Euclid telescope will revolutionize science, overthrow ruling scientific theories, and usher paradigm shift in science.

Scientist claims all three key steps to overthrow ruling scientific theories are met and Euclid's data will be the straw that will break the camel's back.

INDORE, MADHYA PRADESH, INDIA, August 3, 2023 /EINPresswire.com/ -- Euclid is a wide-angle space telescope with a 600-megapixel camera. It was developed by the European Space Agency (ESA) with contributions from NASA. The Euclid Consortium- consisting of more than 2000 scientists from 300 institutes in 13 European countries, the US, Canada and Japan- provided the scientific instruments. Euclid telescope will make the most accurate yet 3D map of the Universe by observing billions of galaxies up to 10 billion light-years away. Designed to investigate the universe's biggest mysteries, it has already captured its first glimpses of the cosmos, and the images are fantastic. Mr. Subhajit Waugh, a scientist (physicist) at RRCAT, India, has confidently predicted that the biggest shock from Euclid data will be that our universe is positively curved (which means that the universe is closed, and finite in size), which will turn science on its head. He has emphatically claimed that all three key steps to overthrow ruling scientific theories in Physics and Cosmology are satisfied. These three key steps to overthrow an accepted scientific theory are: reproduce the successes of the presently accepted theory; explain what it cannot; and make new predictions that differ and can be tested. (Ref. 1). Mr. Waugh has boldly predicted that scientific revolution is inevitable and a scientific paradigm shift is imminent, leading to a 'theory of everything' unifying physics and cosmology.

> “Euclid telescope will spectacularly demonstrate that the universe is positively curved and hence is necessarily closed, and finite in size. Euclid will return more than anyone had bargained for. AMEN.”
>
> *Subhajit Waugh.*

Physics currently rests on two pillars: General Relativity (GR) and Quantum Mechanics (QM). However GR and QM are mutually inconsistent, and there are bitter conflict between the two greatest theories of physics. Physics is derailed. The presently accepted model of the universe is called the ‘Standard Model of Cosmology (SMC)’, which asserts that the universe is (3D) flat, open, and infinite. A ‘Nature Astronomy’ (2020) paper had claimed with 99% confidence that our universe is closed. Another paper claimed odds of 2000 □ 1 against flat and infinite universe. Those papers have mortally wounded the ‘Standard Model of Cosmology’, but have unknowingly

cleared/paved the path towards unification of entire physics. As if those fatal wounds were not enough, Prof. Fulvio Melia has attacked the SMC from eight different angles (Ref. 2). He has concluded that each of the problems highlighted in his paper-on their own-should be sufficient to seriously question the viability of SMC. When viewed in their entirety, those insurmountable inconsistencies and paradoxes ought to convince even the most diehard supporters of SMC that a major paradigm shift in Cosmology is called for.

Mr. Waugh has proposed an alternate (hyper) balloon model of the universe [#Link1], which he claims makes QM and GR compatible. The (hyper) balloon model is a 'constant rate of expansion' of the universe model, in contrast to the 'accelerated rate of expansion' of the SMC. It may be noted that the model of universe proposed by Prof. Melia is also a 'constant rate of expansion' of the universe model. However, Mr. Waugh's model is more refined and successful compared with Prof. Melia's model of the universe. Besides, Mr. Waugh's model is dictated by the crucial SpaceTime equations, and the calculated Hubble constant value matches the accepted values very well, which demonstrates that the model is correct. His model can inherit the successes of Prof. Melia's model of the universe. Therefore, it is prudent to mention the successes of Melia's model. One-on-one comparisons Melia's and SMC models have been performed using 14 different cosmological measurements and observations. Results show probability of approximately 90%–95% that Melia's model is correct, while only 5%–10% chances that SMC is correct (Ref. 3). Consequently, Mr. Waugh's hyper-balloon model of the universe has seriously challenged the currently accepted model of the universe (SMC), and has superseded both General Relativity and Quantum Mechanics, leading to a grand unification. Mr. Waugh has detailed how the three key steps to overthrow ruling scientific theories in Physics and Cosmology are satisfied.

Step One (reproduce the successes of the presently accepted theories): Mr. Waugh has built up his model from a better and more correct understanding of SpaceTime concept which was introduced by Einstein's relativity. The crucial point to note is that he has not challenged the mathematics of relativity. The SpaceTime (ST) metrics are correct, but the mathematics is telling something completely different from what Einstein and Minkowski had assumed. The mathematical interpretations of those metrics (including Minkowski ST metric, FLRW metric and even the Schwarzchild metric) were incorrect, and Mr. Waugh has provided a different mathematical interpretation (and hence completely different physical interpretation). Since, the mathematics has been left untouched, Mr. Waugh's theory can claim all the successes of General Relativity including gravitational time dilation, gravitational lensing, the gravitational redshift of light, the Shapiro time delay and black holes. So far, all tests of general relativity have been shown to be in agreement with the theory (which is great news for Waugh's theory as well). Again, Mr. Waugh's theory has not challenged the postulates on which QM is built, but has explained why all those puzzlingly weird postulates must arise with extremely small size scales. And, as already mentioned, Waugh's model of universe can inherit/claim all the successes of Melia's model (which already is shown to be superior to the SMC).

Step Two (explain what present theories cannot):

A) The SMC fails to explain even an innocent question which a child might ask “If our universe is expanding, what is it expanding into?” GR assumes that the metric tensor is changing (an analogy is a 3D grid, where the distance between each grid is increasing), but the universe is not expanding into anything. However, this explanation is illogical, as the distance between the individual points increases without the overall space (which contains all these points) expanding into anything. Waugh’s model gives a satisfactory answer. Our balloon universe (the term universe is used only for the 3D balloon surface) is expanding into a 4D hyperspace, which might extend infinitely in all four directions. i.e., the hyperspace (void/emptiness) is possibly infinite, while the matter and fields (the wall of our hyper-balloon universe) have a finite extension and form a closed hypersurface.

B) The SMC fails completely when the clock is run backwards, and the model ends up inevitably in a singularity (in which the density of matter/radiation would be infinite, and the temperature would also be infinite). Also, the observed constraints on a singularity state in the past are incredibly tight, which rules out a singularity with certainty. Waugh’s model never reaches a singularity in the past. Imagine a (rubber) football with a certain wall thickness. As the football deflates, the walls become thicker. However, this process cannot continue indefinitely until the football disappears into a single point. Eventually, the wall will become so thick that the inner surface of the wall will touch (in other words, the empty space inside the football will disappear). The football will then resemble a solid cricket ball.

C) Relativity is based on the experimental fact that light travels with a constant velocity (c) irrespective of the motion of the reference frame, but does not explain what causes this postulate to appear. As a result, even after a century, relativity is just a principle theory and there is no constructive theory. Besides, it begs the question: is light somewhat magical? Is relativity is just a branch of electromagnetism? What causes the gravity waves to travel at the same speed of light? Waugh’s theory shows that the real reason is: it is a peculiarity of Minkowskian (hyperbolic) structure, which chokes/throttles infinite velocity at the value c (which is radial expansion velocity of the universe). It is explained in detail in his papers.

D) Quantum Mechanics (QM) is based on some postulates, but QM never explains why those exotic/shocking postulates arise. A great leap was taken by Prof. Andrez Dragan et al. who have shown that all the postulates of QM require just one postulate: superluminal possibility (Ref. 4). In a second paper (Ref. 5), they have proved that superluminal possibility necessities one space and three time dimensions (i.e. 1+3 structure as opposed to our everyday 3+1 structure). Mr. Waugh has shown that at tiny size scales, space and time start exchanging roles. (Ref. 6 & 7).

E) Mr. Subhajit Waugh’s closed universe model can easily explain Quantum entanglement. The (entire) closed universe is an absolutely isolated system (true island) and has to conserve spin, total momentum, etc., however small the magnitude may be. This situation gives rise to non-locality and instant communication over vast distances in quantum-entangled particles. Any open and infinite model of the universe cannot offer a satisfactory explanation of quantum entanglement (which has now secured a firm place in physics and has no intention of going

away). Nature indeed keeps track of every single atom in the World's oceans. Once we come to terms with nature's efficiency in accounting, it won't be difficult to grasp that nature has to keep track of every single particle in the entire universe, and must maintain 'net zero' balance.

F) The list of achievements of Waugh's theory (which present theories fail/struggle to explain) is simply too long to be detailed here [e.g. The 'Principle of Least Action (PLA)' comes closest to the 'theory of everything' in physics, and from which, all known laws of physics can be derived. PLA can be generalized (for relativistic velocities) to 'Principle of Maximum Proper Time', which is just the Minkowskian version of the shockingly simple Euclidean statement: "The least distance between two points in (hyper) space is a straight line" (Ref. 8). A similar conclusion is reached in this paper (Ref.9) which claims that the roles played by kinetic and potential energies in PLA are secondary, and PLA seems to be just a footnote for the statement that 'least distance between two points is a straight line]. His theory also explains why dualities like wave (field)-particle duality, or Lagrangian-Hamiltonian duality arises. Lagrangian is the Minkowskian version, while Hamiltonian is the Euclidean version. Duality is a bedrock concept of modern physics.

Step Three (new predictions that differ and can be tested):
A) Euclid telescope will show that the universe is positively curved (and not flat as presently believed). A circle drawn on curved surface (of a sphere) has shorter circumference compared to a circle of same radius drawn on a flat surface. To explain why, Mr. Waugh uses the example of an orange peel. Orange peels are curved. A circular piece of orange has a shorter edge than a pancake of the same size. For an orange peel, trying to become flat is frustrating; the bigger the piece of orange peel, the more stretching is needed to flatten it. (This is a practical problem in making flat maps of the curved earth.) Eventually, the orange has to split at the edges. [N.B. The following is a technical detail for experts, and may be skipped. In mathematical language, the circumference of a circle drawn on a curved sphere will have a circumference less than twice pi (3.14159...) of the radius. When extended to three dimensions, the equivalent of a circle becomes a sphere, and the circumference is replaced by a spherical surface. The equivalent statement for a sphere drawn on the 3D curved (hyper)surface of a 4D (hyper)sphere will be: spherical surface area will be less than four times pi (3.14159...) of the radius squared]. Euclid telescope is designed to see up to 10 billion light years (l.y.) away. A sphere of 10 billion l.y. can be partitioned into spherical bands (say 7-8 l.y., 8-9 l.y. etc or finer bands like 3-3.5 l.y., 3.5-4.0 l.y. etc.) The number of galaxies falling in each band of radius can be counted. The predictions of Waugh's model of a curved universe will certainly differ from the flat model of SMC. The SMC predicts that the number of galaxies should be proportional to the square of radius, while Subhajit's model predicts the number to become lesser and lesser with increasing radius. This is an extremely crucial result since it is based on a hallowed principle that the distribution of galaxies on a large enough scale of the universe is uniform. Besides, since billions of galaxies will be mapped; any local non-uniformity will be erased out. This result will settle the debate over the shape and size of the universe once and for all.

B) Another major prediction of Mr. Subhajit's model which differ greatly from all accepted models is that matter, or more precisely, Normal Baryonic Matter (NBM) is causing the

expansion of the universe. A cosmological headache for scientists for over a century has been "What is counteracting the force of gravity in the universe?" [#Link2]. Gravity is an attractive force, which means that it pulls matter together. So, over time, gravity should begin to pull the universe together as well. Strangely, the universe expanded after the Big Bang. Mr. Waugh's explanation is that we have NOT understood the true role Normal Baryonic Matter (NBM) plays. Mass have a natural tendency to move away from the center of the Universe. Imagine a balloon (our universe) which is dotted (each dot represents a galaxy or galaxy cluster). If each dot (NBM) tries to move away from the true center of the balloon, then NBM (lying within the wall/membrane of our balloon universe) plays the same role as compressed air inside an expanding balloon. This concept has already been spectacularly confirmed, and a euphoria was generated that with the claims that 'Black Holes is the source of Dark Energy' [#Link3]. Gravity plays completely opposite roles on a local scale and global scale that changes sign at around 150 Mega Parsec scale just as Pardo and Spergel had anticipated, but dreaded to consider as possible (Ref. 10). A galaxy can be imagined as forming the surface of the Flamm's paraboloid (Ref. 11), and the black hole (lying at the center of the galaxy) as the tip of the Flamm's paraboloid.

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