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RESEARCH ARTICLE

NEW NEWTON RELATION WHERE THE MASSES ARE REPLACED BY THE BALANCE BLACK BODIES TEMPERATURES ACCORDING TO THEIR SURFACES EMITTANCES

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ABSTRACT

This publication follows, recent works (Conte M., Rosca et al., 2017) on the correlations between the consequences of the relationship of Newton and the black body surfaces emittances of the objects. The consideration of these photonic energy irradiated by the surfaces in space suggests the presence of mini black holes at the zero resulting potential between two masses in quantum gravity EVTD^2. Taking into account the products of the considered body's emittances it was possible, by copying the relationship of Newton, to show that the gravity force can be defined only by using the product of black bodies' temperatures T_e to power fourth divided by the square of their distances. Verifications by calculi using solar system data and from works (Conte and Rosca et al., 2017; Conte and Rosca, 2015) shows the accuracy of this new gravity approach where the masses are no more considered.

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INTRODUCTION

This work mainly, follows the publication (Conte and Rosca, 2017), which itself was already following the recent work (Conte and Rosca, 2017) on the equalities of known and even unexpected reports today. These are related on the one hand to the so-called classic gravity and, on the other hand, taking into account the fact that the gravitational field appears as photonics in nature (permanently black body emission of objects) wherefrom it would be essentially quantic. It produces a large number of consequences on the basic phenomenon of gravity understanding and on the opportunity to do some calculations in this area. Especially were highlighted from the emittances of the respective surfaces (law of Stefan) (Conte and Rosca, 2017; Conte and Rosca, 2017) correlations between the objects masses involved and their equivalent temperatures (T_e), or equilibrium ones of black bodies to the fourth power. This has been verified at best by some calculations and they *were able to establish correlations between black bodies flow energy arriving in O (zero resulting potential) from these masses and the values of these masses themselves*. But more, directly concerning the emissive surfaces, the relations (Conte and Rosca, 2017) from (Conte and Rosca, 2017) there is direct correlation between the value of the mass and its $(T_e)^4$ of the emitting surface. So, here we shall study the emittances themselves of bodies and neither the flows arriving in *O* to highlight other correlations, not least in the gravity understanding.

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ORIGINAL RELATIONSHIP ON THE PRODUCT OF THE BODIES EMITTANCES, IN SIMILARITY WITH THE GRAVITATIONAL ATTRACTIVE NEWTON'S FORCE

By extending the work (Conte and Rosca, 2017) and after the introduction recalls: the idea to establish, if possible, a similarity between the relationship of Newton and a product of respective masses emittances, seems attractive. This relationship R_{EL12} is defined as the product of the black body emittances of objects 1 and 2 divided by the square of their distance (d^2) between the centers of gravity, multiplied by a constant *X*, unknown for the moment. This (similar to that of Newton) is written with transformations following the model described in (1):

$$R_{EL12} = \frac{\sigma T_{e1}^4 \cdot \sigma T_{e2}^4}{d^2} \cdot X = P_{EL/m^6}^P \cdot X = P_{EL/m^2} \cdot \sigma^2 \cdot X, \qquad (1)$$

where the following notations were introduced:

$$\frac{\sigma T_{e1}^4 \cdot \sigma T_{e2}^4}{d^2} = P_{EL/m^6}^P, \; P_{EL/m^2} = \frac{T_{e1}^4 . T_{e2}^4}{d^2}. \quad (2)$$

If we consider the measure unit of Stefan constant square: $[\sigma^2] = W^2 \cdot m^{-4'} \cdot K^{-8}$, we arrive to the corresponding $[P_{EL/m^6}^P] = W^2 . m^{-6}$. Further, if we consider the base units, we have: $[W] = N . m \cdot s^{-1} = J \cdot s^{-1}$ and, hence:

$$[P_{EL/m^6}^P] = N^2 \cdot m^2 \cdot m^{-6} \cdot s^{-2} = N^2 \cdot m^{-4} \cdot s^{-2} . \quad (3)$$

Now, we shall consider the hypothesis that the physical quantity from (3) that has the unit N (newton) could correspond and represent the gravitational force $F_{G\,12}$ between the two bodies 1 and 2 described by the Newton's relationship (which uses masses' values and the interbody distance). Consequently, we shall establish relationships and, finally, numerical applications would be necessary in order to verify if this conjuncture is or not convenient. Hypothetically for the moment, the next correspondence results:

$$[P_{EL/m^6}^P] = [F_{G12}] . N \cdot m^{-4} \cdot s^{-2} . \quad (4)$$

By the calculations, with the astral solar system data and the works (Conte and Rosca, 2017), we shall find the following correlation between P_{EL/m^6}^P and F_{G12} , doing their numerical reports:

$$P_{EL/m^6}^P / F_{G12} \underline{\underline{\text{not}}} G_{Te} . \quad (5)$$

We find, for the nine studied duets of stars, that these reports (presented in Table 2 and denoted G_{Te}) have a relatively good constant average value. Therefore, considering this observation (proof by nine cases), the $F_{G\,12}$ is multiplied by a constant whose average value is obtained as equal to: G_{Te} = $2.337152 \cdot 10^{-35}$ and whose measure unit is $N \cdot m^{-4} \cdot s^{-2}$ (see Table 2). Hence, we can then write:

$$F_{G12} = P_{EL/m^6}^P \cdot \frac{1}{G_{Te}} \textbf{ and, thus: } F_{G12} = 0.42787117 \cdot 10^{35} \cdot P_{EL/m^6}^P$$

i.e.

$$F_{G12} = 0.42787117 \cdot 10^{35} \cdot \sigma^2 \cdot \frac{T_{e1}^4 \cdot T_{e2}^4}{d^2} = 1.37574 \cdot 10^{20} \cdot \frac{(T_{e1} \cdot T_{e2})^4}{d^2} = 1.37574 \cdot 10^{20} \cdot P_{EL/m^2} \quad (6)$$

Noting the value of the constant in the relationship (6), which is in fact: $C_{EL} = \frac{\sigma^2}{G_{Te}}$, it will have the value:

$C_{EL} = 1.37574 \cdot 10^{20}\ N \cdot m^2 \cdot K^{-8}$.

Ultimately, the new formulation of the attraction gravitational force (independent of the values of the involved objects masses) is written as simply:

$$F_{G12} = C_{EL} \cdot \frac{T_{e1}^4 \cdot T_{e2}^4}{d^2}, \quad (7)$$

having the unit of measure:

$$[F_{G12}] = N \cdot m^2 \cdot K^{-8} \cdot K^8 \cdot m^{-2} = N .$$

Table 1. Intermediate results of the different relationships, taking into account the conventional gravitation forces for the nine pairs of considered stars and also the values of relations dealing with products of photonic energies emitted by the studied stars surfaces in (Conte and Rosca, 2017; Conte and Rosca, 2017) whose data are used here

Duets	$F_{G\,S\text{-}P}$ and $F_{G\,T\text{-}Lu}N$	P_{EL/m^2} between the duets	$P_{EL\,S\text{-}P} / P_{EL\,S\text{-}T}$	$F_{G\,S\text{-}P} / F_{G\,S\text{-}T}$	$P_{EL/m^6}^P = P_{EL/m^2} . \sigma^2$	Used T_{eP} of (Conte and Rosca, 2017) T_{eS}=6100°K
S – Me	$1.30708 \cdot 10^{22}$	94.80787	0.3681	0.3688	$3048.3697 \cdot 10^{-16}$	123 °K
S – Ve	$5.52 \cdot 10^{22}$	400.887	1.55675	1.55783	$12889.7718 \cdot 10^{-16}$	241.3 °K
S – T	$3.54338 \cdot 10^{22}$	257.5155	1	1	$8279.9293 \cdot 10^{-16}$	254 °K
S – Ma	$0.164 \cdot 10^{22}$	11.91097	0.04625	0.04628	$382.9751 \cdot 10^{-16}$	145.4 °K
S – Ju	$4.15955 \cdot 10^{23}$	3017.72323	11.7186	11.739	$97029.2473 \cdot 10^{-16}$	1072 °K
S – Sa	$3.69347 \cdot 10^{22}$	268.23467	1.0416	1.04234	$8624.5844 \cdot 10^{-16}$	793.2 °K
S – Ur	$1.39842 \cdot 10^{21}$	10.17252	0.03950	0.039465	$327.0783 \cdot 10^{-16}$	496 °K
S – Ne	$6.7045 \cdot 10^{20}$	4.89416	0.01900	0.018921	$157.36278 \cdot 10^{-16}$	517.4 °K
T - Lu	$1.9825 \cdot 10^{20}$	1.4430	0.005603	0.005595	$46.39696 \cdot 10^{-16}$	T_{eLu}=83°K

Table 2. The results of calculations for determining the constant G_{Te} for nine duets considered as well as the nine accuracy checks of the relationship F_{G12} (7) compared to the relationship of Newton

Duets	$G_{Te} = \frac{P_{ELduets}^P}{F_{G\,duets}}$	$F_{G12} = C_{EL} \cdot \frac{T_{e1}^4 . T_{e2}^4}{d^2} N$
S – Me	$2.332198 \cdot 10^{-35}$	$1.30431 \cdot 10^{22}$
S – Ve	$2.33510 \cdot 10^{-35}$	$5.51516 \cdot 10^{22}$
S – T	$2.336732 \cdot 10^{-35}$	$3.54338 \cdot 10^{22}$
S – Ma	$2.335214 \cdot 10^{-35}$	$0.163864 \cdot 10^{22}$
S – Ju	$2.332685 \cdot 10^{-35}$	$4.15160 \cdot 10^{23}$
S – Sa	$2.335088 \cdot 10^{-35}$	$3.690211 \cdot 10^{22}$
S – Ur	$2.338905 \cdot 10^{-35}$	$1.399474 \cdot 10^{21}$
S – Ne	$2.34710 \cdot 10^{-35}$	$6.73310 \cdot 10^{20}$
T - Lu	$2.34032 \cdot 10^{-35}$	$1.98519 \cdot 10^{20}$

There are many compliance in this multiple relationships, in units of measure expression and especially here, for $F_{G12,}$ inside of its new formulation where it is properly described in mechanical unit *N* (newton). The nine calculations of the gravity forces between the nine pairs of celestial bodies, done with the new relationship (7), and T_e temperature's values, defined in (Conte and Rosca, 2017) and reported in Table 1, give the nine (F_{G12}) results reported in Table 2. It is to mention the very good agreement of these new calculations with the conventional calculations according to Newton's law that are shown in Table 1. The balance black body temperature of the Sun is always taken to be equal to 6100°K for this suite of calculations. Therefore, we finally can write (8) as the reformulated starting relationship ($R_{El\ 12}$) be equal to the Newton's gravitational force relation:

$$R_{EL12} = C_{EL} \cdot \frac{T_{e1}^4 \cdot T_{e2}^4}{d^2} = F_{G12} = G \cdot \frac{m_1 \cdot m_2}{d^2} . \quad (8)$$

CONCLUSION

Carefully examining all the results of various calculations made and reported in Tables 1 and 2, we have a relatively accurate idea on the direction toward which the understanding of gravity is driven from this new relationship (8). In this case, gravity, is not only dependent on the masses and the curvature of space-time. Black body emissions of objects must occupy an essential place in these phenomena. In this sense it helps the veracity of what Henri Poincaré said when he claimed that there are many ways to define certain phenomena in Physics. This new relationship opens doors to Physics research on a topic that seemed relatively inclusive but rather vague in its phenomenological concepts.

REFERENCES

Conte M.J. and Rosca I.C. 2017. News in classical and quantum EVTD2 gravity through correlations between bodies masses and their black body emittances, *International Journal of Current Research*, Vol. 9, Issue, 06, pp.53332-53335

Conte M. and Rosca I. 2017. Quantic gravity EVTD^2 and photonic gravitational fields: Existence of mini black holes to explain phenomena. The solar system is a database. Part. I: The Sun and the four planets close to it, *Acta Technica Napocensis, Series Applied Mathematics, Mechanics and Engineering,* Vol. 60, Issue I, January, pp. 25-34

Conte M. and Rosca I. 2017. Quantic gravity EVTD^2 and photonic gravitational fields: Existence of mini black holes to explain phenomena. The solar system is a database. Part. II: The Sun and the four planets beyond the asteroid belt, Acta Technica Napocensis, *Series Applied Mathematics, Mechanics and Engineering*, Vol. 60, Issue I, January, pp. 35-44

Rosca I. and Conte M. 2017. Mini black hole in zero resulting potential explaining the Earth – moon gravity. Correlation of thermic radiations photonic flows characteristics to mass gravity, Acta Technica Napocensis, *Series Applied Mathematics, Mechanics and Engineering*, Vol. 60, Issue I, January, pp.57-62

Rosca I. and Conte M. 2017. Calculation of the mini black holes size, present to zero resulting potential, in quantum gravity EVTD^2. Photonic fields radiated by the masses blackbody balance temperatures are the gravitational quantum fields, Acta Technica Napocensis, Series: *Applied Mathematics, Mechanics and Engineering*, Vol. 60, Issue I, January, pp. 63-68

Conte M. and Rosca I. 2015. Phenomena in bodies' freefall by EVTD^2 gravity in energetic quantic space-time formatting potentials in quantic energy levels, Acta Technica Napocensis, Series: Applied Mathematics, *Mechanics and Engineering,* Vol.58, Issue II, June, pp. 165-172

Conte M. and Rosca I. 2015. Energetic and quantic potentials in values multiples of h, distributed on lengths adapted to the 6,048 ratio between the free fall on earth and moon, confirm their accelerations and the compaction process of the EMW in gravity quantum EVTD^2. Acta Technica Napocensis, Series: Applied Mathematics, *Mechanics and Engineering*, Vol.58, Issue II, June, pp. 173-178

Conte M. and Roşca I. Zero resulting potential energetic and quantic in h initiate free fall and proximity of masses in quantic gravity EVTD^2. Design by substratum compacting mode (inter mass) depending on the EMW work, Acta Technica Napocensis, Series: *Applied Mathematics, Mechanics and Engineering*, Vol. 58, Issue III, September, 2015, pp. 315-322

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