Report and Opinion

Some studies in cosmic triangles

S. Kalimuthu

2/394, Kanjampatti P.O, Pollachi Via, Tamil Nadu 642003, India
Email owlskalimuthu@gmail.com Mobile + 91 8220541577

Researcher ID: AAP-4476-2020
Scopus Author ID: 25723330600
ORCID ID: 0000-0001-7978-9013
MR ID 1048338

Abstract: According to Freedman equations, the geometry of the universe has three possibilities namely open, closed and flat. Closed universe obeys the properties of spherical geometry, open universe has the properties of hyperbolic geometry and flat universe agrees with the concepts of classical Euclidean geometry. Recent measurements of WMAP and Planck predict that to a margin of 0.02% error, our universe is flat. But there is no mathematical formulation for the shape of our universe. In this work, the author attempts to show seven mathematical methods for the fate of our universe. The author's findings are just some attempts. The author does not seek any TOP claims. But the author sincerely believes that these studies may be a small clue for further probes and research.

ADE = v [I]
AFG = x [II]
AHJ = y [III]
ABC = z [IV]

Results:

The angles BDE and DEC are straight angles and so their measures are equal to180 degrees.

Let V be the value of this 180 degree (1)

Using (1), $X + Y = V + A$ (2)

i.e. $X = \{V + A - Y\}$ (2a)

$X + B = A + Z = V + C$ ' (3)

I.e. $A = \{X + B - Z\}$ (3a)

Also, $A = \{V + C - Z\}$ (3b)

$X + Y + Z = 2V + C$ (4)

I.e. $X = \{2V + C - Y - Z\}$ (4a)

Let us assume that eqns. (2a), (3a), (3b) and (4a) denote sets.

Intersection of the sets *A* and *B*, denoted by $A \cap B$, is the set of all objects that are members of both *A* and *B*. The intersection of $\{1, 2, 3\}$ and $\{2, 3, 4\}$ is the set $\{2, 3\}$.

Let us assume that equations (2a), (3b) and (4a) are sets.

Considering equations (2a) and (3b) and applying the intersection law of set theory we obtain that, $X \cap A = \{V\}$ (5)

Taking equations (3a) and (4a) and assuming interjection law of set theory we have that, $X \cap A = \{-Z\}$ (6)

Comparing (5) and (6) we get that $V = -Z$ (7)

It is well known that in geometry minus theta refers to the vertically opposite angles.

Since vertically opposite angles are equal, (7) implies that $V = Z$ (8)

A brief analysis of [I], [IV] and (8) clearly indicates that cosmic triangles ABC and ADE are similar. (9)

The similar triangles are possible only in classical Euclidean geometry. ***So, in brief we may conclude that the geometry of our universe is flat*** [10]
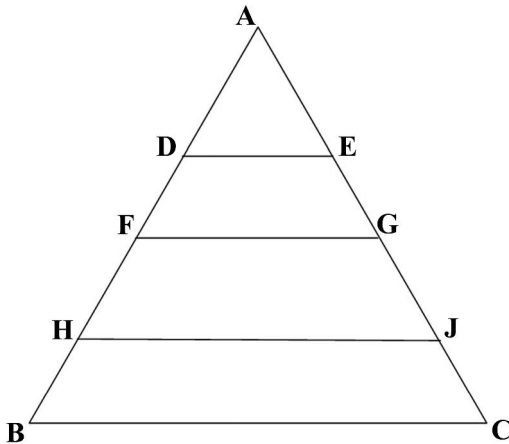
Figure 1

References
1. Google. http://www.google.com. 2020.
1. http://hyperphysics.phy-astr.gsu.edu/hbase/Astro/fried.html
2. http://old.inspirehep.net/record/1795190
3. http://star-www.st-and.ac.uk/~hz4/cos/cosLec3to8.pdf
4. http://www.astronomy.ohio-state.edu/~depoy/courses/lecture.notes/bbang.html
5. http://www.maths.adelaide.edu.au/thomas.leistner/talks/ugsem20100908.pdf

http://www.maths.adelaide.edu.au/thomas.leistner/talks/ugsem20100908.pdf
2. http://www.sciencepub.net/nature/0501/10-0247-mahongbao-eternal-ns.pdf.
6. https://map.gsfc.nasa.gov/mission/sgoals_parameters.html
7. https://map.gsfc.nasa.gov/universe/uni_shape.html
8. https://www.astro.umd.edu/~richard/ASTRO340/class16_RM_2015.pdf
9. https://www.nasa.gov/mission_pages/station/research/experiments/results_name.html
3. Journal of American Science. http://www.jofamericanscience.org. 2020.
4. Life Science Journal. http://www.lifesciencesite.com. 2020.
5. Ma H. The Nature of Time and Space. Nature and science 2003;1(1):1-11. doi:10.7537/marsnsj010103.01. http://www.sciencepub.net/nature/0101/01-ma.pdf.
6. Marsland Press. http://www.sciencepub.net. 2020.
7. Marsland Press. http://www.sciencepub.org. 2020.
8. National Center for Biotechnology Information, U.S. National Library of Medicine. http://www.ncbi.nlm.nih.gov/pubmed. 2020.
9. Nature and Science. http://www.sciencepub.net/nature. 2020.
Wikipedia. The free encyclopedia. http://en.wikipedia.org. 2020.

11/5/2020