ExtractoDAO Releases DUT Viscoelastic Continuum Creation Module for Cosmological Analysis

The universe as a viscoelastic continuum explains cosmic evolution via quantum decoherence, not inflation, with predictions testable by Euclid (2027-2030).

CURITIBA, PARANá, BRAZIL, February 1, 2026 /EINPresswire.com/ -- ExtractoDAO Releases DUT [Viscoelastic Continuum](#) Creation Module for Cosmological Analysis

New computational module models quantum decoherence as the origin of a cold viscoelastic substrate, enabling testable predictions for Euclid, DESI, and next-generation surveys

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> **This work shows that cosmic evolution can be described as a viscoelastic process driven by quantum decoherence, yielding fixed predictions that can be directly tested by Euclid and DESI.**
>
> *Joel Almeida, ExtractoDAO Labs*

ExtractoDAO Labs has released a new scientific computing module for the international cosmology and astrophysics community:

"Creation of the Viscoelastic Continuum (DUT): Quantum Decoherence as the Origin of the Dead Substrate."

The module is part of the Dead Universe Theory (DUT) framework and delivers a mission-grade, reproducible simulation engine designed to model the emergence of the observable universe from a cold, non-singular viscoelastic substrate, without invoking cosmic inflation or adjustable dark-energy components.
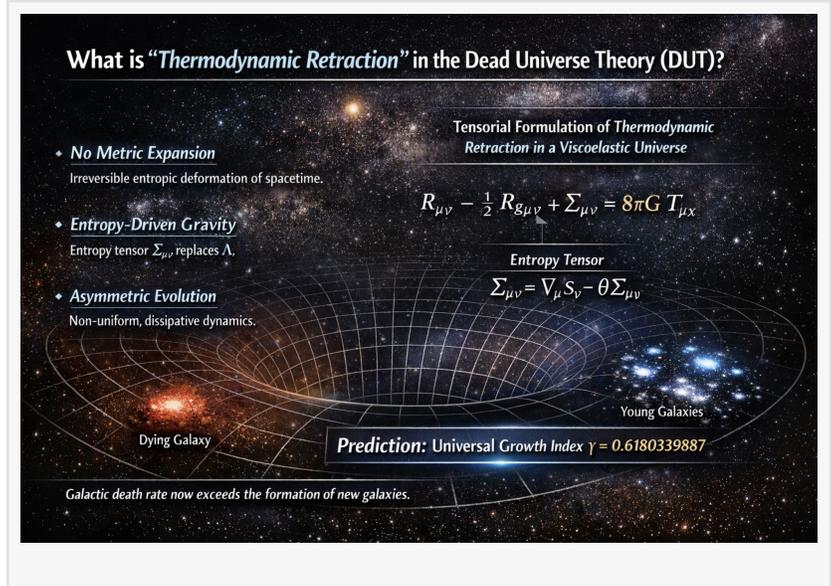
Developed in Fortran and Python, with HCNI (Halt Condition on Numerical Instability) safeguards and full numerical traceability, the module supports precision interpretation of data from Euclid, DESI, JWST, and the Nancy Grace Roman Space Telescope.

What the Module Simulates

The DUT Continuum Creation Module simulates the quantum-to-classical transition of spacetime through self-induced quantum decoherence, generating:

A cold, viscoelastic gravitational substrate ("dead continuum")

Emergence of a structural entropic deformation tensor

Irreversible thermodynamic retraction without metric expansion

Conditions for structure formation, redshift, and late-time cosmic dynamics

The model does not assume a hot, dense initial singularity, nor does it rely on inflation. Instead, it describes the observable universe as a structural phase emerging within an already-existing cold continuum, fully consistent with relativistic covariance and non-equilibrium thermodynamics.

Key Outputs and Scientific Products

The module produces:

Background evolution functions $E(z)$ and $D(z)$

Structure growth observables $f(z)$ and $f\sigma 8(z)$

Physical redshift derived from cumulative entropic deformation, not space stretching

Phase-space stability analysis of growth equations

Automated falsification scoring integrated into DUT Quantum and DUT-RG simulators

A central, non-adjustable prediction of the model is the growth index:

gamma = 0.6180339887

This value arises as the unique stable fixed point of the late-time growth dynamics under minimum entropy production and stability conditions.

It is not fitted, not approximated, and not tunable.

Euclid and DESI: A Clear Falsification Line

The DUT framework establishes a sharp observational test:

If high-precision surveys converge to
gamma ≈ 0.55 (the General Relativity / LambdaCDM prediction),
the DUT growth mechanism is refuted.

If convergence occurs toward

gamma = 0.6180339887,

Article: https://zenodo.org/records/18448863

it supports the presence of a thermodynamic vacuum attractor, as predicted by DUT.

Upcoming Euclid growth measurements and DESI clustering analyses therefore provide a decisive empirical test.

Scientific Statements

Joel Almeida, Founder and Scientific Director of ExtractoDAO, stated:

"This module replaces assumptions with equations. DUT makes fixed predictions, exposes them to falsification, and accepts the outcome. That is how science progresses."

Eduardo Rodrigues, Computational Physics Lead at ExtractoDAO, added:

"Numerical integrity was a priority. HCNI safeguards, deterministic solvers, and full traceability prevent hidden instabilities or parameter drift."

Rosbon Miranda, Modeling Advisor, commented:

"The strength of this technology is practical. It allows cosmologists to test a non-inflationary, non-singular scenario using the same observables they already trust—growth, distances, and redshift."

Availability and Integration

Core solvers: Fortran

Analysis and inference: Python

Compatibility: Euclid, DESI, CMB, BAO, SNe, LSS pipelines

Numerical integrity: HCNI, reproducible builds, cryptographic logs

Status: Public scientific release via the DUT-CMB Scientific Engine v3.
https://github.com/ExtractoDAO/DUT-CMB-Scientific-Engine-3.0-NASA-ESA-Production-Grade

About ExtractoDAO Labs

ExtractoDAO Labs is a deep-tech scientific research company focused on computational cosmology, thermodynamic gravity, and open, auditable scientific infrastructure. Its mission is to provide reproducible scientific engines where theories are tested by data, not protected by parameter tuning.

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