The Pliatsikas Formulation: Mathematical Foundations of Geometric Mass Quantization

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1 The Practical Master Equation

This is the phenomenological form of the law, utilized for calculating the mass of any specific particle, atom, or molecule based on the electron ground state.

$$\boxed{m(n) = m_e \times \left(\frac{n}{2}\right)^2} \tag{1}$$

Where:

- $\mathbf{m(n)}$: The predicted mass of the target particle (in MeV).
- $\mathbf{m_e}$: The mass of the Electron (The geometric ground state, ≈ 0.511 MeV).
- $\mathbf{n}$: The Geometric Quantum Number (An integer: $1, 2, 3...$).
- **2**: The Topology Factor. This represents the spinor/Möbius "double loop" requirement of the fundamental electron geometry.

2 The Theoretical Form (First Principles)

This equation describes the physical origin of the mass terms, deriving them from the standing wave harmonics of a resonant wormhole throat.

$$\boxed{m(n) = \frac{\hbar}{2cR_{th}} \times n^2} \tag{2}$$

Where:

- $\hbar$: The Reduced Planck Constant (representing the action of the vacuum).
- **c**: The Speed of Light.
- $\mathbf{R_{th}}$: The Radius of the Wormhole Throat. This is derived from the electron Compton wavelength: $R_{th} \approx \lambda_c/\pi$.
- **n**: The Harmonic Mode (the integer number of vibrations supported by the throat geometry).

3 The Prediction Formula (Inverse Scan)

This algebraic inversion is utilized to scan experimental data for ”missing” particles or resonances (such as the 96 GeV anomaly or Element 120).

$$\boxed{n = 2 \times \sqrt{\frac{M_{target}}{m_e}}} \tag{3}$$

Methodology for Discovery:

1. Select a target mass (M_{target}) from experimental anomalies (e.g., CERN bumps).
2. Divide by the electron mass (0.511 MeV).
3. Calculate the square root of the ratio.
4. Multiply by the Topology Factor (2).
5. **Criterion:** If the result is approximately an integer (± 0.1), it indicates a stable geometric resonance.