of creation, certainly your theory does not foresee a Big-Bang and therefore denies the initial moment of creation.

All the same, let us assume that the ESF was created, though results difficult to conceive the " nothing " and to conceive that instantaneously there was an infinite presence of ESF inside an infinite Euclidean space which also previously did not exist, how could happen that from an Euclidean space full of ESF but devoid of physical gravitational mass, descended presence of an Universe like the one existing now ?

I: I see that your problem is to individuate the “prime cause " and here we could argue without hope to find a solution.

Nevertheless I am surprised when I am confronted by the determined confidence of those sustaining the theory of the Big-Bang , that is riddled of

weak points , starting from the centrism that with the acceptance of that theory, to my judgment, is almost impossible to avoid.

Personally I do not have an answer, what I only can suggest is that if there was a creative intervention inside an universe made of an ESF existing undisturbed, in the very moment that we conceive as creation, there could have been perturbation, a chaos in the ESF caused from opportune introduction of m-e of supernatural provenience which when the phenomenon subsided left behind a primordial form of physical gravitational mass M_{RM} present as an ultrafine dust made up of ultrafine clusters of particles of m-e M_{RM} , from which started the cycle of degradation and the maturation of the universe into what it is at present.

At first there could only have been clouds of particles joining to form neutrons and gradually, but in a very long time, the present reality took shape.

P.: a sort of Chaos and Harmony, You made at first a description almost consistent with the one of the Bible and now we have the Greek mythology!

I: this is an hypothesis based on the fact that, since transformation-degradation is an unstoppable phenomenon related to substance, transformation-degradation must have started the instant movement was created (provided there has been an instant of creation the way we conceive it).

In the other hand is not the unstoppable process of transformation-degradation part of a continuous flow of phenomena related to creation?

I just consider that not only the ancient Greeks but all the ancients, could not arrive to the conclusions to which I arrived now, (since the times were not conductive to the formulations presented) nevertheless they went through enormous efforts whilst speculating over these problems and I can tell you that some of them made incredible suggestions, like Thales who said that everything is made of water.

This fact is, certainly amazing, if one thinks that water has the average density of the ESF as suggested in this theory…., although he for sure had other reasons to make that assumption (since his water was in opposition to other theories based on more than one element) .

We cannot deny that the Greek thinking is at the root of our present knowledge ….

As far the Big-Bang is concerned, why we must insist in reading in the book of the Nature phenomena inducing doubt and pretend that those who listen to us must believe?

Anyone who is well prepared and has a true interest can reach the point where he can “see “directly and in consequence the best thing for him is to believe what he can manage to see.

I am in doubt, but certainly, I do not accept that there was a Big-Bang and one of the main reasons, is that we are faced continuously with variations and additions to this theory, intended to support its weak points, the other reason is that it represents a centrist theory which puts again the Earth or some other place at the center of the universe, representing a surreptitious return to the

medieval representations that were discarded during the ages of reason.

In the other hand Big-Bangs of more modest nature are present in the Universe that we perceive and by extension in all the Universe and no one can exclude that we find ourselves in presence of catastrophic events, some of which could defy the supposed total power of transformation of our presumed Big-Bang, I intend to say that there are explosions of Novae and Supernovae , which on occasion have shown to be of enormous total Force and as we will see , when the advanced graphic giving a General Representation of the Universe based on Lorentz's transformations, (the DELINEATIO MIRABILIS) is taken into account (see Ruggeri7) after the immediate signals (those that arrive at very high frequencies of the light) are exhausted , we still have that these explosions have the potential to carry on for long time, of the order of hundreds of thousands of years or more to send signals to us at low and extra low frequencies (as perturbations of the "steady" background radiation coming to us from all the directions, see Ruggeri18 pages 13-14).

P: You say that in the infinite Universe, even now, catastrophic events like any Big-Bang that we can conceive, could have happened without us being aware of it since we are far enough in time and in space to receive appreciable signals?

I: Yes, this what I mean, what else could be expected from an infinite Universe?

This was again a moment of departure and I was suddenly aware that P wanted, in a sense, " digest some concepts new to him ", the argument of our future conversation was not yet determined as it had been previously, when we dealt with the Sun and the Stars, only of one thing I could be sure, " next time I was going to face many questions ...."