

“Cube-In-A-Sphere” UAP Potentially Explained Using “UFO Patents” And Advances in Nanotechnology

A recent article by The Hill has highlighted the reports of “cube-in-sphere” UAP’s military pilots have been seeing as reported by Graves where he once again highlights how often our pilots are seeing these things and why he doesn’t believe they are conventional drones or balloons. Article is below for your reference.

<https://thehill.com/opinion/national-security/3545072-stunned-by-ufos-exasperated-fighter-pilots-get-little-help-from-pentagon/>

Zoom image will be displayed



Artist rendition

TLDR; The major takeaway is that trans medium MHD craft that operate silently and stealthily are technologically feasible and the energy density limitations that would normally require a compact fusion reactor can be overcome using aerogel designed to hold a vacuum to create buoyancy.

Quick Recap on MHD and the First UFO Patents

About a month ago I did a deep dive post into UFO patents and how magnetohydrodynamic (MHD) propulsion systems could explain some of the observations. It includes an expired patent from the 1960's and a few newer patents describing not only the propulsion, but how the plasma field can make the craft invisible to radar. The post is below for your reference (links to the patents are in the post.)

https://www.reddit.com/r/UFOs/comments/uz5sdl/i_heard_you_guys_like_ufo_patents_heres_what_the/

May 30, 1967

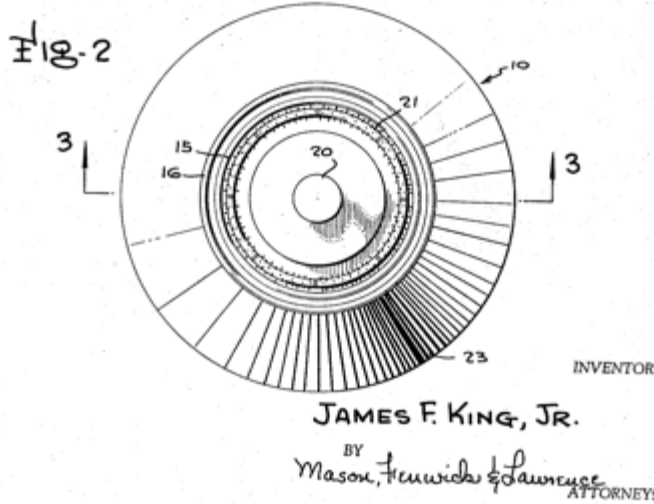
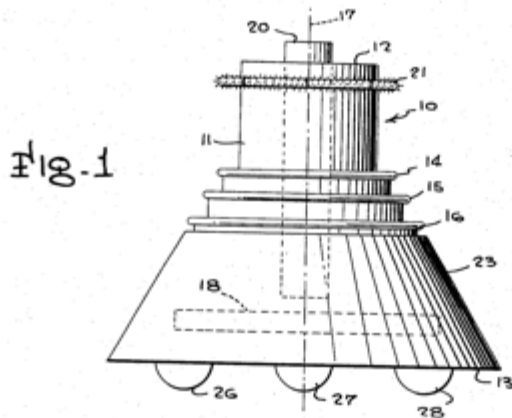
J. F. KING, JR

3,322,374

MAGNETOHYDRODYNAMIC PROPULSION APPARATUS

Filed Sept. 30, 1964

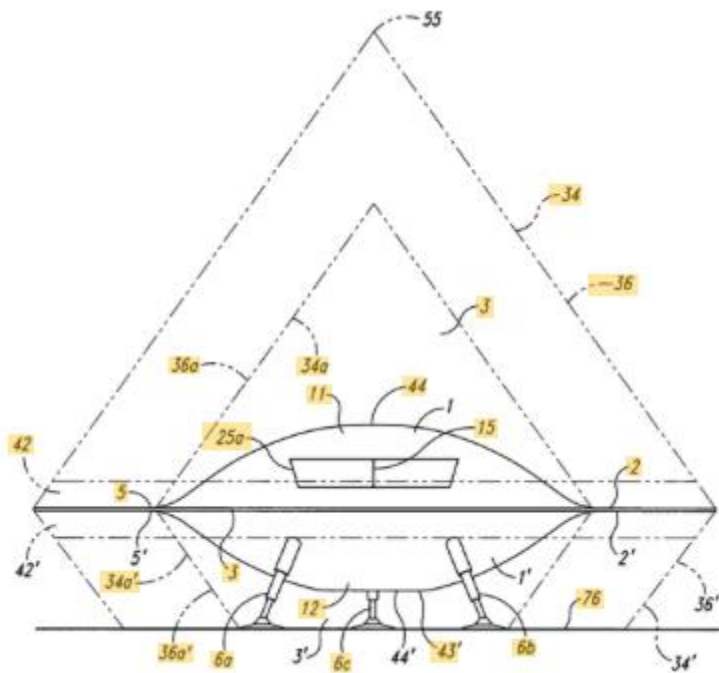
2 Sheets-Sheet 1



1964 patent for MHD propulsion

To just give a brief recap, it's not just theoretically possible to create a craft that flies without wings, propeller nor heat source, it's been demonstrated albeit with simple devices. Furthermore, such a craft has been demonstrated for use in water as well as the medium also works.

Additionally, it's a proposed method for future space craft. **The major takeaway is that trans medium MHD craft that operate silently are technologically feasible.** The reason it isn't in practical use isn't because of theory or feasibility, but because it's insanely energy inefficient to the point it's not only wasteful, but extremely limited by fuel sources. In a nutshell, you basically need a compact nuclear energy source to really make this idea work.



2005 patent for fusion powered MHD trans medium craft invisible to radar.

The idea of a compact fusion reactor may sound too far technologically advanced for some people, but I cover why that may not be the case in my original ufo patent post. What I've discovered now after being inspired by the cube-in-a-sphere report is that there is a "trick" that is also technologically feasible and it may even potentially explain the sphere around the cube.

Using Aerogel to Create Lighter Than Air Craft (A New Submarine)

If you've never heard of aerogel it's a metamaterial made using nanotechnology where a solid material is created in a way that it's made up of a complex network of air pockets to the point where it's mostly air and there is very little solid material. It dawned on me that perhaps such a material could have the air evacuated so that it's mostly composed of vacuum. This is akin to how a submarine uses buoyancy to operate. **The energy density limitations that would normally require a compact fusion reactor can be overcome using aerogel designed to hold a vacuum to create buoyancy.**

Aerogels are fabricated of various materials; silica, i.e. quartz, is one suitable material. To make a flotation solid with vacuum fill, one has to have a compressive strength that exceeds atmospheric pressure (15 psi), and an atmosphere-impermeable outer layer.

For a sufficiently large object, volume (goes as dimension cubed) will always dominate area (goes as dimension squared), so the weight of the impermeable outer layer may be regarded as insignificant. We need only consider the density of the aerogel structure as it relates to the compressive strength.

It turns out it's not only theoretically possible, but I found a patent for it connected to the DOE and Los Alamos National Laboratory.

<https://patents.google.com/patent/US11027816B1/en>

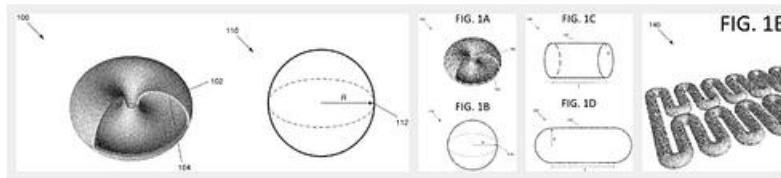
Zoom image will be displayed

Air-buoyant structures and vehicles

Abstract

Air-buoyant structures, and vehicles incorporating air-buoyant structures, are provided. Hollow, air-buoyant structures may include a shell of ultra-low density aerogel material, foam material, or vapor-expanded material that is strong and stiff enough to withstand atmospheric pressure and lightweight enough to achieve buoyancy in air under evacuation. The shell may be reinforced with a suitable reinforcing material, such as helical nanofibers. The air-buoyant structures may also include vacuum pumps and valves operably connected to or integrated with the hollow shell. The vacuum pumps and valves may be configured to pump air out of the hollow shell and allow air back into the hollow shell to control buoyancy.

Images (14)



US11027816B1
United States

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Inventor: Miles Frank Beaux, Igor Olegovich Usov, Brian M. Patterson
Current Assignee: Triad National Security LLC

Worldwide applications
2018 [US](#)

Application US15/997,163 events

- 2017-06-05 • Priority to US201762515469P
- 2018-06-04 • Application filed by Triad National Security LLC
- 2021-06-08 • Publication of US11027816B1

2018 Patent using vacuum-filled aerogels to create aircraft based on buoyancy by Triad National Security LLC.

STATEMENT OF FEDERAL RIGHTS

The United States government has rights in this invention pursuant to Contract No. DE-AC52-06NA25396 between the United States Department of Energy and Los Alamos National Security, LLC for the operation of Los Alamos National Laboratory.

Language from the patent

The current assignee to the patent is Triad National Security LLC. Their website says they bring “world-class expertise in lab management, nuclear operations, national security and scientific research to the National Nuclear Security Administration.” The National Nuclear Security Administration is described by wikipedia as a semiautonomous agency created by Congress in 2000 within the DOE.

https://en.wikipedia.org/wiki/National_Nuclear_Security_Administration

The way this patent reads they go so far as to actually consider using an onboard vacuum system to evacuate and re-fill the aerogel in order to control buoyancy. This is an amazing idea by itself, but when you apply it to the problem of creating MHD craft it becomes a potential game changer. By effectively reducing the weight of the craft by surrounding it with an aerogel that is mostly made up of vacuum you now require very little energy for propulsion! It helps to significantly reduce the limitations of the energy efficiency problem of MHD crafts. **The speculation being the sphere around the cube could be an aerogel or perhaps it would be better called vacuumgel.**

This is a very interesting idea because it also shouldn't hinder the principle of MHD operation being made up of mostly vacuum and in fact the aerogel can be manufactured to have electrical properties to assist in the operation. If it's permanently under vacuum it wouldn't handle going underwater well, but if it utilizes the ability to fill and pump back down, it's basically a submarine that can float into outer space. The brand specifically listed in the patent is Airloy and their website is below.

<http://www.airloy.com>

I'm considering buying some that fits the description and attempting to vacuum seal it to test the idea.

What Would That Look Like?

Another interesting point is how it may look when viewed by FLIR or radar. As the earlier patent pointed out, plasma can be used to potentially become invisible to radar. As for the FLIR, well it probably depends how the plasma is being used. If it's not being used at all or very low energy the craft may show up as very cold because it's surrounded by vacuum. This is what one of the team members with UAPx on A Tear in The Sky claims he has captured on thermal imaging of some UAP's. Such a technology could be very stealthy indeed. In fact, I could conceive of it using electrostatic forces to "hitch" a ride on an unsuspecting aircraft in a very similar manner as has been reported. Such tiny craft could go easily unnoticed visibly and potentially practically invisible in other spectrums at will.

Fuel Source

The new restrictions on limitations for such a craft now allows us to consider fuel sources that once again have already been demonstrated technologically. Instead of a compact fusion generator, which nobody has ever built before (at least publicly,) such a craft could use a myriad of different nuclear battery technologies aka atomic batteries. Nuclear batteries aren't actually batteries, but different methods of generating electricity from nuclear sources other than a steam turbine. We used them already on space missions. In fact we've also been making some huge strides in this technology not only in efficiency but also the ability

to become compact.

https://en.wikipedia.org/wiki/Atomic_battery

“Two researchers—a former Los Alamos National Laboratory engineer and an Alabama A&M University researcher—have developed highly efficient nanotube-based tile materials that can convert radiation, not heat, from nuclear materials into electricity.

The tiles are made of carbon nanotubes packed with gold and surrounded by lithium hydride. Radioactive particles slamming into the gold push out a shower of high-energy electrons that pass into the lithium hydride and then into electrodes, allowing current to flow.”

<https://www.newscientist.com/article/dn13545-nanomaterial-turns-radiation-directly-into-electricity/>

Notice how this new nuclear battery tech was created by researchers from Los Alamos and Alabama A&M University. Well the aerogel patent is assigned to Triad National Security which is made up of Battelle Memorial Institute (Battelle), **The Texas A&M University System** (TAMUS), and The Regents of the University of California (UC). Also, the patent lists **Los Alamos** under it’s statement of rights.

Considering that this patent is under DOE and National Nuclear Security Administration and the work clearly has some crossover I’d say they may have ventured onto the same idea as me that this technology could be used with a nuclear battery to create one crazy

stealthy little MHD craft. Frankly, if they haven't connected the dots, I'd like to be offered a job. Long hours in the sky become less anomalous if we recognize the technological feasibility of such a craft. It's interesting that also in 2018 Triad National Security took over Los Alamos. Perhaps that's a coincidence.

<https://www.lanl.gov/discover/news-release-archive/2018/November/1101-triad-takes-the-helm.php>

I can already hear people saying, "but those UAP were reported before 2018." Yes, that's true. My main point is about the technological feasibility and that still holds true. As for the cube-in-a-sphere reports pre-dating the patent my response is that it could've been in development before the publication. The publication of the new nuclear battery research was 2008. The thing about technology is that it progresses everywhere. Multiple groups can be working on the same thing. I'm pointing to these particular groups just as examples that the technology is feasible, not that they are necessarily behind any particular UAP report.

We Have a Real UFO Problem. And It's Not Balloons.

America's fixation on the recent objects floating over the country overlooks a much more serious problem with advanced technology aircraft that we can't explain.

The Navy has officially acknowledged 11 near misses with Unidentified Aerial Phenomena that required evasive action and triggered mandatory safety reports between 2004 and 2021. | Alex Brandon/AP

By RYAN GRAVES02/28/2023

Ryan Graves, a former Navy fighter pilot and engineer, chairs the American Institute of Aeronautics and Astronautics' UAP Integration & Outreach Committee. He is the founder of the new non-profit Americans for Safe Aerospace (www.safeaerospace.org).

On a clear, sunny day in April 2014, two F/A-18s took off for an air combat training mission off the coast of Virginia. The jets, part of my Navy fighter squadron, climbed to an altitude of 12,000 and steered towards Warning Area W-72, an exclusive block of airspace ten miles east of Virginia Beach. All traffic into the training area goes through a single GPS point at a set altitude — almost like a doorway into a massive room where military jets can operate without running into other aircraft. Just at the moment the two jets crossed the threshold, one of the pilots saw a dark gray cube inside of a clear sphere — motionless against the wind, fixed directly at the entry point. The jets, only 100 feet apart, zipped past the object on either side. The pilots had come so dangerously close to something they couldn't identify that they terminated the training mission immediately and returned to base.

“I almost hit one of those damn things!” the flight leader, still shaken by the incident, told us shortly after in the pilots' ready room. We all knew exactly what he meant. “Those damn things” had been plaguing us for the previous eight months.

I joined the U.S. Navy in 2009 and underwent years of rigorous training as a pilot. Specifically, we are trained to be expert observers in identifying aircraft with our sensors and our own eyes. It's our job to know what's in our operating area. That's why, in 2014, after upgrades were made to our radar system, our squadron made a startling discovery: There were unknown objects in our airspace.

Biden addresses unidentified objects, China spy balloon

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Initially, the objects were showing up on our newly upgraded radars and we assumed they were “ghosts in the machine,” or software glitches. But then we began to correlate the radar tracks with multiple surveillance systems, including infrared sensors that detected heat signatures. Then came the hair-raising near misses that required us to take evasive action.

These were no mere balloons. The unidentified aerial phenomena (UAP) accelerated at speeds up to Mach 1, the speed of sound. They could hold their position, appearing motionless, despite Category 4 hurricane-force winds of 120 knots. They did not have any visible means of lift, control surfaces or propulsion — in other words nothing that resembled normal aircraft with wings, flaps or engines. And they outlasted our fighter

jets, operating continuously throughout the day. I am a formally trained engineer, but the technology they demonstrated defied my understanding.

After that near-miss, we had no choice but to submit a safety report, hoping that something could be done before it was too late. But there was no official acknowledgement of what we experienced and no further mechanism to report the sightings — even as other aircrew flying along the East coast quietly began sharing similar experiences. Our only option was to cancel or move our training, as the UAP continued to maneuver in our vicinity unchecked.

Nearly a decade later we still don't know what they were.

When I retired from the Navy in 2019, I was the first active-duty pilot to come forward publicly and testify to Congress. In the years since, there has been some notable coverage of the encounters and Congress has taken some action to force the military and intelligence agencies to do much more to get to the bottom of these mysteries.

But there has not been anything near the level of public and official attention that has been paid to the recent shoot downs of a Chinese spy balloon and the three other unknown objects that were [likely research balloons](#).

And that's a problem.

Advanced objects demonstrating cutting-edge technology that we cannot explain are routinely flying over our military bases or entering restricted airspace.

“UAP events continue to occur in restricted or sensitive airspace, highlighting possible concerns for safety of flight or adversary collection activity,” the Director of National Intelligence reported last month, citing [247 new reports](#) over the last 17 months. “Some UAP appeared to remain stationary in winds aloft, move against the wind, maneuver abruptly, or move at considerable speed, without discernible means of propulsion.”

The Navy has also officially acknowledged [11 near misses](#) with UAP that required evasive action and triggered mandatory safety reports between 2004 and 2021. Advanced UAP also pose a growing safety hazard to commercial airliners. Last May, the Federal Aviation Administration issued [an alert](#) after a passenger aircraft flying over West Virginia experienced a rare failure of two major systems while passing underneath what appeared to be a UAP.

One thing we do know is these craft aren't part of some classified U.S. project. “We were quite confident that was not the explanation,” Scott Bray, the deputy director of the Office of Naval Intelligence, [testified before Congress last year](#).

Florida Sen. Marco Rubio confirmed [in a recent interview](#) that whatever the origin of these objects it is not the U.S. military. “We have things flying over our military bases and places where we're conducting military exercises and we don't know what it is and it isn't ours,” said Rubio, who is vice chair of the Intelligence Committee.

President Joe Biden rightly points out the real national security and aviation safety risks, from “foreign intelligence collection” to “hazard to civilian air traffic,” that arise from low-tech “balloon-like” entities. I applaud his new order to [create an interagency UAP taskforce](#) and a government-wide effort to address unidentified objects, and [his proposal to make sure all aerial craft](#) are registered and identifiable according to a global standard is good common-sense.

However, what the president did not address during his press conference Feb. 16 were the UAP that exhibit advanced performance capabilities. Where is the transparency and urgency from the administration and Congress to investigate highly advanced objects in restricted airspace that our military cannot explain? How will this new taskforce be more effective than existing efforts if we are not being clear and direct about the scope and nature of advanced UAP?

The American public must demand accountability. We need to understand what is in our skies — period.

In the coming days, I will launch [Americans for Safe Aerospace](#) (ASA), a new advocacy organization for aerospace safety and national security. ASA will support pilots and other aerospace professionals who are reporting UAP. Our goal is to demand more disclosure from our public officials about this significant safety and national security problem. We will provide credible voices, public education, grassroots activism and lobbying on Capitol Hill to get answers about UAP.

President Biden needs to address this issue as transparently as possible. The White House should not conflate the low-tech objects that were recently shot down with unexplained high-tech, advanced objects witnessed by pilots. Our government needs to admit that it is possible another country has developed game-changing technology. We need to urgently address this threat by bringing together the best minds in our military, intelligence, science and tech sectors. If advanced UAP are not foreign drones, then we absolutely need a robust scientific inquiry into this mystery. Obfuscation and denial are a recipe for more conspiracy theories and greater distrust that stymie our search for the truth.

We need a coordinated, data-driven response that unites the public and private sectors. The North American Aerospace Defense Command, the U.S. Space Force and a host of other military and civilian agencies need to be marshaled in support of a much more aggressive and vigilant effort, along with our scientific community and private industry.

Pentagon: '100% clear' China's spy balloon was not for civilian purposes

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Right now, the pieces of the UAP puzzle are scattered across silos in the military, government and the private sector. We need to integrate and analyze these massive data

sets with new methods like AI. We also need to make this data available to the best scientists outside of government.

We have strong supporters of more data sharing. Sen. Rubio has suggested the Pentagon's All-domain Anomaly Resolution Office (AARO), which was set up by Congress last year, share its data on unidentified objects with academic institutions and civilian scientific organizations. The American Institute of Aeronautics and Astronautics and the Galileo Project at Harvard, tech startups like Enigma Labs, and traditional defense contractors could all play a role.

Unfortunately, all UAP reports and videos are classified, meaning active-duty pilots cannot come forward publicly and FOIA requests are denied. These are two major steps backwards for transparency, but they can be mitigated with data-sharing.

I am impressed by the recent whistleblower protections enacted last year to encourage more pilots and others to come forward, and I support the fresh [push by Rubio and Sen. Kirsten Gillibrand](#) (D-N.Y.) for full funding of AARO. Given the stakes, Congress also needs to fund grants for more scientific inquiry of UAP.

Above all, we need to listen to pilots. Military and civilian pilots provide critical, first-hand insights into advanced UAP. Right now, the stigma attached to reporting UAP is still too strong. Since I came forward about UAP in 2019, only one other pilot from my squadron has gone public. Commercial pilots also face significant risks to their careers for doing so.

New rules are needed to require civilian pilots to report UAP, protect the pilots from retribution, and a process must be established for investigating their reports. Derision or denial over the unknown is unacceptable. This is a time for curiosity.

If the phenomena I witnessed with my own eyes turns out to be foreign drones, they pose an urgent threat to national security and airspace safety. If they are something else, it must be a scientific priority to find out.

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Cube in a Sphere UAP Could Be 'Aliens' or 'Next Generation' Spherical Drones, Pentagon Former UFO Chief Says

By [Caleb White](#) Published: Jan 24 2024, 06:45 AM EST

There have been reports about a silver orb with eight thrusters and an internal cube. There are speculations that it was another unidentified flying object (UFO) or unidentified aerial phenomena (UAP), a [Chinese spy balloon](#), or a drone.

'Cube in a Sphere' Sightings

Between 2014 and 2015, US Navy fighter pilots reported seeing these alien-looking vessels close to the Atlantic coast; in one instance, they almost tore the wing off an F/A-18 Super Hornet flying alongside the USS Roosevelt.

The Pentagon's recently retired chief of UFO studies, [Dr. Sean Kirkpatrick](#), now thinks the objects were probably "next generation," "spherical," moving "very accurately" drones.

Although unconfirmed, his description corresponds with a drone prototype that Chinese researchers revealed in 2022. It is a silver ball with eight thrusters arranged at the corners of an interior cube, enabling it to perform previously unheard-of mid-air twists and flips.

Kirkpatrick stated that the instance shows why [UFOs should be taken seriously](#) and not made fun of.

From July 2022 to the end of December 2023, Dr. Kirkpatrick led the Pentagon's recently established All-domain Anomaly Resolution Office (AARO), applying his scientific background to examining military UFO reports.

Dr. Kirkpatrick informed NASA's UFO advisory council in May of last year that AARO had recorded around 800 instances of spherical, flying "metallic orb" UFOs. According to him, those sightings were common, and they observed them worldwide, noting that they made "interesting apparent maneuvers."

ALSO READ: [Chinese Spy Balloon Suspected to Hold Bioweapons; US Shoots It Down](#)

UAP Could Be the 'Next Generation' Drone

The degree to which these metallic orbs resemble the UFOs initially reported to the public by Ryan Graves, a former Navy lieutenant and fighter pilot, who

described them to Congress as "a dark gray or black cube inside of a clear sphere," is unknown.

However, Dr. Kirkpatrick informed the program that it's quite possible that these unearthly crafts served as a platform for foreign espionage. In his opinion, the orb with an internal cube could be a high-tech drone, and it was designed for a purpose - to maneuver it accurately and efficiently.

"There's a large number of people, pilots, others, who have said, 'Hey, I saw this giant sphere. It had a cube in it,' he said, 'I don't understand it. It must be an alien,'" he said.

"Well, actually, no, there's a number of papers out. The most recent one was from the University of Singapore, I believe, where the next generation of drones that are being built are spherical."

They took an inflatable container about two meters in size and filled it with a cube. Additionally, the cube's corners that meet the sphere have been fused, removed, and replaced with tiny rockets, giving it eight thrusters. It can also have cameras and anything else you want to attach. One can control this drone very precisely since it has eight thrusters arranged in a cube, the UFO expert said.

"There are a number of advanced technologies that are being commercialized that people don't recognize. Why they go immediately to 'this is extraterrestrial' is another conversation," Kirkpatrick said.