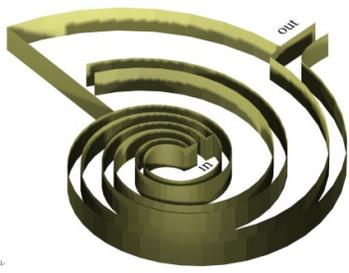Antonio Ruggeri Dr. Ing.

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EX SPIRA AQUA MUNDA

In memory of my son Giovanni

DATE:2021/03/26

To my wife FRANCESCA

and my daughter AMANDA

Virtual mass in $[Ton]$ only contains substance in $[kJ]$

Ruggeri Antonio Dr. Eng. $[Hydraulics]$- Sapienza Roma.

<u>Considerations over the knowledge that only one substance exist in the physical Universe and with its presence originates three equivalent separated states interacting with each other through entropic degradations based on transformations of their natural characters and Status.</u>

In regard of the scientific activity of Albert Einstein, all along these Years I fed myself through second hand information which usually had the purpose to glorify the Man and his legacy but I never had opportunity to consult directly his writings.

I entered the field of physics through pure curiosity and gradually reminiscing my memories of the years at University I followed my inspiration, continuously and for many long Years, it was a frustrating activity whilst all along I developed my own ideas scrutinizing as best as I could the available Works of the "Great men of the past" to the best of my resources....

If the reader will have the patience to go through my publications on: "Google: GSJournals.net Ruggeri A" he will notice that from a certain point my papers were better focused, for the simple reason that I found my personal Way....

My search was from the beginning focused on the $[Ether/ESF]$ as the "basic Substance" and to my surprise whilst I was developing my theories I found affinities with some "Relativistic" concepts elaborated by A. Einstein.....

In my Work I found that the famous equivalence:

$E \equiv Mc^2$ developed on his theory of existence is part of three equivalences based on presence in the Universe of $[Ether/ESF]$.

$E \equiv Mc^2$ is a pure statement of "conservation of Mass"as substance which doesn't consists into pure subdivision but contemplates a physical consequence caused by transformation/degradation of substance in time, in association with expansion of Space occupied that due to conservation corresponds to reduction of density of the substance in the new volume of Space occupied and therefore reduction of internal pressureas a transformation/degradation in time is considering existence of substance respecting an equation based on inverted ratio.

Boyle's Gas Law

Maintaining $\quad\quad\quad\quad\quad\quad p_1 \cdot V_1 = p_2 \cdot V_2$

a transf. going from $\quad p_1 > p_2 \quad$ and $\quad V_1 < V_2$

dissipates $\Delta p\ [kJ]$ Heat

a transf. going from $\quad p_2 < p_1 \quad$ and $\quad V_2 > V_1$

needs input of $\quad\quad\quad\quad\quad \Delta p\ [kJ]$ Work

"Universal Dynamic Science" is the Synthetic title I gave to my investigations concerning the problem of Knowledge.

As abovementioned, it develops Formulations based over the presence of substance in a special "necessary" condition as $[Ether/ESF]$ in the Universal Reality.

During the treatment of problems of Physics the mathematical concepts of infinite and infinitesimal although used in the descriptions of the Universe, on the whole reveal themselves insufficient and becomes necessary to consider a basic particle named "Quantum", here we refer to a quantum of substance (

Q_{kJ}(mass in status of $[kJ]$ in conditions of quiet) is the basic element which with its physic properties in association with other QuantaQ_{kJ}assembles the Physical Reality of the Universe.

 In accordance with the presence of $[Ether/ESF]$ as conglomeration of composite particles $[BM]$containing uniquely Quanta Q_{kJ}I introduced the hypothesis of presence of three "equivalent" states of existence of an "unique substance $[kJ]$" (existing as mass in status of referenceQ_{kJ}) that in the universal Reality completely fill the Space and being endowed of the various physical characters which we observe allow us to determine its properties.

A mass in the Universe has "horror vacui" therefore by "necessity" mass isoccupying in full the Universal Space but this condition is not sufficient since occupation must be implemented in a fashion allowing all the physical transformations/degradations permittingmovement which is the basic condition from which life will DEPEND.
The perfect solution solving this necessity is supplied by an Universe filled by an unique substance$[Ether/ESF]$ which by necessity is occupying a rigid volume of Space Fabric $V_{SF}[m^3]$ in stato di $1\left[\frac{kJ}{m^3}\right]$and contains mass in divided in pre-established Volumes$[BM][m^3]$surrounding an internal particle of mass at maximum status of compression at density $\left[\frac{IP}{m^3}\right] \equiv c^4\left[\frac{kJ}{m^3}\right]$that only being a fraction$\left[\frac{IP}{c^2m^3}\right]$ of the particle $[IP]$ gives to $[BM]$status of existence as $[Ether/ESF]$ at "virtual intermediate density" :

$$\rho_{Ton} \equiv c^2\left[\frac{kJ}{m^3}\right] = \frac{IP}{c^2}\left[\frac{Ton}{m^3}\right]$$

Permitting internal evolution of phenomena of entropic degradation measured through comparison with a constant permanent phenomenon of entropic degradation under the concept of "Time".

What is suggested here is description of the physical characters of a phenomenon based on transformations-degradations and compare them to another similar phenomenon of constant nature.

Therefore by "necessity" substance occupying a volume of Space Fabric $[BM][m^3]$ and is in status of $[kJ]$ surrounding an internal particle that as mass at density $c^4 \left[\frac{kJ}{m^3}\right]$ gives to the $[BM]$ the intermediate status of $[Ether/ESF]$ at "virtual density:

$$\rho_{Ton} \equiv c^2 \left[\frac{kJ}{m^3}\right]$$

the real volume of Space Fabric occupied by composite particle $[BM]$ of $[Ether/ESF]$ at density $\rho_W = 1 \left[\frac{Ton}{m^3}\right]$ is :

$$V_{SF-BM} = \frac{V_{SF-U} = 1[m^3]}{(3e^8)^3 \cdot e^6}[m^3]$$

resuming: a composite particle $[BM]$, as substance in "virtual status" is made up of mass in rigid status of Space Fabric at minimum density $\rho_{kJ} = 1 \left[\frac{kJ}{m^3}\right]$ containing in its centre a particle of mass $[IP]$ of density $\rho_{IP} = c^4 \left[\frac{kJ}{m^3}\right]$ occupying only a volume $\frac{V_{SF-BM}}{c^2}$ at density $\rho_{IP} = 1 \left[\frac{IP}{m^3}\right]$ but then "virtually occupying the centre of the volume V_{SF-BM} at density:

$$\rho_W = 1 \left[\frac{Ton}{m^3}\right] \equiv \rho_{Ton} \equiv c^2 \left[\frac{kJ}{m^3}\right] .$$

Since a $[BM]$ is practically Empty although delimited by volume containing elastic substance $[kJ]$ of extremely reduced density going under the name of Space Fabric,it is comprehensible that this composite particle $[BM]$ has the potential to build up the molecular entities in the physical world, it is up to us to find how and divulge it ......

Let us assume that all the molecular entities occupy the same volume V_{SF} at density multiple that of Water, this means that since Water in status of Gas contains:

$n_W = c^3$Molecular entities and each molecular entity of water contains 894.45$[BM]$whereas to fill the volume occupied by the Gas and obtain Water Liquid/Solid are necessary 1118 molecules of Water, in$V_{SF} = 1[m^3]$ will be present a number of $[BM] = 3.0186e^{28}$ molecules of Water each occupying a $V_{SF-W} = 3.312e^{29}[m^3]$ that extended to A. Avogadro's Law means that each molecule in Gas status and further in Solid status occupies the same volume of the one of Water at density $\rho = \rho_{mol} \cdot \rho_W$ multiple of water's density.

In all inside a $V_{SF} = 1[m^3]$ of Water there are a number of $[BM]$:

$$\tilde{n}_{BM} = (3e^8)^3 \cdot e^6$$

each occupying a volume of space Fabric:

$$V_{SF-B} = 3.703..e^{-32}[m^3]$$

therefore the Space Fabric of a single BM e' il quantum

$Q_{kJ} = 3.703..e^{-32}[kJ]$

at density $\rho_{kJ} = 1\left[\frac{kJ}{m^3}\right]$

Based on the fact that on the structure of the particle $[BM]$ the Space Fabric is mass in rigid status we are "forced" to suggest that both components:

a) its Space Fabric V_{SF-B} composed of mass at

$\rho_{kJ} = 1\left[\frac{kJ}{m^3}\right]$ and

b) the central particle inside V_{SF-BM} at density $\rho_{IP} = c^2 \left[\frac{kJ}{m^3}\right]$ can coexist with a gravitational mass (made up of molecules each made up by conglomerations of $[BM]$ that due to "virtual illusive" manner in which they are assembled permit the $[Ether/ESF]$ and Molecular mass to fit together in the same Unit of volume (the $[Ether/ESF]$ and the molecular masses each at its own density).

Note: naturally there is a physical limit supplied by the observation that physical mass when entirely made up of molecular entities of density $\rho \sim 20 \left[\frac{Ton}{m^3}\right]$ times that of $[Ether/ESF]$becomes unstable.

In the Microcosm the molecular entities of a mass in coexistence with the $[Ether/ESF]$ tend to absorb it in accordance with the "Universal constant":

$$k = \frac{4}{3}\pi e^{-7} \left[\frac{kJ}{Ton \cdot 1"}\right]$$

with absorption they build up with $[BM]$particles the conglomeration of molecular entities going under the name of Gravitational mass $M(\rho, R)$. The gravitational mass, $M(\rho, R)$ due to absorption of the $[BM]$ generates internally a continuous entropic expansion degradation transforming mass in status of units of Heat) $\rho \left[\frac{kJ}{m^2 m \cdot 1"}\right]$ that is degraded masssubjected to transmission (as internal flow that proceeds inside the mass $M(\rho, R)$ under absorption by the external $[Ether/ESF]$ at radial velocity$v_R = 1 \left[\frac{m}{1"}\right]$ and once reached the surface of $M(\rho, R)$ is automatically flowing away from it at transmission speed $v_c = 3e^8 \left[\frac{m}{1"}\right]$.

$[Ether/ESF]$under absorption by a gravitational mass is causing this way the existence of a gravitational field). Absorption of $[BM]$ by the molecules of gravitational mass with whom they coexist is opposed by their Space Fabric justifying

the presence of what we call "gravitational force" permeating any small mass outside the mass $M(\rho, R)$ and the whole mass $M(\rho, R)$ radially towards its centre.

At the base of all these phenomena concerning the three states of substance $([IP], [Ton], [kJ])$ is useful a reference to their states of existence in conditions of equivalence: (their densities are enabling us to compare presence of substance inside the Unit of volume $V = 1[m^3]$ with the insert below:

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"Three EQUIVALENCES".

$$1[IP] = 1\rho_{IP}\left[\frac{IP}{m^3}\right] \equiv c^2\rho_{Ton}\left[\frac{Ton}{m^3}\right] \equiv c^4\rho_{kJ}\left[\frac{kJ}{m^3}\right]$$

</div>

Together with the above definition of existence of unique substance (mass in $\left[\frac{kJ}{m^3}\right]$ having the basic character to exist in status of extreme compression at $c^4\left[\frac{kJ}{m^3}\right]$ comes the discovery of a "module" or "composite particle$[BM]$" in the Universal Reality, allowing us to define how the Water as molecular substance and the other molecular masses at multiple density "ρ" of Water are coming into existence in the physical reality.

Conclusion: Molecular masses present in the Universal Reality, are coexisting with the $[Ether/ESF]$ pervading all the Universal Reality as original object of "Creation" , in the physical reality, their presence is based on their Universal capacity to absorb (gravitation) the composite particles $[BM]$ of

Ether/ESF with whom they coexist.Absorption of $[Ether/ESF]$by gravitational mass is degradation followed by an infinite plethora of other transformations/degradations in the Universal reality.

Note: here I make reference to the composite particles $[BM]$ present in the Universe as substance $[Ether/ESF]$ each with the Following characters:

Composite particles $[BM]$ of $[Ether/ESF]$

$$[BM] = \frac{1}{(3e^8)^3 \cdot e^6} [Ton] \text{ "virtual Ton"} \qquad SF_{BM} = \rho_{kJ} \cdot V_{SF-BM} = \frac{SF_U}{(3e^8)^3 \cdot e^6} [kJ] =$$

$$= 3.703 \, e^{-32} [kJ]$$

$$\rho_{IP} \equiv c^2 \left[\frac{Ton}{m^3}\right] \equiv c^4 \left[\frac{kJ}{m^3}\right]$$

$$named \ Quantum - BM\{kJ\} \ Or \ Q_{kJ}$$

$$\frac{1}{c^2}\left[\frac{IP}{m^3}\right] \equiv 1 \left[\frac{Ton}{m^3}\right]$$

$$Side \ of \ composite \ particle[BM] = \frac{1}{c \cdot 100} [m]$$

in

UDS if you assign a number to the equivalences for volume unit
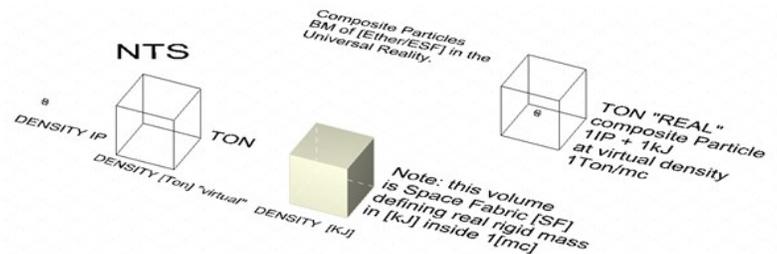
$1[m^3]$ of Space Fabric of$[Ether/ESF]$, $[SF]_{1m^3} \equiv 1 \left[\frac{kJ}{m^3}\right]$ you can write:

1) $1 \left[\frac{IP}{m^3}\right] \equiv c^2 \left[\frac{Ton}{m^3}\right]$

2) $1 \left[\frac{Ton}{m^3}\right] \equiv c^2 \left[\frac{kJ}{m^3}\right]$

3) $1 \left[\dfrac{IP}{m^3}\right] \equiv c^4 \left[\dfrac{kJ}{m^3}\right]$

for : $SF_{kJ} = \rho_{kJ} V_M [kJ]$

2): $\qquad M \left[\dfrac{Ton}{m^3}\right] \equiv \rho[SF]_{V_M} \cdot c^2 \left[\dfrac{kJ}{m^3}\right]$

1): $\qquad E \left[\dfrac{IP}{m^3}\right] \equiv M \cdot c^2 \left[\dfrac{Ton}{m^3}\right]$

3): $\qquad E \left[\dfrac{IP}{m^3}\right] \equiv \rho[SF]_{V_M} \cdot c^4 \left[\dfrac{kJ}{m^3}\right]$

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1): $\qquad E \left[\dfrac{IP}{m^3}\right] \equiv M \cdot c^2 \left[\dfrac{Ton}{m^3}\right]$

Under scrutiny the three equivalences that introduce in terms of UDS the existence of [Ether/ESF]) it turns out that equation 1) is the famous "equivalence" part of the scientific legacy of A.Einstein It is a formula that belongs to the theory of existence of [Ether/ESF] in which the mass [IP] to exist cannot occupy all of Space, and since the infinite Intelligence of the Creator has produced a reality of existence in which the mass exists only in a state of Unique substance (in basic units of Quanta as units of mass [kJ] within a fixed volume of Space and the mass in [Ton] is a prefixed artificial passage through which it is possible to have all the transformations in the reality of Creation, moving from mass [IP], composed of mass in $1 \left[\dfrac{IP}{m^3}\right] \equiv c^4 \left[\dfrac{[kJ]}{m^3}\right]$ to an intermediate stage $1 \left[\dfrac{Ton}{m^3}\right] \equiv c^2 \left[\dfrac{[kJ]}{m^3}\right]$.

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