Dark Matter - Resolved?

In a private letter appealing to all astrophysicists, Munich-based independent research physicist Peter Ostermann wrote in 2018:

> How would you like, in a few weeks, the question of the nature of the 'dark energy' to be clarified? Namely, by specifically proving, upon request, there is no need for such a hypothesis.
> I (71) can't do that alone because of health problems, otherwise, I would keep trying.
> So - I can't do it without YOUR help!

Peter Osterman passed away in 2020 but left an impressive life's work in print and on the Internet. [1]

In 2015 he published a book in Germany "Unterwegs mit Einstein und dem Esel" („On My Way with Einstein and the Donkey") in which he explained his theory of a "Steady Universe Model" (SUM) for the interested public. [2]

His starting point was a growing "uneasiness" with the "big bang" approach and the notion of a "Universe from nothing". According to Peter Ostermann, the big-bang approach is missing some plausibility which can be exposed by a few simple questions:

1. If everything became into existence from nothing, then no physical law can describe it,

2. If it was created out of a vacuum, then this vacuum was not empty.

3. If it was not empty, then the energy density was not zero.

4. If there was an energy density then it is that of the Universe.

5. If there is a Universe, then a Cosmos became into being.

6. If a Cosmos was created than, it is not identical to the Universe.

7. If there is an eternal Universe then there was no single "big bang" of space and time.

Peter Ostermann argues and proves in his book and with references to all his published papers over the past 10 years on this subject, logically and convincingly his SUM model: **A steady infinite, eternal Universe with a local-bang Cosmos** (see also "Model of a Stationary Background Universe behind our Cosmos" – reference below). This model is based on a hitherto unknown stationary cosmological solution of the general relativity equations found by the author in 2001/02. Stationary systems on the one hand are not static but are consistent in their variability. In the simplest case, this is true for a vibrating string, in our case it stands for a living universe.

"Einstein once said that science without religion is lame, religion without science is blind", quoted by Peter Ostermann in the "metaphysics" chapter of his book and continues:

"If our evolutionary cosmos originated in a kind of local bang from something like universal chaos, and if it all makes sense, then this sense was laid out before such a gravitational creation event, in the form of laws that seem to be called divine. (…) I am convinced that life is foreseen in the universe ever since, in whatever form - as independent quality or most likely as contained in the matter self. In this sense I conceive God – whether he exists or not -within the world, not outside, immanent rather than transcendent (…).

The growing skepticism with the current mainstream astrophysicists' explanations of the "standard big bang model", not being able to explain the nature of dark matter and dark energy, is manifested by recent podcats by NTV[5], DLF [6]), and Adam Riess' statement on the 'Hubble trouble': "The tension

between our ideas of the young cosmos and its current state has apparently grown to the point of complete incompatibility “[7].

Therefore Peter Ostermann’s legacy executors made a recent attempt to get his SUM theory back into the discussion without much success so far.

If one of the readers is interested to delve deeper into the theory of the Stationary Universe Model (SUM) based on Einstein’s “biggest blunder”, she/he is referred to the following two main sources:

> Unterwegs mit Einstein und dem Esel [2]
> Stationary Universe Model (SUM) - A first self-contained Wikipedia-like presentation [3]

Ostermann’s Postulations

1. Matter-antimatter baryon asymmetry - is a natural fact in a stationary universe without the need for justification.

2. Cosmological redshift without universal spatial expansion due to another kind of ordinary gravitational redshift.

3. 'Dark energy' - homogeneous distribution of e.g. neutrinos (or other WIMPs) filling the gap to the critical density.

5. ‘Dark matter’ - neutrinos (due to non-vanishing masses thermalized in parts).

6. SNeIa magnitude vs. redshift measurements (…).

7. Requiring two Hubble 'constants' (the local and the universal one) instead of an accelerated expansion ('Hubble trouble').

8. Planck spectrum from a black-body background of redshifted microwave radiation emitted within a non-expanding multiverse.

9. The law of entropy is restricted to evolutionary processes (without conflict against any laboratory experience, allowing for 'primordial' nucleosynthesis in 'multi-bang' processes of re-creation).

10. SUM may describe a local-bang 'multiverse', which is just another word for actually one Universe with multiple cosmoses. [1], [3], [4]

So, if YOU find yourself challenged with this brief summary of the Stationary Universe Model (SUM) to dig deeper and see how far the analytical, visionary mind of Peter Ostermann reached out to explain the Universe or prove it wrong, plodding along with Einstein and his beautiful formulas, you should not hesitate to follow Ostermann’s plead… “I can't do it without your help”.

The Pillars of Creation *are set off in a kaleidoscope of color in NASA's Webb Space Telescope's near-infrared-light view. The pillars look like arches and spires rising out of a desert landscape, but are filled with semi-transparent gas and dust, and ever-changing. This is a region where young stars are forming – or have barely burst from their dusty cocoons as they continue to form.*
Credits: NASA, ESA, CSA, STScI; Joseph DePasquale, A. M. Koekemoer, Alyssa Pagan (STScI).

References:

[1] https://www.peter-ostermann.de

[2] https://www.digit-verlag.de/

[3] http://en.sum-cosmology.org/wiki/Stationary_Universe_Model_(SUM)

[4] Ostermann private correspondence

[5] Rainer Kayser: https://www.n-tv.de/wissen/Vermessung-des-Alls-liefert-neue-Raetsel-article23665848.html

[6] DLF https://www.deutschlandfunkkultur.de/zweifel-an-der-dunklen-materie-100.html

[7] Adam Riess https://www.issibern.ch/hubble-constant-controversy/