

The Static Universe: Exploding the Myth of Cosmic Expansion

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This paper is a précis of my new book by the same title. The Static Universe is a collection of empirical arguments against the notion that the Universe is systematically and holistically expanding. It is pitched at the informed reader with some elementary understanding of physical science and astronomy, although it is couched in conversational English and eschews mathematics. Readers who digest the popular works of Patrick Moore, Brian Greene, Stephen Hawking, and Martin Rees should have no trouble following the arguments. Included is a glossary of terms. It does, however, also accommodate the serious scholar with technical footnotes and an extensive schedule of academic references. There are 9 chapters, and several addenda.

Introduction

My second book, written in collaboration with iconic British observational astronomer Sir Patrick Moore, directly confronts the notion of universal expansion. It was conceived of a winter's evening in the study of Sir Patrick's West Sussex home *Farthings*, and has turned out to be far more than the sum of its parts. The author's dream was for many years to formulate a cosmology quite independently of any theoretical model, and Sir Patrick—who modestly describes himself as an "amateur", yet has at his fingertips more knowledge of real things in the sky than anyone else I've met—was just the inspiration required to drive this project forward. Just why, in direct contradiction of nearly everything we see, the expansion hypothesis should have taken hold and achieved complete domination of empirical astrophysics and indeed, even of observational space science, is the question this work seeks to answer. And answer it does, in no uncertain terms. The blame for the current state of affairs is laid unequivocally at the feet of Carl Friedrich Gauss, the 19th century master mathematician who introduced non-Euclidean geometry to the gentle art of astronomy.

This work addresses a critical divide in world of cosmology: Is the observed universe expanding? Universal expansion is the bedrock of modern cosmological theory, and it is here that the battle lines are drawn. On one side, mathematical theorists hold the high ground. On the other, observational astronomers, second-class citizens in the world of cosmology, challenge the equations head-on with images of real things in space. The author realized the fundamental error in isolating pure thought from physical reality, and now argues for empirical science as the basis for constructing theory.

1. Chapter One: Far Things

The observed universe is put into perspective, listing points of conflict with standard theory. *"A man cannot strongly enough ask of Heaven: if it wants to let him discover something, may it be something that makes a bang. It will resound into eternity."* Georg Christoph Lichtenberg (1742-1799). [1] The Standard Model fails every reasonable test of science. It flies in the face of the laws of ther-

modynamics and the conservation of energy, tenets so fundamental to physics that their breach is simply inconceivable to sober scientists. The assumptions of the Standard Model are arbitrary, tunable, in conflict with observation, and supported only by great uncertainty. We have no good reason to believe what we do. No coherent philosophy could, or should, be built upon such foundations.

2. Chapter Two: The Hubble Universe

Edwin Hubble was the first to realize it - there is no real evidence for expansion. It is unsupported by observation and actually contradicted by it. Edwin Hubble did not discover the Hubble Law, and spent the rest of his life trying to convince people of the world at large that their adulation was misplaced. The original data indicating expansion were found to be spurious, abandoned, and never replaced. It came from nowhere and, observationally, it seems it's going nowhere. The false dawn of universal expansion came from faulty data. *"...it seems likely that red-shifts may not be due to an expanding Universe, and much of the speculation on the structure of the universe may require re-examination."* (Dr Edwin Hubble, 1947). [2]

3. Chapter Three: The Distance Ladder

Asks the questions, *"How do we calculate the remoteness of celestial objects, and how sure can we be of the results?"* The answer in both cases is almost always, we cannot. At the scale upon which Hubble-type expansion is alleged, distance measurement using redshift is unverified and totally unreliable. Cosmological redshift is not a calibration of distance, and does not lend support to or justify expansion theory. The Hubble law is a myth. *"Each step on the distance ladder introduces further uncertainty. Would it not be better to use primary indicators to calculate galaxy distances, and thus remove the need for the treacherous distance ladder?"* (Dr Stephen Webb in *Measuring the Universe*).

4. Chapter Four: Redshift

The Hubble law is a systematic displacement in spectral lines taken to mean recessional velocity. Cosmological redshift is a cocktail, not a single ingredient. It is currently quite impossible to

determine the original degree of redshift in cosmological objects, and we therefore cannot claim to know or infer the degree of change occurring during astrophysical processes. *“Needless to say these values (quasar velocities) are without physical significance and clearly indicate that the cosmological red shift hypothesis is completely untenable.”* (Dr Y P Varshni, University of Ottawa).

5. Chapter Five: Quasars

They are assumed to be the brightest and most distant objects known, but observations show they might well be exceptions that demolish the rule. Quasars provide observational proof of intrinsic redshift and objectively falsify the Hubble law. Arguably the most powerful evidence is the measurement of significant proper motion for quasars. Those favoring the Standard Model do not argue; they simply deny that the evidence exists, and decline to publish it.

6. Chapter Six: Microwave Background

A uniform radio fog surrounding the Earth has been artificially impregnated with meaning, and interpreted as an image of the primordial fireball. It is no such thing. Despite chronically flawed instrumentation that could not possibly produce sufficiently accurate data, the COBE satellite was nevertheless credited with measuring *“the most perfect blackbody ever recorded in the history of science”*. The radio fog surrounding us is ambient starlight reflecting local structure and the equilibrium temperature of space. It cannot logically be connected to an expanding Universe or primeval fireball. *“The statement that big bang theory explains the observed microwave background ... is to distort the meaning of words.”* (Professor Geoffrey Burbidge)

7. Chapter Seven: Structures and Cycles

Can a static universe resist collapse? What does large scale structure really look like? Observed systems are unlikely given the time frame of the Standard Model. The structural properties of the cosmos militate against the finite, expanding model, and favour an eternal, static, cyclic Universe. The array of technical fixes introduced to counter the evidence of plain sight is unconvincing and contrived, no more than desperate glue in the joints of a globally worshipped house of cards. *“The only way to avoid this is to go to a cyclic universe model in which the timescale is infinite.”* (Geoffrey Burbidge).

8. Chapter Eight: An Expanding Mind

An historical, ontological, and epistemological review of how geometry came to dictate observation. The shape of space and its ability to erupt are nothing more than mind games, quite incapable of being verified observationally. Expansion is simply a mathematical construct emerging from one of three solutions to a particular set of equations, and the choice is arbitrary. *“No amount of observations will be able to decide on the true geometry of the Universe.”* (Oxford cosmologist Dr Joseph Silk).

9. Chapter Nine: Discussion

A fireside précis of preceding arguments: We have no good reason to sustain belief in universal expansion while observations at all sides tell us otherwise. *“There are things we know, things we know we don’t know, and then there are things we don’t know we don’t know.”* (Dr Glenn Starkman, *Introducing Doubt in Bayesian Model Comparison*, 2008).

References

- [1] Georg Christoph Lichtenberg,
- [2] Edwin Hubble, (1947).