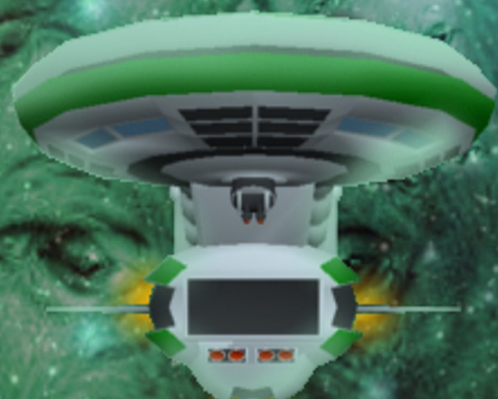


# THE ABCs OF SPACE OPERA

## VOL 1: A-L

Rob Garitta  
Raymond McVay





**THE ABCs OF SPACE OPERA VOLUME 1:  
ASTROGRAPHY TO LANDING CRAFT**

BY

ROB GARITTA & RAYMOND MCVAY

**TABLE OF CONTENTS:**

FORWARD.....	4
ASTROGRAPHY 101.....	8
BEAM WEAPONS: A BRIEF HISTORY.....	20
CAFETERIAS IN THE SPACE FLEET.....	25
DEFENSIVE SYSTEMS.....	33
ELDER GODS.....	41
FELINOIDS.....	52
THE GENOME WAR.....	58
HYBRIDS.....	64
IN SITU RESOURCE UTILIZATION.....	70
JUVENILE TAURANS.....	79
THE K-DRIVE.....	87
LANDING CRAFT.....	92
OPEN GAME LICENCE.....	97

# DEDICATIONS

**Rob:**

*"This book is dedicated to the woman in my life, my wife Renee. Thanks for lighting the fire under me to finish something and put it out there."*

**Ray:**

*"To my Bright Eyes: You keep me in balance, you make it worth getting up in the morning, and you'll even edit hundreds of pages of copy after work. What would I do without you, my wife, Debra?"*

# FORWARD

I've been a fan of the original *Star Trek*, ironically, since *The Next Generation* premiered when I was in middle school. It was a show that not only stimulated my young fanboy's sensibilities for action and "cool stuff" like phasers and spaceships; it also planted a seed of optimism for a future among the stars that has managed to stay with me through two space shuttle disasters, NASA budget cuts, and the cynical trends of grit and "edginess" that permeates modern science fiction.

My parents noticed. So one birthday in 1990 I opened a present that revealed the *Star Trek: Role-Playing Game* by Fasa. I was ecstatic. By the end of the week I had read every booklet in the box set. By the end of the month when school started again after Christmas Break I had practically *memorized* them. So I was more than ready to run a session of my favorite TV shows official RPG at the earliest opportunity.

It was then I discovered what happens when you unleash a typical group of gamers on a universe like *Star Trek*.

The Final Frontier of Roddenberry's vision is populated by officers from the elite peacekeepers and scholars of every planet in the Federation - they are the best of the best of the best. The typical group of teenage gamers are to put it delicately a rabid pack of murder hobos that are barely housebroken and unfit for a typical *pirate* crew to say nothing of the bridge of the *Enterprise*.

I tried playing *Trek* games again in college. While my more mature gaming group did a fairly good job of imitating the style and personality of Starfleet officers the game still had a major problem. It was *boring*. Whatever made *Star Trek* so much fun to watch apparently didn't translate to gaming in a way I could figure out. So, a little wistfully, I retired from the 23rd century once again and didn't think about

doing anything with such an elusive universe again.

Until, that is, I discovered that a little company called Goblinoid Games was releasing a second edition to the 1978 classic, *Starships & Spacemen*.

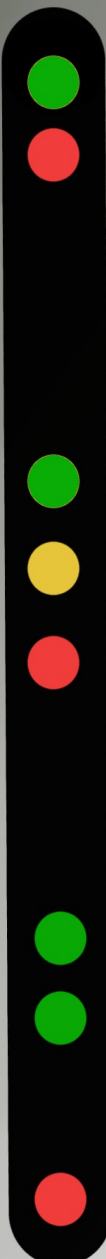
I was excited, I admit, when I got hold of *S&S 2e*. The rules were simple, the characters could command a starships at first level, and perhaps best of all there was no decades of TV and film canon restraining the game.

Even then I didn't want to actually *play* the game, per se. I was just interested in making starships and deckplans. I blue-skied some ideas for awhile, went ahead and got permission from the visionary Daniel Proctor of Goblinoid Games to produce compatible material, and then...didn't do anything much. It wasn't until months later, when I visited a Google+ community dedicated to the game, that inspiration finally struck, in the form of this book's author, Rob Garitta.

Rob posts short fiction pieces based on the game on his blog *Twilight of the GM*. They are true to the game, true to OSR gaming in general, and best of all, a true homage to *Trek*. But they also have that elusive quality that I've never been able to manage on my own in this type of game and but was delighted to find a long last.

The stuff is *funny*.

Rob's characters are rude. They are sarcastic. They are *more* than happy to resort to force and use explosives. They fight dirty. Yet they manage to work as a team, are loyal to each other, and manage to stay on the side of right if only just. In short, they act like a group a gamers.



Inspired by his fiction, I urged Rob to turn the stories into a book. He did me one better, suggesting we collaborate on a supplement for the game that combined his stories, our art, and some new rules and new ways to play.

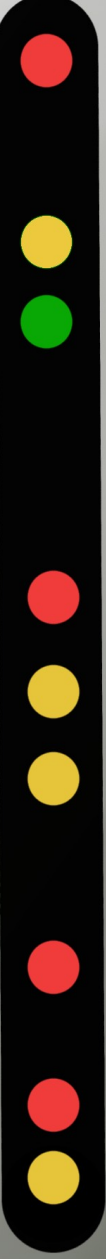
This book is *not* the S&S version of *Unearthed Arcana* - we did not try to re-invent the wheel here. This book expands on some of the rules, provides some ideas for adventures, and even gives some background on some of the game's future technology. Another thing this book does is provide what is essentially a campaign setting – not in the sense of providing a bunch of new rules and NPCs and maps, but in the sense of providing a unique theme and tone for the game. But in my opinion, the most *important* thing this book does is show how a typical group of gamers can make a go of boldly going. It's supposed to make you want to *game*.

I hope you find it as inspirational as I have.

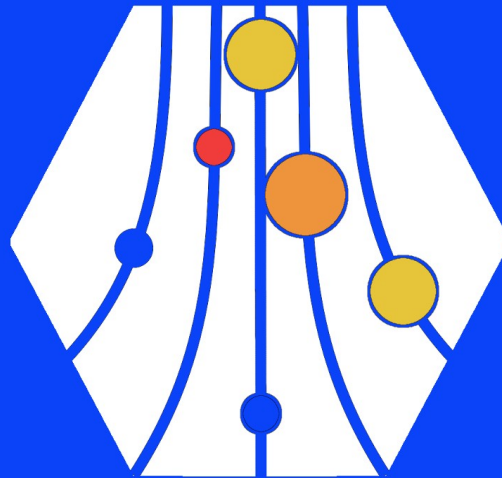
Raymond McVay

Troy, Alabama

Sept. 1st, 2015



# SPACE FLEET COMMAND



THE GALACTIC CONFEDERATION

CADET'S ORIENTATION DATAFILE

*With Notes!*

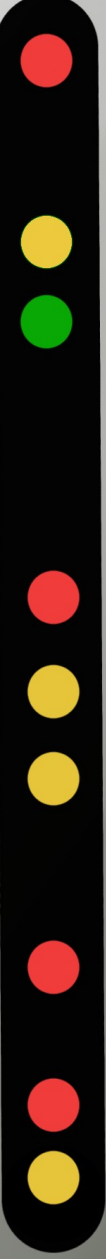
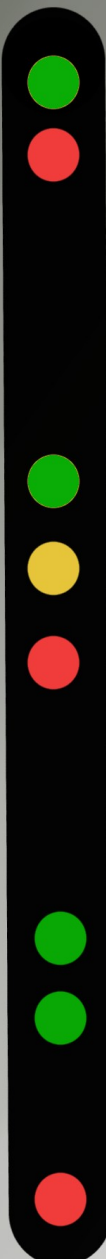
# ASTROGRAPHY 101

By Lt. Tivk, Fabrication Specialist, GCS *Nikola Tesla*

The major point in any understanding of astrography is that our galaxy is made up of bubbles of clear space surrounded by nebulae. Each bubble marks the death of a massive star. In the case of the bubble containing our Confederation it was likely a series of novae in the Hyades, a region still dangerous to travel. Humans refer to this as the Local Bubble, which is the imagination you expect of a race that refers to its homeworld by synonyms for dirt and soil. We Taurans refer to it as the Tauran Bubble and the Hykkot refer to it as the Hykkot Bubble ... you get the idea. We Taurans take precedence. We were out there first, though that doesn't seem to concern the humans or Hykkot.

The nebulae bounding the Local Bubble and other bubbles are important to galactic civilization. Within a bubble, there is relatively clear space and ships can move at high speeds safely. Try that in a nebula, and you're asking for a one way trip unless you have good shields, good sensors, a good navigator or all three. In a day of travel a ship will encounter a couple of kilograms of interstellar material in clear space moving at very high speeds or ten times as much in a nebula, forcing most ships to slow down and making the interior of a bubble easier to defend. Invaders moving through nebulae have to slow down, and that lets you mass your forces in front of an attacker.



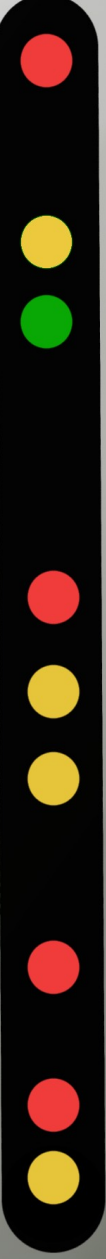
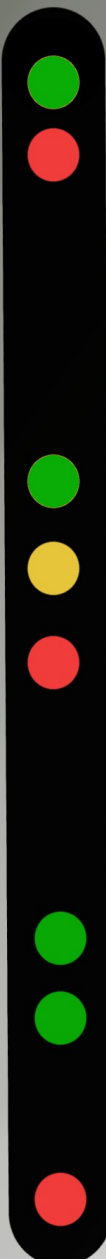


In the Local Bubble, the clear volume is shaped more like an hourglass than a sphere. There is a Northern Lobe and a Southern Lobe. The homeworlds of the Confederation races are in the Northern Lobe. Sol itself is embedded in a group of clouds called the Local Fluff. Today, navigation buoys and comm relays make navigation in the Local Fluff easy, but it caused many problems for humans attempting early FTL flight.

In the top of the Northern Lobe there is also a series of nebulae that the Taurans and Hykkot hail from. These clouds form streamers 50 to 100 light years long with 25-50 light years between them. These races colonized the clear areas between the gas clouds but managed to remain hidden from the Terrans and the Zangid until relatively recently.

The Taurans and Hykkot kept their explorations close to home using FTL drives when you humans thought using steam engines to dig potatoes was bleeding-edge technology. This is because we could content ourselves with the resources of dozens of habitable worlds and several thousand prime mining sites, but when were Terrans or Zangids ever content?

The 'skin' of the Local Bubble is some tens of light years thick and has any number of imperfections and channels of relatively clear passage. These are choke points and usually heavily guarded by starbases



and destroyer flotillas. Channels sometimes shift and close over time. New channels are discovered or open up as well, and these are coveted by smugglers and pirates who prefer not to pass too closely to starbases or destroyer flotillas. In addition, star systems are not stationary and they pass through many bubbles and nebulae in their existence. Some lost planets of Forerunner races are thought to lie in sectors now unsafe for travel.

Within a bubble, races have to find a way to coexist since they can mount quick attacks on each other with little warning. The Zangid and Videni coexist in an uneasy truce today. The Fleet has begun exploring other bubbles, the Arcturus Loop in particular. A series of relatively safe passages into the Arcturus Loop exist called the Lupus Tunnels making transit fairly safe. Some expeditions to the other bubbles have returned with news of new races and new dangers.

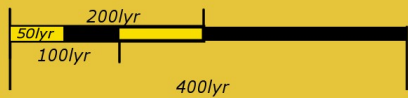
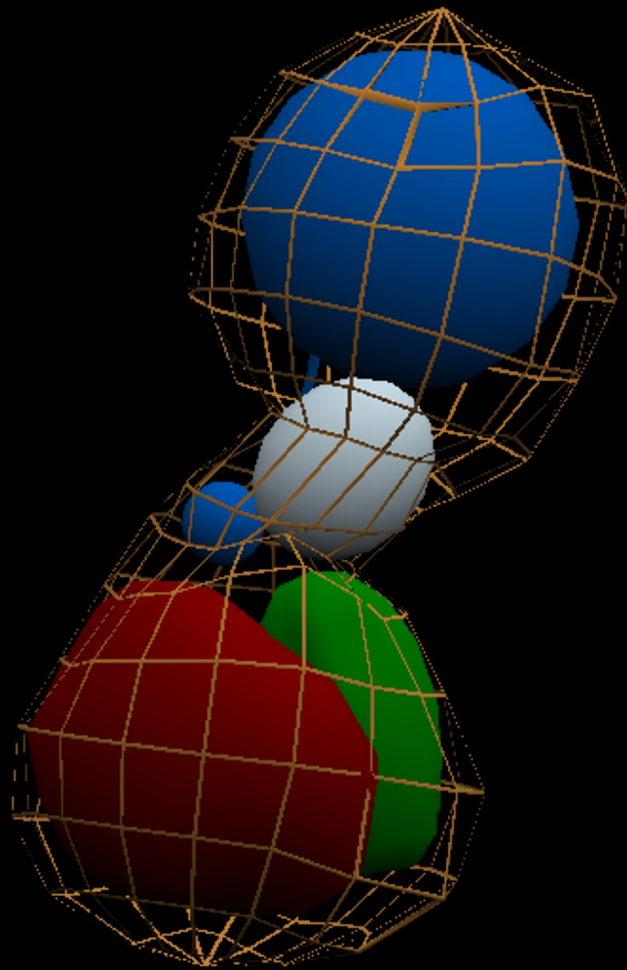
Some bubbles have dead worlds marking races that couldn't live in peace. Some bubbles are armed camps as each species tries to defend itself behind starbases, attack drone fields and fortress worlds. The Zangid employ many such defenses and are on a constant war footing due to their paranoia. Of course, since they are close to the Videni, the question must be asked are they paranoid *enough*? In the Northern Lobe, a number of species have achieved accord and alliance as the Galactic Confederation of Planets (or the Polity). In the Southern Lobe, the methods of coexistence range from mind control to simple slavery, with the alternative to occupy a display case in some museum.

A side effect of the novas that create the bubbles is the formation of super elements and exotic matter. Most of this winds up inside the bubbles which delays the progress of species in the nebula areas.

For example, ionite is required for any practical FTL travel, and even in relatively rich areas, it is hard to find. Ionite is rare to begin with. It is so dense, it usually sinks to the core of any planets forming, but you need it to have starships. Starships are good for defending your planets and other things, so races tend to expand once they learn about this element. While gold, iron, and uranium exist in plenty anywhere there are asteroid belts, Ionite is more tricky to acquire, and it is what fuels exploration.

In the case of the Taurans and Hykot, our exploration was cautious, and we gave more thought to managing our worlds than seeking to conquer other worlds. Development of the local bubble follows a pattern: Ionite strike, mining boom, commercialization, colonization. First, ships will discover Ionite in a sector. This begins a mining operation. Then, as the operation expands, other materials are mined nearby and used to manufacture equipment to support the operation, that being easier than transporting manufactured goods in bulk. Finally, a wave of merchants and settlers arrive to sell food, goods, luxury items and whatever they can to a bunch of suddenly rich miners. In the polity, it is the Terrans who now do the bulk of the exploration, both to satisfy their curiosity and find "shinier" stuff all the time. Again I ask, when did you ever see a Terran satisfied?

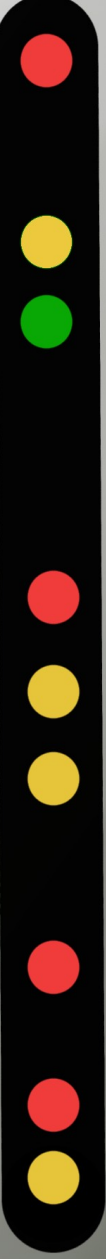
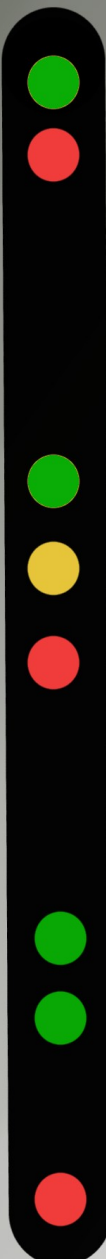
## THE LOCAL BUBBLE



## LEGEND

-  THE GALACTIC CONFEDERATION
-  THE TREATY ZONE
-  THE RIGEL ANNEX
-  THE VIDANI IMPERIUM
-  THE ZANGID KINGDOMS





Humans were derived from endurance predators; their preferred method was pursuing prey till the prey collapsed or just died of aggravation. (Humans try to aggravate Taurans to death all the time, and sometimes they *do* come close.) They are well suited to long range surveys or lengthy prospecting runs, and therefore there is an inordinate human presence in space.

...You humans also breed like rabbits and have the largest population in the Confederation. There's an old Zangid saying, "Once there were two humans. Now ..."

As I mentioned earlier, the shape of the Local Bubble is like an hourglass. The bubble constricts in the middle due to a number of gravity wells in the area and clumps of dark matter. This makes space travel more hazardous in the region. It also forms a natural defensive barrier. The safest and fastest path through the Neck is known as the Rubicon. It is heavily guarded. In the First Zangid War, the Terrans used them to delay the Zangid advance into the Northern Lobe for two years. The Confederation has expanded into the region both before and after the Second Zangid War. This is where we find the Rigel Annex and the Treaty Zone.

The Rigel are the descendants of a slower than light colony ship the Terrans sent out at the beginning of their Genome War. This ship, the *UES Rigel*, encountered a wormhole that sent it to the Neck. Miraculously, the crew found a habitable planet there before the *Rigel* was destroyed by a gravity well. The

crew set up a colony, which was founded just in time to be conquered by the Zangid Empire. The Rigel (who are now mostly Human/Zangid hybrids) were liberated during the Zangid War and their sector of space was added to the Polity as part of the negotiations that created the Treaty Zone. The Treaty Zone is relatively new. It's an area of mining outposts and small colonies near the Rubicon that was negotiated with the Zangid after the last war left their kingdoms in bad shape. The Rigel hire out as mercenaries throughout the Region. There is also the Kentaurus Freehold, a hive of vice and brutality.

As I said before, a number of homeworlds, such as the Hykkot, Tauran and Daelan core systems, lie behind streams of nebulae. Sol itself lies in a small patch of gas clouds called the Local Fluff by the ever-imaginative Terrans. Though the Confederation maintains navigation buoys and charts clear paths through all of these features, the nebulae aided Terran defense during the Zangid wars. The Zangid and Videni have huge fleets but no defensive features and must commit more of their resources to their defense.

When the Local Bubble was formed by a nova in the Southern Lobe it scattered precious ionite throughout the volume. The gas clouds in the Northern Lobe 'caught' more of the mineral than the clear Southern Lobe, piling it before Sol and the Local Fluff. The Northern Lobe is richer in ionite than the volumes of Zangid and Videni Space. Both these powers want the ionite riches the Confederation enjoys.

Though the Galactic Confederation of Planets has huge mining cartels supplying both the Fleet and

civil projects, there are many small, independent miners and prospectors looking for that big Ionite strike to retire on and they contribute a fair share. Naturally, this draws both pirates and the Fleet. Besides prospecting, there are independent archaeologists as well, all seeking ancient artifacts. Personally, I believe that playing with alien artifacts makes handing a blaster to a Terran monkey sound like a good idea ...

## STAR MAPPING FOR YOUR GAMES

The original industry standard for star mapping in science fiction games was 2d hex maps. There's been some attempt to palm this off as the hyperspatial relationship between stars that is equivalent to the flat surface of a three dimensional sphere rotated into hyper-dimensional rooba-rooba-rooba. It's easy to map.

One of the problems with flat maps was that unconsciously they remind you of a planetary map. Planetary maps of course have borders which are often based on geographic features that are defensible. But there are no features in space that will make a multi-light year stretch easier to defend. So the idea of borders is a misconception. Forces can move fairly freely through space and hit you where you live unless you have enough ships to patrol light-years. Space is huge- you can't guard all of it.

Winchell Chung, of the definitive Atomic Rockets website, shows another way to represent a space empire: the node map. There are problems with this too. Real space being what it is and paper being flat you can only produce distance relationships between a star and its closer neighbors. You have to hit a few stars to get anywhere.

There are no "express" routes on a node map - you have to take a local.

Let's look at S&S warp drive: something to make you go so fast the stars in your way want to jump up on chairs and get the heck out of your way (though that would imply sentient stars in your setting and lead to all kinds of adventures.)

The Milky Way galaxy is a hundred thousand light years across and measly 1000 light years thick in our locale. Our galaxy is indeed flat on a large enough scale. If you had warp drives that could pull warp factor 1000 or so (1000 light years a day) you'd not be far off mapping galactic sectors as flat.

Moving that way doesn't say much for borders and no borders means no interstellar states. If you can't defend your people, they aren't going to send you taxes.



But look at a more local region (200 light years radius or so):



First, this section of the Orion Arm is about 1000 light years thick. The Local Bubble is about 800 light years top to bottom (North to South). So the third dimension is a little more than four times the width of the paper. Earth is located towards the North pole of the Northern Lobe of the Local Bubble. The Galaxy is a series of bubbles that are each remnants of the death of a mighty star (in the

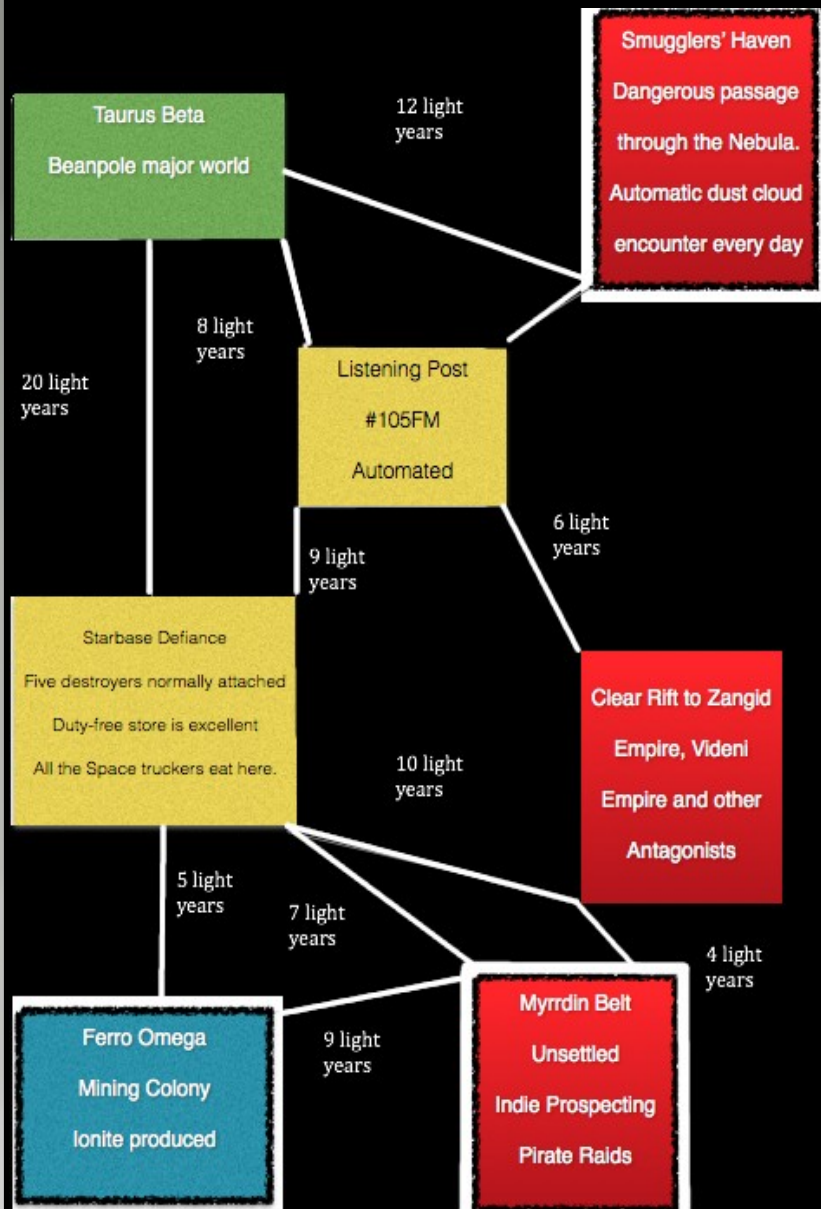
case of the Local Group that was in the Southern Lobe.) These supernovae push interstellar gas and dust away, forming shells of nebulae bounding clear space.

How a warp drive will react to flying through this stuff is anyone's guess. Since it's ultimately *your* game, you can make up your own answer. Flying too fast through a nebula could have a variety of effects to make your navigator wish he'd chosen the security branch. It could simply make warp travel cost more EU (double or triple

per hex per day), increase the chance of a space encounter, or both. *The Starships & Spacemen: Second Edition* Rulebook has extensive lists of space phenomena. Nebula travel could be considered automatically traveling through a gas or dust cloud with all the inherent dangers (see *S&S* page 31). Maybe you'll hit a grazing space amoeba. Needless to say, you can still encounter the other types of clouds in addition to your automatic cloud encounter.

Clear channels into and out of a galactic bubble exist and will be charted and guarded. The Confederation has space bases at all the major channels into the Northern Lobe. New channels are always being discovered or opening and some long-lasting channels eventually close up, making static defenses tricky.

# SAMPLE NODE MAP



The map on the left is an example of a node map for an area near a channel into the Northern Lobe (a border region, in other words). In the example, the nodes with the ragged borders indicate the fringe of a nebula. Ships traveling to and from these nodes must make an additional check for a cloud encounter each day. Traveling between two such nodes means three checks per day. The "Smugglers' Haven" Node has an automatic dust cloud encounter every day. Each node is connected to one or more by the safest route charted with the distance labeled.

## BEAM WEAPONS: A BRIEF HISTORY

By The Chief (CPO, Marine contingent) GCS *Nikola Tesla*

Beam weapons are a science fiction staple, having been introduced in 'Edison's Conquest of Mars' published in 1898. Jeff Prucher's *Brave New Words: The Oxford Dictionary of Science Fiction* lists the first use of a 'blastor' as 1925 in N. Dyalhis' 'When a Green Star Wanes' (*Weird Tales* 6/2). That blastor and Edison's ray weapons fired disintegrator beams that could give our Fleet-issued gear a run for its money. The first true beam weapons worked basically like old-style firearms. They would wound or kill on a good shot. The switch to beam weapons came about when batteries became light enough to allow a beam weapon to fire more shots than a projectile weapon.

Today, an energy weapon for most purposes does not run out of power in a fight or three - which is a good thing, considering what your average Marine gets put through. It's your rate of fire that causes problems. Even with enough power to hold off your average primitive horde, shedding built-up heat and charging your capacitor requires some time. When the capacitor runs down, the rate of fire will drop. Overpowered shots will make things even worse. Old-style projectile weapons disposed of a lot of heat by ejecting the spent cartridges. Energy weapons do not have that luxury and most have radiator fins on the barrel.

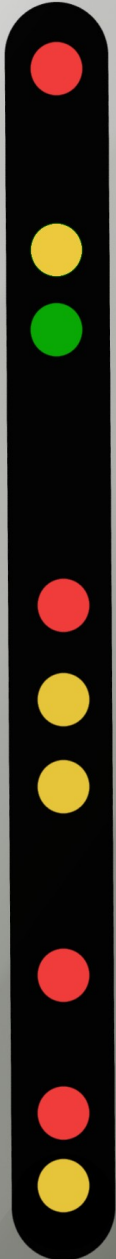
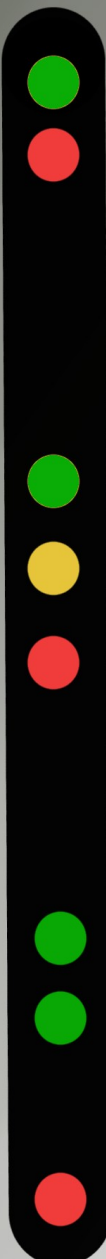
It's a very good thing to keep track of your weapon's rate of cycle in combat and not overdo it. The Fleet installs safeties to restrict maximum fire. In practice, we all override the damned things because hello, combat!

We Marines operate in overlapping fire-teams, one team covering another while their weapons cool down. It works well if everyone does it right. The Zangid and Rigel are a tad...*unrestrained* and they issue spring rifles to some of their soldiers to maintain fire while their beam weapon-equipped soldiers wait for their rifles to cycle. They also like drawing swords and energy blades and charging after melting their gun barrels.

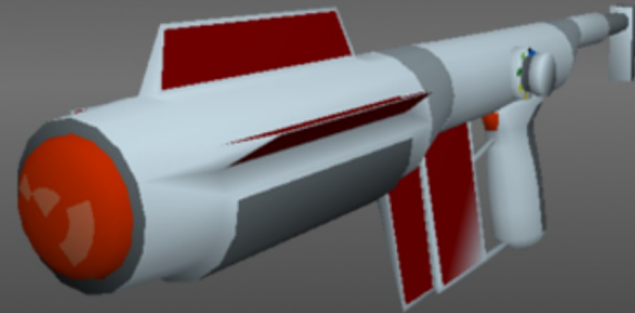
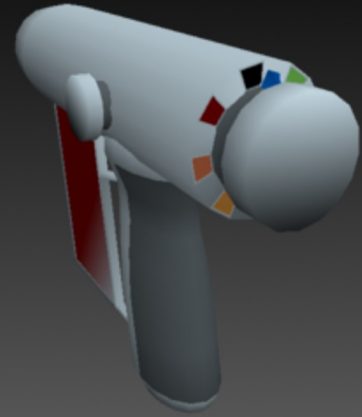
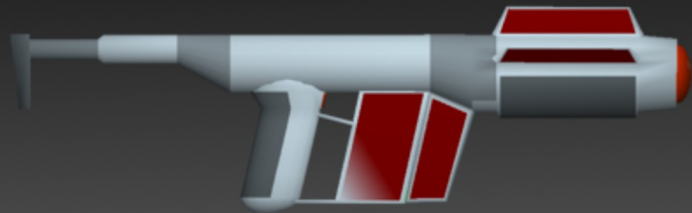


The Videni keep firing their rifles after they overheat *hoping* they blow themselves and their opponents into itty bitties. 'Course, I never fought against them, so that's just hearsay. All things being equal, a rifle will dump heat and cycle faster than a pistol, unless it's a crappy rifle.

In any case, you do *not* want to grab a weapon by its radiator fins.



# BEAM WEAPONS:



# STAR MASTER NOTES

Weapons have heat ratings to represent the amount of rapid firing they can perform without shutting down.

Standard beam pistols do 2d6 points of damage. Each die that comes up '1' generates two points of heat. Each die that comes up '2' generates a single point of heat. A pistol can function with up to three points of heat and shuts down when it has four or more. A beam pistol dissipates one point of heat each turn it is not fired.

Beam Rifles fire 3d6 points of damage and can function with up to five points of heat. They also dissipate one point of heat per turn.

Shoddy weapons will generate more heat (a single point on a '3' as well) or shut down sooner (when they have three or even two points of heat).

Exceptional weapons might only generate one point of heat on a roll of '1' and not generate any heat on a roll of '2'. They may be able to function with more heat than a normal weapon (perhaps four or five points). These are the sort of weapons players should acquire from beings they overcome - beings who will certainly be using the weapons to dissuade the players.

Note that you have to roll for damage and calculate heat *even if you miss*. The Laws of Thermodynamics do not pity your lousy aim.

## CAFETERIAS IN THE SPACE FLEET

Another option (with more of a d20 feel to it) is to have weapons do a set number of dice worth of damage (2dX works well). All weapons generate heat on a roll of one or two but the more powerful weapons use larger dice reducing the chance of heat. A pistol does 2d6 and tends to pick up a point a turn. Weapons shut down after generating four points of heat and dissipate one point a turn. A rifle rolls 2d8 for damage, and the ABC gun rolls 2d12, making them nasty customers.

The fun part comes from detailing special attacks like double tapping or continuous beams that build up heat very fast. The rate of heat build-up could be double, triple or more in exchange for a better chance to hit or more damage. Does the player risk having an inoperative weapon for a turn or more to toast the monstrous alien beast charging him? What about a *miss*? Maybe it would be a good idea to pack a spring rifle like the Zangid. They're in the core book.

If a player wants to deal more damage they announce it before rolling to hit. They roll an extra die for damage with an increased chance of heat and shutting down. Likewise they can roll a single die to avoid heat build up. Do you really need 2d6 damage to blast a space rat? In any case modifying your damage roll is declared before you roll to hit. This can also be useful when you've built some heat up and want the bad guys to keep their heads down while your pals' weapons recharge. A 1d6 beam looks just like a 3d6 beam, after all.

Players, being players, will keep firing till their gun barrels glow and risk their weapons shutting down. Cover in a fight becomes much more important when you're blowing on your beam pistol and waiting for it to reset.



Cover should provide a character with a minus to hit. Keep in mind that complete invisibility confers a -4 so a minus -2 or -3 is generous for cover.

Transcript #32049 from Main Commissary, GCS *Nikola Tesla*

Chief Medical Officer: Good morning new crew! Welcome to the Tesla. I'll be handling your orientation today. How are you this fine day?

Mukh: My quarters are too dry. This entire ship is far drier than I was led to believe.

C.M.O: Right. I'll see what can be done for you. It's rough when you do part of your breathing through your skin. Maybe we can modify your uniform further.

Tivk: Can you be more specific in your question doctor? Are you enquiring as to my physical, mental or professional well being?

C.M.O: Not really. It was a social protocol to ask a rhetorical question.

Tivk: That seems rather aloof for a physician. You let Mukh talk about his physiological shortcomings. Are you feigning interest?

C.M.O.: Very well, How are your vital signs? Does the atmosphere mix sit well with you?

Tivk: If it did not I would have appeared at sick call.

C.M.O.: Right. Moving right along - good grief, what were you doing under that desk?!

Nok: I was resting. There's too much light on this ship. We don't all hail from a type G star system. I like to take my goggles off on occasion.

Mukh: What did you expect doctor? His species is evolved from pouncer stock. Sit and wait. They like to sit and wait. And *snoop*.

Nok: Fair enough, mud dweller.

C.M.O.: Clamp it! Now you are all newly arrived from serving on your own local navies. The Fleet, as you may have noticed, is mostly staffed with humans.

Tivk: The Fleet is 78% human staff. This ship is now 92% human -well above average.

C.M.O. Anyway, we're trying hard to make you comfortable and keep you healthy.

Nok: Install some lighting that I do not need sun block to endure.

Mukh: Up the humidity to something bearable.

C.M.O.: I. Will. Work. On. It. ... Anyway, the Fleet Commissary Branch has made some new rations they wanted feedback on. The idea is that this meal will provide basic sustenance for all of you and Terrans as well for at least a day. The ration comes with condiment packs that contain flavorings you will find palatable -

Nok: Bets?

C.M.O.: - as well as vitamin and mineral supplements to maintain your energy levels. Here, each of you take one.

Tivk: I find it both disconcerting and misleading that these condiments are labeled with the names of our species.

Nok: The Terrans ran around tasting us.

Mukh: Maybe that's why they always are kissing each other? You can't trust omnivores. They'll eat anything.

C.M.O.: Guys, work with me here. Open the containers and check them out at least.

Mukh: Hey! Moistened towelettes! Good call. Give me a couple more! Ahhhh! Can I have yours, Tivk?

Tivk: No.

Nok: Hey, the ration comes with a movie! These little cards, see - Ah! They're too bright.

Tivk: I saw this movie.

C.M.O.: The *ration* consists of carbohydrates in various tubular configurations to aid in even cooking and topped with a tangy protein and lipid rich sauce made from vegetable oils. It's designed to resemble dairy products.

Mukh: You mammals. It's all about milk with you.

Nok: Watch it, froggy.

Tivk: This is macaroni and cheese. Albeit with a B movie.

C.M.O.: It's more than that I assure you. What do you know about mac and cheese anyway?

Tivk: I read a lot. This stuff is a cult with you Terrans. This and that poisonous coffee you constantly swill.

C.M.O.: We don't *constantly* swill it.

Tivk: In the last war the Fleet on the front lines was cut off from resupply and went without coffee for two weeks. Human crew efficiency dropped 40%. But you won over 20% more engagements. You get *mean*.

Nok: Why don't they just keep coffee away from the humans and win more battles?

C.M.O.: Are you out of your *mind*?! Oh! Uh, yes Professor?

Mukh: My macaronis are shaped like bugs. How thoughtful. It looks...*interesting* but...my kind prefers our meals to be moving. That way you know it's fresh.

Nok: Oh for - let me.

*(shaking sounds recorded)*

Mukh: Hey thanks!

*(loud and unhygienic sounds of eating recorded)*

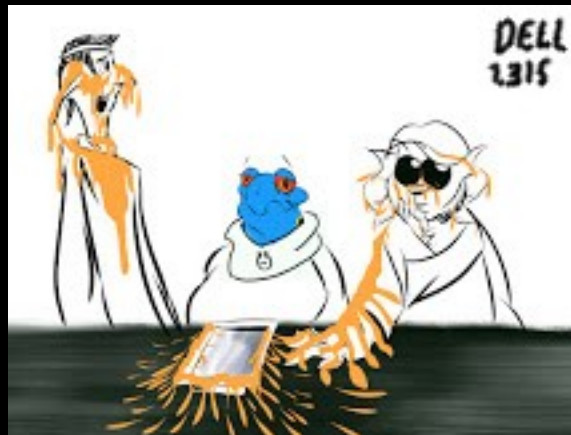
C.M.O. Good grief!

Mukh: Hey, you gotta eat your food fast or it might get away. Or counter-attack!

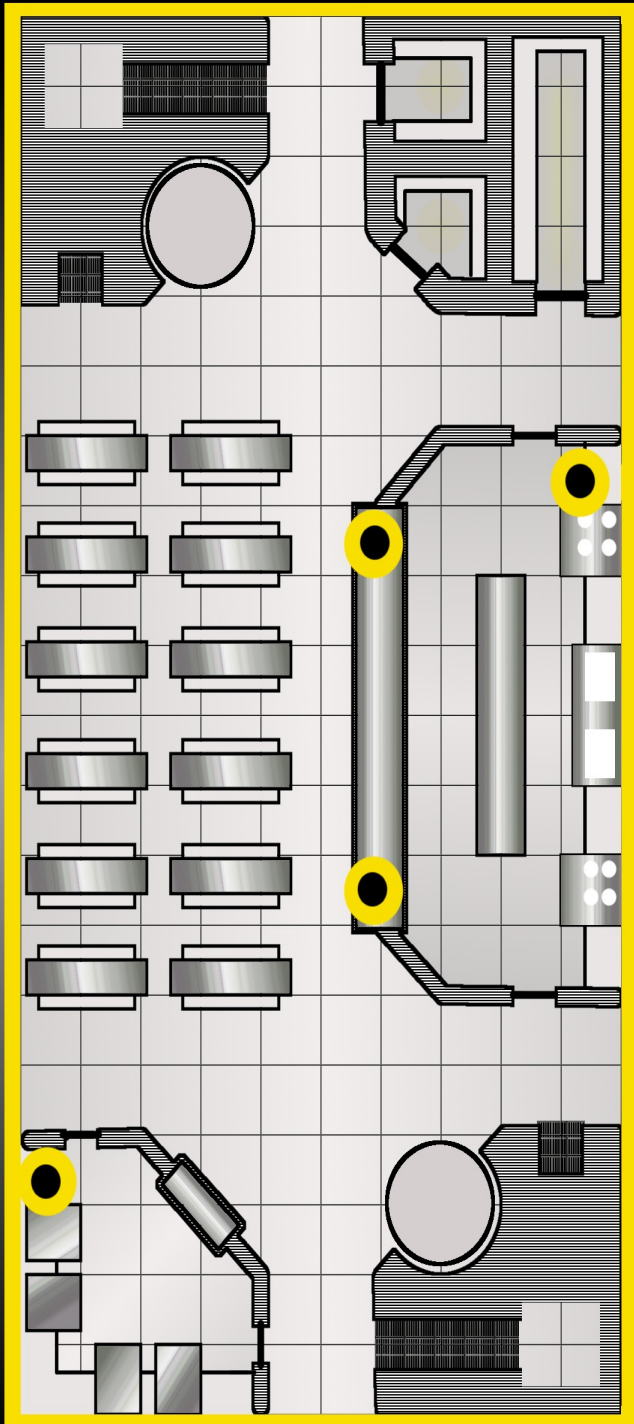
Tivik: You could replace the microwave heater in Mr. Mukh's ration pack with an agitator to move the macaroni around. Or just have someone shake it.

C.M.O.: Riiight. Excuse me, gentlemen. I'm taking a short break to *ehhhh* get some coffee. Yeah, right...

Tivik: Go right ahead. You're losing efficiency fast. (It's the only thing that lets humans keep up with the rest of us, you know.)







## *DON'T RUN DRY!*

It is every spacer's responsibility to check ALL coffee urns before returning to duty.

Remember:

*" IF IT ISN'T A LOT,  
START A FRESH POT!"*

-SPACE FLEET COMMAND

# ADVENTURE HOOKS

## *A Mocha Time*

The ship is out of coffee. More must be found in time before the humans in the crew go crazy.

## *The Poison Pie*

A diplomatic conference held aboard the ship ends in tragedy. Don't let anyone tell you food poisoning isn't a tragedy, either! But was it a mistake or was someone trying to kill the human ambassador?

## *Spectre of the Bun*

Chef is out of his fancy fixings (or cinnamon at least) for baking and wants some pastries to get some more for him in exchange for all kinds of goodies. Enter the PCs who must negotiate, wheedle or steal what is needed from wherever they can. What are these ingredients worth? Whatever the owners can get for them.

## *The Wizard of Sauce*

A delicious condiment an alien diplomat brings aboard temporarily awakens psionic potential in the crew. Hilarity ensues.

## *A Pizza the Action*

The crew is witness to a couple of goons running a protection racket as they beat on a pizza delivery 'bot. But is there more to it than it seems?

### *Crepe Runner*

The crew gets to test out the latest multi-species ration idea: printable crepes with customized fillings (anything you want provided it tastes like blueberries.) If they survive the tasting and fill out a survey the Commissary Branch promises to get them some real food. Unfortunately, they only require a few crew to participate and *everyone* wants in on a possible feast. For even more fun, the Captain arranges a set of "contests" to determine who gets to test the crepes. The nature of these contests is up to the Star Master.



# DEFENSIVE SYSTEMS

By Cadet 1st Class Dell, GCS *Nikola Tesla*

Starships get shot at sometimes. I understand there are a couple of films based on this premise that did fairly well. Add in radiation, meteors, orbital debris and lousy piloting, and you begin to wonder how starships get anywhere at all without being riddled with holes letting a whole lot of air out.

To make matters worse, early in space exploration, ships couldn't hide. Physics spoiled that for everyone. Normally, you can be seen by your body heat a hundred light seconds away (your actual *body*, not that tin can you're flying around in. They could see that from *Pluto*). So basically, ships in space originally had three responses to attack.

## **Dodge!**

This might be problematic if missiles are significantly faster or more maneuverable than you are, but sometimes it's all you have. Contrary to popular belief, dodging can give *some* benefit against lasers and more advanced beam weapons. Even light speed weapons will have a finite time lag in space unless you are close enough to make harsh language a viable attack. Furthermore, a laser has to be held on its target long enough to do damage. If it washes over a ship moving 500 meters per second, that energy is being smeared over half a kilometer. When dodging, be aware that, eventually, your luck is going to run out.

## **Countermeasures.**

You can kick out dust, aerosols, flares, chaff and what have you to kill or distract missiles and diffuse energy weapons. The downside is that some countermeasures have ammunition limits and will eventually run out, or your defense lasers will miss a projectile. Any countermeasures can be overwhelmed by sheer volume of fire.

## **Suck it up!**

Build your ship really *tough*. Armor it; then reinforce its structure; then armor it some more. Only thing is, modern

weapons are pretty brutal, and if you pile enough armor on your design, you discover the fine line between a large ship and a small moon.

Enter the defense field! The first defense fields were what we call "K-shields" now. They stop solid projectiles by directing tractor fields to knock them off course. Yes, a tractor beam can knock a missile off course. Your opponent is trying hard to aim a missile where you'll be. A tractor beam can pull said missile to where you are *at that moment* and hence off course. If your culture has artificial gravity, then they ought to be able to build a tractor beam to defend their ships. If you don't have artificial gravity, what kind of a space power are you anyway?

The first K-shields were an active defense. You had to aim the tractor beams at incoming missiles to knock them off course. Later, humans discovered global shielding techniques that make aiming unnecessary. The chief difference between K-shields and the other kinds of shields is that K-shields are much closer to the hull - typically only a hundred meters to a kilometer thick. K-shields also slow down the projectiles they can't completely stop (like starfighters).

A K-shield won't protect against beam weapons, however. If you used gravity control to make a gravity lensing effect, you could possibly make a beam spread out or bend around your vessel, but that sounds like a lot of power. In nature, only galaxies or black holes bend light that much. If you can generate effects on that level, you don't *need* beam weapons. Just cause tidal effects to rip your target to pieces. If the other guy's ship is in shreds, you're doing it right. As a personal note, it'd take lasers that make Rigel look like a glow-in-the-dark cut out to make me gamble on sticking myself in an artificial black hole...

Eventually, most races discover how to tweak space warping effects with exotic matter to diffuse and even absorb incoming energy of every kind and radiate it away.

What we call "EM-shields" diffuse or absorb attacks with no black hole effects. Visible light goes through them with no problem too, if everyone does their job right. Some first generation shields did indeed block all radiation both ways and ships had to drop shields for laser cannons and sensors to operate, or even use reaction drives. Worse, the ships couldn't dump their waste heat so the shields could only operate for a few minutes before their engines went critical. Yes, it *could*



cloak you like the Videni ships, briefly, but the light show afterwards would *more* than make up for it.

EM-shields raise hell with sensors and computers. You can't teleport through them. Shuttles and small craft flying near a shielded ship can experience control and sensor failure. Shields must be dropped to accept docking craft.

As a side note, some earlier vessels went for armored hulls and then used a magnetic shield to protect against particle radiation. It worked, but you had to run the shields virtually all the time as particle radiation and metal hulls do not mix well. Also, these ships were *slow!*

There are more possible uses for shields. A good, dependable deflector can eliminate many structural elements in your spacecraft's design, lightening the mass of a ship at the cost of more energy usage. Who needs a shuttle bay door? Use a deflector. Ditto for airlocks (at least the outer door). Elevators can be simplified, just a tube with a deflector projector at the bottom. Deflectors could even be used in life systems in place of airbags. Or you can opt for a deflector *bed*, where the mattress is replaced by a deflector for total comfort and protection from beam fire by the people living downstairs. If your power and projector systems are dependable enough, it's no problem. The most common use of specialized deflectors is the shaped K- and EM- shields used as thrust nozzles in modern three-phase Kinetic Drives.

There is also the Zeta effect or "Z-shields". As I said, EM-shields diffuse incoming fire and absorb whatever they can't ward away as heat. That heat (sometimes *lots* of it!) has to go somewhere and the only place in your ship built to take that much abuse is the power core. This results in damage and weakening of the core and is something you'd want to avoid. Modern screens do this by using the shields as a heat radiator. After all, they are good at manipulating radiation already. Current holo movies always get this wrong, probably because the reality looks pretty silly. Shoot at a shielded ship and you see beam scattering at the point of contact and dimly glow around the shield surface until the side of the shield facing away from the contact point starts expanding to radiate heat from the attack more efficiently.

Most races depend mostly on Z-shields for heat radiation. Terran engineering is more belt-and-suspenders style. Our ships have *huge* heat radiator fins compared to most species. These let us keep fighting after our shields go down ... at least until the radiator gets hit. On the other hand, a ship that relies only on Z-shields for heat radiation will be stalled and

dead, incapable of movement.

Shields can direct your waste heat and stray energy emissions away from prying eyes, providing a degree of stealth. In fact, they are perfect stealth devices against most active sensors employed by pre-starflight cultures. They seem to have no effect on psionic energies, though the Fleet is working hard on that to deal with our friends the Slugs.





*Space Fleet Cruiser Nikola Tesla scores a hit on Cruiser Thomas Edison during fleet training exercises, overheating Edison's radiator and causing her (his) shields to drop.*

# STAR MASTER NOTES

First Generation Shields can be employed for 1d4 turns before overheating. Overheating causes 5 points of damage per turn. While the shield is up, the ship can't fire, maneuver or use its sensors. First Generation Shields roll 1d3 instead of 1d6 to determine the percentage of damage they stop.

Second Generation Shields are similar to modern shields but roll 1d4 to determine the percentage of damage reduced (so they eliminate 5-20% of damage at half power and 10-40% of damage at full power.) These shields were used by the Fleet at the time of the First Contact War. They were replaced by Third Generation Shields near the middle of the conflict. Many older civilian ships still mount '2G shields'.

Third Generation Shields are currently in use. They function per the official rules.

Fourth Generation Shields are available only to select ships for special purposes. They roll 1d8 for the percentage of damage stopped (5-40% at half power and 10-80% at full) .

## Armor

The Zangid are at a severe disadvantage already not having torpedoes. It is true that you can have a Zangid task force take on a lone Terran ship, but an alternative is to make the Zangid ships tougher and use less EU for protection. Armored Zangid ships impose a -1 or -2 on hit rolls.



## Shield Heresy

We don't like to reinvent the wheel, but we have a problem with shields in the rules as written. Consider two frigates fighting. One frigate charges its shields fully - that's 30 EU right there. The other frigate does not charge shields.

Assume roughly half of all shots will hit. So for 5 EU, you energize your beam battery and get one hit. That does on average 15-20 points of damage (call it 18). The beam strikes the shielded ship and is reduced by 30-40% (call it a third). That's 12 points of damage inflicted.

The shielded ship fires back, also inflicting roughly 18 points of damage. Observe the damage inflicted on each ship on the following table:

	SHIELDED		UNSHIELDED	
	Damage	Total	Damage	Total
Turn 1	12	12	18	18
Turn 2	12	24	18	36
Turn 3	17*	41	18	54 (46 EU available tomorrow)
Turn 4	17	58	18	72 (28 EU available tomorrow)
Turn 5	17	75 (25 EU available tomorrow)	18	90 (10 EU available tomorrow)
Turn 6	17	92 (8 EU available tomorrow)	18	108 (Destroyed)



\*After the second turn the shielded frigate is doing 5 damage to itself everytime it fires a beam battery because it is out of energy due to powering the shields.

See? Those shields don't work nearly as well as advertised.

In your game, you might want to experiment with giving shields a certain amount of "damage points", say equal to the EU invested in them. Any attacks would be applied to these damage points first. In the example above, the shielded ship would have 40 EU left from its damaged power pod the next day. In other words, they would know they were in a fight, but the frigate would be in much better shape thanks to their shields.

# ELDER GODS

Chief Medical Officer, GCS *Nikola Tesla*

Transcript #33046 from Tesla Shuttle 1

C.M.O.: What is it?

Tivk: It is a big, glowing, green head that is chasing our shuttle.

C.M.O.: ...I mean I want *exposition*. Do you *know* anything about it?

Tivk: It is big. It is glowing. It is a green head. Would you care for range and bearing?

Mukh: I'm assuming this is your *first* contact with a sufficiently advanced jerkwad, Doc?

C.M.O.: ...

Nok: Hang on; it's closing. I'm killing our relative velocity. They love it when you run. Any suggestions?

Mukh: Prayer?

Tivk: I do not know whether to commend you, or slap you.

Elder Gods - or in Fleet vernacular "Big Glowing Heads" - are generally quite the pain in the ass. Advanced and nigh inscrutable beings, they usually show up at random, announce that we are primitive savages, and then try to stop a war or otherwise screw with our basic right to destroy ourselves. Maybe they're trying to teach us some morality? Otherwise, it seems as absurd as a human trying to break up a fight between two ant colonies. Maybe it's their equivalent of community service to the More Elder Gods...

Elder gods are often portrayed as being able to do whatever the heck they want. Even those who have limits are often way above your Captain's pay grade. Maybe the Big Glowing Head chasing your destroyer is "only" as powerful as a dreadnought. That still isn't helpful when you're up against one. Here are some considerations when encountering an elder god in a mission (good luck).

1) *Less is more.* Especially in their case! There aren't a huge number of them -maybe a hundred individuals encountered in the Northern Lobe. Still, one of those Big Glowing Heads can be plenty.

2) *They're Inscrutable.* Their motives can be a complete mystery to us short lived mortals. Maybe they want to protect a planet of slime molds that will evolve into a beautiful and benevolent culture. Maybe they just want to give the slime molds a chance to develop before we start selling them Phast Phood franchises - who knows?

3) *They might not be monolithic.* A space god might still have to worry about his peers. It might get called home from playing by his angry parents ("... and put the Orion Arm back the way you found it! Sorry humans. ") Your current mission blocking BGH might have to pay a price for Its intervention, or have limits on what It can do before other elder gods show up to ruin the party. Ratting one of these guys out would make my career...

3a) You might be unlucky enough to be caught between a *war* of the gods. This can go one of two ways: either the gods of both sides cancel out and need your gang for tie breakers, or they don't cancel out, and the Universe really does hate you as well as have no concern for those a few light seconds around you. In the Fleet's experience when they fight, it is solely by proxy. So far.

4) *They aren't all powerful.* Your starship crewmen could be gods to an iron age civilization, but they can still be taken out by a spear or a bacterial infection, for that matter. Primitive natives may not *know* this, but wait 'til one of your contact team cuts themselves shaving. By the same token, the personification of Cloacina (Roman goddess of sewers!) might be vulnerable to an ion torpedo, or enough energy weapon fire or have a finite energy supply or a vulnerable power source. You get the idea.

5) *They might be charlatans masquerading as gods.* Maybe they just found a ring of power in a pig's nose

or an alien's lobe. Maybe they were discovered abandoned as a baby and given god-like powers by a sympathetic Elder God (I'm *told* they exist). Maybe some explorer reached the edge of the galaxy and became a super-being. These guys can be the worst of the bunch in some ways. They may be easier to neutralize - especially if their power comes from an object - but they are also *completely unprepared for the power they have*. Most Elder Gods got that way over millions of years, and they're *still* smug bastards.

Imagine if the jerk that bullied you at the academy had that kind of power?

Like I said, the Fleet nomenclature for the high-end Elders is "Big Glowing Head -" followed by a number designation - mainly because the Fleet loves number designations and what hell else do you call them? The BGHs are currently at the top of the Elder God Classification System (EGCS) and are invulnerable to our weaponry and technology ... so far. Some notable examples of Elder Gods include:

### **Sesku Iplodewatchewan**

Type: Humanoid

EGCS Rating: 3

This entity was contacted shortly after the First Contact War. She had set up shop on the Daelan colony (redacted to protect the survivors) which had a number of Dreiped and Andromedan refugees. There she set up the so-called Killing Cult, demanding the Daelan surrender the minority species in exchange for their continued survival. The Daelan, being Daelan, managed to get a message out through their spy network and notified the Fleet. The Battle Cruiser *Kamehameha* and Dreadnought *High Justice* responded. Security forces defeated the cult in short order but took massive casualties when confronting Sesku Iplodewatchewan who, at the very least, had a personal force field, an invisibility cloak and a disintegration projector. These may have been innate abilities. After reinforcements arrived, Sesku Iplodewatchewan was apparently destroyed by massed ABC rifle fire and the efforts of three robot tanks that perished bravely.

Sesku Iplodewatchewan may have simply teleported away. In any case Contact Protocols do not apply to her. Use of lethal force is permitted.

## BGH #67

Type: Big Glowing Head

EGCS Rating: 8

BGH #67 likes surprising shuttle crews and landing parties. It delights in posing riddles and puzzles for its 'opponents' to solve. Failure to solve its puzzles too many times results in being teleported through space and, occasionally, time. One unfortunate group was transported back in time to meet their past selves and give them some coaching for the upcoming puzzle test. Help from the future wasn't enough and #67 repeated the time skip. By the time they succeeded in winning the contest, there were five temporal copies of each team member. Since then, the copies and originals were sent on assignments in different sectors and receive regular psychiatric counseling.

BGH #67 seems invulnerable to our current weaponry. An attempt to fend it off by the Cruiser *Marie Curie* using torpedoes resulted in the entire crew being morphed into juveniles. The Fleet is still trying to track down the *Curie*, which was last sighted 'looking for action and cruising for hotties' in the Kentaurus Freehold.

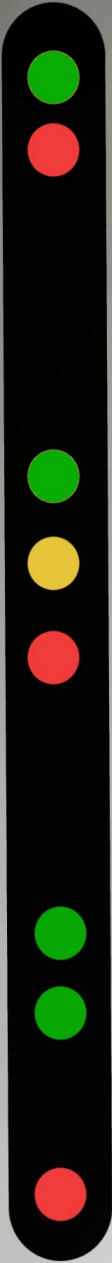
## BGH #23

Type: Big Glowing Head

EGCS: 9-10

**WARNING:** Do not approach and do not engage. Report any sightings to FleetCom immediately. This entity is responsible for numerous acts of destruction and murder in its encounters. Confirmed to have destroyed the Battlecruiser *Percival Lowell* and her Destroyer escort.





# RANDOM TABLES

Sometimes, you just need an elder god in your SF game. Whether it is for a "big bad" in your campaign or just to keep the characters away from that strange white void with no charted stars that you haven't mapped yet, the use of all-powerful entities is a staple of the genre and, when used sparingly, provide everything from *deus ex machina* to comic relief.

Included below are a few random tables to design your own unique elder god. You can either grab your dice and roll away or just pick traits you like - After all, it's a *God*. No one expects a balanced contest.

## Appearance (roll 1d10):

- 1) Glowing Head (roll on BGH special features table below)
- 2) A perfect specimen (and a hottie) of a known race.
- 3) A glowing orb of energy.
- 4) A hyperdimensional nexus it hurts to look at.
- 5) Diminutive person with a funny hat.
- 6) Disembodied voice.
- 7) A bizarre compilation of humanoid, animal, vegetable and mineral (fungal optional).
- 8) A writhing mass of tentacles.
- 9) A nondescript humanoid in a business suit or archaic clothing.
- 10) A different deity to each observer based on the religious beliefs they or their culture holds.



### Big Glowing Head Special Features (roll 1d6):

- 1) Several smaller satellite heads circling the main head and arguing, singing, etc.
- 2) Many tiny insect eyes
- 3) Head turns inside out when it opens its mouth too wide
- 4) Breaks into smaller heads and reforms
- 5) Disembodied brain (numerous eyes optional)
- 6) Big forehead

### The elder god's dark secret is (ROLL 1D10):

- 1) On the run from their peers.
- 2) Screwed something up big time in the past that was hushed up.
- 3) They have blood on their hands. A lot of blood.
- 4) Not the god you think they are.
- 5) On the run from their former believers.
- 6) They have the soul of an innocent child (good luck making them give it back!)
- 7) Will wipe out beings that don't measure up to some double standard.
- 8) Is just testing you! Isn't that a relief?
- 9) Is an elaborate AI constructed by someone long ago.
- 10) Is an elaborate genetic construct built by an AI long ago.

**The elder god is really (roll 1d10):**

- 1) A con artist with some state of the art tech
- 2) A con artist with a genuine artifact of the gods not completely understood
- 3) The real deal, in that they are practically immortal, have existed since prehistory, and were worshipped by someone somewhere who didn't know better
- 4) The real deal, in that they are practically immortal, have existed since prehistory, but don't really give a throggit's tail about you primitive types.
- 5) A powerful being that is practically immortal but hasn't been around long at all and is the equivalent of a teenager (or a toddler).
- 6) An all-knowing type that likes to watch but is limited in their direct interactions.
- 7) Totally alien and incomprehensible.
- 8) Existing in multiple dimensions and *really* incomprehensible.
- 9) Says they are incomprehensible, but are really just a jerk.
- 10) A time traveller from the future.

**Humans are ... (roll 1d6):**

- 1) Toys.
- 2) Great but you can't eat a whole one.
- 3) Primitives.
- 4) Animals.
- 5) Better left alone.
- 6) To be watched carefully and preached to like an 80's cartoon PSA..

### The elder god's weakness is (roll 1d10):

- 1) Nonexistent. Run.
- 2) A finite supply of energy.
- 3) A focus for their power is needed.
- 4) They (or their power) is limited or bound to a place.
- 5) Their life force is linked to a place, object or person.
- 6) Their true love.
- 7) Overconfidence. See number 1 above.
- 8) Dependency on the belief of their followers.
- 9) They are physically a normal humanoid.
- 10) Roll twice. It's a bad day to be a god (relatively speaking).

### Modus Operandi (roll 1d10)

- 1) Works behind the scenes using followers.
- 2) Appears in giant form and demands worship.
- 3) Appears and spends all their credits on ale and whores.
- 4) Chases starships, breaks up wars, and otherwise interferes with primitives' natural development.
- 5) Offers people their fantasy in exchange for their soul or a reasonable facsimile.
- 6) Makes people love them.
- 7) Causes natural disasters: planet quakes, thunderstorms, meteor showers, actors going into politics etc.
- 8) Feeds off the living to make undead slaves of them.
- 9) Has really nasty minions.

10) Bad news: The elder god doesn't mind getting their hands/feelers/claws/suckers dirty (or bloody), it's a throw down.

### Power Level (roll 1d6)

- 1) They can neutralize the defenses of an entire world.
- 2) They can slug it out with a capital ship (Cruisers and larger).
- 3) They can slug it out with smaller spaceships (Frigates and Destroyers).
- 4) They can raise merry hell with a landing team and shrug off any attacks with ordinary sidearms.
- 5) They can terrify and dominate primitives.
- 6) They are stuck on the plane of dreams (woooooo!) and can only act through dreams.

### Edge (roll 1d10)

- 1) Possessing sentients and/or machinery.
- 2) Incredibly realistic illusions.
- 3) Mind control (they make new friends easily).
- 4) Tech blocker. Your blaster will not function here!
- 5) Shapeshifter.
- 6) Knows what scares you.
- 7) Unearthly allure.
- 8) Warping reality in an instant.
- 9) Has an established and extensive theocracy with armed might.
- 10) Has a very sneaky and capable cult of total fanatics.



*Transcript #33046 from Tesla Shuttle 1*

Tivk: That is an encounter I do not desire to repeat.

Mukh: Meh. He gave us three riddles, we answered three riddles.

C.M.O.: I *knew* he was just messing around when he asked "How do you keep a monkey in suspense?"

Smug bastard.

Nok: I bet he didn't really give us three wishes.

C.M.O.: Smug. *Bastard*.

# FELINOIDS

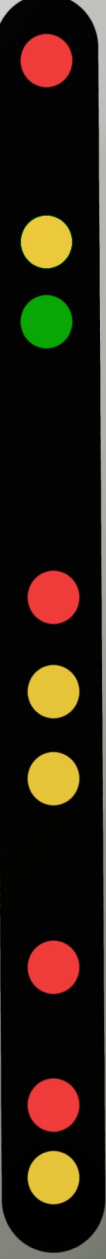
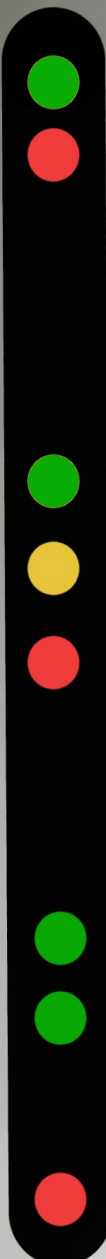
By Riasi (professional cat girl)

First of all, "felinoid" is human jargon for a humanoid with feline characteristics. I don't think it is accurate. A better definition of that word is an *animal* with catlike features and I'm talking about cat girls and guys. I think "ailuranthrope" has a better ring to it, and it is also similar to 'Lurrans' our own name for ourselves. I admit that describing a humanoid as based on a Terran animal is a useful form of shorthand. While an alien can be really *alien*, it is still easily understood (for the most part anyway) by your listeners. So, humanoids with cat-like traits and/or features...what the heck do you *mean* by that?

Your first contact with cat girls happened in the 21st Century ... if you count primitive cos-mod surgery. Some people wanted to look like cats.

Your *next* contact with cat girls was with humans who were genetically modified to have feline characteristics. A number of feline characteristics were very useful for ... space travel. But it wasn't *really* about space travel, was it? Naughty humans...

It is true that Human Felines (and Lurrans) have an easier time orienting in zero gravity than regular humans. We have less tolerance for gee forces than average, however. This was discovered in your World War Mark Two when the American Office of Strategic Services tried making a cat guided shipping bomb. It was reasoned that since cats must have some measure of aerodynamic ability to always land on their feet *and* loathed water, they would aim their bomb towards a ship to stay dry. I have no idea how they were to control the bombs but the question was a moot point since the cats passed out soon after the drop. It was a dirty trick to pull on a cat, and I'm sure just one reason the Germans kept scratching their heads and wondering how the Allies won.

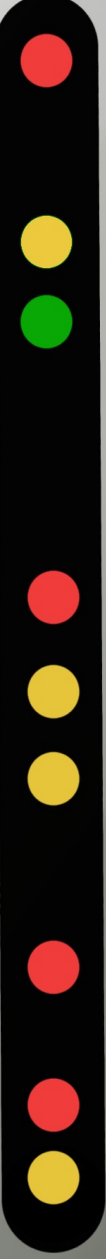
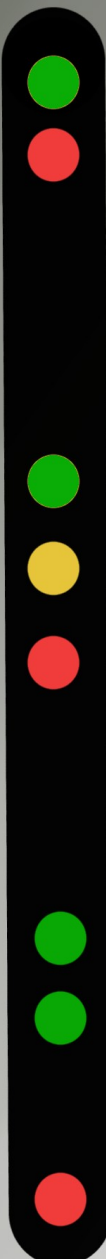


In any case, my people prefer low gee planets and low acceleration ships. Physically, we are slighter and weaker than humans, though we appear about the same size. This is due to standing and walking on our toes and a generous helping of body fur.

Lurrans night vision is better than human norm but we don't see in pitch black or in the far infra-red like the Daelans. Apart from our cat-like night vision, evolving around a type 'F' star has made us see into the ultraviolet end of the spectrum. It's a lovely color we call 'murvle'. In contrast, your red and orange blur together for us, and some shades of red appear black to us. This can be a problem when we encounter emergency signage.

Claws, even retractile ones, are a mixed blessing. They're great for opening up that cargo container, but do you *really* want to chance those nails when you're wearing a *spacesuit*? Do you want someone with those claws helping you suit up? Don't tell me about restraint, accidents happen. We make do with space suits that have mechanical claws at the end of the arms operated by waldos. *Much* safer. Some of our spacers have their claws filed down or removed for safety reasons. Spend too much time in a spacesuit and they fall out anyway, like your pitiful human nails.

There are other feline traits that make them less than ideal space explorers. Felines (on Earth at least) are pure (obligate) carnivores. They have a higher need for proteins than most animals and they can only get such good things as taurine, arachidonic acid, vitamin A and vitamin B12 in sufficient quantities from meat, which is *really* bad news for long duration voyages or space stations. A vegetarian diet causes hearing loss, hair loss (!) and liver and heart problems for felines. We Lurrans are not *pure* carnivores but pretty close. It has caused a number of problems in our explorations and we often stop off on friendly planets for a fresh meal. We eat a lot of our meat rare. *Very* rare.



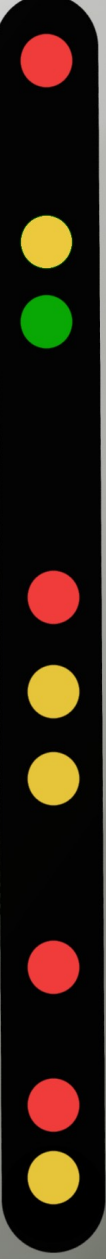
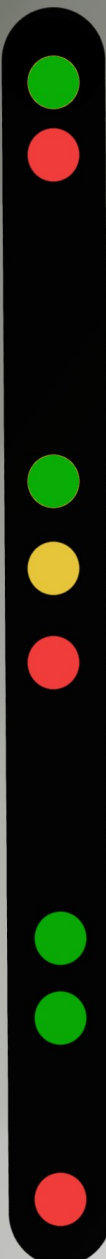
Our starship crews looked at a lot of dietary supplements when there was no fresh meat. Contrary to popular belief, our non-Lurran crewmates do *not* look yummy after a few weeks. Cloned meat, synthesized meat, and *really* good dietary supplements help us satisfy our need for meat on spacecraft and stations.

Another characteristic we share with felines is sleeping a lot. We are capable of bursts of speed and strength, but we pay for it afterwards with power naps. Humans are at an advantage for heavy labor purposes as they are built for endurance. Cat people are better for things like damage control or emergency response (just hope we wake up.)

There are some cosmetic considerations with cat people: tails, fur and ears. Now most mammals have body fur, unless they lose it for evolutionary reasons (being aquatic or having thick skin are the two most common courses). You humans evidently lost your hair through random evolution and then came to prize that hairlessness as a sign of fitness, which led to the hairless people breeding more and more. Success rewards success in nature, so you're now *bald*, by ailuranthrope standards. Evolution doesn't have to go that way. In our case, it did not, fortunately. Human hairlessness is a mixed blessing. Humans gain and lose heat more quickly than Lurrans. They also suffer sunburns and have no protection versus a scratch or nip. Fur is the way to go! Fur is also handy for retaining body heat if you are smaller than human average, so our fur is functional, as well as beautiful.

Having cat ears is no weirder or 'unattractive' than many of the 'forehead aliens' we've met. We convey a lot of emotion through ears, whiskers, and tail movement, but are hard to read by facial expression. Some humans regard us as aloof because we can't exactly *smile*. Showing teeth among Lurrans and other evolved mammals is usually a prelude to biting someone. When in doubt as to our intentions, look at our hands. If the claws come out, odds are you're upsetting us.

Humans make a lot of fuss over our tails. Humans don't have one, nor do your closest relatives



among the apes. One theory was that walking upright proved beneficial because there was less surface area exposed to the tropical sun, resulting in more heat tolerance. Being a biped negates the need for a tail. We cat people came from a more temperate planet and we also kept the ability to run on all fours. We had fur to protect us from the sun so we have evolved an upright stance for tool use. So you can say being bipedal is sort of optional or part-time for us. Our tails give us the advantage of balance (not to mention swatting people who annoy us). A final note about Lurrans: unlike Terran cats, our tails are prehensile to a degree that varies with individuals. Most humans find this alarming. Some athletic Lurrans can actually hang by their tails and use them as a crude extra hand (I can hang by mine for a bit or trip someone but I'm athletic.) Our spacesuits all have 'tails' built in. Some Lurrans subraces and individuals have more or less developed tails.

I mentioned we are often characterized as being aloof and loners with little empathy for each other. This is extending a perceived behavior of a small group of felines (house cats) to us because we have some anatomical similarities. This is *not* the case even for all felines on Terra, as prides of lions work together quite well. Also, the animals we evolved from were social animals and group oriented.

Most Earth felines dislike and avoid crossing water or getting wet. Tigers, in contrast, are awesome swimmers. Know your ailuranthrope; I can swim, and I like water. I *don't* like having to dry my fur out, however. And fur conditioner starts to cost you.

Lurrans are not all that feline in nature. We are *aliens*. Aliens are alien. Just because you meet a humanoid race with tails and retractile claws doesn't mean they *act* like cats. Foxes have tails and retractable claws for that matter. We could have just as easily been called Fox Girls. I tried to do more research on both Cat Girls and Fox Girls on your interwebs but ... I couldn't really get past the images I found. Yeek!



Love the sketch...  
don't let Doc find it!

## LURRANS (Cat Grrls/Guyzz)

Requirements: Dex 12

Ability Adjustments: STR -1 DEX +1 CON -1  
CHA +1

Skill Adjustments: Combat -1, Contact +1,  
Metabolism: Iron Based

*Claws*- Lurrans have retractable claws. They inflict 1d3 damage in unarmed combat.

Lurrans substitute Dexterity modifiers for Strength modifiers when using their claws as attacks focus on speed and accuracy.

*Light Frame*- Lurrans have a +1 to Dexterity and Charisma and a -1 to Strength and Constitution reflecting their smaller size.

*Paws*- Their paws lack grasping strength. Lurrans may use laser swords and light (no pun intended) melee weapons (doing 1d6 damage or less) normally. They use heavier weapons at -2.



*Ranged Combat*- Lurrans have a -1 to all ranged attacks due to their preference for hand to hand combat.

*Night Vision*- Halve all penalties for dim lighting or darkness (other than total darkness).

*Endurance*- Lurrans double all penalties for high gravity.

*Skills*- Lurrans treat climbing as a Primary skill for rolls and swimming as a Tertiary skill. They can swim, but they aren't great at it.

# GENETICS

By Professor Tiglath Alfstan Mukh, Linguist/Historian GCS *Nicola Tesla*

Many pre-spaceflight cultures try to prove their superiority to their intra-planetary neighbors. A notable exception is the Taurans, who merely try to prove their superiority to everyone *else*. Some races, like the humans, tried to improve themselves through genetic engineering. Friction arose between the uplifted and the plain vanilla humans, and hilarity ensued.

Actually the Genome War ensued and many people died.

Human records of the time are sketchy. They have kept their nuclear response to a civilized minimum, at the very least. According to some accounts, the genetically-engineered created a *de facto* caste system, and natural humans were the underclass. Movies about the era have a sort of Roman Empire/Fascist/Kinky vibe, but it seems like the oppression was primarily a matter of more and better opportunities for those who played cut-and-paste with their chromosomes.

Like any plan to take over the world, there were problems with genetic engineering. A simple rule of thumb is, "If a single world government doesn't spring up on its own, you probably did it wrong." First of all, there's still a lot of unexplored territory in human genetic structure. At that point in history, they knew even less. Unfortunately, not knowing how little you know is usually taken as competence by humans and most other races. Those frail, cellulite-ridden, appendix popping wrecks you walk about in are the result of millions of years of trial and error. There are reasons for a lot of the so-called drawbacks you have. Cure alopecia, for example, and maybe the subject acquires the gene for color blindness - or schizophrenia. As Riasi said in her text on felinoids, "We don't know the exact reasons for humans being

hairless or tail-less." So, a few body modding crews made themselves into human/generic mammal furies and discovered that their new DNA sequencing triggered atavistic rages when they couldn't find designer clothes made specially for those with tails. Some discovered their feline-modeled upgrades gave them perfect balance, but threw their inhibitions to the winds on a regular cycle (*Dream on. Cat Dudes don't know you're breathing ... but wait 'til the 14th. Yeah there's an app that tells you that stuff. I got it. - Riasi*)

Not all the drawbacks were that obvious, either. Government-mandated genetic tweaking resulted in a "standard" upgrade package provided to all citizens in the womb. This had the unforeseen effect of reducing genetic diversity. In nature, reduction of genetic diversity usually appears in very small populations. When you have low genetic diversity, any bacteria, virus or bug with which one individual gets infected has the potential to infect *everyone*. Fast. What one can't fight, none can fight. Standardized genetic coding can result in true pandemics. While this may be no big deal if the complaint is athlete's foot, before the Genome War, you had a new flavor of influenza everyday, and worse. It was a horror show in closed environments like spacecraft or stations.

Another problem with genetic engineering was copywriting. Let's say a geneware company created some individuals that made all other humans look fit for nothing but a museum display. The problem is that these uber-people were going to have kids unless they were made sterile. Sterility is not a great selling point. So, those fantastic gene mods are going to end up dispersed among the population like any other genetic trait. Some companies tried to make their people/products sign agreements not to mate with individuals below a certain genetic rating, or just with people with similar tweaks. Naturally, this didn't work. You humans mate no matter *what*. It's saved mammals like you more than once. I understand you even "got busy" with your Neanderthal cousins, and when you can close the deal with a person who can benchpress a boulder, a court writ will not really deter you. Also, these gene products were *brilliant*. Certainly brighter than the lawyers that thought up those safeguards in the first place.

In evolution, the race does not always go to the swift, nor the battle to the strong, but it is *definitely* slanted towards those who keep churning out kids.

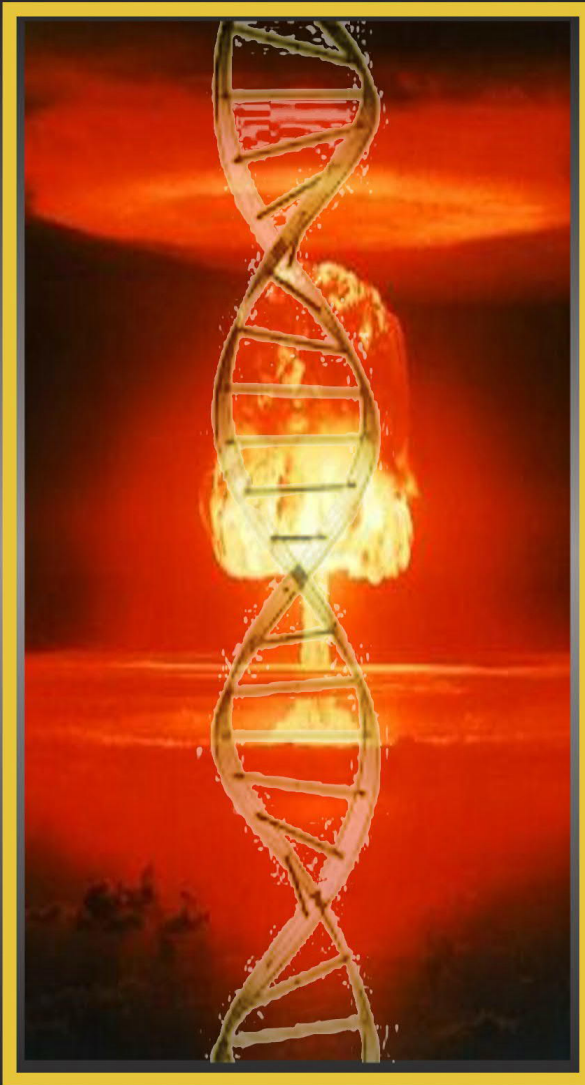
The Human Genome War was not (as some Terrans think) a war between Human 1.0 and Human 2.0. Rather, it was a period of *everyone* fighting everyone else. You had the base-lines rebelling against the caste system, the modified rebelling against the corporations, and the government trying to get control by passing more and more restrictive laws until everything collapsed.

Somehow, the Terrans still managed to send out at least six slower-than-light colony ships. One of those was the UES *Rigel*. More on those later.

Today, most Terrans have at least *some* genetic trait that can be traced to artificial modification. The line between "normal" and "modified" is meaningless, blurred by a couple centuries of *snooksnook*. Oddly, you still get some reclusive self-proclaimed "genius" somewhere who tries to genetically modify his own army.

Any serious modification to strength, intelligence or dexterity seems to carry penalties such as megalomania, over-emoting, being irrationally stubborn, and other failures to play nice with others. Today, there are many organizations in our Polity that exist to resocialize these individuals - or at least stun them and take the scissors and nukes out of their hands.

It's easy enough to stun them if you wait until they monologue...



PUT THAT TEST TUBE DOWN!

There are enough  
**SMUG Bastards**  
"Big ~~Glowing~~ Heads" in the  
galaxy without YOU playing  
God. Report any unauthorized  
gengineering IMMEDIATELY!

-Space Fleet Command  
(Science Division)

# RANDOM TABLES

Current genetic engineering can create a human (or other species) character or NPC, though it is far from an exact science. Such characters roll 2d6+6 for their characteristics. If a player wants a gene-tweaked character the Star Master now say: "Sure! Now roll on the table for side effects!"

## Genetic Superhuman Side Effects (roll 1d8:)

1. Berserker- the first time the character is hit in a fight, they must roll a save vs. energy attacks or stun effects. Failure caused the character to attack all creatures, friends and foes alike, in the immediate area (30ft.). The berserk character may re-try the saving throw every other round. The character stays berserk for 1d6 rounds after the last enemy is dead, or until they succeed on a saving throw.
2. Deadhead - the character's Psi Potential is halved.
3. Jerk- the character receives -4 to all uses of the Contact skill.
4. Dependency- the character needs daily medication or a specialized diet. If they do not receive the required medication or diet, they must save vs poison or suffer from the Berserker and Jerk disadvantages.
5. Sterile- The character is unable to conceive or sire children and is psychologically traumatized as a result. In any dealings with attractive or enticing humanoids, the character suffers from the Jerk disadvantage.
6. Obsessive/Compulsive Monologuing- At an opportune time (ref's call), the character must begin a monologue. They won't just call the Big Glowing Head a smug bastard - They will list Its faults in excruciating and infuriating detail. The character won't retreat before delivering a speech on how they will return and exact revenge. They must monologue for 1d6 turns. If the character is attack or otherwise subjected to an effect that requires a saving throw, the character makes the saving throw normally. If the



character succeeds at the saving throw, the character may also stop monologuing - after a declaration of revenge, of course.

7. Jackpot- roll 1d6 on this table two times.

8. Trifecta- roll 1d6 on this table three times.

Characters created as part of mad scientist's dream army may have an extra +1 or +2 to a stat at the cost of two rolls on the chart above.

# HYBRIDS

By Chief Medical Officer GCS Tesla

(Commentary by Professor Tiglath Alfstan Mukh Linguist/Historian GCS Tesla)

Different species should not be able to have kids. At least, that was what conventional medical science told us before we made First Contact across the Local Bubble. Then, impossibly, kids! Humans will be humans, after all. The fact that most human hybrids are with the Zangid, our often mortal enemies, or with the Taurans, our sometimes mentors, sometimes frenemies, sometimes condescending *jerks*, says something for our fast talking skills.

In the DNA of intelligent species across the galaxy, there are sections of code known as hybridization interons. Once thought to be redundant or junk sections of the genetic code, the interons act as a sort of Swiss Army Knife of baby-making. You need a certain number of interons for the process to work and, oddly enough, *all* mammal derived races we've encountered so far have that number: 46. So basically, Andromedans, Daelans, Taurans and the Zangid can interbreed. Life forms with less than 46 chromosomes can't. There will, for example, be no Zangid War Hound-Chihuahua mixed breeds.

*(Good thing too. Those Chihuahuas are murderous little things!-Mukh)*

The ability of non-mammalian species to interbreed is uncertain at present. The Gorran and Hykot are both egg-layers, but their methods of fertilization differ greatly and might require artificial means.

*(You humans really think about sex a lot. This would never even occur to us. Gorran? Yikes! -Mukh)*

The Rigel are the best known and most numerous hybrids in the galaxy. They are the only hybrids to have their own civilization and a unique culture made of a fusion of Terran and Zangid customs.

*(More Zangid customs than Terran customs. But they still don't know whether to conquer you or con you. - Mukh)*

Recent research indicates an ancient extinct race known as the Rockapongolie were a very advanced civilization that had widespread influence through the Local bubble and Leonis Expanse. They are best known as the creators of a device known as the Anomalous Xeno Artifact. The AXA, as it is known, is a box or cabinet capable of changing the species of a subject. A number of these were found on abandoned colonies by Fleet personnel.

*(They seem to have missed or ignored the non-mammalian races. I take this as proof God is cold-blooded. -Mukh)*

The Rockopongalie probably used the cabinets to place long term observers among other races covertly. The scientific value of their observers recording their impressions as other species cannot be underestimated. We have just begun to learn the many applications of these AXA devices. Professor Mukh has proved instrumental in translating the operator manuals and allowing us to restore full function to the one AXA *Tesla* has recovered.

*(About that "scientific research" ... it's not hard to read between the lines. The Rockopongalie were not after abstract knowledge. We may have found a race more interested in "getting it on" than humans. - Mukh)*

The AXA in question can now hold five genetic templates, derived by scanning a cell sample. Any

known species can use the AXA and, with care, templates can be swapped out. The cabinet works its miracles through a combination of retroviruses, nano-tech, and bio-genetic mutation on a scale beyond our current technology. Some nuances of operation are still beyond us.

*(He means to say it hurts like hell! Also it takes at least an hour to reset and recalibrate. On the other hand, it is probably safer than a teleporter. Note that "known species" does not include Gorrans or us Hykot. The damned thing spat me out and identified me as a type of terrier! The Rockopongalie were warm-blooded bigots, apparently. And it's "retroviri", not "retroviruses" Doc. Learn your own languages! -Mukh)*

Subjects transformed by the AXA also are host to a retrovirus that realigns the DNA of any mammalian humanoids to allow interbreeding between that species and other known mammalian species. We are not sure if this function was intentional.

*(Variety is the spice of life. In any case, it appears from the inferences I can make out in the AXA manuals I translated that this "species swapping" became something of a compulsive mania among the Rockopongalie. As time passed they seem to have devoted more and more time and energy to it. Eventually, so many Rockopongalie became other species and settled into a lifestyle of "orgies" or "family raising" with other mammalian species that there were not enough left to maintain their cultural identity or civilization. The Rockopongalie are possibly unique in the galaxy in that they effectively bred themselves into extinction.-Mukh)*



# OPTIONAL RULES

The easy way to make a hybrid character is to take one advantage and one disadvantage from each parent species. For example, the Rigel (human/Zangid), the hybrids receive both the Zangid Constitution bonus and the lack of active Psi Potential. Humans are the default species in *Starships & Spacemen*, with no special abilities other than a potential for active Psi, so it is suggested the hybrid lose a disadvantage normally received from the other parent, such as the lack of active Psi potential.

In the case of a Tauran/Zangid hybrid, the high Tauran Psi Potential and the Zangid lack of Psi would cancel out, leaving a race about as psionic as humans. A character can take the High Zangid Constitution and the Tauran low Charisma, resulting in modifiers might look like this:

## **Tauran/Zangid Hybrid**

Requirements: INT 10, CON 10

Ability Adjustments: CON +2, CHA -2

Skill Adjustments: None

Metabolism: Copper or iron based depending on the mother's metabolism.

(No, an iron based mother can't have a copper based offspring unless she adopts one.)

## **Tauran/Human Hybrid**

Requirements: INT 12, CON 9



Ability Adjustments: INT +1, CHA -1

Skill Adjustments: None

Metabolism: Copper or Iron based depending on the mother's metabolism.

At character creation, a Tauran/Human hybrid may chose a single psionic power. Other Tauran abilities are available if the character was raised in Tauran culture. Otherwise, it is possible to learn the meditative trance and nerve strike; these are not automatic. Tauran/Human hybrids do not suffer from the blood fever.

## IN-SITU RESOURCE UTILIZATION

by Lt. N'Sa Nok, Shuttle Pilot GCS Tesla

Transcript #51049 from Tesla Shuttle 1

Nok: Finally, a planet with a normal level of light. I can take my shades off here! Not to mention, walk around without fear of combusting.

Mukh: If you had a healthy coat of slime ... you poor mammals.

Tivk: Yet, we survive.

Mukh: Barely. Take the humans: If it wasn't for that asteroid strike, they'd still be living in the dinosaurs' walls and stealing scraps to survive.

Tivk: I doubt that any Tyrannosaur could get the best of the Chief.

Nok: I'd be selling tickets to *that* fight. What's going on over there?

Trader: Step up! Be orderly, you rabble! Yes, let me have a scan of that stone ... 20 carats. Very nice. That will buy you ...10 liters of water! Good thing you caught me today. Tomorrow the price goes up!

Nok: This is the way it goes on tide locked worlds around an M star. Too low a water percentage to start with, and it all freezes out on the night side. My homeworld was lucky. But this ... those firestones are

worth *thousands!*

Mukh: The "dirty chiseler"! Rrrrrrr.

Nok: Merchant! What are you doing to these locals?

Trader: I'm selling them water, fresh from the dark side. And I sold them some water ice I collected from asteroids on my flight here. That cost even more - it was *imported!*

Tivk: You are selling them their planet's own water. This amoral hyper-capitalism is tantamount to extortion.

Nok: Yeah that's ... the hell did you say?

Trader: I prefer to term it "in situ resource utilization". I can charge for my labor, wear and tear on the ship, and my time. I am a licensed trader and charging what the market will bear. Anyhoo, this planet is in open space. The Fleet doesn't run things out here. So hand out your brochures, conclude your "cultural exchange" and be on your way!

Nok: You're taking advantage of their low technology. The locals could supply themselves if they had environmental suits or sealed vehicles. Why not sell them those?

Mukh: And sell them service contracts!

Tivk: We're trying *not* to exploit the locals, Mukh.

Trader: Wah wah wah. Not *my* fault their ancestors got stranded here and went tech-stupid.

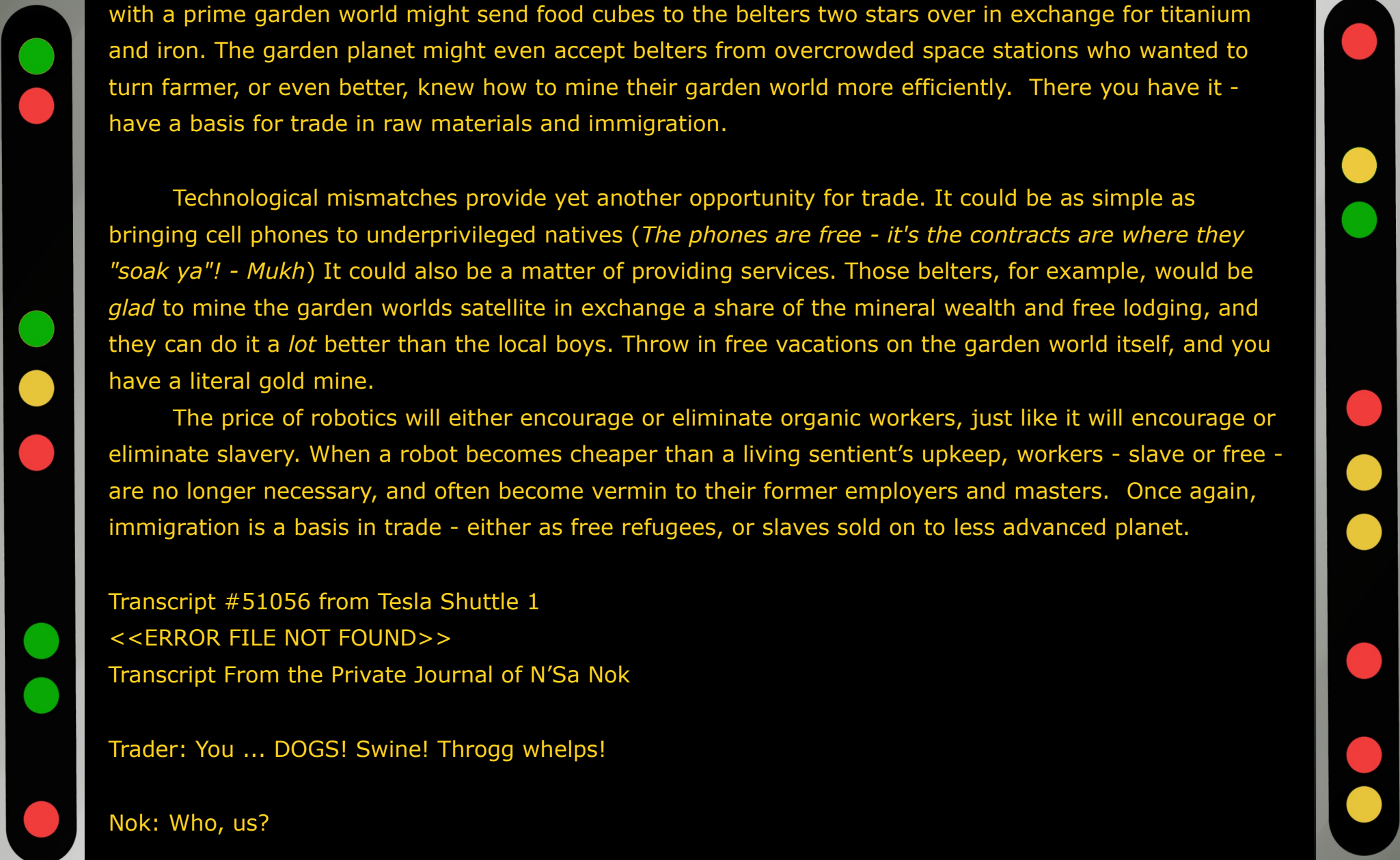
Nok: ...

Many people said that interstellar society would have no basis for trade. Any star system has more than enough resources to last a space faring race for their foreseeable future. Barring luxury items or unique substances like arts and crafts, there is little worth trading.

In practice, this is not the case. As transportation costs became cheaper, it paid to harvest resources from star systems where they are easier to get to. A case in point is asteroid mining in the Sol System. Even though Terra was full of metallic wealth, little things like insane depth and magma made 99% of it unreachable. For some precious metals, it actually paid for the Terrans to send rockets with a cargo of rovers to an asteroid, in hopes of later establish mining outposts. And that was with chemical and ion rockets! Our K-drives make mining on a system-wide scale easy.

For another example, Terra was lousy with water. Water can be used for fusion fuel, chemical propellant, life support and shielding. That Terran water, however, is at the bottom of a *deep* gravity well. Before the K-drive and antigrav came along, the Terrans used moon ice as a major water source in exploring and exploiting space. Their puny rockets were so weak, the moon ice wasn't even from *their* moon - they had to go all the way to the neighboring planet of Mars because the gravity well was more shallow.

So the bad news for the galaxy is that "evil aliens" might want something our lovely worlds have. All it takes is being able to acquire resources more efficiently elsewhere - often at gunpoint. Even worse, if living beings are cheaper than robots, native populations might wind up working *for* them, with a beam rifle aimed at their heads.



The good news is with modern warp flight, we have a basis for trade. A system without asteroids but with a prime garden world might send food cubes to the beltors two stars over in exchange for titanium and iron. The garden planet might even accept beltors from overcrowded space stations who wanted to turn farmer, or even better, knew how to mine their garden world more efficiently. There you have it - have a basis for trade in raw materials and immigration.

Technological mismatches provide yet another opportunity for trade. It could be as simple as bringing cell phones to underprivileged natives (*The phones are free - it's the contracts are where they "soak ya"!* - Mukh) It could also be a matter of providing services. Those beltors, for example, would be *glad* to mine the garden worlds satellite in exchange a share of the mineral wealth and free lodging, and they can do it a *lot* better than the local boys. Throw in free vacations on the garden world itself, and you have a literal gold mine.

The price of robotics will either encourage or eliminate organic workers, just like it will encourage or eliminate slavery. When a robot becomes cheaper than a living sentient's upkeep, workers - slave or free - are no longer necessary, and often become vermin to their former employers and masters. Once again, immigration is a basis in trade - either as free refugees, or slaves sold on to less advanced planet.

Transcript #51056 from Tesla Shuttle 1

<<ERROR FILE NOT FOUND>>

Transcript From the Private Journal of N'Sa Nok

Trader: You ... DOGS! Swine! Throgg whelps!

Nok: Who, us?

Mukh: I'm more frog like. It is a common mistake.

Trader: You gave those natives hand stunners and a de-crypter paddlet to open up my ship. They seized my water AND my ship 'til I pay an import tax and a dozen fines for health infractions and ... they want me to unionize my market workers! You utter bastards!

Nok: Ooh. A union. Imagine that.

Mukh: I *might* have explained how galactic economics worked.

Tivk: We brought no such equipment with us, besides our own gear which is registered with our ship. It is present and ready for inventory. If I were you, I'd make my way to your embassy with all due speed. There is a large mob of unruly locals cresting that hill at this moment, waving said out-of-place weaponry. They look far from charitable.

Trader: Nyaaaaaaaaaagh!!

Mukh: Humans run funny. That serves *him* right. So what'd you charge the prince for those stunners and the de-crypter?

Nok: It came to ten thousand credits in firestones. I'm opening an account for his planet with it at the nearest spacebase.

Tivk: I had my misgivings, Mr. Nok, when you asked me to fabricate those stunners and the de-crypter. Fortunately, the resins required were the same as those used for trade good kits. But are we not pushing the envelop on "allowable imports"?



Mukh: Naaah. Wow, look at them run!

Nok: Here come our new friends. They look pretty... impressive. They're proud of those stunners - look at them wave them around!

Mukh: Yeah like the Chief that time I ... Wait, did you guys show them the fabricator? Do they know we have the means to manufacture stunners?

Tivk: I... *might* have done a demonstration for the prince...

Mukh: Prep the shuttle!

Nok: Dark Mother dancing on a pole!

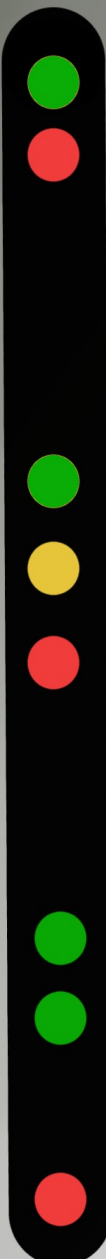
Mukh: Prep the damn shuttle!!!

Nok: Prepping now! Come assist, Tivk! Mukh, you hold them off!

Mukh: Why am *I* the strong arm?! I have two PhDs!

Tivk: Your skin is 10 centimeters thick, not counting mucus secretions. You can take ten hits from those stunners before being knocked silly! Try to stand in front of the lateral stabilizer. A stun discharge there could delay our departure.

(*Sound recorded: Dakkadakkadakkadakkadakkadakkadakkadakkadakkadakkadakkadakkadakk!*)



Mukh: You better *hope* they knock me silly! Dakkadakkadakkadakka!

Tivk: You *do* know yelling "Dakkadakkadakkadakka" does not improve your aim?

Mikh: Prep the *egg sucking* shuttle! Ow. Ow! Did you *have* to give them Type 2 stunners!? ... Why isn't my stunner working on *them*? They're superhuman!!

Nok: You're trying to stun them with the targeting laser, Dr. Two-PhDs!

Mukh: PREP! THE! EGG!! SUCKING!! SHUTTLE!!! REEEEEEEEEEEEEEE!!!

(*Dakkadakkadakkadakkadakkadakkadakkadakkadakkadakka!*)



## FABRICATORS IN USE



## RULES FOR USING FABRICATION LAB:

1. G.A.I.A. unit will be treated like CREW, not EQUIPMENT!
2. No unathorized fabrications.
3. No "toys" or other non-standard equioment.
4. No protoyping of experimental gear or weapons without my input.
5. If fabricating prototype equipment  
UNDER NO CIRCUMSTANCES WILL A  
REPORT BE FILED WITH PROCURMENT!

-Lt Tivk, Fabrication Specialist

# ADVENTURE HOOKS

## *Food Fight*

A peaceful garden world is the annual stop for a fleet of pirates who stock up on food. Fending them off is easy enough for a Fleet ship, but only a temporary fix. The crew must give the population the means and will to resist.

## *Lawn of the Dead*

A fungus brought in a free trader slipped through is destroying grass all over. Grains are grasses. Grasses feed livestock. Grasses prevent erosion. The crew may have to deal with floods and famine if the bight continues. Traders will also need to be hired - and negotiated with - to bring in food till the world is again self supporting.

## *Sales of the Floating Mountains*

A group of off-world asteroid miners arrives in the local system, threatening to sell gold, platinum and ionite at a fraction of its local value. Unless the planetary leaders pay a huge fee for them to leave, the miners will undermine the local economy.

# JUVENILE TAURANS

Transcript #51409 Enlisted Cafeteria, GCS *Nikola Tesla*

Jenn: Morning Mr. Tivk. May I join you?

Tivk: There is no one else sitting at this table. I see no physical impediment.

Jenn: Uh, I mean, would you like company for breakfast?

Tivk: ...I will acquiesce to your request.

Jenn: *Thank* you.

Tivk: Certainly. There's no need to request permission.

Jenn: The Chief has had me overhauling the Shaker the last few days. He's way upset about that whole "Procurement Branch" fiasco.

Tivk: Of course he is. You got caught.

Jenn: Good point. You would not *believe* how much lubricant a shuttle uses.

Tivk: I know exactly how much it uses. It is a matter of fact. My belief does not alter it.

Jenn: ...

Tivk: Ms. Jenn, I am going to pre-empt you here. I dislike small talk. I have enjoyed our collaboration on designing and tweaking various items of weaponry and equipment. You have a fine eye for design and practical engineering which I enjoy encouraging and you are a suitable co-worker. That is as far as I go.

Jenn: What are you -

Tivk: I regard your attraction to me as a compliment. Thank you. I can't reciprocate. You're human, and I'm not.

Jenn: ...It's as simple as that?

Tivk: It should be. Anything else is not rational.

Jenn: Agreed. But then I'm *not* rational.

*(Sound recorded: Splash!)*

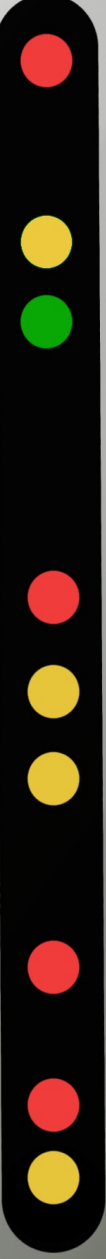
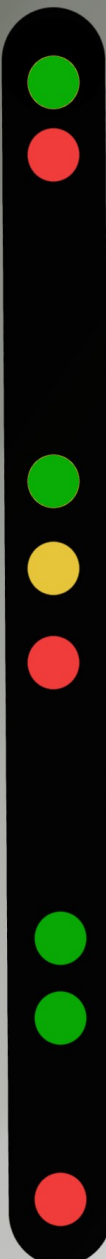
Tivk: I...failed to consider that.

Jenn: *Arrrrrrraarrrrgh!*

*(Sound recorded: Stompstompstomp!)*

Riasi: Hurr. She really let you have it.





Tivk: Considering she is a trained killer with beam weapons, Casaba Derringer rounds, and dark matter munitions at her disposal, I think it went rather well. At least it is over and done. When she settles down we can work on those new ideas she had.

Riasi: You gotta be *kidding* me.

Tivk: There is no need to insult me...

### Tivk's Journal

The ideal of multiple species working together in harmony is laudable. No one species is indispensable, and together we become much greater than the sum of our parts. A 32% increase the galactic economy in the decade before the Zangid War, if Tauran experts are accurate. And, of course, they are.

Taurans ("beanpoles" is no less offensive than "Taurans", so we accept it) and humans are a case in point. Despite the many misunderstandings we have had, all on the human's part, we remain your staunch ally. Despite our near perfect rationality and your ... thought processes... we continue to work to together. Mostly.

Taurans are a tall people hailing from a high gravity planet. It is a hot planet and height allows us to radiate heat more efficiently. In addition, being higher off the ground kept our ancestors heads above the inevitable dust kicked up by running from our planet's apex predators.

Taurus Prime has a thick atmosphere with a lower percentage of oxygen than most Terrans find comfortable. Taurans have a greater lung capacity than Terrans and in fact, some suffer from a form of

intoxication when breathing a Terran air mix for the first few days. Don't bother looking for signs of this intoxication; it would only be obvious to another Tauran.

Our home world's terrain runs strongly to desert, though there are small seas and forested areas. Survival for our pre-industrial ancestors was difficult and many adapted to a nomadic existence. Our culture stretches back continuously for 10,000 years, so I will just mention the high points.

Current theories believe that we are not native to Taurus Prime but are the descendants of a lost colony or interstellar refugees. Given the discovery of the Videni (whom Cadet insists on calling "mean-poles"), the refugee theory is considered to be highly likely. The descendants of these refugees lost and re-developed a technological civilization based on science and rationality wholly unlike the theocratic Videni. We are tolerant of god-faiths, as one would speak softly to an agitated child, but place our faith in ourselves, our tradition and our understanding of science. Science has a better track record for *us*, at least. Eschewing emotional reactions and outbursts has maximized our intellectual and psionic potential.

We developed FLT drives in the 1500's CE, by the Terran dating system. After an initial era of exploration and several dangerous encounters, we settled down to develop the stars closer to our world in safety. We entered into a golden age of extolling rationality, inward exploration, and peace.

This ended when we contacted humans.

I will explain why First Contact failed and you were shunned. We actually we shunned you long before you found us. We had surveyed Earth and humans from space in the mid-20th century, your time, and decided against contact. We really didn't expect to hear from you for at least a thousand years. Instead, two centuries later, there you were contacting *us*. It was very disconcerting.

The other thing that was disconcerting was the way you reminded us of...us.

You see, the Taurans with whom you have most of your dealings are not quite average for our species. Most of us are over 70 Terran years old, or what we refer to as adults. Before age and maturity (and hormone changes) makes us embrace rationality, we are juveniles. The difference might not be apparent to humans. Juveniles among us are treated with encouragement and even indulgence. They are *not* rational most of the time. They enjoy competition, procreation, excitement ...

They act a lot like humans.

We do not let them off world. If we did, they would run off to Terra and never come home. In any case, this was the reason we shunned contact. Would *you* want to deal with a bunch of teenagers with starships? I will, however, say this in defense of humans: Zangids are a little worse.

Contact and alliance with humans was reconsidered during the First Contact War. The war was largely the fault of humans encroaching on what the Zangids regarded as their territory in the Leonis Expanse. The Zangid had a problem when the Videni arrived as well, but the Videni had a superior fleet. The Zangid may be irrational, but they are not stupid.

Of course we helped you. We have no desire to see any species (even the Videni) wiped out. We certainly had no desire to see the Zangid with a major base on Sol in the Local Bubble.

When we saw the Zangid were going to wipe you out, it triggered something. Our juveniles frequently get themselves in trouble and require help to extricate themselves. We never fail to intervene. We also never intervene the first time they ask. That's the only way a juvenile will learn.

Our juveniles are more "human" than we like to admit. They are preoccupied with affairs of the heart. By the time Taurans become adults we put such distractions behind us -though, admittedly, some more effectively than others. Keeping our juvenile's home is the reason Tauran-human hybrids are rare. Few adults are interested in raising more children, and the alternative is to let the hybrids be raised human, which is equally unacceptable. While juveniles have always had limited contact with other races, Confederation sponsored mixed-species colonies are allowing our juveniles contact with other races more and more often.

...Now I just need to get Mukh or Nok to tell all this to *Jenn*. I'm staying in my cabin 'til they do.



# OPTIONAL RULES

## Juvenile Tauran

Requirements: INT 9, CON 12

Ability Adjustments: STR +2, CON +2

Skill Adjustments: Technical +1

Metabolism: Copper Based

Juveniles get no Psionic Powers on generation but are psi active.

# ADVENTURE HOOKS

## *Dude Where's My Starship?*

An important Tauran official's offspring have absconded with the family yacht. The crew has to bring them back before someone makes an Aliens Gone Amok holo of them!

## *Insanity is Hereditary, You Can Get It From Your Children*

The crew encounters a group of young Taurans who survived a ship crash. They must bring the youngsters back to the nearest Spacebase.

## *Might of Passage*

Some young Taurans are undergoing the process of maturity and developing powerful and dangerous Psionic techniques. Does the crew counsel them, or contain them?

*A Diplomatic Devolution*

A senior Tauran diplomat is infected with Reverse Aging Disease before an important summit. The crew must find the cure before he blows off the peace talks to play holo games.





# THE K-DRIVE

By Senior Technical Officer, GCS *Nikola Tesla*

Transcript #50304 from Tesla Cadet Engineering Class

Technical Officer: All right, the Chief and I were supposed to tell you command trainees about the K-drive, but he won the coin toss so it's just me today. Everybody know what the letter 'K' stands for?

Cadet: Kinetic.

*(Sub-vocal sound recorded: "Duh,")*

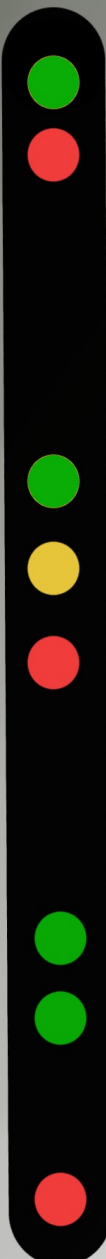
T.O: Ah, we got a college man there! You are correct, the K-drive imparts kinetic energy to reaction mass. This exits the back of a spacecraft, allowing it to accelerate in the opposite direction. Since you want to use as little re-mass as possible, you want it to leave the aft of the craft very fast. So we're talking rockets. What kind of rocket do we use?

Cadet: Tenth generation Vasimr nuclear rocket.

*(Sub-vocal sound recorded: "Duh,")*

T.O.: And what does Vasimr stand for, wise guy?

Cadet: ...



T.O.: "Variable Specific Impulse Magnetoplasma Rocket". In the basic structure, it is very similar to the first engines that took mankind to the planets and the nearer stars. Modern technology has let us improve the engine's efficiency dramatically. We don't have to drag an ice asteroid around for propellant the way our grandparents did. Can you tell me what the exact improvements were?

Cadet: Well, we use a series of gravity generator toroids to accelerate the plasma exhaust dramatically increasing thrust and fuel efficiency,

T.O.: Specific impulse, not "fuel efficiency". Engines use reaction mass or propellant, not *fuel*. But you are right. The grav generators increase thrust and specific impulse. You can get by with as little propellant as you want at the cost of increased power drain for the grav boosters.

Cadet: I don't understand something. If we *already* use gravity generators to fling propellant out the back, why don't we just use hydrogen, or water for that matter? Why lug a fusion reactor around to feed the rocket plasma? There can't be *that* much extra thrust provided.

T.O.: My *gosh* that's a good question. I may need to sit down. Seriously, though, those are good points. First of all, the rocket's reactor can serve as a backup power generator in emergencies. That feature has saved a few lives in Fleet history. Secondly, grav generators can lose power for a variety of reasons. Then your water propellant would not do you any good. With the reactor design, you still have a rocket that will take you at least some places, but only at about 1 g acceleration. Call it Terra to Jupiter in a week, instead of a few hours.

Now, what about the *other* chief improvement over the old rockets?

Cadet: ... force fields?

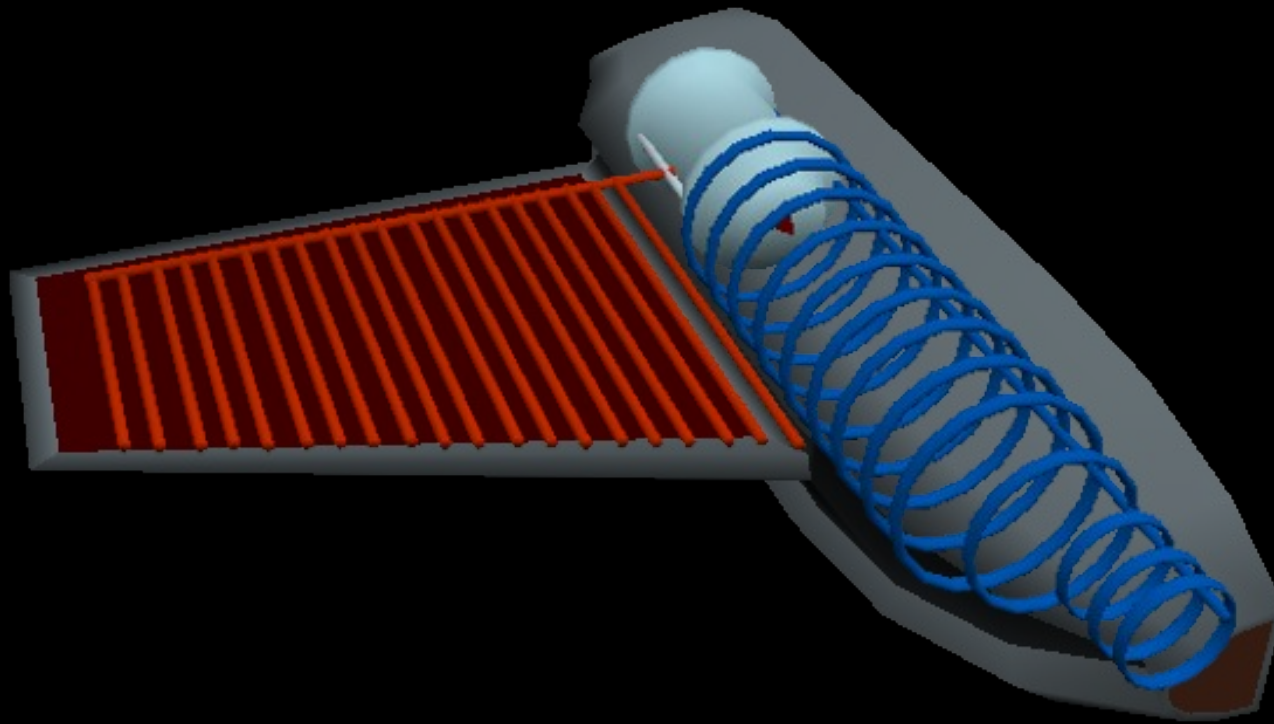
T.O.: Not very specific is that? Anyone want to elaborate? Right. Force field technology and old style magnetic fields kept the hot plasma from contact with the rocket engine, which you want to discourage. If the fields buckle, you'll have a melted engine, or worse. Our engines also have a heat tap to the main defensive shields. Those monsters already deal with multi-megaton nukes and terawatt energy beams and dissipate their energy. The engines use them to radiate their waste heat away instead of the old style physical radiator fins. You military types will try to aim that heat away from prying eyes to try for a stealthy approach. Sometimes you even get it right. Oh, all *right*, what is it now?

Cadet: We *do* have a radiator fin on the Tesla and other ships. Why?

T.O.: Back ups. When you're in a fight, you want as much radiator area as you can. The shields operate at various radii, see. When you're cruising, they're bigger to radiate heat more effectively. To stop a beam cannon or nuke they have to contract, sometimes to a few meters from the hull. Less room to radiate heat means more heat build up. Back up fins can save your life, then. Except ... The shields work both ways. They absorb EM and heat from your ship, as well as the external energies. We have to open holes in the shields for our rocket exhaust, sensors, comms and radiators. If a lucky shot hits your radiator in the middle of a fight, through the hole opened for it, you'll lose the radiator fin and then the engine, a few seconds later.

Cadet: So do we have a back up for a radiator hit?

T.O.: Sure. Lots. They're called *lifeboats*.



## OPTIONAL RULES

### **Fusion Reactors**

Space vessels all have a secondary reactor that provide extra power for emergencies. A reactor holds enough fuel to generate power equal to one day's output from the Power Core. The reactor of a frigate could thus supply up to 50 EU before it must be refueled at a spacebase. In an emergency, a reactor's fuel can save your ship.

A ship can use up to 20% of its fusion reactor's EU in a combat turn. A frigate, for example, could add 10 points to its power core per turn until the fuel is exhausted.

### **Radiators**

Physical radiators can be used to shed some of the heat from a weapons hit on a ship. An undamaged radiator can negate 5 points of EU damage from a hit at a penalty of +1 to the next attack on that ship. The radiator must be physically extended beyond the shields to gain this benefit. Radiators on frigates can negate 5 damage, destroyers 10 damage at a +2 to the next attack, and larger ships negate 15 damage at +3 to the next attack. Ships must declare they are deploying radiators at the beginning of their turn.

Only Space Fleet ships of Terran manufacture have physical heat radiators.

# LANDING CRAFT

By Chief Petty Officer, Marine contingent, GCS *Nikola Tesla*

Transcript #50308 from Tesla Cadet Engineering Class

Chief: Listen up *kay-dets*. I'm here to spell out to you the care and feeding of a landing craft. One 'a you "butter shirts" may have the honor of driving some of us Marines to the fight, someday.

Cadet: What happened, Chief? Did the Tech Officer win the coin toss today?

Chief: Nah. He got a good look at the the coin I was using. Now, future commanders, tell me why Eris in her infinite wisdom gave us special built ships to get us from orbit to the real action? We have mastered the atom, the force of gravity, and superluminal flight. Why do we still rely on glorified SSTOs like our primitive ancestors?

Cadet: A teleporter will get you killed?

*(Sound recorded: laughter)*

Chief: *Correct*, but not the answer to my question. Yes, there's over 167 separate meteorological and geological conditions that will turn your teleporter into gateway to Nowhere. If you try to use it anyway, it *will* leave you dead or a cautionary tale to keep your friends up at night. But *why* the need for shuttles, landers et al?



Cadet: Uh... our ships aren't aerodynamic?

Chief: Cadet, when you got a big enough pusher an *asteroid* is aerodynamic. Be specific please.

Cadet: An airframe takes up mass. It doesn't pay for a starship to be streamlines when it will only need to land during a mission maybe 5% of the time. Also, even if you don't use the wings, they still need to be shielded, and that increases the volume, mass and power of the shields required.

Chief: Very good. I may let you drive me to the fight sometime, you're so bright. Anyone else?

Another Cadet (unidentified): A starship's Vasimr rockets don't work well in atmosphere. You'd need to stick an air intake on the front and use the reactor to superheat the atmospheric gas to create a jet. That takes power away from the shields and weapons, leaving your ship more vulnerable in the air. When you're operating in space, it's all just more mass and more maintenance and cost.

Chief: Excellent. Yes?

Cadet: What about operating on or near a world like Luna? Light gravity and no air. You could use the main engines all you want.

Chief: You could. But that's no place for troops. They could get roasted by maneuvering jets or cooked on the inside by sensor beams or squashed by thruster fields. On airless worlds, Marines are either underground storming tunnel cities or - well, we'll soon be underground either way. You ever see a battlecruiser 50 meters off the ground? *I* did.

Cadet: It must have been a sight, Chief!

Chief: I'd have liked it better if it was one of *ours*...



*A rare image of the independent pirate craft The Wanton Cortesan, a modified Zangid lander. The pirate craft had apparently been hiding under cloud cover prior to attacking the light freighter Solar Franchise above Dane's World in the Kentaurus Freehold. The freighter's sensor data and these images (Transmitted by a sensor probe prior to its destruction) are the first confirmation that The Wanton Cortesan is equipped with a Vidani Shielding Mechanism.*

# STAR MASTER NOTES

Landing craft are used for rescue efforts or major assaults. They excel at dropping off a lot of passengers or cargo quickly. Although they are capable of FTL flight, they have smaller power cores than true starships of the same size. Currently, the major powers all can construct frigate- and destroyer-sized landers.

In troop landings, the troops in question are usually spread across several transports or capital ships and transferred to a lander for planetet-fall. This is due to living space limits aboard the landers. Having an Ionite core, a lander is far harder to damage than a shuttleship and can therefore fly through planetary defense fields. The greatest advantage of lander is the use of its beam batteries to reduce surface fortifications. Beam weapons can't penetrate most atmospheres; Landers are the only effective way to bombard a planetary surface with directed energy weapons.

While you can use a k-drive in an atmosphere, it heats up the surrounding air quite fast. There is also some slight radiation associated with it. On friendly worlds with an atmosphere, the k-drive is turned off prior to ionization blackout. As the lander approaches the ground, its k-shields allow it to assume a more aerodynamic form. The k-shields also operate as a landing thruster, shoving against a wide area of the planet to lower the vessel slowly and safely.

Note that the landing craft doesn't *have* to shut down the K-drive in the upper atmosphere and does not have to play its thruster effect over a wide area. That only applies to friendly worlds. Landing craft of both sides made a mess of Alakir-3 by screaming in on jets of radioactive death and using pinpointed k-shield effects to crush surface

forces into the ground with every newton of thrust the landers could shed.

Frigates and destroyers may attempt to land, even if they do not have a lander system installed. This requires them to use their tractor beams in reverse as "thruster beams". This is a desperation maneuver, usually resulting in a severely damaged ship. Treat landing in this fashion as the equivalent of a successful hit by an ion torpedo.

## OPTIONAL RULES

Landers require a piloting roll to land safely at a -2 to the skill. Lander pilots are amongst the most skilled in any service.

Failure to land safely results in 1d6 x 5 damage to the ship. If a navigation officer is the pilot, shields may not be used reduce the damage. Members of any other branch failing to land safely must roll 1d6 x 10 for damage.

Frigates and destroyers can be made into landers. The modification results in +1 to hit the craft due to the wing constructions and more exposed engines. In addition, the ship's PPB is reduced by 10% (45 for a frigate and 90 for a destroyer.)

Modified Frigates can hold 50 troops short term (1-2 weeks) while destroyers can hold 100 troops. This is a common modification for Zangid starships.

## OPEN GAME LICENSE Version 1.0a

The following text is the property of Wizards of the Coast, Inc. and is Copyright 2000 Wizards of the Coast, Inc "Wizards"). All Rights Reserved. 1. Definitions: (a) "Contributors" means the copyright and/ or trademark owners who have contributed Open Game content; (b) "Derivative Material" means copyrighted material including derivative works and translations (including into other computer languages), potation, modification, correction, addition, extension, upgrade, improvement, compilation, abridgment or other form in which an existing work may be recast, transformed or adapted; (c) "Distribute" means to reproduce, license, rent, lease, sell, broadcast, publicly display, transmit or otherwise distribute; (d) "Open Game Content" means the game mechanic and includes the methods, procedures, processes and routines to the extent such content does not embody the Product Identity and is an enhancement over the prior art and any additional content clearly identified as Open Game Content by the Contributor, and means any work covered by this License, including translations and derivative works under copyright law, but specifically excludes Product Identity. (e) "Product Identity" means product and product line names, logos and identifying marks including trade dress; artifacts; creatures characters; stories, storylines, plots, thematic elements, dialogue, incidents, language, artwork, symbols, designs, depictions, likenesses, formats, poses, concepts, themes and graphic, photographic and other [visual](#) or audio representations; names and descriptions of characters, spells, enchantments, personalities, teams, personas, likenesses and special abilities; places, locations, environments, creatures, equipment, magical or supernatural abilities or effects, logos, symbols, or [graphic designs](#); and any other trademark or registered trademark clearly identified as Product identity by the owner of the Product Identity, and which specifically excludes the Open Game Content; (f) "Trademark" means the logos, names, mark, sign, motto, designs that are used by a Contributor to identify itself or its products or the associated products contributed to the Open Game License by the Contributor (g) "Use", "Used" or "Using" means to use, Distribute, copy, edit, format, modify, translate and otherwise create Derivative Material of Open Game Content. (h) "You" or "Your" means the licensee in terms of this agreement.

2. The License: This License applies to any Open Game Content that contains a notice indicating that the Open Game Content may only be Used under and in terms of this License. You must affix such a notice to any Open Game Content that you Use. No terms may be added to or subtracted from this License except as described by the license itself. No other terms or conditions may be applied to any Open Game Content distributed using this License.

3. Offer and Acceptance: By Using the Open Game Content You indicate Your acceptance of the terms of this License.

4. Grant and Consideration: In consideration for agreeing to use this License, the Contributors grant You a perpetual, worldwide, royalty-free, non-exclusive license with the exact terms of this License to Use, the Open Game Content.

5. Representation of Authority to Contribute: If You are contributing original material as Open Game Content, You represent that Your Contributions are Your original creation and/or You have sufficient rights to grant the rights conveyed by this License.

6. Notice of License Copyright: You must update the COPYRIGHT NOTICE portion of this License to include the exact text of the COPYRIGHT NOTICE of any Open Game Content You are copying, modifying or distributing, and You must add the title, the copyright date, and the copyright holder's name to the COPYRIGHT NOTICE of any original Open Game Content you Distribute.

7. Use of Product Identity: You agree not to Use any Product Identity, including as an indication as to compatibility, except as expressly licensed in another, independent Agreement with the owner of each element of that Product Identity. You agree not to indicate compatibility or co-adaptability with any Trademark or Registered Trademark in conjunction with a work containing Open Game Content except as expressly licensed in another, independent Agreement with the owner of such Trademark or Registered Trademark. The use of any Product Identity in Open Game Content does not constitute a challenge to the ownership of that Product Identity. The owner of any Product Identity used in Open Game Content shall retain all rights, title and interest in and to that Product Identity.

8. Identification: If you distribute Open Game Content You must clearly indicate which portions of the work that you are distributing are Open Game Content.

9. Updating the License: Updating the License: Wizards or its designated Agents may publish updated versions of this License. You may use any authorized version of this License to copy, modify and distribute any Open Game Content originally distributed under any version of this License.

10. Copy of this License: You MUST include a copy of this License with every copy of the Open Game Content You Distribute.

11. Use of Contributor Credits: You may not market or advertise the Open Game Content using the name of any Contributor unless You have written permission

from the Contributor to do so.

12. Inability to Comply: If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Open Game Content due to statute, judicial order, or governmental regulation then You may not Use any Open Game Material so affected.

13. Termination: This License will terminate automatically if You fail to comply with all terms herein and fail to cure such breach within 30 days of becoming aware of the breach. All sublicenses shall survive the termination of this License.

14. Reformation: If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable.

15. The ABCs of Space Opera, Volume 1: A-L © 2015 Rob Garitta and Raymond McVay. "Starships & Spacemen, Dalean, Gorran, Hykot, Star Master, Tauran, The Galactic Confederation, Vidani, Zangid" and other terms associated with *Starships & Spacemen: Second Edition* property of Goblinoid Games and used with permission. Text by Rob Garitta. All Artwork marked "Dell 2315" by Rob Garitta. All other Artwork by Raymond McVay

16. All rules appearing in this book under titles including "Optional Rules" and Star Master Notes" are Open Game Content. We request you credit the author and this document. You're welcome:)

You can contact Mr. McVay and Blue Max Studios by email at:

**[bluemaxstudios@yahoo.com](mailto:bluemaxstudios@yahoo.com)**

For free content for this product as well as more information on our future products, commentary on gaming, game design, and science fiction,

follow our blog at:

**[www.bluemaxstudios.blogspot.com](http://www.bluemaxstudios.blogspot.com)**

For information on how to get all of our past products, as well as our future products for free,

consider become one of our fine Patrons on Patreon at:

**[www.patreon.com/bluemaxstudios](http://www.patreon.com/bluemaxstudios)**

For more stories about the "intrepid" crew of the GCS *Tesla*, as well as more optional rules for *Starships & Spacemen*, *Classic Traveller*,

and OSR gaming, follow Rob Garitta's blog at:

**[www.twilightgm.blogspot.com](http://www.twilightgm.blogspot.com)**