SPACE TRAVEL

Space travel is a common feature of far-future settings. Faster-than-light (FTL) engines propel ships at incredible speeds through the void of space as they navigate from one star system to the next.

Not every campaign will allow the full range of FTL speeds; in fact, many campaigns may not allow FTL travel at all, limiting character to use of generation ships, space gates, or simply local in-system travel – either because such technology is not physically possible in the setting, or because technology hasn't yet reached that level of advancement.

Navigating in space is a complicated affair. It requires complex calculations, expert engineering, and sensitive sensors. In order to make an insterstellar voyage, various attribute checks must be made – these attribute checks determine the time it takes to make the journey and the condition the ship and its crew are in upon arrival.

>>DISTANCE & TIME

To make a space journey, first determine the distance of the journey in parsecs. There are hex-based star maps available to help plan space travel. Breaking a longer journey up into sections can make progress easier.

A starship has a travel increment measured in days equal to its class. For every increment beyond the first, attribute checks suffer a -1d6 penalty. A Class VII ship can make a journey of 7 days with no penalty, but a journey of 10 days inflicts a -1d6 penalty, and a journey of 15 days causes a -2d6 penalty.

Space travel time

FTL-X	C	1 PARSEC
1	1	1,190 days
2	8	149 days
3	27	44 days
4	64	19 days
5	125	10 days
6	216	5.5 days
7	343	3.5 days
8	512	2.3 days
9	729	1.6 days
10	1,000	29 hours
11	1,331	21 hours
12	1,728	17 hours
13	2,197	13 hours
14	2,744	10 hours
15	3,375	8 hours
16	4,096	7 hours
17	4,913	6 hours
18	5,832	5 hours
19	6,859	4 hours
20	8,000	3.5 hours
30	27,000	1 hour
40	64,000	25 mins
50	125,000	12 mins
100	1,000,000	2 mins
200	8,000,000	15 secs
500	125,000,000	1 sec
1,000	1,000,000,000	0.125 secs

Space travel times are shown in the table above. **C** refers to a multiple of the speed of light – the actual speed of a ship is the cube of its FTL factor (thus FTL-5 is 125 times light speed). A parsec is 3.26 light years.

FTL-7 is very close to 1 day per light year; when local variations and other factors are taken into account, 1 day per light year is accurate enough for navigational use. This has made it the standard travel speed, and is referred to as "standard speed", as in "set a course for Sirius X at standard speed". FTL-20 is almost exactly 1 light year per hour.

The *Milky Way* is roughly 100,000 light years in diameter. Even at FTL-20 (8,000 times light speed) it would take 11 years to cross the entire galaxy. At FTL-100 (1-million times light speed) it would take roughly 40 days.

>>ATTRIBUTE CHECKS

Three primary checks must be made. These checks are *Routine [10]* checks in **friendly** space, *Challenging [13]* checks in **hostile or unexplored** space, and *Difficult [16]* checks in **dangerous** space. They can be made by PCs, or by the ship's crew using the vessel's crew rating (typically a **4d6** dice pool).

Engineer. A LOG check (bolstered by the *engineering* skill) must be made to maintain the FTL systems.

Navigator. A LOG check (bolstered by the *astrogation* skill) must be made to plot the course and calculate FTL coordinates.

Sensors. An INT check (bolstered by the *computers* skill) must be made to use sensors and keep an eye out for hazards.

Additionally, some secondary checks may be required under certain circumstances.

Medic. On a journey of more than one week, a LOG check (bolstered by the *medicine* skill) is required to monitor the crew, their physical and mental health, and their diets.

Security. On a ship of more than 50 crew, an INT check must be made to maintain order and spot trouble on board the ship.

>>ARRIVAL

Space travel is a "fail forward" system – the ship will not fail to navigate to its destination, but the checks determine the condition it arrives in. Add up all the successful checks and all the unsuccessful checks. If there are more unsuccessful checks than successful checks, when the ship arrives at its destination PCs are *weary*, and the crew is considered one category less skilled (elite - experienced - standard - poor) until they have had 24 hours' rest for each range increment travelled.

Additionally, each failed check results in a problem.

Delay. A failed engineering check causes delays as repairs are needed. The delay is 1 day, after which another engineering check is made which either enables travel to resume normally, or another day's delay be inflicted. This check is repeated until success. The delay takes place halfway along the route.

Fuel. A failed navigation check means that the fuel cost of the journey is doubled. A good navigator will plot a more efficient course, perhaps effectively completing a spice run in less than the number of parsecs expected.

Illness. A failed medical check means that 1d6 crew members are lost to

illness or injury. If a 6 is rolled on this number, an infectious illness breaks out.

Indiscipline. A failed security check can cause sloppiness, and even petty crime. This costs the ship 1d6 Cr x the crew complement.

Encounter. A failed sensors check means an unexpected encounter takes place. This can be with an interstellar phenomenon or with another ship. The GM should roll for or select an encounter from the *Space Phenomena* table.

>>DISTRESS CALLS

Distress calls can be made by stranded ships (either out of fuel, or damaged). If a distress call is issued in charted space, aid arrives in 1d6 days. Aid has a cost of 1,000 Cr per ship class per parsec; credit will always be given in such situations. In uncharted space, aid arrives in 1d6 weeks and may be a new species.

>>INNER-SYSTEM TRAVEL

Compared to interstellar travel, movement within a solar system consists of extremely short journeys – relatively speaking. However, if these are not undertaken at faster-than-light speeds, the journeys can still take a very long time. In 2006, the NASA space probe *New Horizons* left Earth, reaching the dwarf planet Pluto nine years later.

DISTANCE

Distances within a solar system are measured in Astronomical Units (AU). 1AU is equal to 93 million miles, or the average distance from Earth to its Sun. Pluto orbits at about 40AU on average, meaning that at light speed (FTL-1), it would take 5.5 hours to get there.

SUB-L 1 is roughly 550,000 km/h, and is the approximate speed of a high speed early 21st century space vessel.

Sublight travel time

SUB-L	C	1AU
1	infinitesimal	82 days
2	0.0005	10 days
3	0.002	3 days
4	0.004	1.3 days
5	0.008	16 hours
6	0.01	9 hours
7	0.02	5.7 hours
8	0.03	3.8 hours
9	0.05	2.7 hours
10	0.06	2 hours
11	0.09	1.5 hours
12	0.11	1 hour
13	0.14	54 mins
14	0.18	43 mins
15	0.20	35 mins
16	0.26	29 mins
17	0.31	24 mins
18	0.37	20 mins
19	0.44	17 mins
20	0.50	14 mins
21	0.60	12.5 mins
22	0.68	11 mins
23	0.78	9.7 mins
24	0.88	8.5 mins
25*	1.00	8 mins

*This speed is not possible under normal physical laws

SUB-L 25 is equal to FTL-1, the speed of light. Under normal physics, a ship cannot ever reach SUB-L 25; the laws of relativity forbid an object from reaching light speed without special faster-than-

light technology.

Note that while a starship's SPEED rating (as shown in its stat block) is used for both tactical combat and in-system travel, the two uses are not directly equivalent. Navigational speed (which uses an exponential scale similar to the way FTL speeds are calculated) is much faster than tactical speed (the number of kilometers a ship moves in one round; see *Starship Combat*, later) despite the fact that both are based on the same basic SPEED rating.

A SUB-L journey is resolved in exactly the same way as an FTL journey. The only difference is the units used.

EXAMPLE SOLAR SYSTEM

The following table uses the Sol system to provide an example of interplanetary distances in AU from the Sun, all the way out through the various planets, the Kuiper Belt, the Oort Cloud,

Distance from Sol

LOCATION	AU
Mercury	0.4
Venus	0.7
Earth	1
Mars	1.5
Ceres	2.8
Jupiter	5.2
Saturn	9.6
Uranus	19
Neptune	30
Pluto	40
Kuiper Belt	52
Oort Cloud	75,000
Proxima Centauri	268,000

and the closest star, Proxima Centauri.

The distances to objects orbiting a star are average distances, and highly eliptical orbits can cause large variations. Additionally, the distance between two locations in a star system varies as both orbit the star. At times, they may be on opposite sides of the star, greatly increasing the straight-line distance between them (which would be equal to the combined distance of each from the star itself), and at other times they will be on the same side of the star.

Assuming both locations are on the same side of the star, to determine the distance between any two simply deduct one from the other.

If they are on opposite sides of the star, add the two distances together.

For ease-of-play, GMs should feel free to simply use the above average figure rather than track the orbital positions of every body in a star system.

USING FTL DRIVES IN A STAR SYSTEM

The travel times within a star system can be drastically shortened by simply using a vessel's FTL drives, if it has them. FTL travel reduces an AU to a trivial distance, as can be seen in the following table.

At FTL-10, travel from the Sun to Pluto is a journey of a mere 20 seconds (in comparison, at the same speed, it would take 29 hours to reach the nearest star).

Travel at these speeds inside a crowded star system is difficult and dangerous, however. Star systems often cntain large amounts of clutter – planets, asteroids, comets, and clouds of ice and rock such as Sol's Oort Cloud, which surrounds the entire system. There's no

physical law preventing it, but the FTL calculations are much more complex than those for interstellar travel. In populated systems, the danger is even greater. Many civilized systems will have local laws determining the permitted speeds or usage of FTL drives.

FTL	1 AU
1	8 mins
2	1 min
3	18 secs
4	7.5 secs
5	3.8 secs
6	2.2 secs
7	1.4 secs
8	0.9 secs
9	0.7 secs
10	0.5 secs

Within a charted star system, the navigator's FTL checks take a -2d6 penalty. Within an uncharted system, the checks take a -3d6 penalty. And in a civilized, populated system, an additional -1d6 penalty is applied.

Failure on this check dumps the ship unceremoniously out of FTL as automated systems avoid a collision. This badly damages the FTL engines and the superstructure. The ship takes 2d6 damage to its SS, and the FTL engines go offline until they are repaired, which requires a *Difficult [16]* LOG check (bolstered by the *engineering* skill) and takes 1d6 hours.

>>FUEL

Both FTL and sublight travel require fuel. Fuel can be hydrogen, antimatter, or even old-style rocket fuel. As a general guideline the fuel capacity of a starship (in fuel units), unless otherwise noted in its stat block, is the cube of its ship class.

A fuel unit buys one parsec of travel. So a class IV scout has a fuel capacity of 64 fuel units before it needs to refuel, and a class XI cruiser can travel 1331 parsecs – about one twentieth of the way across the galaxy.

The cost of fuel is typically 10 Credits per unit, although it can vary from place to place.

A journey within a star system costs 1 fuel unit, whatever the length of the journey.

>>LANDING & DOCKING

Landing or docking ships is fairly routine task. It is only a *Routine [10]* AGI check, with failure meaning 1d6 damage to the ship. Some space stations may have automated docking controls, which remove even that small risk.

Attempting to dock with a moving target inflicts a -1d6 penalty, as does attempting to dock at high speed (a SPEED greater than 5).

Twelve light years. Doesn't sound very far does it? You can get from Earth to Tau Ceti and back in a day now, but when those first explorers left the solar system to find that first habitable planet, it was going to take them eighty years to get there. It was always going to be a one-way trip.

They slept, of course. Cryogenic technology had been more or less perfected and so they spent the trip on ice, waking up only when when they were on the final approach.

Those first few days in the Tau Ceti system were busy ones. Their calculations had been a bit off and the pioneers found themselves navigating around an asteroid belt that had ten times the number rocks in it than the one back home. Their spacecraft wasn't really

designed for that sort of precision flying, but they were a resourceful lot and made it through without getting too banged up.

They settled into orbit around Tau Ceti f and, made planet fall fifteen days after waking up. And to their great surprise. They found life. Or at least what remained of it. An ancient civilization that rose and fell thousands of years before their arrival.

The planet was positively littered with cities. Huge, sprawling cities with towering buildings that, in their prime, would have reached, glittering into the sky. They were well past their prime now, though. Abandoned an age ago, victim to some ancient catastrophe.

They explored the largest of these cities for days before they found the library. A vast repository of ancient texts. And that's when they made the horrifying discovery: the books were in English. And French and Chinese and Spanish.

This was no ancient civilization. The pioneers hadn't been traveling for eighty years, but eighty thousand. Maybe more. It was the human race, that had risen and fallen while the pioneers slept.

And now they were alone. But as I mentioned, they were a resourceful lot. First they recolonized Tau Ceti F, then they rediscovered faster than light travel and they spread out across the galaxy again, eventually becoming the Second Great Human Empire that we know today.

>>TYPES OF FTL TRAVEL

The speed of light in a vacuum is 186,282 miles per second. Faster-than-light travel, properly referred to as superluminal travel, is a process by which the laws of special relativity which normally forbid such speeds are broken or circumvented. Technically, the laws aren't broken – but certain solutions to the equations allow FTL travel in specified ways or "effectively" travel faster than light without actually doing so. Some special particles such as

tachyons travel faster than light at all times. The types of FTL travel available may be dependent on the game setting or, in settings where multiple types of FTL travel exist, on location, species, or advancement level.

Unlike subluminal speeds at a large fraction of light speed, moving faster than light also avoids relativistic effects; the time experienced by the traveler is the same as that experienced by the observer, unless otherwise noted.

The 20th century physicist Geoffrey Landis of the NASA Lewis Research Center categorized FTL systems as follows:

REALDRIVE/JUMP GATES | Type 0

A drive which uses tricks of spacetime geometry (a la general relativity) to travel faster than light.

Jump gates are also known by a variety of names – stargates, wormholes, boomtubes, mass relays, hypergates, transwarp conduits, quantum gates, portals, and space bridges. A jump gate links two points of space-time so that a vessel can travel quickly between them by traveling through hyperspace. Naturally occurring jump gates are usually known as wormholes.

Examples: Babylon 5, Stargate, Deep Space 9

HYPERDRIVE|Type I

The ships enters some different space during the trip, whether or not time passes for the crew while in this space.

Hyperdrive relies on the concept of an alternate space where dimensions, distance, and time work differently. A

vessel slips into this alternate space (named variously as hyperspace, null space, N-space, subspace, space^2, phase space, nodespace, slipspace, irrational space, zero space, otherspace, and more), travels to its destination, and then slips out again into normal space.

Examples: Star Wars

ALCUBIERRE/WARP DRIVE| Type II

A bubble of different space is projected around the ship so that the ship can travel faster-than-light while still in realspace.

Antimatter engines are used to power warp systems which create a space-time bubble which is able to travel at superluminal speeds. These systems are most commonly known as warp drives, or Alcubierre drives after the 20th century physicist Miguel Alcubierre. The antimatter reactor is used to power the displacement field.

Examples: Star Trek

JUMP DRIVE|Type III

The ship travels from one point to another, possibly in multiple jumps, without occupying the intervening space and without the use of a different space to assist the travel.

A jump drive enables a vessel to travel instantaneously from one point to another. Rather than travel through hyperspace or accelerate a warp bubble, a jump drive teleports the ship. In most cases, the jump distance is limited, requiring long journeys to use multiple jumps.

Examples: Battlestar Galactica

FAKEDRIVE|Type X

Assume that special relativity or general relativity are incorrect in part or in whole, or just ignore them. Now you can just accelerate at constant gravity until you go faster than light.

WHICH TYPE OF FTL?

The type of FTL travel allowed – if any – is determined by the setting. See the chapter on *Building A Universe* later in this rulebook for more information. The most common choices are one type (*Star Trek; Star Wars*), all types (*Doctor Who*), or no types – settings with two or three types are not common.

STARSHIP COMBAT

Starship combat is similar to ground combat. Attacks are made using dice pools based on attributes and skills, and ships move in an attempt to gain advantageous positions from which to fire upon their enemies.

Starship combat can be played with or without miniatures. When played with miniatures, ships are moved on a hex grid using a tactical combat system; when played without, a "theater of the mind" system is used.

Both forms of starship combat use the same rules; however each uses its own set of movement rules.

Although the asteroid belt ahead of the convoy provided ample opportunity for an ambush, the corporation had deemed it too costly to divert from anything other than a direct route between the hilithium mines on Carrax IV and the warp gate at the edge of the system.

Dermal had been tracking the convoy for days, waiting to take advantage of the Corporation's frugality. She had a plan and it was a good one.

She positioned her heavily modified Apache class freighter behind one of the larger rocks, taking advantage of it's natural radioactivity to hide her from the sensor sweeps of the gunships accompanying the vast hilithium tanker.

The last ship entered the asteroid field. Dermal checked her screens and went over the plan one last time: detonate the nukes, swoop in and take out whatever remained of the gunships, plant one last nuke on the tanker and get the hell out of there. Oh, and get paid. Get paid very well indeed by the anonymous patron who would very much like to see the convoy protection contracts go to a rival militia.

It was time. The convoy was in position.

Dermal flicked a couple of switches and then paused to take a deep breath before pushing the big red button that would rain fiery destruction on the unsuspecting gunships.

Payday.

Nothing happened. Dermal cursed, pushing the button frantically. Still nothing. But why? She had laid the mines and programmed the detonator herself. She had checked everything two, three times. It should have been perfect.

A jangling siren interrupted her train of thought. Proximity alert! Two of the gunships were closing in her position. They knew where she was. How?

Dermal pushed the thruster controls forward and maneuvered the Apache away from the asteroid. She had to escape. Get as much distance between her and the convoy as she could. She pulled the lever back hard and the freighter lurched forward, jamming her back in the seat.

She just had to get free of the asteroid field and then she'd be free and clear. Thirty seconds.

The Apache shuddered as a concussion missile hit, somewhere at the back. Dermal lost control momentarily as the ship went into a spin, but wrestled the controls back. Another missile exploded harmlessly on the port-side hull plating. The ship ducked around one last rock and then she was free.

Except the Navy was was waiting for her on the other side. Three heavy cruisers and a squadron of snub fighters. Dermal was going to have to fight her way out...

>>THE BASICS

If you are already familiar with the *What's O.L.D. is N.E.W.* task resolution rules, you'll find that starship combat does not require you to learn much more.

The action economy is slightly different, however.

Instead of two actions per turn like in a ground-based encounter, a starship has one movement action and a number of other actions equal to its class. These actions can be performed by PCs or by the ship's crew.

Actions are dealt with in the following sections. Movement is dealt with separately in the *Theater of the Mind* and *Tactical Combat* sections.

>>PLAY SEQUENCE

The play sequence is similar to that of a regular ground-based encounter.

1. Make attribute checks to access the ambush turn, if appropriate. These will be opposed by ship sensors.
2. Roll INITIATIVE for each ship. The pilot rolls, and can use the *starship tactics* skill to in the dice pool. Larger ships have INITIATVE penalties.
3. Each ship takes a turn in INITIATIVE order, starting with whichever rolled the highest. The ship takes one move, and a number of actions equal to its class.
4. At the end of the round, move onto the next round and repeat, re-rolling INITIATIVE every round.

ACTIONS

In addition to movement, each ship takes a number of actions in its turn. The number of actions available to it is equal to the ship's class - a Class V vessel will move and take 5 actions. Actions consist of attacks, special exploits, repairs, scans, and more. A large vessel can accomplish a lot of simultaneous actions in one turn, although large ships tend to have low INITIATIVE and act last.

Actions are performed just like they are in ground-based encounters. Attribute checks, bolstered by skills, are made to attack, scan, and so on. Attacks are made using attributes vs. the target's DEFENSE, just like on the ground. Scans

with starship sensors work just like scans with handheld scanners, albeit with range increments measures in kilometers rather than feet – roll a check vs the target's DEFENSE and ask a question.

Actions are taken in any order. These actions can be performed by PCs, or by the crew. PCs may only perform one action each, so if the number of available actions exceeds the number of PCs, the crew will perform the remaining actions.

Every ship has a crew rating which indicates the dice pool the crew makes when performing an action, whether that be an attack, a repair, or something else. The crew uses this set dice pool for all actions. A typical (standard) crew rolls 4d6.

Just like in ground combat, there is no fixed list of available actions. A character can do anything; the GM will assign the appropriate attribute check if necessary. However, the following list provides some examples.

- **Attack** with a shipboard weapon using a LOG or INT vs. a target's DEFENSE. The *gunnery* skill helps with this.
- **Repair** 2 points of SS or 2 CPU cycles with a *Difficult [16]* LOG check. *Engineering* helps with SS, while *computers* helps with CPU cycles.
- **Scan** a target by making a LOG check vs. the target's DEFENSE and ask a single question about that target. You can use the *computers* skill to use ship sensors, or specific skills if they information you seek is related to a specific subject (*engineering* if you're scanning their engines, *medicine* if you're looking for life-forms, and so on).

- Perform **medical actions** to either heal a PC, or restore a crewmember to duty. The ship's sick bay tells you its capacity per day for restoring casualties to duty. The *medicine* skill is useful here. This is a *Challenging [13]* LOG check.
- Make an **electronic attack** using LOG vs. the target's ELECTRONIC DEFENSE. Success causes 1d6 damage to the target's current CPU cycles, possibly causing systems to shut down.
- **Launch** a shuttle or a fighter squadron.
- Perform an **exploit**.
- **Use** transporters, tractor beams, or other special equipment.

FIRING WEAPONS

A character fires a shipboard weapon using his LOGIC for missles and torpedoes (it's a complex, mathematical process plotting trajectories) or INTUITION for energy and ballistic weapons vs. the target ship's DEFENSE. The *gunnery* skill applies to ship weaponry. The target ship must be in the weapon's arc of fire; there are four arcs marked forward, aft, port, and starboard; some weapons are mounted in turrets, which give it access to more than one firing arc.

If a weapon hits, roll the damage noted on its stat-block entry. If the ship has a SOAK value from shields or armor, deduct that amount. The final total is applied to the target's SUPERSTRUCTURE.

Banks. Some weapons are mounted in banks or arrays. These are noted in the stat block. Banks and arrays require just one attack roll to hit with multiple weapons, and can be operated

simultaneously by a single gunner.

Missiles. Missile weapons often have long ranges and high damage potential compared to energy weapons. However, they are more easily defended against with point defenses, and take two rounds to reach their target beyond 10 hexes (if you are using miniatures, they move at 10 hexes per round). If the target moves outside the missile's range in that time, the missile will fail to engage.

Energy weapons. Lasers, phasers, ion weapons, blasters, disruptors, and other energy weapons lose 1d6 damage per range increment.

The following modifiers apply to attacks.

Stationary target	+1d6
Rear attack	+1d6
Forward-mounted weapons	+1d6
Per range increment	-1d6
Aft-mounted weapons	-1d6

SHIELDS

Shields reduce incoming damage by an amount equal to their SOAK score. Each time a shield is penetrated, its SOAK value is reduced by 1 point. A character can repair one point of shield SOAK with a *Difficult [16]* LOG check.

CASUALTIES

Ordinarily, ship damage merely reduces the vessel's SUPERSTRUCTURE until it reaches 0. However, whenever the ship takes 5 or more damage (after the SOAK from shields and armor have been deducted), casualties may occur.

Each player-character should roll 1d6. On a roll of 6, the character takes 2d6 damage.

Additionally, any crew beyond the player-characters take 1d6 casualties. A ship below its minimum crew complement suffers -1d6 to all actions. A ship below half its minimum crew complement suffers -2d6. A ship below one-tenth of its crew complement cannot function.

POINT DEFENSES

Point defenses grant an "aura". Unlike shields, which provide a passive defense, a point defenses are an active measure. Point defenses are usually too weak to do serious damage to a large vessel, but can cut swathes through squadrons of fighters or smaller ships which get too close.

An aura is assigned a range. Vessels within the aura's range automatically take 1d6 damage. The damage is inflicted whenever a ship enters the aura or begins its turn in the aura.

Point defenses also grant a continuous DEFENSE bonus vs. missiles and fighters.

FIGHTERS

Fighters are launched in squadrons, and launching a squadron is one action. A squadron's HEALTH is equal to the number of fighters in the squadron, and its attack has a range of 3 and does damage equal to the number of fighters in the squadron. A squadron moves at SPEED 10. Squadrons take 1d6 casualties for entering or beginning their turn in the aura of larger ship's point defenses. Each squadron is treated as an individual ship for the purposes of INITIATIVE.

EXPLODING SHIPS

A ship reduced to 0 SUPERSTRUCTURE starts to roll countdown dice from a pool of 3d6, after which it explodes, killing everybody on

board. The time taken by the countdown period can be used to evacuate the ship. The explosion can also cause damage to those nearby. The damage is equal to the ship's total power (all engines), reduced by 50% for each hex (each kilometer) distance from the explosion.

COLLISIONS

Collisions (either through accident or deliberate ramming) do damage to both parties. The damage each vessel or object inflicts on the other is equal to its class multiplied by its velocity. Stellar objects, such as asteroids, have classes just like starships do. Asteroids range from Class I all the way up to Class 30, and typically have a velocity of 1d6.

>>THEATER OF THE MIND

While starship combat can be played out on a hex map with positions and movement carefully plotted, theater of the mind can result in faster, more cinematic – albeit less tactical – starship combats.

Theater of the mind combat and grid-based combat are fundamentally very similar, with one major difference: movement and positioning are described narratively in the former rather than being based on the position of a miniature on a map.

NON-GRID MOVEMENT

Every ship has one movement action on its turn. During that phase, the ship can move in any way that it would normally be capable of. Some examples of movement might include:

- Closing to 3,000m.
- Swinging round on the enemy's tail.
- Turning broadsides.
- Making a break for an asteroid field.

- Backing off to 10km distance.

The pilot is free to narratively describe the movement and resultant position. There's no restriction on a ship's movement, with one important exception: *a ship cannot undo through movement an advantage created by a ship which beat it in this turn's INITIATIVE order.*

For example, if the winner of INITIATIVE positions itself on its target's tail, the target – which lost INITIATIVE – can move, but cannot undo that situation. Winning INITIATIVE gives you power to determine the tactical position, and while those later in the turn can move, they can't do so in a way that negates that advantage. They need to try and win INITIATIVE next turn and be the one to define the tactical environment if they wish to do that.

The idea of movement is to gain a tactical advantage or a useful position. For example, attacking a target from the rear not only grants you a bonus to hit, but rear-mounted weapons have a penalty to hit. That makes the "six" position very advantageous.

Maneuvers like this take place automatically, unless a pilot attempts to negate another pilot's maneuver. This forces an opposed attribute check (skills and equipment – in this case the ship itself – contribute to this as normal). Failure simply means that the desired outcome is not achieved, and the relative status quo is retained.

EXPLOITS IN THEATER OF THE MIND

Exploits in theater of the mind starship encounters work in the same way as in ground combat. Any given character can

use exploits once per turn, and these may be actions, reactions, or modification exploits.

Some maneuver exploits allow a character to counteract an advantage gained by a faster ship's movement. This is the exception to the general rule that you cannot negate – by moving – an advantage gained by a ship higher than you in the INITIATIVE order.

Exploits are usually automatically successfully. However, if the enemy pilot knows that exploit, too, he can attempt to counter your use of it. This forces an opposed check (and counts as his use of an exploit that turn).

EXAMPLE OF THEATER OF THE MIND PLAY

This is an example of *theater of the mind* starship combat.

James, Leonard, Walter, and Nichelle are playing in an adventure being run by Grace. They play the characters Sasha, Dr. TikTok, Ashonnn, and Talik. Their starship, the *Murphy*, has encountered two other vessels, one of which appears to be a Spartan scout ship threatening the other, an unarmed freighter.

Leonard (playing Ashonn): What's our current distance? I'm scanning the Spartan ship for more information. What type of ship is it?

Grace (the GM): You're 19 kilometers away right now. I think that's the second range increment for your sensors, right? Roll your check!

Leonard (playing Ashonn): 3d6 for LOGIC, 2d6 for my computers skill, 1d6 for those excellent Newwatch ES-1H we... errr... liberated. That's 6d6, down to 5d6 for the range, makes... [rolls] 22!

Grace (the GM): Great. It's a Talon Class VI Scout. Slightly bigger than your Class V ship. That type of ship typically has a crew of around 30, and is armed with both torpedoes and disruptors.

Walter (playing Dr. TikTok): I'll get on another scanner terminal. I want to know if there's anyone alive on that freighter. 3d6 LOGIC – Ashonn's better at using scanners than me, but my medical training lets me add 2d6 since I'm scanning for lifeforms. 5d6, roll of 19.

Grace (the GM): You detect 4 life-forms aboard the ship. It's an *Aphid* Class III Transport.

Walter (playing Dr. TikTok): Hmm. They have a crew complement of 7. It must have taken damage or casualties already. OK, I'll scan the freighter for damage or anything unusual. I can't use my medicine skill for this, and I have no engineering skill, so just the 3d6 this time. I get 12.

Grace (the GM): That's enough to detect the energy signature of an overloading ion engine. That ship's gonna blow! You don't have long.

James (playing Sasha): OK, let's deal with that Spartan first. 19km is a bit far for our weaponry. Our torpedoes have a range increment of 7km. 3 range increments is too many for my liking, and our blasters are much shorter range than that. Do we know what the range on the Spartan's weapons are?

Leonard (playing Ashonn): I can check. Scanning again... a roll of 19 this time.

Grace (the GM): One torpedo launcher with a range increment of 10km, and a pair of small beam disruptors with a range increment of 3km. With your shields up, the disruptors will struggle to do much damage to you, but the torpedo is another matter.

James (playing Sasha): OK, let's close the distance to 5km. Can I place us between the Spartan and the freighter?

Grace (the GM): You can try. The Spartan ship is maneuvering also to prevent that. Make an AGILITY check!

James (playing Sasha): Plus my piloting skill! That's 3d6 AGI, 2d6 piloting, 5d6 total. I roll 16.

Grace (the GM): The Spartan pilot only rolled 14. You skilfully insert the *Murphy* between the Spartan and the freighter, at a distance of 5km. I assume you're raising shields?

Nichelle (playing Talik): Hell, yeah. This ship has no armor at all! In fact, one good hit from that torpedo could kill us. Even with the shields, I don't like it. Anyway... shields are raised! I'm using my Shield Reinforcement exploit to reinforce the shield facing nearest the Spartan. That gives it an extra 2 points of SOAK.

Grace (the GM): That's lucky, because the Spartan is turning to face you. I don't think anyone can argue we're not in combat now. No ambush turn, as you're all clearly aware of each other and ready to fight. Roll INITIATIVE!

James (playing Sasha): I'll roll it. I have 4d6 INITIATIVE. We get -1d6 for the ship class, though, so 3d6. I roll.... 12!

Grace (the GM): The Spartan gets 15. It wins. This round it decides on the movement, and you get to react; then it takes actions, followed by you. It accelerates in an attempt to swoop in behind you, all guns blazing. What are you doing?

James (playing Sasha): Trying to maneuver to prevent that, I guess. I don't like the idea of him getting a rear attack – those are no fun! I knew we should have fitted that rear torpedo tube. Do I make

an opposed roll with him?

Grace (the GM): Yep. The Spartan rolls 16 and I see you have rolled... oh dear. Only 9! You're not having a good day – the Spartan ship positions itself in your rear arc at a distance of only 3km and opens fire with its disruptors.   He rolls 12 and 17 – what's your ship's DEFENSE?

James (playing Sasha): 16. I guess that means one of the guns hits and one misses?

Grace (the GM): That's exactly what happens. A disruptor bolt slams into your rear shield for... 5 damage.

Nichelle (playing Talik): The shields take it easily. Those disruptors aren't really a problem. He's not firing the torpedo, too, is he?

Grace (the GM): Not yet, at least. Your turn, guys. What are you doing?

James (playing Sasha): We're facing the wrong way and we lost INITIATIVE, so I can't do much about that right now... except... I haven't used an exploit yet this turn. I use Wingover. We accelerate away, and reverse direction in half-loop barrel roll. We're totally facing him now! Talik - fire everything!

Nichelle (playing Talik): If you say so – firing everything! Two pulse blasters, and our new baby – the Highwide Works MPPx-1 *Thunderbat* proximity photonic torpedo! And it's a proximity weapon, so it'll still do some damage if it misses. Let's see how he liked that!

Grace (the GM): OK, the Spartan ship's DEFENSE is 18. You're now 6 hexes away, so point bank for your torpedo, but the second range increment for your pulse blasters. Roll your attacks! Remember forward-firing weapons get +1d6.

Nichelle (playing Talik): Two

blasters.... both -1d6 for the range, darnit. 3d6 plus my 1d6 gunnery, plus 1d6 for the forward arc, less the 1d6 is a flat 4d6... I roll 12 and 16. Both blasters miss. The torpedo I'm rolling 5d6 for though... 21! Boom! That'll be 10 damage, thank you!

Grace (the GM): Straight through his shields, which soak 6, leaving 4 damage to his superstructure. You haven't crippled him, but he can't take too many of those!

WHAT NEXT?

Continuing, the two starships will take turns to act. Both will have a free movement action of their choice. Ships might, for example, try to close or withdraw, maneuver behind each other, or try to keep a damaged side away from the enemy. Each will also be able to take a number of actions per turn (the *Murphy* has 5, the Spartan ship has 6) , which can be used for firing weapons, scanning, electronic attacks, repairs, and more. Each starship's actions take place all at once, in any order chosen by that ship. So when it comes to the *Murphy's* turn, the players can decide in what order they wish to resolve various actions.

One important aspect of the movement and INITIATIVE order is that while a ship can move any way (within its capabilities) during its turn, it cannot negate an advantage achieved by a ship which beat it on INITIATIVE unless a specific exploit is used.

Even if an exploit is used, if the opposing pilot also knows the same exploit, he knows how to counter it – so an opposed check must be made to negate the first vessel's advantage.

In the above example, when the Spartan vessel managed to position itself on the *Murphy's* tail, the *Murphy* would have been able to move how it wished, but would not be able to undo that situation that turn – the Spartan vessel would still be in its "six". However, Sasha has an exploit specifically designed for such situations, which overrides that general rule – she pulls a Wingover, which lets her reverse directon quickly. Without the exploit, the *Murphy* would need to win INITIATIVE next turn and then maneuver into a more favourable position.

>>TACTICAL COMBAT

Starship combat can also be played on a hex grid for a much more tactical experience. This can also be very useful when there are many ships involved, as their relative positions can be seen clearly. The hex grid is called a "starscape", although it doesn't have to display empty space - it may display the surface of a moon-sized space station complete with laser towers, a blasted post apocalyptic landscape for high-altitude dogfights, or anything else you can think of! The starscape may contain features which have an effect on the game each round – asteroids might move, or a black hole might pull ships towards it.

Additionally, you will need miniatures, tokens, or counters to represent the ships involved in the combat. You can download ship counters designed to work on a hex grid from EN Publishing for free which you can print and cut out, or you can buy miniatures or small plastic ship models from many hobby or toy retailers.

Using a hex-based starmap is very similar to theatre of the mind combat. The only difference is that instead of

advantages being determined by narrative descriptions, they are instead derived specifically from the positions of the miniatures on the map. A ship is attacking another's rear arc if its miniature is physically positioned in its victim's rear arc.

A hex on a starmap represents 1km. The movement phase, instead of consisting of a description of motion, has the pilot move the vessel a number of hexes up to its SPEED (as indicated in its stat-block) on the map. Turning one hex-side counts as one hex of movement (also, see the optional *Newtonian Movement* rules, below, for a more realistic simulation of movement in space).

The rule that you cannot undo a faster ship's advantage does not apply on a hex map. You can undo it if you can figure out how to move your ship so as to do so. The only determinant of position is the map itself.

NEWTONIAN MOVEMENT

Newtonian movement is an optional way to deal with ship movement on a hex grid. Instead of simply moving a ship any number of hexes up to its SPEED, a ship *must* move a number of hexes equal to its *current* velocity. The ship's SPEED score tells you how much it can increase or decrease its velocity by each turn.

A ship at zero velocity may rotate one hex side per turn for free.

Using Newtonian movement, turning does not cost any movement. It takes place for free, but there are limits on how fast you can turn based on your ship's overall agility and current velocity. A fast moving carrier has a very wide turning circle, while a tiny fighter can change direction much more easily.

A ship's turning circle is equal to its speed multiplied by its class, divided by 10 (round down to a minimum of 1). A class XI ship moving at a velocity of 6 has a turning circle of 11 x 6 / 10 = 6. A smaller Class V scout moving at the same velocity has a turning circle of 3.

The turning circle value simply represents the number of hexes in a straight line that a ship can move before turning one hex side.

THE NEWTONIAN ROUND

The round structure for Newtonian movement differs slightly to that of regular movement. All movement takes place simultaneously, followed by all actions. The Newtonian round looks like this:

1. All ships make INITIATIVE checks.
2. All ships move in *reverse* INITIATIVE order (starting with the ship which lost).
3. All ships then take actions in *forward* INITIATIVE order.
4. Return to Step 1.

This sequence creates more realistic movement, but allows ships which win INITIATIVE to make tactical movement decisions based on what they see their opponents doing. The movement takes place simultaneously, but is resolved in reverse order to give an informational advantage to faster ships.

If you are considering running chase sequences, the Newtonian movement round is a very useful tool – especially if ships are racing through an asteroid field and trading speed for the ability to turn quickly!

>>USEFUL EXPLOITS

For reference, the following exploits are useful in starship combat.

180 HAMMERHEAD *[action]*
Prerequisites: *Piloting* skill; AGI 8+
A starship is rotated 180 degrees while continuing its momentum, enabling it to face and fire at pursuers.

BURST OF SPEED *[action]*
Prerequisites: *Piloting* skill
Your mount, ship, or vehicle gains a speed boost of 2 hexes for the turn.

COUNTERHACK *[reaction]*
Prerequisites: *Computers* skill
When an opponent is attempting to access your systems using the System Override exploit, you may make an immediate opposed LOG check to block the attempt.

HIGH ENERGY TURN *[action]*
Prerequisites: *Piloting skill*; LOG 8+
The pilot uses FTL energy to force a ship into any emergency facing. It requires a LOG check equal to 10 + the ship's class. Failure inflicts 1d6 damage to the ship's SS per ship class. Success allows the pilot to face the ship in any direction he wishes.

REINFORCE SHIELD *[action]*
Prerequisites: LOG 6+; *computers* skill
Until the start of your next turn, one shield (forward, aft, port, or starboard) becomes reinforced. It gains a +2 SOAK.

RELATIVITY CORKSCREW *[action]*
Prerequisite: *Piloting* skill; *physics* skill; LOG 6+
This complex maneuver uses FTL speeds, time dilation, and high-level calculations to gain a temporal advantage in starship combat. An FTL drive is necessary. One action is used to perform the relativity corkscrew, but the ship gains 1d6 free actions in return. However, this is a dangerous maneuver and requires a *Strenuous [25]* LOG check to accomplish. It cannot be performed again until at least one hour has been spent maintaining the FTL engines.

SYSTEM OVERRIDE *[action]*
Prerequisites: *Computers* skill
You remotely access another ship's control computer, and briefly take a system offline. One shield, or one weapon, can be deactivated until the beginning of the target ship's next turn, at which point it is automatically reactivated.

TARGET ENGINES *[modify+]*
Prerequisites: *Gunnery* skill
You can choose to target an enemy ship's engines by paying 2d6. Attacks to the engines directly reduce their power output instead of damaging superstructure (and consequently affecting the ship's SPEED or FTL capability).

TORPEDO SPREAD *[modify+]*
Prerequisites: *Gunnery* skill
Multiple torpedoes can be fired in a spread which affects a wide area of effect. For each 1d6 paid, one hex within range is affected; all affected hexes automatically do 1d6 damage of the appropriate type to any vessels in them.

WARP MANEUVER [action]
Prerequisites: LOG 8+; *engineering* skill, *piloting* skill
A very dangerous maneuver, you use

your ship's FTL capability to reposition your ship on the battlemap. You can move to any location to which you have direct line-of-sight, but your resultant facing is randomized (roll 1d6). This takes your ship's FTL engines offline, and they require an hour to repair.

WINGOVER *[modify]*
Prerequisites: AGI 5+; *piloting* skill
You can reverse direction 180-degrees instantly with a half-loop plus barrel roll. The starship you are piloting must be Class V or smaller. This maneuver is part of the move phase.

>>CREWS

When a ship takes an action not performed by a player character (either an NPC ship, or when more ship actions are available than there are PCs to take them) the crew's rating is used to form dice pools. The same dice pool is used for any action or attack.

See the *Starship Construction Manual* for more information about crew costs and ratings. If the crew rating is not specified, assume it is a standard crew with a dice pool of 4d6.

Rating	Dice
Poor	3d6
Standard	4d6
Experienced	5d6
Elite	6d6

>>THE *MURPHY*

Weight 67120 tons; **Cargo Units** 250 (161 available)

Hull Class V (INIT -1d6); **Length** 102m; **Width** 70m; **Height** 66m

Crew 20 (cost 4000Cr/m; standard 4d6); **Troops** 0; **Passengers** 0 (0 standard, 0 luxury)

Command & Control Systems
Computer Frontier Products MM-2 (CPU cycles 12; check +0d6)
Sensors Interstellar Enterprises MS-2 (range 6; check +0d6)

Engine & Power Data
Subluminal 1x Oshiro Shipping MI-2 ion engine (power 21; SPEED 4.2; fuel efficiency 1.6)
FTL 2x Outerdyne DayCorp MH-2 hyperdrive (power 20; FTL 4; fuel efficiency 0.9)
Operational Range 112.5 parsecs

Defensive Data
Superstructure 20; **DEFENSE** 16; **ELECTRONIC DEFENSE** 6
Armor -
Shields 1x Satellite Yards MSM-1 combat deflector shields (power 23; SOAK 5)
Point Defenses -

Weapons Data
1x Highwide Works MPPx-1 Thunderbat proximity photonic torpedo (range 7; damage 2d6 heat; attack +1d6)
2x Tan-Korovin Enterprises SBP-1 Hotbuster pulse blaster (range 2; damage 2d6 heat; attack +0d6)

Facilities
Luxury 100% (adequate; +0d6)
Facilities Sickbay (5), Messhall (10), Laboratory (5)
Other Systems -
Shuttles 1 (Parsec Systems ZM2 Shuttle/fighter Bay); **Fighters** 0

Market Value 885.5 MCr

>>SPARTAN *TALON* CLASS VI SCOUT

Weight 68222 tons; **Cargo Units** 360 (212 available)

Hull Class VI (INIT -1d6); **Length** 79m; **Width** 95m; **Height** 95m

Crew 28 (cost 5580Cr/m; standard 4d6); **Troops** 0; **Passengers** 0 (0 standard, 0 luxury)

Command & Control Systems

Computer Frontier Products MM-3H (CPU cycles 32; max FTL 8; checks +1d6)

Sensors Interstellar Enterprises MS-1H (range 8; check +1d6)

Engine & Power Data

Subluminal 1x DeltaLight products LI-2 ion engine (power 32; SPEED 5.3; fuel efficiency 1.4)

FTL 1x Newdyne Concepts LA-1 antimatter engine (power 20; FTL 3.3; fuel efficiency 1)

Operational Range 216 parsecs

Defensive Data

Superstructure 18; **DEFENSE** 18; **ELECTRONIC DEFENSE** 16

Armor -

Shields 1x Satellite Yards MSM-2 combat deflector shields (power 33; SOAK 6)

Point Defenses -

Weapons Data

1x Wayfarer Aeronautics LPPx-1 Flamespear photonic torpedo (range 10; damage 3d6 heat; attack +1d6)

2x Mekhdiev Construction SDB-1 Thunderray beam disruptor (range 3; damage 1d6 heat; attack +0d6)

Facilities

Luxury 79% (poor; -1d6)

Facilities Sickbay (20), Training Hall (4), Messhall (2)

Other Systems NorthCo GYN3 Starship Stealth System, Omniwide Productions YPO57 Electronic Countermeasures

Shuttles 0; **Fighters** 0

Market Value 1950 MCr

>>SPACE PHENOMENA

Empty starscapes do not make for exciting space battles. The following phenomena can be added to create a exciting and dynamic starship combat environment. Choose, or roll d66 twice on the following table.

This table is also used for space travel random events when a sensors check is failed.

11-12) Asteroids. Asteroids take up between one and three hexes. They should be sprinkled liberally across the starscape. Asteroids block line of sight.

13-14) Black hole. A black hole is not placed on the starscape itself; rather it exists off of one edge of the starscape. Each round, all ships are dragged 1d6 hexes towards that hex edge in a straight line. Any vessel which crosses the edge of the starscape has passed through the event horizon and is effectively destroyed.

15-16) Energy barrier. An energy barrier forms an impassable "sheet" one hex thick which causes 3d6 heat damage to any ship which comes into contact with it.

21-22) Energy fluctuations. Energy fluctuations are an environmental feature. Each round, roll 1d6; on a roll of 5 or 6, an energy fluctuation takes place. Roll 1d6 on the following table to determine its effect:

Energy fluctuations

1   All shields are overloaded and go down for this round.

2   All energy weapons deal double damage for this round.

3   All ships take 1d6 heat damage.

4   All sensors are knocked offline,

making firing impossible this round.

5   Characters aboard a ship all take 1d6 heat damage.

6   Energy reactions are amplified; ships all double their velocity this round.

23-24) Funnel clouds. Funnel clouds are gaseous entities of 3 hexes diameter. They look like towering pillars of turbulent gas. A ship can hide within a funnel cloud, rendering it effectively cloaked. However, the ship will take 1d6 heat damage each round while inside the cloud.

25-26) Gravitational anomaly. Gravitational anomalies have unpredictable effects on starship. An anomaly is 1d6 hexes in diameter. The GM should determine its location, but it is a *Difficult [16]* INT check to use sensors to locate and chart an anomaly. Any ship which comes into contact with a gravitation anomaly is thrown 3d6 hexes in a randomly determined direction.

31-32) Magnetar. A magnetar is a type of neutron star with a powerful magnetic field, about the size of a large asteroid (one hex). They inflict a -2d6 penalty to all sensor checks and attack rolls. Magnetars also cause energy fluctuations (see above) with strong x-ray and gamma ray bursts.

33-34) Dense nebula. Nebulae encompass an entire starscape and reduce sensor and attack range to 2d6 hexes.

35-36) Plasma storms. Plasma storms are dangerous, explosive phenomena which can cause damage to vessels which stray too close. Storms appear randomly, and disappear again just as quickly. At the start of the encounter, place 1d6 plasma storms of 3-hexes in diameter on the starscape. Each storm has a countdown die of one dice; roll 1d6 for each storm each round, and remove it if a 6 is rolled. Additionally, roll 1d6 each round and on a roll of 5-6 add a new plasma storm to the starscape in a randomly determined location. Plasma storms cause 6d6 damage to any starship which comes into contact with it.

41-42) Psychic penomena. Psychic phenomena affect crew rather than ships, adjusting their emotions. Each round, each character is subjected to a 4d6 vs. MENTAL DEFENSE attack. If the attack is successful, they suffer 2d6 psychic damage.

43-44) Quantum singularity. A quantum singularity is a type of black hole. It has a massive gravitational pull, but its event horizon is only one-hex in size, and is placed randomly on the starscape. Each round, all ships are dragged 1d6 hexes towards that hex in a straight line. Any vessel which enters the hex has passed through the event horizon and is effectively destroyed.

45-46) Radiation. Radiation pervades a starscape. Any ship with no active shields is vulnerable to radiation, which harms the crew, causing 1d6 casualties each round.

51-52) Solar wind. A solar wind is a stream of plasma emanating from a star; solar winds are what solar sails use for propulsion. Technically every star emits a solar wind, which is usually harmless to starships, but occasionally a stellar body will emit such a ferocious solar wind that even starships are in danger. Solar wind moves across the starscape from one edge to another. Starships are pushed one hex in that direction each

turn (those with solar sails are pushed 1d6 hexes). In addition, they take 1d6 heat damage from the direction of the solar wind.

53-54) Space creature. Space creatures are placed randomly on the starscape. A space creature is unpredictable. Roll 1d6 on the following table for its action each turn. A space creature has 4d6 INITIATIVE, 4d6 HEALTH and 3d6 DEFENSE, should any vessel wish to attack it.

Space creature actions

1 No action.
2 Move 2d6 hexes in a random direction.
3 Move in a straight line towards the nearest vessel.
4 Attack the nearest vessel with a ranged attack (4d6 to hit, 4d6 damage).
5 Emit an energy surge (see **Energy Fluctuations** above).
6 Flee towards the nearest map edge.

55-56) Spatial anomaly. A spatial anomaly randomly teleports any vessel which enters it to a random location on the starscape. Spatial anomalies are 3 hexes in diameter and are placed randomly on the starscape.

61-62) Temporal anomaly. A temporal anomaly can speed up, slow down, or stop time for any that come into contact with it. Temporal anomalies are 1d6 hexes in diameter. If a vessel touches a temporal anomaly, roll 1d6. On a 1-3 the vessel misses its next turn; on a 5-6 the vessel gains an immediate bonus turn.

63-64) Volatile gas pockets. Volatile gas pockets are hard to detect, but they can be charted with a *Difficult [16]* INT check. A gas pocket is usually 3 hexes in diameter, and 2d6 of them should be placed randomly on the starscape. Any ship within a volatile gas pocket when it fires a weapon, or when it is hit by a weapon, takes 2d6 heat damage from exploding gas. The gas pocket disappears after exploding.

65-66) Wormhole. A wormhole is a one-way portal to another location. Any ship entering the wormhole leaves the encounter immediately. Wormholes are usually only 1 hex in diameter, and tend to be very visible.

PHENOMENA AS PART OF SPACE TRAVEL

If the phenomenon is encountered as a random event as a result of a failed sensors check during space travel (as opposed to being a feature of a starscape used for a space battle), the GM will need to adjust the situation slightly.

The phenomenon automatically brings the ship out of FTL travel.

The GM will then need to run an impromptu encounter featuring the phenomenon, likely requiring attribute checks to overcome or avoid it. Usually a *Difficult [16]* AGI check (bolstered by the *piloting* skill) will suffice if the phenomenon is an avoidable object, although other phenomena may require different checks.