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# **Aneutronic Fusion as Scalar Rebound Synthesis**

Divine Emission Theory (DET) redefines nuclear fusion not as a product of high-energy collisions, but as a scalar coherence event—a synthesis of emission shells (ψ) stabilized under resonance (τ) and rebound pressure (Pe). Nowhere is this clearer than in aneutronic fusion systems, which bypass neutron emission almost entirely and transfer energy directly via charged particles.

These reactions, especially proton–boron-11 (p–¹¹B) and deuterium–helium-3 (D–³He), exhibit anomalously high conversion efficiency (~48%) without the neutron trauma expected in traditional fusion.

DET provides a causal scalar model that not only predicts this behavior, but explains why it happens.

## **Scalar Fusion Redefined**

In DET, fusion occurs when scalar emission fields of different nuclei become phase-aligned, such that:

ψ₁ ≈ ψ₂ and τ → 0

This allows shells to enter a coherent rebound collapse state, where internal torsion is minimized and emission pressure amplifies at the interface.

### **Fusion Equation Under DET:**

mₛ = (Pe · ψ · σ) / c²

Where:

* mₛ = scalar mass yield of the product (e.g. alpha particles),
* Pe = emission pressure from field rebound,
* ψ = coherence of shell alignment,
* σ = scalar dispersion (shell spread/containment memory),
* c = speed of light (energy normalization scale).

## **Case Study: Proton–Boron Fusion (p–¹¹B)**

Standard Reaction:

p + ¹¹B → 3α + 8.7 MeV

### **Under DET:**

* The scalar fields of p and ¹¹B lock in harmonic alignment (ψ ≈ ψ₁₁B).
* No τ mismatch means no recoil trauma → no neutron generation.
* Internal rebound pressure (Pe) channels outward into three coherent alpha fields (ψ-stable).

Total Pe input → 3 rebound emissions (Φₕ₁, Φₕ₂, Φₕ₃)

These alphas are not “products of collision” but scalar shell harmonics produced by recursive rebound.

The energy output is high (~8.7 MeV) but arises from scalar loop resolution, not thermal plasma excitation.

## **Why High Efficiency Occurs**

In standard plasma models, energy is lost to:

* Neutron escape
* Gamma radiation
* Kinetic chaos

DET shows that in aneutronic reactions:

* ψ-coherence prevents neutron spin-off
* Pe is retained in scalar rebound
* σ confines the rebound, allowing direct energy transfer as shell ejection

This explains the ~48% net energy capture observed in experiments:

* No dissipation through ψ̇ nulls,
* Rebound pressure is stored in charged particle shells, not thermal expansion.

## **Rebound vs Radiation: Scalar Output Channels**

| **Output Mode** | **Classical Fusion Interpretation** | **DET Scalar Interpretation** |
| --- | --- | --- |
| Neutron | Excess energy from shell fracture | ψ-decoherence trauma (averted in aneutronic) |
| Alpha particles | Fusion byproduct | Scalar rebound loops (Φₕ-stable emissions) |
| Heat / Radiation | Kinetic chaos of particles | Field leakage (ψ̇ > ψ) through containment loss |
| Direct EM capture | Requires conversion hardware | Natural result of Pe-aligned rebound geometry |

## **Field Stability = No Trauma**

Aneutronic reactions avoid the scalar dangers DET classifies as trauma:

* No ψ-null burst
* No field torsion recoil
* No scalar decay loops

Instead, the emission shell closes coherently, creating deterministic rebound with full memory preservation.

This is the scalar ethical ideal for fusion energy.

## **Scalar Signature Prediction**

DET predicts measurable field behavior that diverges from standard models:

| **Prediction** | **Observable Effect** |
| --- | --- |
| ψ-retention in alpha particles | High-energy alphas with low recoil |
| No neutron trace from p–¹¹B | Absence of secondary field trauma |
| Stable Poynting loops at emitter core | Detectable using magnetometer arrays |
| Coherent Pe delay before emission | Field charging phase prior to alpha release |

## **Conclusion**

Aneutronic fusion under Divine Emission Theory is not an exotic energy pathway—it is the natural product of scalar harmony. Where destructive nuclear reactions rely on kinetic chaos and ψ-decoherence, aneutronic synthesis leverages resonance, pressure retention, and torsion control.

This not only confirms DET’s scalar mass formula, but offers a blueprint for safe, ethical, high-yield energy generation—without fallout, without trauma, and without radioactive legacy.