

La tecnología ficticia del núcleo de efecto masa (Mass Effect core), que reduce la masa de la nave para permitir desplazamientos sin causar dilatación temporal o requerir grandes propulsores tradicionales. Esto, por supuesto, se considera "magia espacial" más que una tecnología plausible.

os sistemas como **propulsores iónicos**, **Direct Fusion Drive**, **nuclear pulse propulsión** o incluso el **Project Valkyrie antimateria-fusión** son tecnologías mucho más plausibles desde un punto de vista físico e ingenieril:

Propulsores iónicos / antiprotones

Propulsión iónica real (como el X3)

Direct Fusion Drive (DFD) is a conceptual, low radioactivity, nuclear-fusion rocket engine, designed to produce both thrust and electric power, suitable for interplanetary spacecraft. The concept is based on the Princeton field-reversed configuration reactor, invented in 2002 by Samuel A. Cohen. It is being modeled and experimentally tested at Princeton Plasma Physics Laboratory, a U.S. Department of Energy facility, as well as modeled and evaluated by Princeton Satellite Systems (PSS).[1][2] As of 2018, a direct fusion drive project driven by NASA is said to have entered its simulation phase, presented as the second phase of the concept's evolution.

Sistema (Mass Effect)	Equivalente más realista (mundo real)	¿Por qué es más plausible?
Núcleo de efecto masa (Mass Effect core)	—	Tecnología ficticia, sin base física
Tantalus Drive (Normandy, reacción sin calor)	—	Igual de ficticio, basado en cambios de masa
Propulsores iónicos / antiprotones	Propulsión iónica real (como el X3)	Uso de iones como propulsor es una tecnología existente Reddittapatalk.com
Combustión de fusión directa	Direct Fusion Drive (DFD)	Motor real en desarrollo basado en fusión Wikipedia
Propulsión por pulsos nucleares	Nuclear pulse propulsion	Concepto histórico como Proyecto Orion o Medusa Wikipedia
Motor de antimateria-fusión (Proyecto Valkyrie)	Antimatter-fusion hybrid drive	Teórico, muy energético pero extremadamente costoso y complejo Wikipedia

Nuclear pulse propulsion

Not to be confused with the Pulsed nuclear thermal rocket.

An artist's conception of the Project Orion "basic" spacecraft, powered by nuclear pulse propulsion. Nuclear pulse propulsion or external pulsed plasma propulsion is a hypothetical method of spacecraft propulsion that uses nuclear explosions for thrust.[1] It originated as Project Orion with support from DARPA, after a suggestion by Stanislaw Ulam in 1947.[2] Newer designs using inertial confinement fusion have been the baseline for most later designs, including Project Daedalus and Project Longshot.

Project Orion

Main article: Project Orion (nuclear propulsion)

A nuclear pulse propulsion unit. The explosive charge ablatively vaporizes the propellant, propelling it away from the charge, and simultaneously creating a plasma out of the propellant. The propellant then goes on to impact the pusher plate at the bottom of the Orion spacecraft, imparting a pulse of 'pushing' energy. Project Orion was the first serious attempt to design a nuclear pulse rocket. A design was formed at General Atomics during the late 1950s and early 1960s, with the idea of reacting small directional nuclear explosives utilizing a variant of the Teller–Ulam two-stage bomb design against a large steel pusher plate attached to the spacecraft with shock absorbers. Efficient directional explosives maximized the momentum transfer, leading to specific impulses in the range of 6,000 s (59 km/s) seconds, or about thirteen times that of the Space Shuttle main engine.

los **propulsores iónicos** (como los que usa la nave para maniobrar a velocidad sublumínica) impulsados por energía de fusión es decir, **Direct Fusion Drive**.

Estructuras:

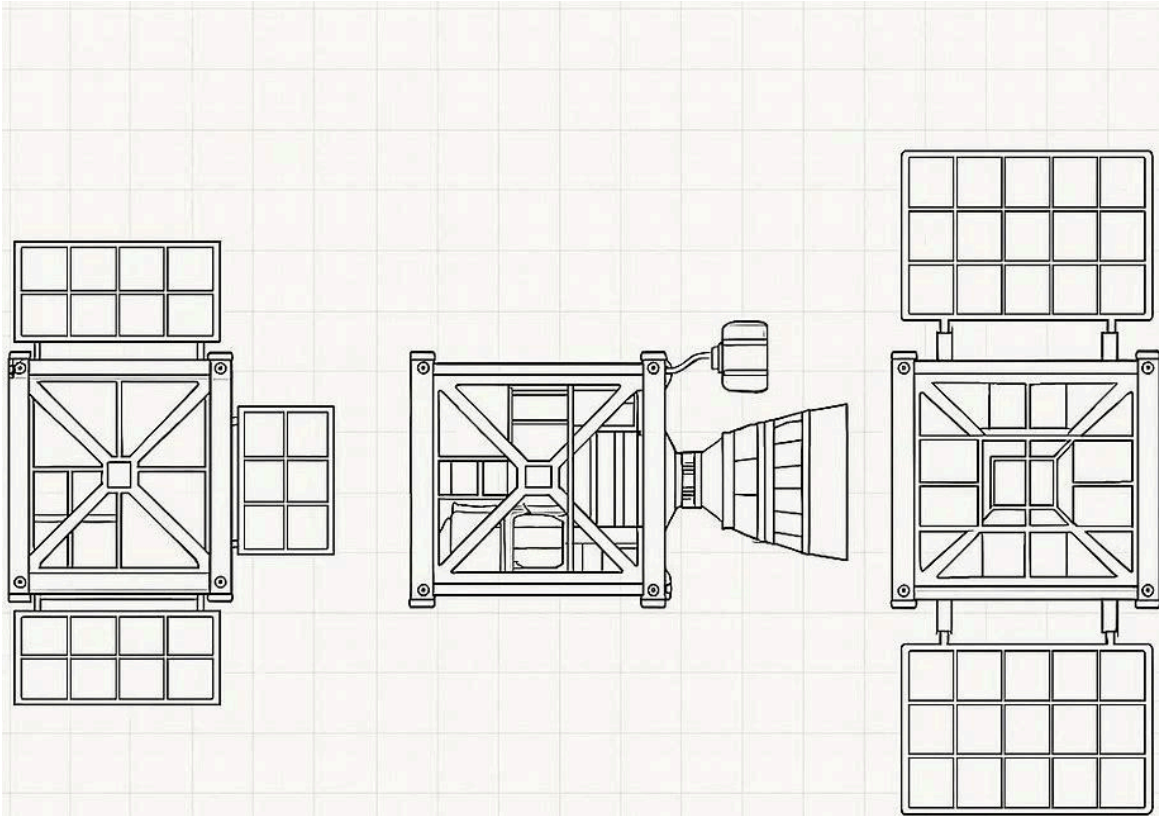
Kinetic barriers, colloquially called "shields", provide protection against most mass accelerator weapons. Whether on a starship or a soldier's suit of armor, the basic principle remains the same. Kinetic barriers are repulsive mass effect fields projected from tiny emitters. These shields safely deflect small objects traveling at rapid velocities.

Unlike those of personal body armor, shields equipped on ships are more powerful allowing them to block any and all objects that may collide with a vessel. In the case of boarding craft attempting to reach a target vessel, they must attempt to latch on when the vessel's shields are down or else they'll be repelled away from the hull.

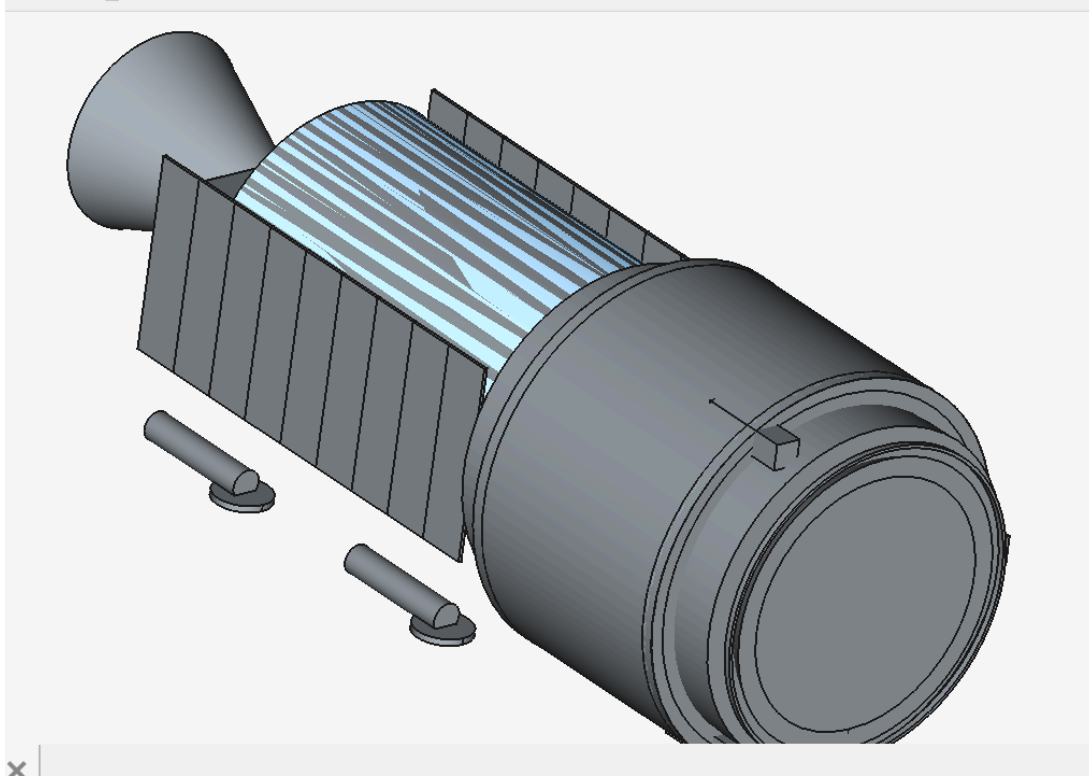
But like personal body armor, shielding afforded by kinetic barriers does not protect against extremes of temperature or radiation.

Although the system appeared to be workable, the project was shut down in 1965, primarily because the Partial Test Ban Treaty made it illegal; in fact, before the treaty, the US and Soviet Union had already separately detonated a combined number of at least nine nuclear bombs, including thermonuclear, in space, i.e., at altitudes of over 100 km (see high-altitude nuclear explosions). Ethical issues complicated the launch of

such a vehicle within the Earth's magnetosphere: calculations using the (disputed) linear no-threshold model of radiation damage showed that the fallout from each takeoff would cause the death of approximately 1 to 10 individuals.[5] In a threshold model, such extremely low levels of thinly distributed radiation would have no associated ill-effects, while under hormesis models, such tiny doses would be negligibly beneficial.[6][7] The use of less efficient clean nuclear bombs for achieving orbit and then more efficient, higher yield dirtier bombs for travel would significantly reduce the amount of fallout caused from an Earth-based launch.



conceptual cubesat spacecraft equipped with a direct fusion drive propulsion system



Mass Accelerators

Model Level: I to III - IV to VI (Frigate, Cruiser, Dreadnought - Twin MA)

Mass accelerators propel solid metal slugs via electromagnetic attraction and repulsion. A slug lightened by a mass effect field can be accelerated to extremely high speeds, permitting previously unattainable projectile velocities.

The primary determinant of a mass accelerator's destructive power is length. The longer the barrel, the longer the slug can be accelerated, the higher the slug's final velocity, and therefore the greater its kinetic impact. Slugs are designed to squash or shatter on impact, increasing the energy they transfer to their target. Without collapsibility, slugs would punch through their targets while inflicting only minimal damage.

Rather than being mounted on the exterior, starship guns are housed inside hulls and visible only as gun portholes from outside.

A ship's main gun is a large spinal-mount weapon running 90% of the hull's length. While possessing destructive power equal to that of tactical nuclear weapons, main guns are difficult to aim. Because ships must be able to point their bows almost directly at their targets, main guns are best used for long-range "bombardment" fire.

Approximately 40% of the hull's width, broadside guns inflict less damage and can be mounted with greater numbers and more flexibility. The modern human Kilimanjaro-class dreadnoughts mount three decks with 26 broadside accelerators apiece for a total salvo weight of 78 slugs per side, firing once every two seconds.

However, mass accelerators produce recoil equal to their impact energy. While the mass effect fields suspending the rounds mitigate the recoil, recoil shock can still rattle crews and damage systems.

POWERPLANT:

*Dual Fusion Plant
Helium-3 Fusion Generator
Nuclear Fusion Plant
Solar Power Generator
Emergency Power Core*

Compliments to Powerplant:

*Hydrogen Power Cells
Hydrogen-Oxygen Fuel Cells*

PROPULSION:

*FTL Drive
Ion Engines
LOCKE Engines/Units
Mass Effect Drive Core
Maneuvering Thrusters
Hydrogen/Anti-proton Thrusters*

Description: *Asari-made Silaris armor can resist even the tremendous heat and kinetic energy of starship weapons. The armor is nearly unsurpassed in strength because its central material, carbon nanotube sheets woven with diamond Chemical Vapor Deposition, are crushed by mass effect fields into super-dense layers able to withstand extreme temperatures. That process also compensates for diamond's brittleness.*

Diamond armor itself has two limiting disadvantages. First, while nanotubes and CVD-diamond construction have become cheaper in recent years, it remains prohibitively expensive to coat starships or aircraft larger than fighters in Silaris material. Second, the armor must be attached to the ship's superstructure, so shock waves from massive firepower can still destroy the metals beneath the armor itself.

Cyclonic Barrier Technology (CBT) attempts to solve the higher-end limitations of traditional kinetic barriers. Traditional barriers cannot block high-level kinetic energy attacks such as disruptor torpedoes because torpedo mass effect fields add mass. The CBT violently slaps aside rather than halting incoming linear force. By rotationally firing their mass effect field projectors, ships create rapidly oscillating kinetic barriers instead of static ones. Shooting through the CBT is like trying to shoot at a target inside a spinning ball.

Significant drawbacks to current CBT configuration prevent its use on anything other than frigates and fighters. Its many high-frequency sensors and emitters require frequent maintenance and replacement. A partially damaged CBT can endanger its operator, who is surrounded by rotating mass effect fields skewing in unpredictable directions. Fortunately, if an emitter is damaged, the CBT corrects to become a traditional shield array, a safety feature that makes it most effective during opening volleys.