

Advanced DUT Simulation Technology Reproduces 'Impossible' Galaxies Observed by JWST and Challenges ACDM

New simulations reproduce high-redshift galaxies seen by JWST and propose a radical cosmological shift beyond *ACDM*.

CURITIBA, PARANá, BRAZIL, June 29, 2025 /EINPresswire.com/ -- A newly released preprint by

To simulate the universe with mathematical precision is to dismantle myths with data and disprove fiction through gravity."

"

Joel Almeida -CEO

cosmology researcher and lead developer of the DUT Simulator, Joel Almeida, introduces a groundbreaking computational simulation based on the Dead Universe Theory (DUT), capable of reproducing the observed properties of massive galaxies at redshifts z > 8, including CEERS-1019 and GLASS-z13. These galaxies, detected by the James Webb Space Telescope (JWST), have challenged the predictions of the standard ACDM cosmological model.

Using DUT's entropy-gradient-driven gravitational collapse, the simulations achieve under 5% accuracy in stellar mass, sub-kpc radius, and formation timescales below 100 million years—outperforming ACDM expectations by factors of ~5. Crucially, DUT offers falsifiable predictions and proposes that the universe is not expanding, but retracting within a non-singular, structural black hole.

The full simulator is open-source and fully reproducible, available through ExtractoDAO for researchers worldwide.

III JWST Observes 'Impossible' Galaxies — A New Theory and Quantum Simulator Challenge the Big Bang

A new study published as a preprint by researcher Joel Almeida, in collaboration with the scientific startup ExtractoDAO S/A, proposes a bold solution to one of modern cosmology's greatest mysteries: how could massive, compact galaxies have formed so early in the universe?

Recent observations from the James Webb Space Telescope (JWST) identified galaxies such as CEERS-1019 (z = 8.67) and GLASS-z13 (z = 13.1), with stellar masses above 10¹⁰ MD and cores

smaller than 1 kiloparsec—structures that, according to Big Bang and ACDM models, should not exist at such early epochs.

In response to this enigma, the Dead Universe Theory (DUT) and its computational simulator presented remarkable results: the observed properties of these galaxies were reproduced with up to 5% accuracy, simulating ultrafast star formation (<100 million years) without requiring cosmic inflation or exotic dark matter.

"The simulations show that the universe doesn't need to have emerged from a singular point or to be expanding indefinitely. JWST data can be reinterpreted as evidence of asymmetric gravitational retraction within a larger, stable, non-singular cosmic structure," says Almeida.

The DUT model considers the observable universe to be an entropic bubble embedded in the core of a "structural black hole"—non-singular, governed by a regularized oscillatory gravitational potential, capable of stabilizing galaxy formation without violating Einstein's equations. The computational tool used, named DarkStructSim[™], is fully auditable, reproducible, and operates 100% offline, with future optional integration to quantum clouds such as IBM Quantum.

Research Highlights:

<5% accuracy in mass and size of z > 8 galaxies

Explicit computation of core temperature, <u>gravitational entropy</u>, and cosmological constants

ACDM refuted under extreme mass and redshift regimes

Falsifiability proposed: if no galaxy with z > 12 and $M > 10^{10} M\Box$ is observed by end of 2024, DUT will be considered refuted

The research is available on Research Square under the title: Preprint 1.0: JWST High-z Galaxies in the Dead Universe Theory (DUT) Cosmological Framework Read the full paper: https://www.researchsquare.com/article/rs-6952094/v1

Any researcher can now reproduce the same simulation by downloading the offline code:

I https://extractodao.com/dut

□ <u>https://zenodo.org/records/15750860</u>

https://zenodo.org/records/15765004

About the author:

Joel Almeida is a cosmology researcher and founder of ExtractoDAO, a blockchain startup developing scientific technologies based on gravitational simulations, decentralized computing, and secure research infrastructures.

Contact: j.almeida@extractodao.com
ORCID: 0000-0003-4015-7694
Simulation Platform: <u>https://zenodo.org/records/15716055</u>

Joel almeida ExtractoDAO S.A email us here Visit us on social media: LinkedIn Instagram YouTube

This press release can be viewed online at: https://www.einpresswire.com/article/826706191

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information. © 1995-2025 Newsmatics Inc. All Right Reserved.