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Theory of ether:Erratum

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Title :THEORY OF ETHER-ERRATUM

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Abstract:

In 7 articles ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾⁽⁵⁾⁽⁶⁾⁽⁷⁾, we exposed a very general Theory of Ether, including the fields linked to Special and General Relativity, as well as astrophysics. The articles ⁽⁶⁾ and ⁽⁷⁾ are mostly contained in the articles ⁽²⁾ and ⁽³⁾. Those articles have been published between 2000 and 2009 and they need to be clarified and modified. The clarified and modified versions of those articles are exposed in the book Théories d'or ⁽⁸⁾, but this book is written in French. In the present article, we are going to present the main modifications and clarifications of the articles ⁽¹⁾ to ⁽⁷⁾ that are necessary.

Key words: Theory of Ether

1.INTRODUCTION

In 7 articles ⁽¹⁾ to ⁽⁷⁾, we have exposed a very general Theory of Ether, including the fields linked to Special Relativity, General Relativity and astrophysics. The theory exposed in the articles ⁽⁶⁾ and ⁽⁷⁾, is mostly exposed in the articles ⁽²⁾ and ⁽³⁾. Those articles have been published between 2000 and 2009 and they need to be modified and clarified. The modified and clarified versions of those articles are exposed in the book Théories d'or ⁽⁸⁾, but this book is written in French. In the following chapter 2.ERRATUM, we are going to expose the main modifications and clarifications that are necessary concerning the articles ⁽¹⁾ to ⁽⁷⁾.

2.ERRATUM

We remind that the modern Theory of Ether is based on 2 fundamental Principles, analogous to the 2 fundamental Relativity Principles.

The 1st Principle is the following one:

- a)It exists an absolute fixed Referential, called Ether, non equivalent to all the Galilean Referentials (meaning discernible).
- b)The laws in the Ether are such that they tend to prevent an observer at rest in a Galilean Referential to detect its motion relative to Ether.

In the the 1st article ⁽¹⁾, we propose this preceding fundamental Principle. We also propose a Postulate that is fundamental in astrophysics and is the following one:

POSTULATE 7:

- a)The Universe is like a swelling sphere, whose borders move at the absolute velocity c (relative to the Ether).
- b)A photon situated in an area of the Universe submitted to a factor of expansion f , has a length of wave also increasing of the same factor f .

We will keep the part a) of the preceding Postulate 7. It is nonetheless necessary to suppress the part b), because it brings to contradictions.

In the 1st article ⁽¹⁾, we also obtained that the experiments linked to transversal Doppler Effect (In particular experiments analogous to Ives and Stilwell experiments) should permit to obtain the velocity of our earth relative to the Ether. But this is wrong: We can prove that the Postulates of the Theory of Ether lead to a prediction of the transversal Doppler Effect that is identical to the prediction of Special Relativity.

Moreover the obtainment of the Hubble constant in the 1st article ⁽¹⁾ is wrong: We obtain it in the articles ⁽²⁾ or ⁽⁶⁾. It is also interesting to define a Galilean Referential \tilde{R} as a Referential driven with a constant velocity \mathbf{v} relative to the Ether, and using standard rules and clocks at rest relative to it (consequently driven with the same velocity \mathbf{v}) and in whom the simultaneity is equivalent to the absolute simultaneity (meaning simultaneity in the Ether).

In the 2nd article ⁽²⁾ (or ⁽⁶⁾), we interpreted the evolution of the temperature of the fossil radiation using the part b) of the preceding Postulate 7. We saw that this part needed to be suppressed and consequently the interpretation of the temperature of the fossil radiation exposed in the article ⁽²⁾ or ⁽⁶⁾ is no more valid. We nonetheless can obtain this evolution, modeling the Ether-substance(substance constituting what we call the vacuum) as an ideal gas and using thermodynamics.

In the 3rd article ⁽³⁾ (or ⁽⁷⁾), in order to interpret the observations in Cosmology, due to the part b) of the Postulate 7, it was necessary to suppose that the longitudinal Doppler effect had to be suppressed in some cases. This is no more necessary, if we suppress the part b) of the Postulate 7.

In the 4th article ⁽⁴⁾, we proposed a second Principle for the Theory of Ether with gravitation. A clearer and more interesting Principle is the following one:

Fundamental Principle of the TEG:

a)In presence of gravitation, we can define a dilated space E_d , in which is our Universe, superposed to an absolute Euclidian space E_A .

b)In a fixed point P of the dilated space E_d , we can define a tensor of the TEG giving the correspondences of the spatial and time intervals measured in E_A or in E_d . This tensor has the expression of the Einstein's tensor in the case $V/c^2 \ll 1$.

The fundamental preceding Principle is valid if the inertial centre of the mass creating the Potential is at rest in E_A .

We also remark that contrary to the electro-weak and strong interactions, the gravitation is not a local interaction. So it is theoretically possible that the classical differential equations of gravitation must be expressed in E_A , despite that those of the electro-weak and strong interaction must be expressed in E_d .

In the 5th article ⁽⁵⁾, it is useful to introduce a Postulate 8 indicating that

a)If the mass creating the potential has its centre-of-mass which is the origin of a Galilean Referential \tilde{R}_A , then we can superpose to the Lorentz Referential \tilde{R}_A associate to \tilde{R}_A a dilated space $E_{d_}$ (in which we live) such that the relations between \tilde{R}_A and $E_{d_}$ are identical to the relations between E_A and E_d when the mass has its centre-of-mass coinciding with the origin of E_A .

b)Moreover, the equations of a system S expressed in \tilde{R}_A and $E_{d_}$ are identical to the equations of an identical system S expressed in E_d and E_A when the mass has its center-of-mass at rest in the origin of E_A .

This preceding Postulate 8 appears to be a direct consequence of the 1st fundamental Principle of the Theory of Ether that we recalled at the beginning of this article

3.CONCLUSION

The modified and clarified versions of the articles ⁽¹⁾ to ⁽⁷⁾ exposed in the book ⁽⁸⁾ contain many other clarifications and modifications as the ones presented in this article that are the main ones. Nonetheless, we can verify that the basis of a modern Theory of Ether are contained in the articles ⁽¹⁾ to ⁽⁷⁾.

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