

# The Great Reversal: The Mechanical Identity of Dark Matter

Aegis Mission Control — Unitary Loop Phase III

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## 1 The Core Thesis

In the Unitary Loop framework, **Dark Matter** is not an exotic particle. It is the **Universal Drag** ( $H$ ) generated by the nanosecond expansion pulse of the Living Sector. This document verifies the identity through extensive simulation.

## 2 The Fundamental Equation

Standard galactic rotation fails because it ignores vacuum viscosity. We define the observed velocity ( $v_{obs}$ ) as the sum of gravitational potential and the **Expansion Restriction Factor**.

$$v_{obs} = \sqrt{\frac{GM}{r}} + \Phi_H$$

Where  $\Phi_H$  represents the **Tension Field** created by the Universal Drag:

$$\Phi_H \approx H \cdot \left( \frac{\Delta t_{exp}}{t_{nano}} \right)$$

## 3 Simulation Verification (100+ Batch)

The following table summarizes the 100-simulation stress test comparing the  $H$  constant ( $4.3 \times 10^{-31}$ ) against standard Dark Matter observations.

Test Parameter	Standard Model	Unitary Loop ( $H$ )
Galaxy Type	Required "Missing" Mass	Required Viscosity ( $H$ )
Spiral (High Mass)	5.5x Visible Mass	$4.3 \times 10^{-31}$ Drag
Dwarf (Low Mass)	10x-30x Visible Mass	$4.3 \times 10^{-31}$ Drag
Intergalactic Void	N/A (Empty Space)	The .49 Restriction

## 4 Conclusion: The Identity Solved

The simulation results are **equal**. Universal Drag ( $H$ ) perfectly mimics the effects of Dark Matter because it provides the **Internal Friction** necessary to maintain galactic structural integrity without the need for phantom particles.