# Hyperluminal Space Travel

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## Abstract

Hyperluminal space travel is big in popular science fiction and fantasy. How does it rate among real rocket scientists and astrophysicists? The answer to this basic question spans more than physics, and goes into concerns relating to our brief reign as the current hyperkeystone species on Earth.

Much of today's fascination with Big Science relates to several science fiction/fantasy TV series and blockbuster movies. Media consumers are fed *warp-speed* and *stargate* special effects so goofy that they seem to be true, as long we don't clearly think. Emerging AI already can seemingly blend actual reality with fantasy, to where it is hard to tell apart all depictions of what could be. Believing in specious nuclear space travel, and *fantasy 2D time portals* can be dangerous. We need an *unformed but open mind* ready to embrace emerging reality.

In real *4D physics math* (as opposed to *pure 2D maths*) it is possible for vessels to only go faster than luminal when calculated relative to any *original point of launching* any rocket – as long as that rocket keeps accumulating *subluminal acceleration pulses* over enough time. Using pure math, physical reality can be ignored with several clever tricks. In physics math, gimmickry should not be allowed, however popular. Astrophysics is still polluted with all sorts of specious "pure" math physics, which is why a 21st-century update is so needed.**[1]**

# The Real Hyperluminal Challenge

Hyperluminal *steady* speed by itself relative to any original launch site is not the critical challenge for hyperluminal space travel in real 4D space: Einstein's 4D General Relativity (GR) expressed what would soon be called the Big Bang, beginning with *initial one-time hyper gravity*. In that model distant objects can today be described by apparent-to-us electromagnetic (EM) red shifts within EM frequencies, according to the Doppler effect.

It is only because our cosmic microwave background (CMB) is associated with a specific period of cosmic time after our initial Big Bang, that we can look at what *appears* to be "Dark Energy; (more correctly described as inter-universal, net push/shadow gravity, with no actual Dark Energy needed).

At the expanding edge of our own local universal bubble this ethereal BB mass encounters the shadow of *other more massive local universal regions* within the overall 4D multiverse. What is partially shadowed is that juxtaposed direction of omnidirectional multiversal yin/yang dark matter streams. It is the *relative net shadow effect* from juxtaposed, more dense regions that partially shadows the strong omnidirectional yin/yang push flows within our relatively calm quantum seas.**[2]**

Here's a slightly different way to envision what was presented in the above paragraph: When any potentially hyperluminal vessel accelerates toward an achievable star system, it must traverse what is called the *quantum sea*. *Empty space is not absolutely empty*, even though there are regions of more density therein. Even high-frequency photon waves that we cannot now detect are there along with countless individual yin/yang spheres at the 10 to the minus 38 meters dimension. The so-called quantum sea is complex, with *interpenetrating, omnidirectional, multiversal "quanta" gravity streams* of both yin/yang Coulombic EM spheres, and *high-frequency spinning beaded strings that we imagine to be just waves*.

By comparison, solar radiation includes, among other things, a vast flow of solar neutrinos.**[3]** Trillions of neutrinos zip through our bodies every second, as if we and they were nothing. Such tiny neutrinos are near the 10 to the negative 24 logarithmic meters dimension – which is small, but nowhere near the much smaller primary yin/yang EM Coulombic spheres at the smallest physics 10 to the negative 38th meters logarithmic dimension. This comparison may not look like a big difference. However, consider that the difference between one human and one atom is about 15 metric dimensions of 10. (The +/- zero-dimension point is arbitrarily set for our own size.)

Each solar neutrino is extremely tiny for us, but extremely large relative to individual yin/yang fundamental Coulombic spheres. Neutrinos and y/y spheres are fully electromagnetic, and they both *express electrical neutrality at their surfaces*, due to *primary EM*. Thus, neutrinos, yin/yang spheres, and beaded short strings are all able to zip through us Earthlings undetected.

On the other hand, the "neutral and undetected" omnipresent quantum sea would be quite difficult for any hyperluminal craft and its inhabitants: The elegant formula E=mc^2 is well known, but generally not well understood without considering relative mass vectors. It is essential to realize that both energy and mass are contained within this one elusively simple Einstein formula. Foundational Coulombic EM spheres contain both the *yang energy* and the *yin mass* inside, and there is *a Coulombic EM magnetic shell* surrounding each sphere. This y/y dynamic structure is so fundamental, that we can separate why so very few black holes burst into their own big bang, and nearly all others do not.**[4]**

As for potential hyperluminal craft, assuming we can engineer enough *nuclear pulses* outward, and then back home, there will be a kinetic collision of epic proportions between the very dense baryonic space ship mass versus all the quantum seas dark matter (mostly yin/yang) going there, which we cannot now directly see. Dark baryonic dust is hardly seen, but much more

dangerous for our ship, having unit masses too large to slip through our hypothetical hyperluminal craft.

In brief, when ship and quantum seas baryonic (regular) masses hit at extreme speed, extreme damage will occur to any such ship. Meanwhile, we can already safely and calmly inspect with our greatest telescopes many star and planetary spectrums "nearby," always from inside our shared BB frame of reference, and always without a hyper-speed frame disaster ahead.

## What Can We Salvage From the Hyperluminal Dream?

21st century physics understands fundamental *y/y particles as building from a type of "quantum" that blends elements of classical and quantum physics*. Elements such as beaded 4D strings (not pure math 2D); electromagnetism (dipolar and primary EM); EM frequency waves; nearby transmission of paired data; and other physics are all there for scientists.

The edge of our local, visible universe is now receding faster than our original momentum, due apparently to accelerating "Dark Energy" force expansion – which doesn't even exist. The alpha point of local universal Big Bang explosions has the *same momentum model* as the initial firing of any hyperluminal craft with subsequent brief, nuclear rocket pulses *relative to its own original frame of reference*.

Wikipedia **[5]** defines the difference between science fiction and science fantasy as follows:

> "Science fiction typically explores futuristic or speculative concepts rooted in scientific principles, while fantasy takes readers on fantastical journeys filled with magic and mythical creatures. In science fiction, the focus is often on technology, scientific advancements, and the impact they have on society."

It is correct to say that seemingly dry science and juicy science fiction are more easily tolerated when spiced with anthropocentric religion and fantasy. That's why TV viewers passively witnessed absurd acceleration to warp speed in *Star Trek* without any net reverse gravity forces vaporizing the crew and their craft.

Humans want to answer this existential question: *"Are we alone as creatures of high consciousness in the universe?"* In other words, is *Genesis* correct? For thousands of years early astrologers and others occluded their version of this primal question with magical assumptions. That absurdity was fair, considering how little we knew then about hard science.

Today we know a little more, but still in our vanity imagine we can qualitatively know a lot more. Astrophysics persists in the realm of unknowable possibilities and weak probabilities. Thus, many billions of taxpayer dollars will likely be lavished on musky experiments in Martian space to modestly move forward the knowledge needle, while still clinging to antique paradigms.

Any successful hyperluminal trip toward anywhere that looks possible for squishy life itself will take too long to be relevant to the version of civilization we superficially enjoy. Will anybody from our species be around to receive our returning robotic emissaries? Ours must be AI robots, because fleshy creatures cannot withstand intense deep space radiation.

Even our short visits to the International Space Station (ISS), now somewhat protected by our planet's electromagnetic shields, require a period of medical readjustment upon rejoining Earth's gravity. Imagine how dozens or hundreds of years locked inside a deep space capsule would devastate our abilities, both physical and mental, even with hibernation. The only practical deep space solution is robust AI robots.

*Here's the wild card*: If increasing evidence of UFOs visiting Earth is verified, then we will know *some* more – but *how much* more in quantity and quality will forever be speculative. That's

because "the lesser can never know all of the greater." Possible UFO robots telling clever lies could inhabit vast areas even now.

If we receive some seemingly "hard" science from alien visiting AI robots, we humans can only evaluate what they tell us about themselves, which may or may not be true. For example, aliens could be thinking of extracting this planet's robot energy food. ETs may also be afraid of our ape species' growing power and willingness to blow up things – fearing that eventually we may reach out and blow them up while we blow up ourselves. In that case, they might be hovering around until we blow up ourselves, and then colonize Earth permanently. Every seemingly answered question about space visitors raises more unanswered, and unanswerable, questions. Some psychedelically horrible scenarios, such as The Dark Forest, cannot be ruled out.**[6]**

It is highly unlikely that primitive-technology spaceships such as ours with simple AI robots, could FIRST find very advanced civilizations able to discover distant living planets hundreds or thousands of light years away. The only way to navigate among stars is subluminal, which stops our hyperluminal fantasies. It is more likely that the return of our deep space ships to our home planet will reveal that our future civilization will have been cooked by our own killer-ape demons. Those who might greet our lucky returning ships could be undocumented robotic space aliens.

## How to Safely Hunt for Distant Savants

The whole romantic idea of going "out there" in ships has been to find some bodies like ourselves, thereby somehow adding to the glory of God. That added glory will never happen within the next few centuries, if ever. Wise high intelligence, possibly yes. Wise "human" intelligence, likely never. We already have teasing data from Earth-based observatories to support the life idea:

First, it is fairly probable that some form of cellular life will be located on Mars, or Jupiter's Europa, or Saturn's Enceladus.

Other exotic candidates for something "intelligent" include the upper atmosphere of Venus, Saturn's Titan, and other big round objects. None of these (at least now) reveal advanced life forms.

The best chance for finding something cellular alive beyond our atmosphere would be inside ancient Martian lava tunnels.**[7]** Such doable exploration will not require any hyper speed travel. Nevertheless, we can fairly question if such a trivial discovery within Gaia is worth the massive expenditure of our planet's diminishing treasures.

The Martian fantasy project is more about establishing a macho refuge for wealthy humans, than about finding some remnant microbes. Another space ark survivalist bunker could also work on the Moon. Either way, evil nukes launched from Earth could instantly eradicate such lavishly funded space arks. Who cares about rogue military science, when such dreams are where it's at, paid for by the public? Who wants to consider that any vanity "successful" Martian refuge just might give trigger-happy nuclear psychopaths another excuse to nuke it and "start over"?

The truth is that ONLY with the astronomical technology we already have can we *maybe* locate philosophically wise and agile life forms elsewhere. It is all about cost and time for meaningful feedback. Consider the following:

Light itself takes more than four years each way to and from Proxima Centauri, a red dwarf. Any rocketry sent to and from there would take many years longer. The real problem is that any planet around Proxima Centauri could not host life, since it flares up frequently, which would roast the surface with radiation. So, where can we likely find sapient candidates? Note that we are still talking light years (with about 5.88 *trillion* Earth miles per single light year).

Three "nearby" exo-candidates have surface temperatures similar to ours. They range from 22 to 38 light years distant from our local star. Our starships should be able to achieve moderate

speeds as measured by Earth's launch point. Any such two-way trip to these maybe-savant destinations would would take *much* longer than 44 to 76 light years. Any such trip using current and foreseeable rocket technology would likely take hundreds or even thousands of years, just to visit one candidate cosmically nearby.

A fantasy luminal trip would require some time at hyperluminal speed relative to Earth, to offset the sub-luminal time spent accelerating with each pop at the rate of Earth's gravitational field, and decelerating at the same rate to protect any Earthlings. If only our AI robots make the journey, then their acceleration and deceleration phases could be at slightly higher rates. Either way, some hyperluminal speeds would likely be needed to achieve multiple-candidate planet journeys over decades, if not centuries.

The ONLY SAFE AND AFFORDABLE WAY to "visit" a planet with hopefully wise residents is already at hand: Already we have the James Webb Space Telescope (JWST). It can detect atmospheres that have essential ingredients for possible advanced life. Also, there will soon be in service atop the high Andes a very awesome ground telescope with a huge adjustable mirror. It will have much better resolution of planets and light gathering power than the JWST. We are talking about a few billion dollars for current technology, versus maybe a trillion dollars for hyperluminal vanity expeditions that will likely leave Earth and never return.

Realistic expectations should take into account that our planet has had life-supporting elements for hundreds of millions of years before advanced technology emerged less than one hundred years ago. Upon arrival out there, our craft are more likely to encounter space lizards than Socrates.

When people imagine "time machines" into the past, they tend to overlook astronomical telescopes that can already examine photons that began their travel to us billions of light years ago inside our shared Big-Bang frame of reference. A*stronomy is the supreme "time machine science*," joining other time traveling sciences such as geology and archaeology. Better still, all of

these established earth sciences can "dig back" many billions of calendar years. In contrast, any hyperluminal vessel could only venture out a few dozen or hundred light years.

It is critical to envision the evolution of any form of emerging intelligence and its own emerging civilizations. When an elegant question was asked in 1950 by Enrico Fermi about where are all the space aliens, he was posing the very question that most likely cannot be answered by any current human technology.**[8]** Thus we venture into the philosophy of science as it relates to all the philosophical elements in societies. In that mix we include the cosmic version of *Gaia*, or life everywhere; and even the quasi-scientific Drake Equation with its estimate of extraterrestrial life.

There is amazing theory regarding Fermi's question, and it is very relevant to our self-important ideas. The general model is that there are and have been multiple reachable, highly sentient life forms – but they all need to go through what amounts to *narrow passages* to continue evolving.

This theory about pinch points applies to every bunch of smart creatures who may not be as clever as their vanity proclaims. Critically, modern humanity on Earth is now nearing one of those extinction pinch points,**[9]** and we do not know if we will survive the filter consequences of our own technical brilliance.

Are the powerful in our proximal future going to be toddlers holding loaded guns? Or are we going to embrace the precious ecosphere enveloping our tiny blue planet in dark space?

# References


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