Opinion

On the Age of Earth

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Abstract

In this paper, we explore the hypothesis of Young Earth with eternal background. We offer a number of reasons to support this scenario's plausibility, including mass influx and matter creation processes. We hope that this paper will stimulate dialogue between sciences and theology.

Keywords: Age of Earth, hypothesis, mass influx, matter creation.

Introduction

The Age of the Earth has not been settled and falls into three possibilities: (a) Young Earth scenario, suggesting age of Earth to be no less than 7,000 years old; (b) Evolution scenario, suggesting age of Earth to be more than 1 billion years old; and (c) Progressive creationism, suggesting scientific result to be credible (whatever it is) and in conformity with biblical accounts. See also [2-4, 45-46].

Inspired partly by a recent report suggesting that Early phase of Earth might be covered by oceans fully in the ancient past[1], we began to rethink existing models of Earth according to Genesis chapter 1:2 and suggest in this paper the fourth plausibility (choice): (d) A young Earth with eternal background (abbreviation: YEEB). We offer a number of supporting reasons, including mass influx and matter creation processes. We suggest that our Universe has remarkable similarity to a macro-scale Bose-Einstein condensate on the grounds that: (a) CMBR temperature is found to be as low as 2.73 Kelvin, therefore, it may indicate a low temperature physics model of Universe; and (b) There exist various cosmological phenomena in terms of low temperature physics, see, e.g., Lidsey [1].

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[1] Source: *Nature Geoscience*, March 2020. See also: https://scitechdaily.com/early-earth-may-have-been-a-waterworld-likely-covered-by-a-global-ocean-3-2-billion-years-ago/

Matter Creation Processes: A new hypothesis

Physicists throughout many centuries have debated over the physical existence of aether medium. Since its inception by Isaac Newton and later on by others too, many believed that it is needed because otherwise there is no way to explain *interaction at a distance* in a vacuum space. We need medium of interaction, of which has been called by various names, such as: quantum vacuum, zero point field, etc.

Nonetheless, modern physicists would answer: no, it is not needed, especially after Special Relativity theory. Some would even say that aether has been removed even since Maxwell's theory, but it is not true: James Clark Maxwell initially suggested a mechanical model of aether vortices in his theory [31-33]. Regardless of those debates, both approaches (with or without assuming aether) are apparently resulting in the same empirical results, but with entirely different physical processes and assumptions.

The famous Michelson-Morley experiments were thought to give null result to aether hypothesis, and historically it was the basis of Einstein's STR. Nonetheless, newer discussions proved that the evidence was rather ambiguous, from MM data itself. Especially after Dayton Miller experiments of aether drift were reported, more and more data came to support aether hypothesis,[2] although many physicists would prefer a new terms such as physical vacuum or superfluid vacuum. See [34-38].

Once we accept the existence of aether as physical medium, then we can start to ask on what causes matter ejection, as observed in various findings related to quasars etc. One particular cosmology model known as VMH (variable mass hypothesis) has been suggested by notable astrophysicists like Halton Arp and Jayant V. Narlikar, and the essence of VMH model is matter creation processes in various physical phenomena. Nonetheless, matter creation process in Nature remains a big mystery for physicists, biologists and other science researchers. To this problem Neutrosophic Logic offers a solution.

Although we can start with an assumption of aether medium is composed of particle-antiparticle pairs, which can be considered as a model based on Dirac's new aether by considering vacuum fluctuation (see Sinha, Sivaram, Sudharsan.) [39-40] Nonetheless, we would prefer to do a simpler assumption as follows:

[2] see also Grusenick's experiment, proving the existence of vertical influx aether flow toward the Earth surface. See for instance: https://www.liquidgravity.nz/vertical_michelson_morley_experiment.html

Let us assume that under certain conditions that aether can transform using Bose condensation process to become "*unmatter*", a transition phase of material, which then it sublimates into matter (solid, gas, liquid). Unmatter can also be considered as "pre-physical matter."

Summarizing our idea, it is depicted in the following block diagram:

Aether → bose condensation → "unmatter" (pre-physical matter) → sublimation → ordinary matter/particle

Diagram 1. How aether becomes ordinary matter

In this paper, unmatter is considered as a transition state (pre-physical) from aether to become ordinary matter/particle, see also [42]. Moreover, superfluid model of dark matter has been discussed by some authors [43].

As one more example of our proposed scheme of transition from aether to matter, see a recent paper [44]. See the illustrations at pages 5 and 6 of [18] regarding the physically observed properties of the Galactic Center (GC), which are obviously completely different from the imaginary "*black hole*" model. The mapping of the magnetic field structures of the Core is a profile of a torus, as we have previously suggested. Page 5 in that paper also illustrates the relation between Sag A and Sag B and the space in between them. These illustrations are also relevant to *matter creation* at the galactic scale. Also note the gamma ray distributions in [44], which are relevant to matter destruction processes. Electrical discharges such as lightning, stars, and galaxies, all produce gamma rays.

The mass increase is a combination of the two: dust accumulation, and [various other]. The rate of dust accumulation has been calculated before, by NASA. And we've talked about it before. In my present view, matter creation occurs by way of aether processes, **one of which** is the KH vortex formation which forms electrons and positrons in chains during von Karman street events in the aether, where existing electrons and positrons cause the turbulence in the aether, which turbulence is resonant with the electron/positron which is interacting with the aether wind which is passing across where the electron exists at the given moment.

Aether winds can be superluminal, or subluminal. The velocity and temperature of the aether is a determining factor in many normal matter events. For example the mixing rate and interaction rate of various chemical reactions can be increased or slowed down by aether processes. Frolov talks about this, and has a machine that can slow down or speed up chemical reactions, using aether activities.

Probably, additional creation processes such those produced via B/E condensates, can happen internal to the planet. There may be other processes, as well, involving other phase states of the 5 phase-state aether (Mishin[3]). This can be modeled by considering interactions among the phase states of normal matter, which we suggest are analogous to the phase-state behaviors of aether matter. So normal matter fluids cooling off, create solids, for example.

In our present view, this happens with aether-matter, as well. So the 5 phase aether has energy density capacities which are dependent on which aether phase we are examining. The same can be said of normal matter, as well as aether matter. We have to start viewing the aether as another kind of matter, because it makes understanding so much easier, and because, so far, the analogy has been accurate to the observable facts.

Ranges of Earth's Age & Plausible Supporting Evidences

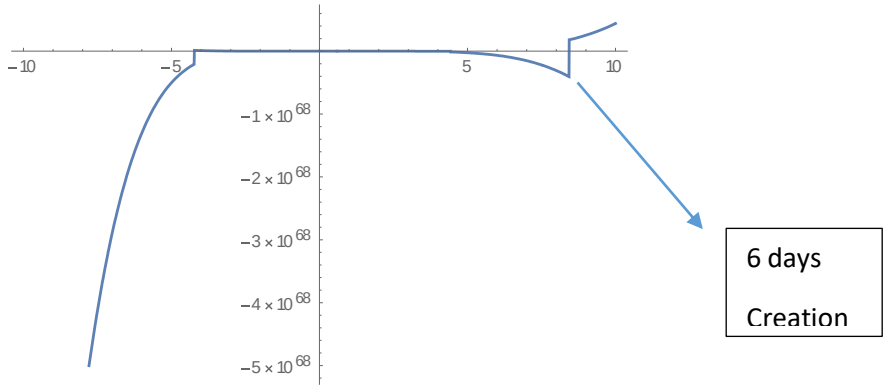

Figure 1. Conventional Young Earth hypothesis (6 days in Genesis ~ 6,000 years)

As we pointed earlier, the mass increase may be a combination of mass influx and other processes, including matter creation. Therefore, we may summarize several possible scenarios:

a. Age of Earth: more or less 10,000 + 4,000 + 2,000 years (16000 yr) – semi evolutionary, i.e. each day in Genesis 1 equals to 1000 years

b. Age of Earth: more or less 4000 + 2000 + 20000 years (26,000 yrs) → young earth with pre-creation period (20,000 yrs and also infinite eternal background)

[3] See: https://www.researchgate.net/figure/Mishins-5-phase-aetherdynamics_fig7_329072312

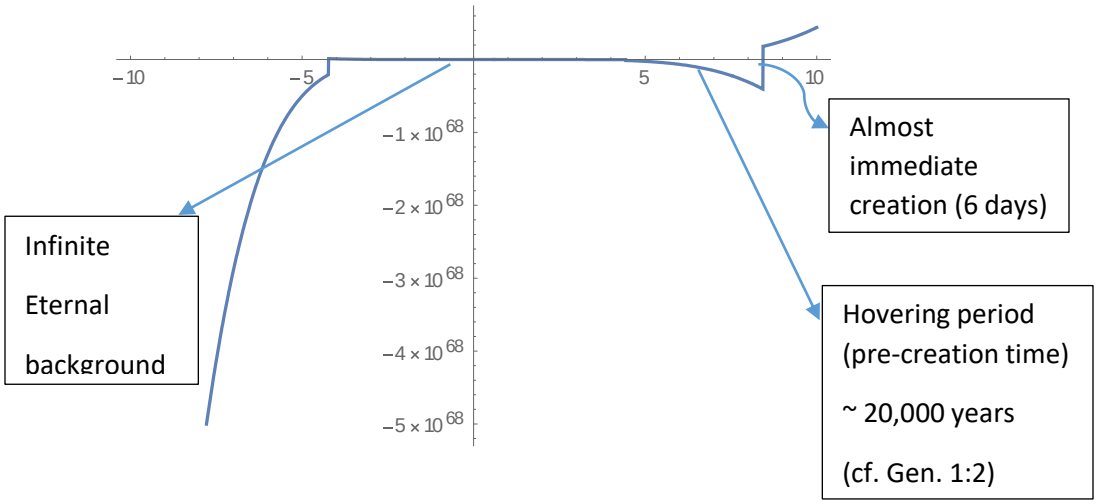

Figure 2. Young Earth with Eternal Background Scenario (~ 26,000 yrs)

Therefore, we would submit our hypothesis of Young Earth with its *pre-creation* process, of which its total age may span for around 26,000 years.

As plausible supporting evidences, we submit that:

a. Although a recent news suggest that the Moon is older than previously thought [50], and may be that view is also supported by Kozirev [49], Bucher & Stern [48], and perhaps Earth is much older than the Moon, in our view we can compare with estimate of age of Arizona crater, suggesting its age is in the range between 5,000-50,000 years. See Figure 3 below, and also Table 1.

b. Moreover, there is known long cycle corresponding at the order of 26,000 years. That long cycle is sometimes referred to as *Milankovitch cycle* [51]. This long cycle can be attributed to Earth precession cycle. Currently, the Earth's axis precesses 360^{o} in 25,772 years (approximately 26,000 yrs) and this length of time is called the precessional cycle or period. However, this motion does not change the 23.5^{o} tilt of the Earth's axis, that is, the obliquity of the ecliptic. Actually, the precession phenomenon is more complicated than what we have described here, since the Moon is moving in orbit around the Earth, thereby changing its position in space relative to the Sun. [52]

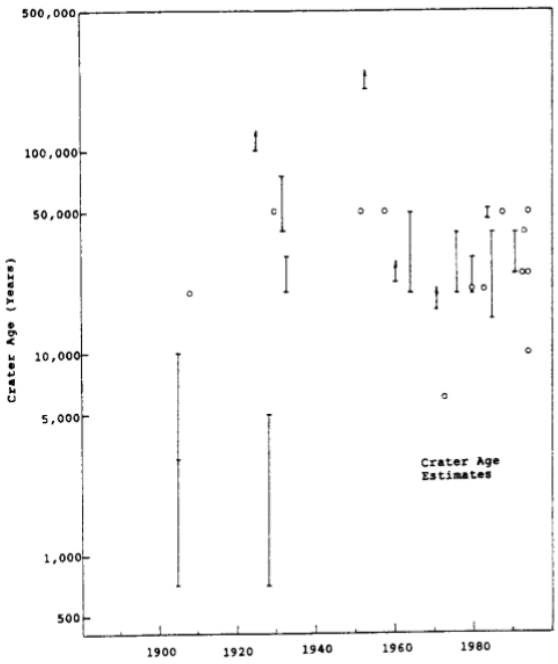

Figure 3. Range of age of Arizona Crater, ref. [46]

Author	Year of Publication	Age of Barringer Crater (In thousands of years)
Barringer, D. M.	1905	.7 - 3
Tilghman, B. C.	1905	.7 - 10
Merrill, G. P.	1908	20
Colvocoresses, G. M.	1925	> 100
Boutwell, W. D.	1928	.7 - 5
Jakosky, J. J.	1930	50
Blackwelder, E.	1932	40 - 75
Brown, F. M.	1953	2 - 3
Nininger, H. H.	1952	50
Hager, D.	1953	≥200
Beals, C. S.	1958	50
Buddhue, J. D.	1961	≥22.5
Hawkins, G. S.	1964	20 - 50
Reger, R. D., et al.	1971	≥16.3
McCall, G. J. H.	1973	6
King, E. A.	1976	20-40
Wood, J. A.	1979	≥2.7
LeMaire, T. R.	1980	22
Lewis, R. S.	1983	22
Shoemaker, E. M.	1983	20 - 30
Sutton, S. R.	1984	47 - 52.8
Sagan, C., et al.	1985	15 - 40
Burnham, R.	1988	50
Ronan, C. A.	1991	25 - 40
Payne, CA, et al.	1992	22, 50
Kaufmann, W. J.	1993	25
Pasachoff, J. M.	1993	40
Amy, T. T.	1994	10, 50
Engelbrektson, S.	1994	25
Kuhn, K. F.	1994	25

Table 1. Publications on various possible age of Arizona crater, ref. [46]

Conclusion

In this paper, we have explored some existing hypotheses with regards to Age of the Earth. We have discussed the necessity to introduce the notion of matter creation in order to fill the knowledge gap of expanding Earth. Starting with a plausible connection between Ermakov-Pinney equation with cosmology schemes (Lidsey [1]), our additional note in this paper is pertaining to the use of similar Ermakov equation in Newtonian Universe with vortex [5, 47], which indicates early universe with rotation can be modeled using Ermakov equation instead of trying to modify Friedmann equation for *rotating metric*. Summarizing, we support the argument of the Age of Earth is around 26,000 years including its *pre-creation* time (hovering period). This cycle may be crosschecked for instance with other data, such as known long cycle of 26,000 years (Milankovitch cycle).

Further investigation is recommended to be carried out in this line of thought.

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