



Contribution ID: 52

Type: not specified

The Earth expansion links with the old concepts of hydrodynamic gravitation and tired light

Thursday, 9 September 2021 16:45 (20 minutes)

From Earth Sciences come clues on a role of the aether in the evolution of Earth, planets, and universe. Paleogeographic reconstructions allow a rough evaluation of the new ordinary matter added to the planet in the unity of time, and some inferences on the inner energy balance of the Earth. The need of central flow of aether is considered here. Its origins can be found in Isaac Newton (1643-1727) and in John Bernoulli (1667-1748). An interrelations of aether's density, flow rate, and velocity with the cosmological parameters (H_0 , G , c) is found. Fundamental elements of a new cosmology descending from Expanding Earth are:

i) The constant ratio between any Q (aether flow rate) and its associated mass M :

$$\frac{Q}{M} = 4\pi \frac{G}{H_0} = l = 3.6 \cdot 10^8 \text{ m}^3/(\text{kg}\cdot\text{s});$$

with l a constant of "transfer" from the world of the masses to the real hydrodynamic one of the flow rates.

ii) The density of the aether:

$$\rho = \frac{1}{4\pi} \frac{H_0^2}{G} = 0.647 \cdot 10^{-24} \text{ kg/m}^3.$$

iii) The superluminal velocity of the aether at the Earth surface:

$$v = \frac{M_T \cdot l}{4\pi \cdot R_T^2} = \frac{M_T \cdot G}{H_0 \cdot R_T^2} = 4.2 \cdot 10^{18} \text{ m/s}.$$

Experiments (De Sangro et al., 2015) confirmed fields superluminal speed of propagation.

The presence of this fluid and of the consequent dissipative term $f = \rho Qv$ (a static fluid tends to slow down the motion of sinks or sources singularities) means that the principle of inertia, conservative field, escape velocity, etc., are only stated as local good approximations of a more complex reality. The expansion of the celestial bodies is linked with a revision of the concepts of physics and cosmology, in which a role play the preferred conception of Hubble and several of his colleagues of the time (Kragh, 2017) in explaining the cosmological redshift: the idea of "tired light".

More details and more complete bibliographic references can be found in Scalera (2020, 2021).

REFERENCES

- De Sangro R., Finocchiaro G., Patteri P., Piccolo M., Pizzella G.; 2015: Measuring propagation speed of Coulomb fields. *Eur. Phys. J. C*, 75:137.
- Kragh H.S.; 2017: Is The Universe Expanding? Fritz Zwicky And Early Tired-Light Hypotheses. *Journal of Astronomical History and Heritage*, 20 (1), pp. 2-12.
- Scalera G.; 2020: An Expanding Earth –A reply to two recent denial papers. *Rendiconti Online Società Geologica Italiana*, Vol. 52, pp. 103-119.
- Scalera G.; 2021: La Gravitazione Idrodinamica Come Causa Della Espansione Terrestre. <https://www.researchgate.net/publication/351443253>. DOI: 10.13140/RG.2.2.23345.30565

Primary author: SCALERA, Giancarlo (INGV - Roma)

Presenter: SCALERA, Giancarlo (INGV - Roma)

Session Classification: History and epistemology of physics

Track Classification: sisfa 2021