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Some astronomical data based on the formulations pertaining to the Universal Dynamic Science (UDS) and concerning internal transformations-degradations of gravitational origin in physical masses large enough in size.

One of these transformations is the one which generated by gravity in a Large Gravitational Mass (M_{LGM}) produces release of mass-energy as M_{Heat} inside it , this M_{Heat} coming out of the atomic mass remains compressed between the atoms and by natural Law (first Law of thermodynamics) tends to move towards the external surface of the M_{LGM} and when reaches it is dissipated.

At the surface of the physical mass we have that the compressed M_{Heat} is subjected to reduction of its density through a factor c whilst is absorbed by the ESF at c speed, the concatenations of transformations and events described are inducing a controlled release of M_{Heat} inside the physical mass and dissipation of mass-energy out of it which can be described through mathematical formulations(see [Ruggeri8](#)).

Two are the main types of transformations generated by gravity in a large physical mass in orbit around a much larger one (the M_{LGM}), the first is the same as the one considered above and depending from the own gravity of the physical mass in question and the second is due to the striction (to which is associated the precession) developed by the said mass in orbit inside the gravitational field of the M_{LGM} , and induced in the mass concerned by the presence of the gravitational field of the M_{LGM} in the center.

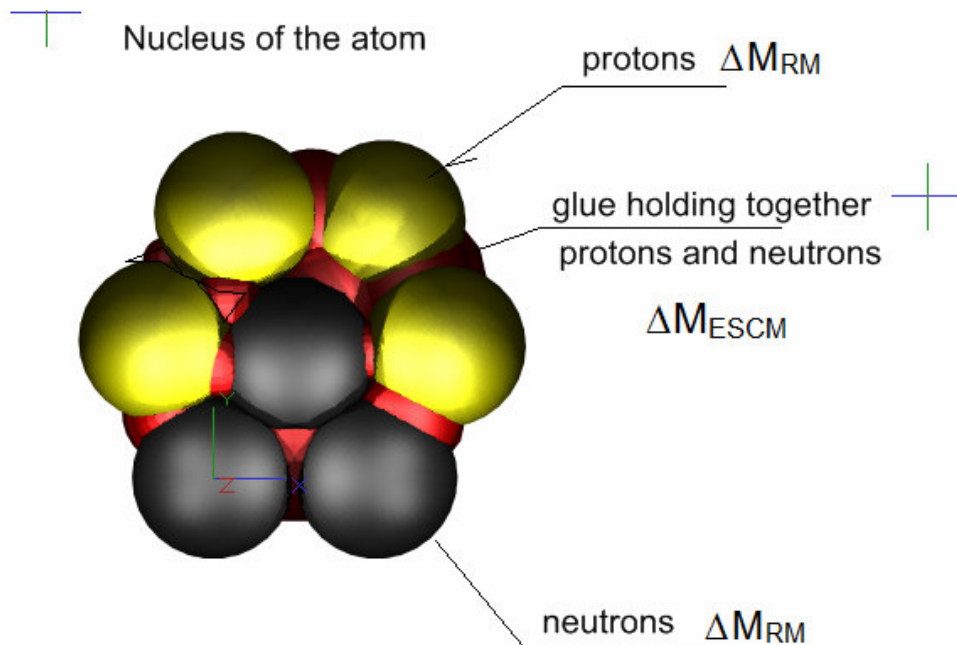
These two transformations were deduced in base of relations of Classic Mechanics, based on Newton's ULG but require the adoption of the Law of equivalence of energy present in the physical object mass observed, to mass-energy present inside it.

This is expressed mainly through the observation that the Dominant Force acting on a mass and released through gravitation corresponds to internal transformation of mass-energy whose equivalence to the Dominant Force (instant power of transformation) is expressed through the Law of equivalence as formulated by Einstein.

Through ceaseless enquiry directed to the understanding of the phenomena related to the above transformations I deduced the conclusion that all the transformations internal to the physical mass caused by the own gravity of it,

either releases M_{Heat} internally to it which being trapped between the outer surfaces of the atoms proceeds slowly to the external surface of the physical mass and when (in continuous basis) reaches it moves away from it as dissipation or is cause of internal transformation (called by me "unbundling" also of gravitational origin) at the base of which is the striction intended to be justified by an internal vibration of the physical mass in orbit (to which follows the consequent geometric effect, also in the physical mass in orbit, measured by the precession).

The "unbundling" is the effect of transformation-degradation producing change of status of the neutronic mass-energy M_{RM} into the mass-energy, called by me M_{ESCM} , constituting the glue which in the atomic nuclei is holding together the neutronic mass-energy, (this transformation-degradation into M_{ESCM} , still is mass-energy similar to the neutronic one, but has undergone degradation, M_{ESCM} retains the character gravitational and inertial of the neutronic mass but cannot be transformed into inertial mass M_{ESCE} and is only a step away from the status of M_{Heat} which reaches through consecutive transformation-degradation).



Note: M_0 represents the gravitational mass of the atoms deprived of movement (or "at rest") and is made up of:

$$M_0 = \Delta M_{RM} + \Delta M_{ESCM}$$

Note: for "neutronic mass" is intended the mass ΔM_{RM} made up by the sum of the masses of the neutrons and the protons

Figure 1

Note: I was able to demonstrate why this mass-energy does not come out as M_{Heat} and dissipation, adducing the simple reason that in cases where dissipation

should have been present, indeed was not, and even where M_{Heat} and dissipation was present, there was no manner to attribute it to presence of the transformation-degradation causing striction inside the physical mass.

Indeed the transformations-degradations caused by the own gravity of a physical mass and producing internal passage of status into inertial mass and finally into heat and dissipation, fits well with the formulations developed in base of the new Science of UDS and give an accurate value for the Sun and tantalizing results for Jupiter, the large planets and very interesting conclusions came out also in regard of smaller planetary masses up to the size of moons including our one.

In the publication made in this GSJ ([Ruggeri8](#)) where for $M(R)$ is intended to be the mass of the Sun, I obtained a Dominant Force represented by an output of M_{Heat} at the surface of the Sun, which expressed in mass-energy is:

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

This is a result closely fitting the most recent measurements of dissipation of the mass-energy from our Sun.

Note: I have presented the same formulation in [Ruggeri11](#) pages 2 and 3, in a reviewed form.

As the formulation of k_{el} in [Ruggeri8](#) is strictly tied up to the ULG of Newton and to the Law of equivalence, since in the way it has been presented there, we can see that depends from k , ρ , R , and c^2 (the ratio of equivalence Total Force/mass-energy is expressed as $F_T/\Delta M = c^2$ and in [Ruggeri11](#) has been presented in a different but equivalent form) there is no hindrance in affirming that the formulation is an advanced interpretation of the ULG which extended through the adoption of the principle of equivalence and the hypothesis of the existence of the Ether/ESF gives the dissipation of M_{Heat} afflicting physical gravitational masses.

The strict relation to the universality of the ULG and to the universality of the Law of equivalence renders universal also the formulation obtained combining the two Laws and nothing can stop us (like in the case of the ULG) to apply the formulation to any large enough gravitational mass as nobody can stop us from affirming that as from the simple application of the ULG was derived the discipline called Classic Mechanics now that we have extended the formulations through incorporation of the Law of equivalence, we rightfully can claim that the new theory is at the base the UDS as a discipline which represents an extension of the old CM which as consequence results contained in it.

Below I present a table listing the Sun and the principal planets, (the terrestrial planets and the gaseous giants) reporting the values of mass-energy equivalent received by them as dissipation coming from the Sun and dissipation over the spherical surfaces of their physical masses, caused by their own internal gravitational transformations.

In column 1:

Is reported the total solar dissipation of mass-energy received as mass equivalent, in Ton/sec by the planets over their cross sectional area.

In column 2, for:

R average radius of the object under observation, in m

G universal constant

k = 4πG constant of absorption in kJ/(Ton sec)

M(R) mass of the object under observation in Ton

$$a(R) = \frac{kM(R)}{4\pi R^2} \quad \frac{\text{kJ}}{\text{m}^2 \text{sec}}$$

Flow of ESF through the spherical surface of radius R in the UDS, but also value of acceleration due to gravity at the surface of the physical mass under observation.

$$v(R)_0^2 = a(R)R \quad \frac{\text{kJ}}{\text{m}^3}$$

Value of depression at R distance from the center of the gravitational mass induced in the Ether/ESF by the gravitational absorption of ESF, but also square of the value of the circular orbital velocity of a physical mass at R distance from the center of the gravitational mass.

$$k_{el} = \frac{1}{2} a(R) \frac{v(R)_0^2}{c^2} \quad \frac{\text{kJ}}{\text{Ton sec}}$$

Proportionality factor of transformation per unit of time of physical gravitational mass M(R) in Ton into units of Energy per unit of time in kJ/(Ton sec) or Watt/Ton.

Note: all the above data and those below were calculated through the theory developed in the UDS.

In column 3:

$$F_D = k_{el} M(R) \frac{\text{kJ}}{\text{sec}} \text{ or } \text{kW}$$

Dominant Force or instant power of transformation

In column 4:

$$\Delta M / \text{sec} = \frac{F_D}{c^2} \frac{\text{Ton}}{\text{sec}}$$

Power of transformation in mass equivalent, internal to the physical mass in orbit, for the transformation of gravitational origin generating F_D .

Table 1) reporting the values of energy and of mass-energy equivalent received as dissipation coming from the Sun and dissipation caused by internal transformation

Table 1)

--	1	2	3	4
Sun and Planets of Solar system	Total solar dissipation of mass-energy received by the planets over their cross sectional area in Ton/sec	k_{el} kJ Tonsec	Internal production of $\Delta M_{Heat} / \text{sec}$ and dissipation from outer surface of the whole mass in units of energy kJ/sec	Dissipation from outer surface of the whole physical mass, as mass-energy equivalent in units of mass per second
Sun		0.0002935	5.868 e 23	6,520,000 Ton sec
Mercury	0.002803	1.787 e -10	5.72 e 10	0.635 g/sec
Venus	0.005338	2.492 e -9	1.221 e 13	135 g/sec
Earth	0.002944	3.41 e -9	2.039 e 13	226 g/sec
Mars	0.0003657	2.57 e -10	1.65 e 11	1.83 g/sec
Jupiter	0.0137	2.453 e -7	4.66 e 17	5,18 Ton/sec
Saturn	0.0029	3.64 e -8	2.07 e 16	231 kg/sec
Uranus	0.0001114	1.38 e -8	1.20 e 15	13.4 kg/sec

Neptune	0.000040	2.36 e -8	2.43 e 15	27.0 kg/sec
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As mentioned, the value of dissipation for the Sun corresponds closely with the one measured and assuming that the formulation is correct we have that though the various planets dissipate minuscule quantities of mass-energy when compared with the Sun; we must assume that there is close correspondence between the values of dissipation calculated and the values observed.

Jupiter in this case needs a special mention, since it is supposed to spew out 5.18 Ton/sec of mass-energy in dissipation and whilst this happens and as we can observe, its atmosphere, made of gaseous dense mix is subjected to enormous storms which never show exhaustion.

The only conclusion which can be inferred from the presence of these storms is that inside it the temperature of its core is very high (probably a few millions of degrees K and the $\Delta M_{\text{Heat}}/\text{sec}$ released inside it reaches its surface where is cause of the storms and from there is dissipated.

Jupiter probably is a planet which started existence as a very hot object but now has reached an uniform equilibrium in which the internal power of the gravitational transformation replenishes the loss by dissipation, therefore is an object which can be considered stellar whose dissipation is still on a range that does not produces light (is a proto-star).

Note: this is in touch with the observation that objects gradually more massive than Jupiter are gradually showing larger values of dissipation output and gradually show displacement of their radiations within the specter of the light frequencies, becoming brown, red and yellow in color when they reach the physical mass value of our Sun.

From the above table we can also observe that Saturn Uranus and Neptune (all of them also gas giants like Jupiter) are subjected to internal transformations of the same kind, but in lesser amounts which nevertheless correspond to a capacity to maintain hot their cores and show turbulence at their surfaces, which, as observed, are gaseous.

For the terrestrial planets (Mercury, Venus, Earth and Mars) as can be seen from the above table the input of mass-energy coming from the Sun is far greater than the output caused from internal transformations due to their own gravity.

This particular topic from the point of view of Earth merits attention, since Earth (according to the above calculations) receives a dissipation from the Sun in mass-energy equivalent made up of a consistent amount of 2.944 kg/sec (some of which are reflected straight away through a mirror effect) but the rest being absorbed by the Earth on a continuous basis and also dissipated again but not after having produced on Earth a series of interesting phenomena, most of them life sustaining (since life forms are capable to absorb in various ways and to their own benefit, mass-energy in dissipation coming from the Sun store it and reuse it as necessity of sustenance of life dictates).

I point out now that to the above amount of 2.944 kg/sec received from the Sun, by the Earth we have to compare the amount of 0.226 kg/sec of internal transformation produced internally to Earth through the effect of its own gravity, this amount compared to the size of Earth seems a ludicrous value but I must point out that over the 24 hours corresponds to an hefty ~19526 kg of transformation of neutronic mass into M_{Heat} and over the year will become ~ 7127 Ton completely transformed into M_{Heat} .

We talk now of a huge amount of mass-energy (in comparison to the size of Earth) which though comes out as dissipation at the power of transformation of 40 W/m^2 is representing an amount that for Earth Standard is rather difficult to measure since any surface on Earth receives over the twelve hours an average far higher reaching values of $\sim 0.5 \div 0.65 \text{ kW/m}^2$.

All I can say is that these 40 W/m^2 coming out on a continuous basis can be responsible for reduced cooling of the Earth surface during the nocturnal time interval.

Nevertheless in order to have that paltry output of mass-energy in dissipation per square meter, our Earth needs to have an hefty build up of temperature in its interior, as we can observe that at the depth of $\sim 5000 \text{ m}$ the average temperature is already $\pm 50 \text{ }^\circ\text{C}$, a quick interpolation tells us that the center of the Earth is always Hot and can easily maintain a temperature from 70,000 to 100,000 $^\circ\text{K}$ (possibly more).

Earth, like Jupiter, from an initial high value of temperature at its center, slowly cooled but now maintains an average value of temperature on its core, due to the presence of its own gravity which causes a neutronic transformation of the atoms forcing them to release M_{Heat} through the effect of the gravitational compression which is acting over the fabric of the ESF constituting the surface of the said atoms.

Is this phenomenon which maintains hot a section of the Earth where tectonic plates floating over dense magma whose temperature is kept constant through the constancy of transformation due to the Earth gravitational mass, are periodically producing large volcanic activity and lethal earthquakes.

If now we look at Mercury, we see that the bulk of the mass-energy affecting its surface is dissipation coming from the Sun, whereas the internal transformation due to gravity is a paltry 20 kg per terrestrial year.

This nevertheless is not the case of Venus, in which the dissipation coming from the Sun is almost double than that affecting the Earth and the internal gravitational transformation is also to be taken into account since is more than half of the one affecting Earth.

As we know Venus has a thick atmosphere which absorbs well the mass-energy in dissipation, coming from the Sun, and traps it through a greenhouse effect, this combined with the internal production of Heat (as shown), is permitting the establishment of an high value of temperature at its surface

The dissipation coming from the Sun and reaching Mars is about 1/8 of the one reaching Earth and the internal transformation due to its own gravity is $\sim 1/125$ of the one affecting Earth, this induces me to say that Mars is an almost frozen rocky world, it may have had a period of acceptable surface temperatures whilst

it was cooling, but now it has a tepid core and the dissipation reaching it from the Sun is far from satisfactory.

As one can notice up to now only qualitative presentations were made by the Astronomers in regard of the terrestrial planets and of the gas Giants, but now with the use of very simple formulations developed through the advancement of the classic mechanics represented by the UDS was possible to make quantitative assessments which not only confirm the previous assessments, but carry on with the presentation of another type of gravitational transformation present on the planets of a system having a central Large Gravitational Mass in the center.

Striction over a mass at rest in conditions of quiet above the surface of a larger one is at the base of the above formulation which permitted to calculate the production of M_{Heat} caused by gravity and successive dissipation (used in the table 1) but now we have a similar formula for the striction in orbit and the difference with the striction calculated at rest is that in orbit the striction is amplified by the orbital velocity v_0 .

In the paper [Ruggeri](#) (bottom of page 2) archived in this site, "striction" was introduced as $\frac{1}{2}$ of the sums per unit of time of the amplitudes of vibration afflicting the mass in circular orbit inside the gravitational field of the central mass and these vibrations, being radial movements, are causing the "unbundling" of the neutronic (gravitational) mass-energy into a degraded form of mass-energy called M_{ESCM} and defined as the glue holding together the neutronic particles forming the atomic nuclei (see Figure 1 above).

Striction in orbit :

$$dr' = \frac{v_0^3}{2c^2} \text{ m/sec}$$

And the value of unbundling caused by striction as instant power of transformation-degradation is given by the expression:

(For M the planetary mass in Ton)

$$F_D = Ma \ 2dr' \quad \frac{\text{kJ}}{\text{sec}} \text{ or } \text{kW}$$

This in mass-energy M_{ESCM} equivalent is:

$$\Delta M_{ESCM} / \text{sec} = \frac{F_D}{c^2} \quad \frac{\text{Ton}}{\text{sec}}$$

Since the M_{ESCM} as result of the neutronic transformation of mass-energy, inside the physical mass, is an intermediate gravitational status of the mass-energy existing inside the atomic mass in a stable condition, the transformation is internal and does not show to the observation like in the case of the internal release of M_{Heat} and successive dissipation(as shown in Table 1).

Note: in all calculations of the UDS the value of the physical mass and the value of the gravitational mass inside it are consistently used as an unique value M (or at times M_{HM}), rounding off the usually minimal difference between them.

Table 2) “unbundling” of neutronic mass-energy inside the physical mass in units of energy which can be measured as kJ/sec corresponding to transformation-degradation of units of mass-energy internal to the physical mass, which can only be deduced thanks to the formula of equivalence

Table 2)

--	1	2	3	4
Sun and Planets of Solar system	Orbital acceleration due to the central mass of the system (the Sun in our case) m/sec ²	Orbital velocity in m/sec	Internal unbundling of the neutronic mass of an object in orbit which degenerates into M_{ESCM} trapped inside the object in orbit and shown in units of energy kJ/sec	Internal unbundling of the neutronic mass of an object in orbit which degenerates into M_{ESCM} trapped inside the object in orbit and shown in units of mass-energy Ton/sec
Sun				
Mercury	0.0394	47887	1.538 e 16	0.171
Venus	0.01144	35150	2.705 e 16	0.300
Earth	0.00593	29820	1.044 e 16	0.116
Mars	0.002590	24250	2.626 e 14	0.0029
Jupiter	0.0002205	13100	1.046 e 16	0.1163
Saturn	0.00006554	9670	3.75 e 14	0.004170

Uranus	0.00001620	6800	4.92 e 12	0.0000547
Neptune	0.000006596	5450	1.221 e 12	0.00001358

As can be noticed the internal transformation in a mass in orbit caused by presence of striction, (strictly associated to precession in m through a coefficient of proportionality 2π , see [Ruggeri1](#)), is large for smaller orbits as we can see that although the whole mass of Jupiter is ~ 318 times the mass of Earth the internal total transformation due to striction to which it is subjected is approximately the same as Earth.

Here below I compared the three main sources of mass-energy transformations afflicting the planet Mercury and the Earth (and the reader can on his own extend the exercise to the other planets).

Mercury: internal constant gravitational transformation:

$$0.000000635 \text{ Ton/sec}$$

Constant output over external surface:

$$0.000776 \text{ kW/m}^2$$

Radiation received from the Sun on a constant basis at the equator at midday (over its cross sectional area vertical to the radius R):

$$0.002803 \text{ Ton/sec}$$

Corresponding to a maximum of 13.71 kW/m^2 at midday at the equator

Internal gravitational mass unbundling associated to precession:

$$0.171 \text{ Ton/sec}$$

The indirect proof that this transformation is of internal nature is in the fact that if it was producing Heat it would correspond to a presumed constant output and dissipation over external surface of Mercury, of:

$$209.1 \text{ kW/m}^2$$

As it is now the input of dissipation coming from the Sun at the Zenith is a local maximum of 13.71 kW/m^2 at midday (and therefore much lower over the day) and there is no hint that the striction causes internal production of M_{Heat} in such a large scale to reach 209.1 kW/m^2 of dissipation at any point of the surface of Mercury.

The example above has been extended to the Earth:

Earth : internal constant gravitational transformation:

0.000226 Ton/sec

Constant output over external surface :

0.0040 kW/m²

Radiation received from the Sun on a constant basis at the equator at midday :

0.002944 Ton/sec

Corresponding to 2.07 kW/m² at midday at the equator

Internal gravitational mass unbundling associated to precession:

0.116 Ton/sec

If it was producing heat it would correspond to a presumed constant output and dissipation over external surface of :

20.5 kW/m²

Representing an amount of Heat and dissipation that could destroy in few minutes most of the life on Earth.

If one peruses the extended periodic table and considers the presence of a large number of isotopes (most of them unstable) of the atomic stable elements, it results possible to conclude that an internal transformation enriching the nuclei of the atoms of the glue holding together the neutronic gravitational mass (made up of neutrons and protons) coupled with the enrichment of neutronic mass due to gravity, eventually increases the ability of the nuclei to change their composition.

This conclusion opens the way to the hypothesis that the atomic masses in orbit, due to striction could in the course of time subject their atoms to maturation into more complex and heavy ones, through acquisition of degraded gravitational mass-energy and successive capture of new neutronic particles coming into existence through the gravitational phenomenon of absorption of the ESF .

Note: the word "neutronic" is here intended to mean without distinction only the neutrons and the protons present inside the nuclei of the atoms. (see Fig 1)

An exercise to be considered would be the calculation of the effect of the "internal transformation caused by striction" that supposedly are transforming the atoms into heavier ones, since the terrestrial planets which are the ones more

subjected to that transformation are also the ones in which the gaseous original masses could have been transformed during the passage of eons, into more dense ones.

Whereas the gas Giants in which the “internal transformation caused by orbital striction” can be overlooked, remained so and maybe became more gaseous in virtue of the high values of their internal gravitational transformations affecting not only the neutronic mass but the mass M_{ESCM} (the glue) through additional transformations-degradations which then could increase the percentage of light atoms and consequently presence of gaseous matter.

These of course are only hypotheses and if proven they could increase the antiquity of the Solar system of a great number of billion years.

Codicil 1: the Special theory of Relativity (SR), in my own interpretation is to be considered the true general one, since it regards the description of the universal reality in real terms and in conditions of geometric simultaneity with the Observer in conditions of quiet and the system observed assimilated to a point, whereas what was defined the General Relativity is restricted to a standard gravitational system having a Large Gravitational Mass (M_{LGM}) in the center, and therefore is an extension to be considered after the application of the SR to gravitational systems that in SR are assumed concentrated on a point, GR is a successive step made in the effort directed to achieve a physical description of the universal reality.

With it the system concentrated on a point is extended to full scale and its physical conditions investigated (calculated) in respect of the observer of the SR in its point of observation.

It results that once described the conditions of simultaneity for a system (described concentrated in a point) in regard of an observer (possibly in conditions of absolute quiet), if we are unsatisfied in regard of the point like description we can expand the description to the system concentrated into a point, taking into account the gravitational phenomena related to the M_{LGM} supposed to be in its center and to the planetary masses orbiting it, and how the relativistic phenomena develop inside it.

Codicil 2 : the development of Classic Mechanics found impetus from the moment the ULG was enunciated by Newton, the proportional relation between Force, Masses and Distances was a crowning achievement and though the understanding of the underlying transformations-degradations generating the Force was still a long time in the future and since the internal transformations corresponding to measurements of energies amounted to mere perturbations of the gravitational physical masses generating the Forces it was possible to develop a Science (the classic mechanics) which in its inability to perceive the minimal effects of these transformations was restricted and could not expand its interests.

Note: the CM was borne through the interpretation of effects but was unable to describe the causes of these effects.

With the enunciation by Prof. A.E. of the law of equivalence (also as Universal Law) the measurements of energy could be extended to corresponding transformations-degradations of mass-energy inside gravitational physical masses and when possible, their effects over long periods of time were summed, (as it happens in the case of the geometric effect represented by the precession which can be observed at long time interval and is strictly related to the internal “unbundling” of the neutronic component of the physical mass in orbit), or also when possible their effects were calculated when the transformations-degradations were applied to very large masses, since in such cases these transformations could not be overlooked anymore. (ex: the internal gravitational transformation of mass-energy into M_{Heat} inside a Large Gravitational Mass which comes out as dissipation), this together with the understanding that these internal transformations of gravitational origin inside a physical mass, are transformations of neutronic mass into inertial mass, and that the presence of inertial mass (associated to movement) has effect on the way the time phenomenon evolves inside a system, coupled with other dramatic advances, caused the existing classic mechanics to become a branch of the new more complete Universal Dynamic Science (founded by me).

The advances made in quantum physics are little affecting the development of this new discipline since it incorporates the whole processes of this Science in Statistic terms (like the ULG of Newton did) and whilst the Force in Classic Mechanics could be explained to extremely low values of observation, likewise the new revised concept of Force adopted by the UDS (based on the adoption of the existence of the Ether/ESF the ULG and of the Law of equivalence, both of them Universal Laws) can explain the emergence of a new revised concept of Force which can be extended to a Dominant Force of gravitational origin intended as result of transformation, of the neutronic mass internal to the physical mass in circular orbit into mass-energy M_{ESCM} or of transformation of the neutronic mass internal to the physical mass into mass-energy M_{Heat} and to many more phenomena of similar nature.

I can confidently say that the UDS is the new advance in Classic Mechanics and within its limits (like CM until now) can proceed without recourse to Quantum mechanics.

Its formulations are simple like the basic simple universal Laws on which it is founded and the concepts which require a building up of mental categories on the learners have little to do with the physics of the quanta (at least for the moment).

Codicil 3:as far the Truth is concerned, what has been presented above is a proof of the real results which can be obtained through the application of formulations pertaining to the new discipline (the UDS) incorporating the old Classic Mechanics and many more conclusions in touch with these results are to come and have been concentrated on a book.

Undoubtedly I will have to present this new Science in its entirety and I am ready to do so, in the interim I present results, concepts and mental categories in the effort to build up the capacity of understanding of the audience.

In this new Science, the Dominant Force which is a phenomenon of transformation and could be expressed by Newton through an Universal Law which eluded his attempts to give it an explanation, and only could be tied up to the concept of energy, becomes the subject of explanations and its meaning is expanded through the adoption of the concept of transformations-degradations internal to a physical mass at nuclear level and at atomic-molecular level (chemical transformations-degradations) releasing “spin belonging to the mass-energy and having as well indestructible character ”, today we know that the attempts to explain the phenomenon are also the subject of quantum theories.

Nevertheless the formulation based on the ULG stands on the whole and still give results.

The same considerations apply to the Law of equivalence whose explanation at present is at the base of a plethora of hypotheses of physical nature.

Nevertheless, when the Law of equivalence is applied straightforward to transformations-degradations involving a reassessment of the Force as explained through the ULG, we obtain the noteworthy results of physical nature leading to the foundations of the UDS,

The union of these two Laws must then be considered in comprehensive terms as an unique Universal Law which does not needs quantum mechanics (at least at this stage of development) and is quite able to explain a larger range of phenomena than the ULG alone (such as the M_{Heat} coming out of large Gravitational masses, the transformations afflicting a mass in orbit, the precession and the relativistic phenomena).

The UDS is therefore constituting a new discipline which extends and encompasses the old classic mechanics based only on the ULG as formulated by Newton and is at the foundation of the developments in the new Science of quantum mechanics.