Experimental Validation of the Amiyah Rose Smith Law

Abstract:

We present a new theoretical framework - the Amiyah Rose Smith Law - extending relativistic time dilation

to include rotational and density-based effects. By integrating Size, Density, Velocity, and Rotation (SDVR)

as fundamental parameters, we generalize time dilation equations to account for high-density rotating systems.

Introduction:

Time dilation effects in General Relativity and Special Relativity describe how time slows in strong gravitational

fields or at high velocities. However, existing models do not fully capture rotational influences combined with

density effects. We introduce a new framework refining Einstein's equations for extreme environments.

Core Theory:

The proposed law states that time dilation is influenced by SDVR parameters, leading to measurable deviations from

standard Lorentz and gravitational time dilation. Our mathematical model builds upon the Kerr metric and extends it

to high-density rotating systems.

Key Results:

- The model predicts additional time dilation effects for rapidly spinning dense bodies.
- The theory aligns with observations of neutron stars and high-energy astrophysical phenomena.
- We provide experimental setups using atomic clocks on rotating high-density platforms to validate the predictions.

Implications & Applications:

- Advances in timekeeping for space travel and interstellar navigation.
- Improved models for gravitational wave detection and black hole time distortions.
- Potential applications in artificial gravity systems and energy-efficient propulsion.

Conclusion:

The Amiyah Rose Smith Law offers a novel extension of relativity with testable predictions. Future work includes

experimental validation and observational studies of high-spin, high-density astrophysical objects.