

Physical Space and Its Nature (Physics)

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Abstract : Physical space has got definite properties. Nature of space has been considered from some points of view of Physics, Philosophy and Psychology to propose a simple semi-liquid model in order to represent a section of the nature of physical space.

Key words : Cosmic sea, Extension, Void or empty and filled, Semi-liquid, High tide, Low tide.

1. Introduction : This is continuation to my previous paper in Physics : Physical Space And Its Dimensions (IJSER VOL 3 ISSUE 8 AUG 2012). Nature of space is of similar interest in Physics and Philosophy, and also in Psychology. A study on some relevant points reveals the proposal for a semi-liquid model of the nature of physical space.
2. Discussion : A. Einstein established the relationship between gravitation and curve space. His General relativity is actually the metric theory of gravitation. One of the consequences of general relativity is that universe is expanding, wherein very distant portions of universe are moving away from us faster than light. [1]

It is a matter of very long and traditional debate whether entity of any objective thing is observer-dependent or observer-independent. Many Philosophers and Scientists greatly contributed in this aspect. Whatsoever may be, space is constituted by different dimensions. According to realization in Metaphysics, "... all are but waves in His cosmic sea". "Expansion in Eternity" is also considered there. [2]

Space is realized as "extension". Psychological perception means realizing an object situated at a specified location in space. The object fills some space. Space may be of two types : void or empty and filled. By space or extension, we generally mean : (i) coexistence of many points, and (ii) existence of relationships between distances and directions among the coexisting points. Extensity

of "extension" is understood in terms of local character and movement. [3]

3. Conclusion: A semi-liquid model of the nature of physical space is proposed as follows, on the basis of the foregoing discussion: nature of physical space may be somehow like that of a liquid, i.e. semi-liquid, with vortices causing curvature. Furthermore, expansion of universe may be like high tide and contraction (if any) may be like low tide.

Reference :

[1] C. Kittel, W.D. Night, M.A. Ruderman, Berkeley Physics Course - Vol. 1 (Mechanics), McGraw - Hill Book Company, 1973

[2] P. Yogananda, Metaphysical Meditations, Yogoda Satsanga Society of India, 1980

[3] J. Sanyal, K.N. Mallick, "Manobidya" (in Bengali), Sribhumi Publishing Company (Kolkata), 1970

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