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# A New Nikola Tesla? Engineer Devises “UFO Patents” for the U.S. Navy

The government is experimenting with limitless energy and the ability to modify spacetime.

(https://interestingengineering.com/author/paul-ratner) By Paul Ratner  
September 24, 2017 (https://interestingengineering.com/author/paul-ratner)

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U.S.Navy fighter jet breaking the sound barrier.

Source: Pixabay

Theoretical inventions known as the “UFO patents” have been inflaming worldwide curiosity. A product of the American engineer Dr. Salvatore Cezar Pais, the patents were filed during his work for the U.S. Navy and are so ambitious in their scope and imagination that they continue to draw interest despite any clear evidence that they are feasible. The patents include designs for a futuristic hybrid vehicle with a radical propulsion system that would work equally well in the air, underwater, and in space, as well as a compact fusion reactor, a gravitational wave generator, and even a “spacetime modification weapon”. The technology involved could impact reality itself, claims its inventor, whose maverick audacity rivals that of Nikola Tesla

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## The patents

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[https://patents.google.com/?inventor=Salvatore+Pais&og=inventor:\(Salvatore+Pais\)\)](https://patents.google.com/?inventor=Salvatore+Pais&og=inventor:(Salvatore+Pais)))

for yourself, it's evident that the tech necessary to actually create the devices described is beyond our current capabilities. Yet research into many of these fields has

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gone on for years, which may explain why the Navy expressed an interest. Another likely influence is the fact that the Chinese government seems to be working to develop similar technology.

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One of the most attention-grabbing designs by Dr. Pais is the 2018 patent ([https://patents.google.com/patent/US10144532B2/en?inventor=Salvatore+Pais&oc=inventor\(Salvatore+Pais\)\)](https://patents.google.com/patent/US10144532B2/en?inventor=Salvatore+Pais&oc=inventor(Salvatore+Pais))) for a cone-shaped craft of unprecedented range and speed. The amazing vehicle would be able to zoom around

with ease both high in the air and deep in the sea. It would travel through air, water, and space by generating a quantum vacuum with an energy field. This vacuum around its body would help it push away any molecules it encounters, regardless of the medium. The craft would also not leave any heat signature, making it virtually undetectable. Controlling the "quantum field fluctuations" in the vacuum would

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counteract inertia and resistance, resulting in “extreme speeds.” Reducing a craft’s inertial and gravitational mass in this way could be transformational for space travel. It sounds like an enticing design. However, as noted, it’s not something we could actually create with current technologies.

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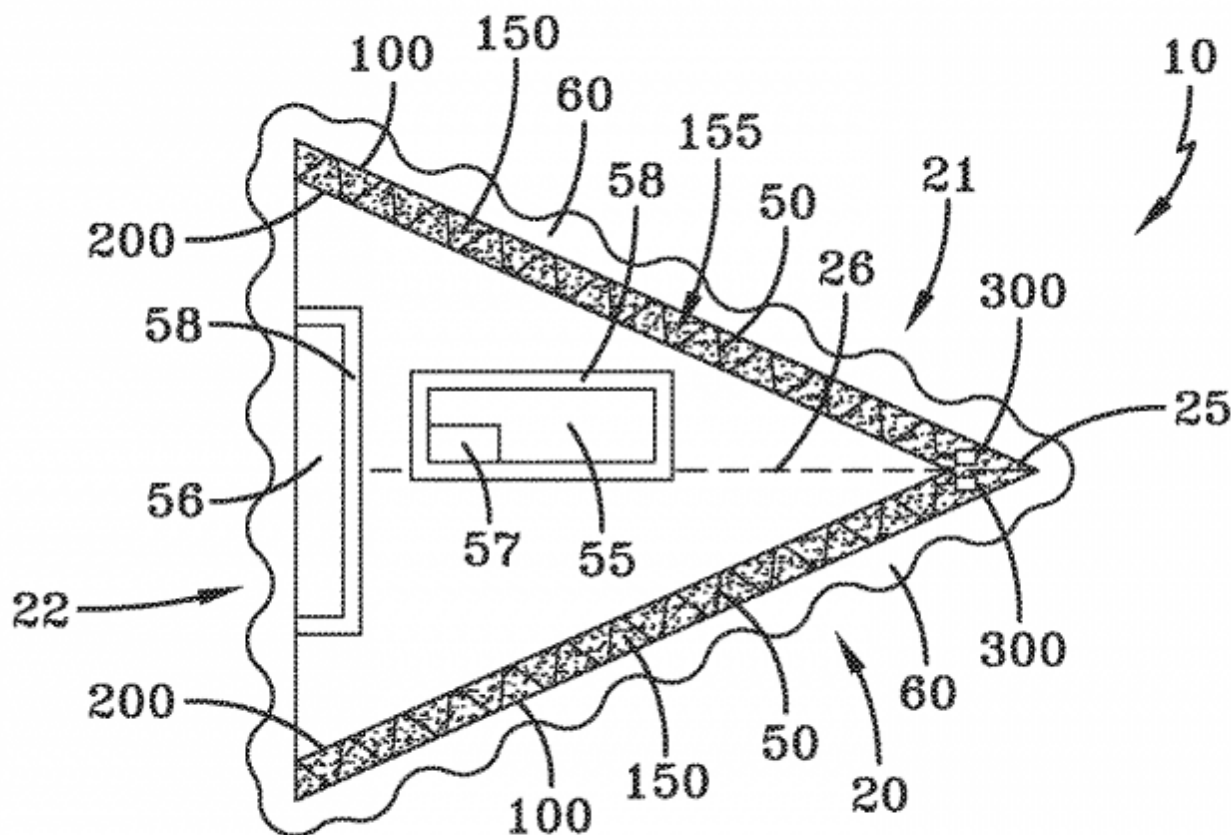
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Craft using an inertial mass reduction device. Credit: Pais / Department of Navy.

Another futuristic patent with far-reaching ramifications is Pais' Plasma Compression Fusion Device. It would be relatively small, less than two meters in length, and house fusion reactions generating power in the gigawatt (one billion watts) to terawatt (one trillion watts) range. By comparison, a coal plant or a nuclear reactor

(<https://interestingengineering.com/how-do-floating-nuclear-power-plants-work>) generate energy in the one to two gigawatt range.

Notes from researchers who worked on vetting Pais' ideas indicate that a possible outcome of the plasma fusion device and the high energy levels it may generate is the "Spacetime Modification Weapon" (SMW). Research documents refer to it as "a weapon that can make the Hydrogen bomb seem more like a firecracker, in comparison."

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# Potential Uses

- What is the Navy's potential use for this invention:
- Imagine our Navy's ships, submarines aircraft and (Marine Corps) armored ground vehicles being powered with safe, reliable, virtually limitless fusion energy. Imagine the power of the Sun confined in a compact, relatively small space. With the Plasma Compression Fusion Device (PCFD), this figment of imagination becomes a tangible reality.
- The present invention can produce power in the Gigawatt to Terawatt range (and higher) with input power in the Kilowatt to Megawatt range, and possibly lead to Ignition plasma burn.
- Under uniquely defined conditions, the Plasma Compression Fusion Device can lead to development of a Spacetime Modification Weapon (SMW- a weapon that can make the Hydrogen bomb seem more like a firecracker, in comparison). Extremely high energy levels can be achieved with this invention, under pulsed ultrahigh current (I) / ultrahigh magnetic flux density (B) conditions (Z-pinch with a Fusion twist).
- SMW Energy Yield  $\sim I^2 B^3$
- Is there the potential for commercial use – YES
- The design of Thermonuclear Fusion Reactors (safe, reliable, limitless energy) for commercial electricity generation.
- The design of Fusion-driven Aircraft Jet Engines.
- The design of Fusion-induced Intergalactic Space Drives.

FOUO- PAX 285 - Plasma Compression Fusion Device

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Research notes from Navy's experiments with Pais's plasma fusion device. *Source: FOIA / Department of Navy.*

Among Pais's other inventions with military applications is a patent

(<https://patents.google.com/patent/US10135366B2/>) for an electromagnetic field

generator. It could create "an impenetrable defensive shield to sea and land as well as

space-based military and civilian assets" which would be used against ballistic and

cruise missiles that avoid radars and other defenses. The shield would also be a barrier

against dangers from space like coronal mass ejections and wayward asteroids.

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Pais's electromagnetic field generator consists of a shell, an electrostatic generator, a power plant, a thermoelectric generator, and an electric motor. Source: Salvatore Pais / U.S Department of Navy  
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Another device that could deflect asteroids is the high-frequency gravitational wave generator ([https://patents.google.com/patent/US10322827B2/en?inventor=Salvatore+Cezar+Pais&oq=inventor:\(Salvatore+Cezar+Pais\)\)](https://patents.google.com/patent/US10322827B2/en?inventor=Salvatore+Cezar+Pais&oq=inventor:(Salvatore+Cezar+Pais))) conceived by Pais. It would work to intersect generated electromagnetic fields and create waves of gravity. These could be used to propel spaceships to the far reaches of the galaxy, among other uses.

## The Pais Effect

The fantastical inventions devised by Dr. Pais largely build upon an idea that he calls "The Pais Effect." In his patent write-ups and in an interview (<https://www.thedrive.com/the-war-zone/31798/the-secretive-inventor-of-the-navys-bizarre-ufo-patents-finally-talks>) with *The Drive*, he described it as "the generation of extremely high electromagnetic energy fluxes (and hence high local energy densities) generated by controlled motion of electrically charged matter (from solid to plasma states) subjected to accelerated vibration and/or accelerated spin, via rapid acceleration transients."

This effect amounts to the ability to spin electromagnetic fields to contain a fusion reaction. The electromagnetic energy fields would be so powerful that they could "engineer the fabric of our reality (<https://www.thedrive.com/the-war-zone/28729/docs-show-navy-got-ufo-patent-granted-by-warning-of-similar-chinese-tech-advances>) at the most fundamental level," writes Pais.

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In practical terms, this invention could lead to a veritable revolution in propulsion, quantum communications, and create an abundance of cheaply-produced energy. Certainly, an extraordinary claim that requires extraordinary evidence, as posits the Sagan standard (<https://effectiviology.com/sagan-standard-extraordinary-claims-require-extraordinary-evidence/>).

## The critics

The assertions by Dr. Pais have drawn a fair share of criticism and incredulity from fellow scientists. The nuclear engineer and researcher Carl Willis, who is also a reactor supervisor at the University of New Mexico, called (<https://www.thedrive.com/the-war-zone/38937/navy-ufo-patent-documents-talk-of-spacetime-modification-weapon-detail-experimental-testing>) Dr. Pais's work, "a classic case of pathological science" that's heavy on jargon and "nonsensical statements" while providing little evidence that his ideas, which seem to contradict established physics, can bear fruit.

Physicist Stephen Webb of the University of Portsmouth in England was equally blunt, saying (<https://www.thedailybeast.com/did-the-navy-try-to-build-its-own-ufo-that/>), "I find it puzzling frankly that the patents were awarded." He called Pais's ideas a, "wonderful wish list of things that we want," which "doesn't make sense in terms of physics."

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Dr. Charles Collett, who teaches Physics at Muhlenberg College, did acknowledge (<https://www.thedrive.com/the-war-zone/31798/the-secretive-inventor-of-the-navys-bizarre-ufo-patents-finally-talks>) that in theory, the Pais Effect may not be “outlandish” but in practice, there are “significant engineering challenges” in fashioning a device that would be able to produce the kind of electromagnetic forces Dr. Pais envisions in his patents.

## The trials

Despite the well-founded unease at Dr. Pais’s inventions, the Navy took them seriously enough to run experiments for three years and even found some of them “operable”, although the extent of that alleged operability is under debate. In the patent documents, two Navy officials seemed to assert (<https://www.thedrive.com/the-war-zone/29232/navys-advanced-aerospace-tech-boss-claims-key-ufo-patent-is-operable&sa=D&source=editors&ust=1632154743398000&usg=AOvVaw0CHJ8tPD9GdZaZa>)

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the operability of the inventions.

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Furthermore, in correspondence (<https://www.thedrive.com/the-war-zone/39012/the-navy-finally-speaks-up-about-its-bizarre-ufo-patent-experiments>)

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with The Drive’s “War Zone,” Timothy Boulay of NAWCAD, stated that Pais’s High Energy Electromagnetic Field Generator was, in fact, tested from 2016 until 2019, at a cost of \$508,000. The team working on the project consisted of at least 10 technicians and

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the Pais Effect “could not be proven,” shared Boulay.

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What happened subsequently with the tested device and further investigations is not known at this point. There are indications (<https://www.thedrive.com/the-war-zone/38937/navy-ufo-patent-documents-talk-of-spacetime-modification-weapon-detail-experimental-testing>) in documents obtained by The Drive's WarZone through the Freedom of Information Act that the inventions could be moved to another research department in the Navy or the Air Force, or possibly even to NASA or DARPA, but whether that really happened is not clear.

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**Objective:** Design a test article and instrumentation to demonstrate the experimental feasibility of achieving high, electromagnetic (EM), field-energy, flux values toward the design of advanced High Energy Density / High Power propulsion systems

**Product Description:** Test apparatus, instrumentation and operational method to prove that by coupling an electrically charged system's high frequency of axial spin (possibly coupled with high vibration frequencies) operated in a rapidly accelerated transient mode, we can achieve extremely high electromagnetic field-intensity (EM energy flux) values.

**Warfighter Benefit:** Realization of this technology moves propulsion technology beyond gas dynamic systems and enables the design of a field propulsion-based hybrid aerospace-undersea craft.



**Transition Details:** ONR, NRL, DARPA - possible continuation of project funding to be provided by these DOD agencies.

**Transition Sponsor:** If the feasibility study determines this experiment can be conducted at PSEF, funding will be pursued to build the test asset and run the test.

**Transition Date:** 9/30/2019 (Planned)

**NAE Gap/STO:** Strike Operations (STK)/STO-1: Responsive Engagement

**Total S&T Funding:** \$515.30K

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Pais's Electromagnetic Field Generator tested by the Navy researchers. Source: FOIA / U.S. Navy

## Who is Dr. Pais?

As a creator of such potentially pioneering designs, Dr. Pais has understandably drawn scrutiny from internet denizens and skeptical scientists but as he rarely gives

interviews (partially due to classified research for the military), he has remained largely enigmatic.

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**His author bio** (https://ieeexplore.ieee.org/abstract/document/8871349/authors#authors) in a 2019

concept paper on the Plasma Compression Fusion Device, published by the peer-reviewed engineering journal IEEE Transactions on Plasma Sciences, provides some

clues. The paper proposes a compact plasma compression fusion device that seeks to generate tremendous energy through nuclear fusion and describes Dr. Pais as a

**Purposes** mechanical and aerospace engineer who currently works for the Navy's Strategic Systems Program (https://getadmiral.com/pb/?utm\_source=interestingengineering.com&utm\_medium=pb&session=4139678387

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Department of Defense in Washington, DC. According to its website, the SSP is “the Nation's premier provider of cost-effective, safe and secure sea-based strategic deterrent systems and related technologies.” It works to develop advanced submarines and weapons for the stated mission “to prevent nuclear war.”


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Dr. Pais's education includes a Ph.D. from Case Western Reserve University in Cleveland, Ohio and his prior credentials include work as a NASA Research Fellow, working for the Naval Air Warfare Center Aircraft Division (NAWCAD) (<https://www.navair.navy.mil/nawcad/>) in Maryland, and work as a general engineer as well as an advanced concept analyst for Northrop Grumman Aerospace Systems (<https://www.northropgrumman.com/who-we-are/business-sectors/aeronautics-systems/>), one of the world's top companies for next-generation aerospace and defense technologies.

Dr. Pais, claims the bio, utilizes his “advanced knowledge” in aerodynamics, with particular expertise in designing hypersonic missiles and vehicles. His wide-ranging research interests also extend to electrical engineering, room temperature conductivity, and new quantum technologies with a concentration on laser power generation and high-energy electromagnetic field generation.

The inventor's credentials are definitely impressive. Did he come up with devices that not only defy known physics and physicists but will radically change our life through limitless energy and high-speed all-medium vehicles? Time will tell, but in his exchanges (<https://www.thedrive.com/the-war-zone/31798/the-secretive-inventor-of-the-navys-bizarre-ufo-patents-finally-talks>) with *The Drive*, Dr. Pais stands by his technological visions and asks the skeptics to “try to keep an open mind in regard to my work.”

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