

Tactics and Strategy in Three Dimensions: How to Wage Combat in Space

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0.0 Introduction

At one time, we were but fish in a large ocean. Mankind today now swims in a much larger ocean: Space. We face today enemies and opponents that are much deadlier than any prehistoric shark. Because of this, I have been commissioned to do a summary report of the various tactics and strategies needed to meet those foes, all in the context that even our greatest ally may one day turn into our greatest foe. What follows is the result of my research. It should be noted that most of report deals not with space itself, but with the beings of space, who I think represent the bulk of any threat in space.

1.0 Basics

The following makes space different from any theater ever fought in before:

1.1 Distance

When it comes to space, one needs to remember one thing: Distance.

That one factor is what decides who wins and who loses any conflict in space, and woe those who forget it. Guns are capable of farther distance, and communications take longer. Lines of supply become much more tenuous, and help is farther away.

Although the ability to do damage at a further distance is a definite advantage, it requires a much tighter aim to take advantage of this greater range. Beam weapons are arguably your best weapon, as they require no ammunition, and they are capable of damaging your target before he can adequately defend himself. Missiles, especially guided ones, are a solid bet as well, as shape-recognition technology allows them to follow their targets even through a gas cloud or asteroid storm. Coilguns are only good if the enemy is close; otherwise, the enemy has too much time to dodge. Also, remember that a number of weapons become beam weapons; with no gravity, mortars and artillery shells have no arcs.

Also, do not buy into the theory that heat-seeking missiles are the best missiles in space. Although the heat from a spaceship engine is visible, it is quickly frozen in space, usually in a matter of microseconds. I have also heard stories of a captain who brought radar-guided missiles; he was surprised when the missiles went right by his target. He had forgotten that radar is dependent on sound, and there is no sound in space.

Communications in space take significantly longer. Combine range with processing time, and a message that took scant seconds in-atmosphere can now take a minute to reach its intended target. Keep in mind that not hearing from someone is good, hearing from them could be bad; after

all, once battle has begun, the most you may hear from some ships is their black box beacon.

(On a related note, keep in mind that powering down is neither a good idea nor absolute. It's a bad idea because your life support systems are depleted at a quick pace. It's hardly an absolute defense because techno-pirates are hardly unsuspecting, and it leaves you at the mercy of whoever still wants to blast your ship.)

1.2 Vacuum

Something that you have this much of needs to be noted. Radar and sonar do not work in a vacuum (lidar systems work fine, however). Also, you need to be aware that it is a near-vacuum, not an absolute one. Clouds of space dust can wreak havoc with all shipboard systems, and can ground lower-density materials in the wrong circumstances.

Unfortunately, this also changes the likelihood of survival in an emergency. On Earth, even the Arctic allows for some chance of survival: At the very least, you have air and water. In the vacuum of space, you have neither. Thus, you can't hope to survive long without an environmental suit. Suffice to say, the "walking of the plank" (being shoved out of an airlock sans suit) is a definite death sentence. This also means that fantasies of landing on a friendly asteroid are precisely that. Even the Orbital Marines are scared of hitting a planet from too high of an altitude. Anything that makes them nervous should make the rest of us panicked.

The lack of air also has the decidedly nasty feature that air is not there to protect you from radiation. Thus, any hope of a "quick freeze" due to the near absolute zero temperatures of outer space, in hopes that someone can rescue and then revive you, are nothing more than fanciful thought. If you somehow end up unaided outside your craft or suit, you are dead.

1.3 Aloneness

Do not count on anyone but yourself. Obviously I am not referring to tactics here, but actual survival. You cannot count on anyone to save you, and space itself is a harsh mistress. In essence, just because you send a distress signal, someone may not receive it, and even if they do, it may still do you no good if they are too far away to help you. Even in a fleet, you may not receive the help you need, especially if the fleet is under fire or in retreat. In short, even your closest ally may be too far to help.

2.0 Obvious Stratagems

Given the near-vacuum nature of space, and its micro-gravity, several stratagems may be implemented that have no parallel on Earth.

2.1 Drifting

On Earth, if you cut power, you drop. In space, you drift. This can allow you to turn your ship 90° and then fire on all targets on one side, targets that would be unhittable on earth. If your ship is sufficiently damaged, drifting makes you look like an asteroid, which, if the course is

near but not on a collision course, will fool most computers (but not necessarily humans on board).

2.2 Acceleration from Small Sources

On Earth, the recoil from even fully-automatic fire counts for naught. However, in space you can actually get to decent speed if your ammunition holds out. Although this isn't likely, combined with maneuvering jets, you can alter your course slightly, or maneuver yourself into a better shooting position. Also, not unlocking missiles when they fire is a good thing should you main engines go out.

2.3 Bouncing

Obviously only a stratagem to be used when you are absolutely sure of the outcome, bouncing takes advantage of the drifting and acceleration concepts. In essence, you hit a target without destroying it, while imparting on it a definite velocity. This target then hits another target. With a bit of luck and skill, you can create a cascade effect.

3.0 Psions

I have divided psions into the eight aptitudes. Each one brings with it certain advantages and drawbacks. I have included these in order to help with crew scheduling, as well as in dealing with rogue psions. Also, a paragraph on the mode's order has been prepared as well.

3.1 Biokinetics

Biokinetics have control over their various physical processes, allowing them to transmogrify, adapt, and do things in close combat that simply can't be matched by other psions. Unfortunately, whereas this puts them high on the roster for marine and damage control duties, they have little use in actual space combat. Although capable of enhancing their reaction times and coordination, they are not on par with a decent SI, and thus should only be gunners if the SI is damaged.

In our use of biotech, we have a vulnerability to someone who can change shape with almost no limits. As simply destroying the infiltrator is messy and difficult, I would advise that anyone who has been to another ship be required to type in a password (DNA and retinal scans are obviously problematical). Also, ships, vehicles, or other large objects that have been used aboard another ship are advised to go through a thorough sterilization process. On board, simple keypads may actually be a far better defense than a DNA/Retinal scanner device. Lastly, monitor everyone aboard for major, unexplained personality shifts as a further check against infiltration.

Norçans always have an agenda besides that of their captain, and that should be a concern always in the forefront of placing them. If you are trying to keep a secret, they should not be placed near it, nor even be made aware of it. Although arguably irrational, treat any biokinetic as a Norçan, as this group prides itself on its family ties, and tight family ties make for bad security risks. And keep in mind that the Pai de Norça would probably be proud of this recommendation.

3.2 Clairsentients

With their abilities to extend their sense, clairsentients are arguably the best psions for space missions. They can ascertain an enemy's weakness, calculate incoming

projectiles as well as any SI, and dodge practically any weapon. For what amounts to an aptitude without a truly offensive ability, clairsentients can hold their own in any battle. I would advise that all ships have at least one on the bridge at all times to defend against incoming attacks. Also, their ability to determine where a target will be, and their ability to dodge that target, make for a potentially potent fighter pilot.

Distraction is your friend when dealing with a clairsentient. When you are not in the room, blinding strobes and pinging systems should be activated. Also, running the absolute worst pornographic film you can find is also advised. Although a clairsentient can somewhat filter his senses, visual and auditory stimuli are the bulk of what they sense, and thus a means of keeping them from prying. Also, typing in passwords with as much of a guard as possible is also advised, such as typing in a code with a folder directly over your hand. Above all, teach yourself that any move you can do can be watched; modesty is no longer a realistic option.

The ISRANs, although a nice enough bunch, need to be guarded against even more strictly than Norçans. I would advise the use of psi-resistant rooms when one is aboard who has been labeled a potential security risk. Their abilities, while generally beneficial, carry with them the ability for espionage that make any other order pale in comparison. Also, due to their ability to consider long-term planning, makes it obligatory to ask if they have a long-term goal that they are working towards, and what they are willing to make that goal a reality.

3.3 Electrokinetics

Electrokinetics are, well, very nice to have on board. The ability to reroute power flows, find power leaks, and send messages with your mind is a great ability to have on your side. They may be used as a spare beacon, or distress signal, and disable an opponent's hardware and software from a distance. Essentially, having one aboard as either an engineer or communications officer is a great option. Having one on your infiltration crew is also good, as they hack the opponent's computer even without a minicomputer. Lastly, they have one other interesting thing: Because they can shield against a number of types of radiation, an electrokinetic could probably survive for much longer than other psions in the cold of space.

Foiling an electrokinetic is actually somewhat easy, as any rule of hacking applies as much to them as anyone else. Good security programs will stop an electrokinetic as quickly as a normal hacker. Also, a log of computer use really helps (especially a back-up version). As for Photokinesis, however, simply paying attention to detail is your best bet, and don't forget that they have access to lasers even without a rifle (basic blow-blocking is very effective, but arm-twisting just seems to put them in a better position).

Orgotek employees tend to be very mercenary. On board this is an asset as they will do whatever it takes to get back home. They may lack a certain level of honor, but at least you know that they will back you. The other thing to keep in mind is that they like a challenge. If you can keep things interesting, then they may back you even if someone should offer a higher price. This is not to denigrate Orgotek

in general; just allowing that they tend to think more in terms of money than loyalty.

3.4 Quantakinetics

As there are few quantakinetics, this is included more for completeness than necessity. Basically, quantikinesis involves the ability to enhance your abilities, create energy and manipulate matter. Any one of these abilities can have a number of effects and bonuses. Enhancing your abilities can make you a superman among regular men, more capable and skillful than anyone around you. Creating energy can help a spaceship make it back to port and make repairs far easier. Also, they fire on other ships, or at least power your weaponry. Manipulating matter, even as a gross ability, can make defense and offense easier. Because of their abilities as regards energy, they could probably thrive in space, otherwise unprotected, as long as their psi lasted.

As for defeating a quantikinetic, it's difficult but can be done: Simply overwhelm them. Also, aberscopes are also useful against them, as they tend to use quantum forces; this use can be tracked.

The Chitra Bhanu tended more towards science and philosophy than tactics and strategy. Still, that level of intelligence is hard to deal with, especially backed by their level of power. Diplomacy works; as long as you are not threatening them; this is the advised path, especially as most surviving members are bound to be more powerful and a bit paranoid.

3.5 Telekinesis

The ability to grossly manipulate objects, and control temperatures, telekinesis is formidable in close range. However, in space they are useless. Their abilities make them ideal for damage control teams, as they can lift objects off a fallen crewmember without touching the object, quell the fire, and get the crewmember to safety, again without touching him or changing his position.

Defeating a telekinetic, is unfortunately all too easy; overwhelm any defenses, and don't engage them too closely or use heat-damage weapons (such as flame-throwers). Explosives work well; grenades, however, can be thrown back. However, as the telekinetic more than likely has combat training and the means to utilize it, do not expect an easy fight.

Legionnaires are arguably the best order in combat overall. Biokinetics have superior skills and training, and are better at infiltration, and electrokinetics are more versatile, but Legionnaires have the numbers, the training and the teamwork to back it. Teamwork is definitely the most impressive Legionnaire advantage; even an adjunct like myself can get others to move heaven and earth on just my say-so. Electrokinetics are too competition-based to have any long-term teams, and, although Norçans are all of the same family, they are too widespread to really be of help. Destroy that morale, and you destroy the Legions.

3.6 Telepathy

Telepathy is essentially the ability to communicate over a distance without making any obvious gestures. Against weak-willed opponents, they can be quite effective, as most master at least some offensive techniques. They can also

help bridge the communication gap, as familiarity not distance is the key to their abilities. A network of telepaths could probably allow faster communications than a series of datapods and radios.

Defeating a telepath is much harder, as they don't need to be seen. Besides never allowing one near enough to get a psi-imprint, focus is the best defense. If you walk, concentrate on walking, and the scenery around you, not on that top-secret document you just read. If you eat, concentrate on the food, its scents and flavors, and the person across from you, rather than that classified form in your briefcase. As they can read surface thoughts easily, but deeper thoughts are harder, this level of concentration should help you fend off telepathic snoops. Otherwise, well, a certain level of paranoia is always acceptable.

The Ministry is somewhere between the Legions and Orgotek as far as cooperation goes; essentially, they are willing to help each other as long as no one else sees it. As they work better when no one suspects that they are working, they either try to be everyone's friend or in an established role, both of which cause them to disappear into the shadows. But two telepaths working together is cause for alarm, as people tend to be suspicious when they think they are being talked about. Compounded by an overall distrust of the Chinese government, The Ministry is not well trusted, but are considered allies. Even non-aligned telepaths share in this treatment, as it is possible that they are still in cahoots with those that dunked them.

3.7 Teleportation

For space combat, the biggest problem with teleporters is that there are so few of them. Besides damage control (teleporting a victim to a med bay) or communication (through old-fashioned letters sent via transmassion, or via courier), a teleporter can also get a ship there and back. They can also speed a ship up or slow down (in the short term), and have access to the ultimate dodge: You can't fire at something that's simply not there.

Defeating a teleporter is hard, but impossible. Use strobe effects to confuse them, followed up quickly by any other means. Do not assume you can control one, however; the events of the Diasporia and the Chromatic War make this more difficult. However, you may be able to ransom one or use him as a bargaining chip.

The Upeo wa Macho as an organization don't exist. Think more of a ragtag group with a group of mentors; that's how Atwan runs it. For such a small group, this works out well. It should be noted that the Upeo have gone up the rest of the orders, and won, or at least didn't lose. This needs to be considered when you fight them as a group. However, the key to defeating a teleporter is to call into question his honor and skill; at the very least, you'll get a window of opportunity to shoot them. At the very most, you'll get a first-hand demonstration of that honor skill.

3.8 Vitakinesis

Vitakinesis has no long range effects, but does have a potent effect on a nearby target. Thus, I would advise that all landing parties have at least one, and one that has been trained not only to heal, but with some combat skills. Also, because of their ability to heal on the spot, they make

welcome addition to damage control teams; at the least, if a victim can walk, he does not need to be carried.

Vitakinetics are arguably the easiest psionics to deal with. After all, their abilities require close proximity and are geared more towards healing than combat. Those with damaging abilities are rare, but nonetheless potent; after all, they target specific organs and systems for failure. However, as most have been administered the Hippocratic Oath, they are worth more alive than otherwise. In short: Kill only if absolutely necessary, for the doc you save could be the one that saves you one day.

The Aesculapians are a dichotomous bunch. One is staid and the others are anything but. If possible, this dichotomy can be used to effect, pitting the more rational rex against his Haitian counterpart. However, the rule of “publish or perish” is one they all live by, so instigating competition between two rexes as a distraction is somewhat easy, and should be considered a first step in nailing any group of Aesculapians.

4.0 Aliens

Each alien race that we have encountered has its own strategies. These strategies are outlined below.

4.1 Qin

Our allies, and the first race a lot of us encountered first. The Qin are scientists, not fighters. Although capable of designing and building the most powerful weapons and vehicles, Qin are best not applied to a fighting situation. In combat, telepathic strikes are not unknown, but the relative inexperience with combat shows.

4.2 Doyenne

A race of energy beings, the Doyenne have a wide variety of abilities that they can bring to bear in a combat situation. Unfortunately, they tend to get lost in the details, making them susceptible to any plan that is fast-paced and improvised. Tactics involving at least one random factor tend to do well against Doyenne, as well as any that are improvised. Apparently, their ability at long-term thinking impairs their ability at short-term thinking. Also, as they are only partially on the physical plane, they are also vulnerable to physical attacks, even though the damage is but a fraction of what they should be taking. In times of extremis, ramming them with a spaceship has been proven to be effective.

4.3 Coalition

A race of genetically-tiered beings, The Coalition is at least fifty years ahead of us, technologically. The weapons and vehicles they have severely outclass ours. However, the majority of the fighting is done by their “spinal” phylum, who do not have our skill or training in combat; they are almost purely instinctive fighters. Thus, greater strategy must win the day for us, just as numbers will for them.

Another thing to consider is that almost all communication is pheromone-based. Thus, with the right pheromones, we can trick them into thinking that we are sasqs (useful for sabotage) or drones (to get anywhere without being noticed). There are other stratagems, but these are the most effective. Spinals, for example, tend to fight amongst themselves (heaven help any human disguising himself as

spinal), and the rest of the phylums would interfere with you far too much if you had disguised yourself as a breeder. Envoys would be a debatable choice as well, given their sexual proclivities.

Also, the Coalition Ark itself is a form of weakness; without it, The Coalition would be stuck wherever they currently were. However, we have not yet found a way to make effective use of this weakness.

4.4 Chromatics

As the chromatics are still a threat, this is a needed section. The chromatics are an amphibious Bronze Age race with photokinetic capabilities. Basically, due to their stealth and ranged combat capabilities, the chromatics should be engaged in close combat. Any kind of battlefield heat will also force them to retreat quickly, as it dries their skins (which they depend on for breathing). Also, I would advise a photokinetic or a translator be in the combat squad, as diplomacy may eliminate the need for combat altogether. However, fanatics serving the Doyenne may not be able to be talked to.

Rumors persist of a sub-race of greks on Chrome Prime, comparable to our neanderthals. They lack the lasing ability, but are much more physical. No bargaining is possible, but they run quickly when a strong opposition presents itself. Also, given the amount of bio-engineering that the Doyenne are capable of, it is entirely possible that they have created a sub-race of psionic chromatics, combining the natural abilities of a chromatic with psionic ability. These psionic chromatics may be defeated using a combination of close range attacks and quick actions, but would probably be fanatic worshippers of the Doyenne.

4.5 Greks

The greks are actually three separate races: the greks (a race of psions); the lupines (genetically enhanced super-soldiers); and the morituri. The morituri can be handled as aberrants, and the normal greks as psions of the appropriate aptitudes. However, be aware that the race as a whole prides itself on its bargaining skill, and will only fight as long as it's interesting; thus, you can bargain your way out of a mess, or just lay down and refuse to fight. Bargaining is, of course, the advised way to go. Honor is a force with any and all greks.

The lupines are incredibly fast and resilient, and are very capable fighters. Once engaged, they will not let go until there is a clear victor. Also, be aware that they shrug off most blows and some weapons. Given that combat and survival are what they live and train for, they do poorly in other areas, but they are a force to be reckoned with.

5.0 Aberrants

Aberrants actually come in four flavors: sub-aberrant, Colony lackeys, mercenaries, and Edenites. Each one has its own tactics. However, it should be noted that there is no real rule-book when dealing with aberrants; I will try to give some examples, but no listing could hope to give you everything you would need to fight them. Luck, skill and prayer is just as effective as good tactics.

5.1.1 Sub-Aberrants

These are the easiest to deal with. Essentially, laying down firepower is all you usually need. They are fanatic and will not stop until they're killed or have won.

5.1.2 Colony Lackey

If possible, run. Otherwise a combined missile barrage and telepathic attack are your best bets. These are usually tough enough to last in space, but generally have limited will.

5.1.3 Mercenary

Unaffiliated with the colony, these aberrants have taken to the spaceways in hopes of a bright new future. They will do what it takes to get the job done. Some can be bargained with, and all will usually surrender if you can convince them that you stronger than them.

5.1.4 Edenites

Edenites are in it for the nobility and duty aspect. As such, they can be expected to give their all in a fight, but will sue for mercy. Also, they will respect an honorable foe, and will probably allow anyone suing for mercy to surrender. However, anyone acting with dishonor (threatening civilians or using surrender to gain tactical advantage) will cause them the fight without mercy, and without quarter. Thus, fighting with honor and knowing you can surrender are vital parts of dealing with the Edenites.

5.2 Types

Aberrants may also be divided into seven basic types: bricks, egotists, energy projectors, enhanced fighters, speedsters, transport specialists, and notas.

5.2.1 Bricks

Bricks are, for our purposes, any aberrants that primarily use physical defenses and/or immense personal strength. Those using force fields are just as much bricks as the armor-plated monstrosities. Usually, a combination of mental attacks and grappling attacks (such as nets or gels) are best. It is not advised to get too close to one of these; a single punch is more than capable of sending a person through steel plating. As they specialize in no-range, area effect attacks (such as turning into lava or clapping their hands together), anyone within a close proximity to one takes his life in his own hands.

5.2.2 Egotists

Egotists generally tend to use mental attacks; these can be as subtle as suggestion to an outright mental blast. Although they sometimes have personal defensive abilities (telekinetic force fields seem to be a favorite), physical attacks, especially using disorienting strobes, are a good bet. Mental attacks are usually a very poor choice.

5.2.3 Energy Projectors

Energy projectors are those aberrants that use some sort of ranged attacks, possibly combined with flight, as their main abilities. Fully-automatic fire is usually a good bet, as are area effect explosions. However, given that a number also have enhanced defenses regarding their personal attack form, using that against them is usually a bad idea (using the polar opposite ,i.e., cold versus a flame-wielding aberrant, has not shown any actual success).

5.2.4 Enhanced Fighters

Enhanced fighters generally tend to use claws or energy weapons, combined with physical prowess and enhanced training. As such, they typically incredible fighters. Do not engage them in hand to hand, and use consciousness-altering attacks; explosives and other physical attacks put them down, but usually only temporarily due to their amazing recuperative abilities.. Putting them to sleep, and keeping them that way, is usually the best way to deal with them.

5.2.5 Speedsters

Speedsters are aberrants that use tremendous personal speed in an offensive manner, such as tripping up a platoon, or hitting the same target multiple times. Automatic fire is useless against; they tend to dodge it rather easily. Area effect or mental attacks are the way to go with them, and gas or gel attacks are particularly effective.

5.2.6 Transport Specialists

Transport specialists are those aberrants that provide a line of support for other aberrants, allowing them to get from one place to another quickly. The key is to identify them and take them out as quickly as possible, as they offer another possibility: Stranding the aberrants where they are. Usually teleporters or warpers, they can best be taken out with a single shot. Automatic fire is easier for them dodge than single bullets, and area effect attacks are useless against someone who isn't the area. Thus, using your best sniper is usually your best bet.

5.2.7 Notas

Actually an acronym (None Of The Above), these are aberrants that either combine two or more of the above types, or simply can't be nailed down easily. Either take them out as proscribed, or treat them as normal targets.

6.0 Conclusion

Today's world can be much harsher than it previously was, but there many more things to marvel over. I hope only that all of humanity will recognize the stranger within themselves, and that we shall someday beat more swords into plowshares.