

Slipstream Technology

In order for a ship to create and utilize a Slipstream it must have two specific systems:

A Mass Dampener and a Graviton Generator/Emitter

Both of these systems together make up the Slipstream Drive.

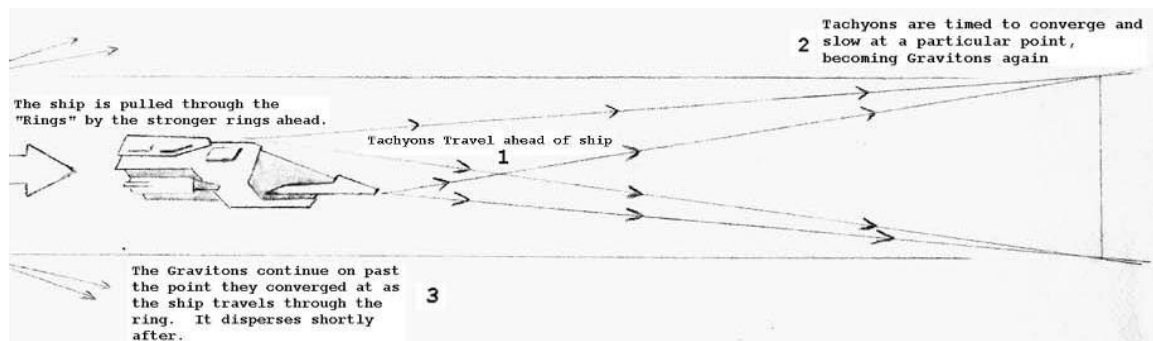
The first step before generating a slipstream is for a ship to reduce its mass. The Mass Dampener generates a field around the ship that lowers its mass in relation to the surrounding universe. The result is a 700-ton vessel only weighing 1 or 2 lbs outside of the field it's generating.

The second step is to actually generate the Slipstream. The Graviton Generator/Emitter does exactly what it says. It creates a vast amount of gravitons and projects them in front of the ship in a "converging pattern". The graviton particles are spun at a tremendous speed when emitted from the ship and are technically tachyons. This allows them to travel much faster than light (the amount of spin determines the extra speed the particles can achieve). The amount of spin is timed by the systems computer to slow in conjunction with the gravitons convergence with the other gravitons in its area. This mass of bundled gravitons form a ring in front of the ship (the distance ahead depends on the current speed, the ring forms closer when accelerating).

This ring is the strongest source of gravity affecting the ship and surrounding space. It's so strong that it affects light and aether around it (thinning both inside of the ring); this gives the added bonus of reducing drag for the approaching ship.

By the time the ship enters the graviton ring it is already dispersing (as the gravitons continue on their original path) and the ship has already projected more "rings" ahead of it. As it disperses the gravity that a graviton ring creates quickly dissipates as well. Shortly after the ship passes through a fading ring it disappears completely.

These rings that the ship travels through go by so fast that the observer sees it as a tube (which is called a Slipstream). What little light that a graviton ring gathers at its strongest point is released as it begins to disperse. The color depends on the surrounding area but is usually light blue (the color of the surrounding star light). This gives the Slipstream a wavy, light blue, appearance unless it's near a larger source of light.



In order to exit from Slipstream a ship just has to disengage the graviton emitter. With its mass still lowered spatial drag will immediately slow it to sub light speed.

Pros and Cons:

The biggest bonus attributed to Slipstream travel is, of course, the ability to travel faster than light. The only boundary to how fast a ship can go is the amount of power it can generate relative to its mass (after dampening). This affects how fast it can generate gravitons and project them as tachyons.

Another bonus is that ships can also travel together (with the smaller one in front also lowering it's mass) and share the same Slipstream (that either one can generate).

G forces are reduced while accelerating into a Slipstream. Most ships have gravity plating installed throughout to compensate for any situation, but they're rarely needed while accelerating. Decelerating, however, could crush the crew if the gravity plating were to fail to counteract the inertia.

One of the big cons to Slipstream travel is the safety to the ship and crew. If a ship shifts out of the exact center of the slipstream and is unable to "right" itself again it will be drawn to the closest side and severely damaged (or destroyed). This is extremely rare but possible.

Communication is also difficult while Slipstreaming. The gravity that's created distorts light, aether, and radio/subspace waves. A signal can make it through but is severely distorted. That is why communications outside of the ship are limited to voice communication and transponder beacons while in Slipstream.