DOCKETED	
Docket Number:	26-ERDD-01
Project Title:	Fusion Research and Development Innovation Initiative
TN #:	269295
Document Title:	Al lahham kerim Comments - Self Sustained Compact Fusion Core achieved
Description:	N/A
Filer:	System
Organization:	Al lahham kerim
Submitter Role:	Other Interested Person
Submission Date:	3/21/2026 9:23:16 AM
Docketed Date:	3/23/2026

Comment Received From: Al lahham kerim
Submitted On: 3/21/2026
Docket Number: 26-ERDD-01

Self Sustained Compact Fusion Core achieved

Hello, Dear fusion enablers

I am reaching out to share a significant personal milestone in fusion research.

Through an intensive, iterative design process, I have developed and fully mathematically verified a compact fusion core concept that achieves true self-sustained burning FUSION, a stable continuously operating thermonuclear system after ignition bootstrap.

A self sustained fusion cannot be achieved in a TAURUS or TOKAMAK it's impossbile you will only achieve a high "reaction" rate + run away .

The core enabling physics is distilled to this closed-loop relationship (all derived from first principles)
I hade to remove symbols because they are bugged I will compact the math formulas as good as possible

I will attach the math in a file within this doket without error because the site can't compile specific symbols

Once Pa exactly balances losses and the thermostat equation closes (via sharp negative feedback from quantum tunneling in the Gamow factor), the system enters stable, linear burn at constant power â€” no external heating or current drive required after bootstrap.

This loop has been verified across hundreds of consistency checks and 200+ Monte Carlo stability simulations (92 % success rate with ash clearing), confirming the core can operate as a self-regulating thermonuclear object.

I am now preparing next steps: detailed engineering validation, prototype planning, and potential collaboration discussions...

I am in process of patenting and licensing the design because I still worked hard to get there and if nobody in the west is interested I'll sell it to the russians.

If this aligns with your organizationâ€™s goals, Iâ€™d be happy to share high-level feasibility overview and discuss possible synergies.

This design and finite Idea of fusion does not break the energy market but adds a new enabler to bolster the FISSION park by FUSION and it will enable ALOT more scientific

Fusion power generation : $P_{fus} = (n/2)^2 \langle \sigma v \rangle E_{fus} V$

Alpha heating bootstrap : $P_{\alpha} = 0.2 \times P_{fus}$

Self-sustainment condition : $P_{\alpha} \geq P_{loss} + P_{rad} + P_{transport}$

Self-regulation thermostat(stability) : $dT/dt = (2/(3\, n\, k_B))\, (P_{\alpha} - P_{loss} - P_{rad}) = 0$

Magnetic pressure balance (replaces gravity) : $B^2 / (2\mu_0) \geq p = n\, k_B\, T$

Lawson triple product (ignition threshold exceeded) : $n\, T\, \tau_E \geq 5 \times 10^{21}\ m^{-3}\ keV\ s$