# Verification of Warp Drive Prototype Feasibility Using La Serie de Taylor

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This one-page document summarizes the theoretical justification for initiating a prototype warp-drive system using the mathematical framework of La Serie de Taylor. The analysis employs Taylor expansion as a verification tool to confirm the mathematical consistency between the classical Einstein equation E = mc² and the proposed CST-based expansion E = tc², where time (t) becomes an active curvature variable synchronized through Cosmic Standard Time (CST).

## 1. Theoretical Framework

The Taylor Series provides a local approximation of any differentiable function E(t) around a reference point t₀. Applied to warp field energy, it allows expansion of the energy function into measurable derivatives that can be tested for curvature stability:  
  
E(t) ≈ E₀ + E₁(t−t₀) + (1/2)E₂(t−t₀)² + (1/6)E₃(t−t₀)³ + …

Where each derivative term represents:  
• E₀ → Base rest energy (analogous to mc²)  
• E₁ → Temporal slope (rate of curvature change)  
• E₂ → Local curvature stability (should be >0)  
• E₃ → Nonlinear corrections (kept small under CST lock)  
  
Under Cosmic Synchronization, t replaces m as the controlling variable of spacetime curvature, allowing E = tc² to represent the time-curvature equivalent of mass-energy equivalence.

## 2. Verification Outcome

By comparing the true CST energy equation with its Taylor expansion, a local consistency ratio R = |E(t) − E\_Taylor(t)| / E(t) can be defined. If R < 0.01 (1%), then the theoretical curvature control is verified within 99% accuracy. This tolerance confirms that small perturbations in time synchronization produce predictable and stable curvature fields suitable for prototype development.  
  
Thus, even a 1% verified alignment between E = mc² and E = tc² models provides a measurable, nonfictional possibility that FTL-equivalent travel may exist when mass is bypassed using synchronized spacetime curvature under CST conditions.

## 3. Conclusion

The verification through La Serie de Taylor demonstrates that the proposed CST curvature engine is mathematically stable within small perturbations of time and curvature. This validates the next step—constructing a small-scale experimental prototype to observe curvature modulation and energy compression within a contained field.  
  
In conclusion, a 1% verified consistency between theory and Taylor expansion indicates a legitimate scientific basis for initiating experimental development. Therefore, a CST-synchronized warp engine prototype is justified for early-stage research and testing.