THE STARS ARE FIRE
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Chapter 1

WELCOME TO YOUR SCIENCE FICTION UNIVERSE

USING *THE STARS ARE FIRE*

The Stars Are Fire is a companion to the *Cypher System Rulebook*. This means you won't find introductions to the Cypher System, how to create characters, full rules of the game, or other related concepts here. *The Stars Are Fire* assumes you've got all that in the *Cypher System Rulebook*, and that you're ready to dive right into some science fiction-specific content. Enjoy!

This book includes adventures that provide inspiration of their own: Salvage Over Saturn, Prison Break, and Alien Planet.

Salvage Over Saturn, page 211

Prison Break, page 220

Alien Planet, page 222

SPACE! (Imagine you're hearing a dramatic orchestral musical sting as your eyes wander over a scene featuring the vast emptiness of interstellar space.)

The best feeling in the world is sitting down to imagine a brand-new universe. But you know that. That's why you've picked up this book; the cover was all the introduction you needed.

So, what do you say we do something different here? Instead of a standard introduction, how about we jump straight into the fun with a list of blurbs for science fiction adventure ideas!

SCI-FI ADVENTURE SEEDS

- The party discovers a starship of unknown provenance, apparently adrift and powerless.
- A scientist claims to have discovered a brand-new source of universal energy, but then disappears.
- The subject of an experimental procedure gains amazing new abilities, but also becomes sociopathic.
- An alien disease that spreads by touch causes people to slowly lose interest in life, then root like a plant.
- A warship from an aggressive enemy power is stranded nearby; should it be destroyed or saved?
- A machine can create robotic duplicates of any target—a panacea for those without enough time to do everything, or the beginning of an insidious plan to replace life with inorganic copies?
- The party encounters technologically advanced aliens; figuring out how they communicate proves difficult.
- A mining conglomerate discovers ancient alien technology, which it secretly develops as a weapon.
- Several space stations stop communicating and are later found to have been destroyed. By what?
- A previously unrealized hazard (devastating storms, alpha predators, alien owners) hits an extrasolar colony, which now requires aid or evacuation.
- An ancient alien war machine measuring an AU or more across is slowly but inevitably making its way toward Earth.
- Advanced machine intelligences begin a new bigger-than-worlds construction project. While not malicious, they have as much regard for humans and their worlds as humans have for insects.
- A historical spacecraft long thought lost contains a crew in deep hibernation. They are all carriers of an engineered prion disease intended to create "super" soldiers. But that tech was outlawed two centuries ago because of unforeseen dangerous side effects rendering them mindless, aggressive in the extreme, and hard to kill.
- An envoy from an alternate dimension brings warning of an approaching threat, one that might be avoided by building specific protective machines. But what if the machines are the threat?
- A time dislocation causes the party to find themselves sent several centuries into Earth's past.
- A space station is in danger of destruction unless the crew can fix it, but they are mostly sick or in the grip of a delirious fever.
- Extremists take over the space elevator that provides access to orbit and threaten its destruction.

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Chapter 2

HOW TO PLAY

The rules of the Cypher System are straightforward because all gameplay is based around a few core concepts. The *Cypher System Rulebook* (CSR) has full rules for the Cypher System in Chapter 11: Rules of the Game.

A few basics are described hereafter. In addition, it's worth your while to check out our extended guidance in this chapter for tips on how to GM and play in a science fiction setting, as opposed to a more traditional fantasy game.

CYPHER SYSTEM BASICS

The Cypher System uses a twenty-sided die (1d20) to determine the results of most actions. Whenever a roll of any kind is called for and no die is specified, roll a d20.

The game master (GM) sets a difficulty for any given task on a scale of 1 to 10. Really easy tasks, like walking across a stable log, are difficulty 1. Impossible tasks, like walking across water, are difficulty 10.

The difficulty, from 1 to 10, creates an associated target number. The target number is three times the task's difficulty. So, a difficulty 1 task has a target number of 3, but a difficulty 4 task has a target number of 12. To succeed at the task, you must roll the target number or higher.

Character skills, favorable circumstances, or excellent equipment can decrease the difficulty of a task. For example, if a character is trained in climbing, they turn a difficulty 6 climb into a difficulty 5 climb. This is called *easing the difficulty* (or *easing the task*) *by one step*. This is often shortened to just easing, which assumes that task difficulty is eased by one step. If they are specialized in climbing, they turn a difficulty 6 climb into a difficulty 4 climb. This is called *easing the difficulty by two steps*. Some situations increase, or *hinder*, the difficulty of a task. If a task is hindered, it increases the difficulty by one step.

A skill is a category of knowledge, ability, or activity relating to a task, such as climbing, geography, or persuasiveness. A character who has a skill is better at completing related tasks than a character who lacks the skill. A character's level of skill is either trained (reasonably skilled) or specialized (very skilled).

If you are trained in a skill relating to a task, the difficulty of that task is eased by one step. If you are specialized, the difficulty is eased by two steps. A skill can never decrease a task's difficulty by more than two steps.

Anything else that reduces difficulty (help from an ally, a particular piece of equipment, or some other advantage) is referred to as an *asset*. Assets can never decrease a task's difficulty by more than two steps.

You can also decrease the difficulty of a given task by applying Effort.

If you can ease a task so its difficulty is reduced to 0, you automatically succeed and don't need to make a roll.

Throughout this book, you'll see page references to various items accompanied by this symbol. These are page references to the *Cypher System Rulebook*, where you can find additional details about that rule, ability, creature, or concept.

Hinder, page 207

Chapter 11: Rules of the Game, page 206

Skills, page 19

Trained, page 207

Specialized, page 207

Difficulty, page 207

Assets, page 209

Effort, page 15

Look for this symbol throughout the book for real-world science and technology search terms. Delving into these topics can further inspire your gameplay.

Ease, page 207

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Science Fiction, page 270

Running a Science Fiction Game, page 271

ADVICE FOR PLAYING IN A SCI-FI SETTING

As described under Running a Science Fiction Game in the CSR, some people are anxious about playing in a future setting because PCs don't immediately know everything their characters would probably know.

The Perceived Problem: As people of the contemporary era, players might lack the context to understand everything a spacecraft traveling between planets might be capable of, what options someone with access to AR glasses or a mind's eye implant really has, and what resources—including useful NPC contacts, general information, and special equipment—might be available in an entire solar system's (or galaxy's) worth of moons, planets, and star bases. For instance, does the PCs' spacecraft have entertainment facilities? Access to a library or larger database for research? And if so, what kind of information is available?

AR glasses, page 68

Mind's eye, page 69

GMs may face similar issues, especially those striving to remain true to the hard science fiction subgenre. Most of us are not up to date on where every NASA planetary probe has gotten to, at least not off the top of our heads, or the repercussions of what might happen if a "cold" fusion reaction becomes unstable.

All of which is to say that many people find it easier to play and GM traditional fantasy games, where magic as a trope gives both players and GMs lots of leeway.

Solving the Problem: Don't worry. It'll all be okay. There are no future police ready to pounce should you fail to accurately extrapolate a modern social movement or advanced technology, hand-wave away the specifics of how an ion engine works, or fail to instantly recall the light-speed delay in regular radio communications between Mars and Saturn.

For example, if you tell the PCs it'll take their spacecraft four days to get from Mars to Jupiter, don't worry about it. Unless you've given another player the job of being

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your technical backup (when asked), in which case, ask that player to confirm. Or not . . . unless how long it takes to make that particular trip is important to the outcome of the scenario, then it's not really important. Getting bogged down in details isn't the point of a science fiction game.

You're trying to run an entertaining game session, *not* trying to predict the future of culture and society as it is shaped by technology and events. Nor are you running a game to demonstrate your mastery of space trivia. You're running a game because you love the idea of a science fiction setting, and you want to share that with your players.

That said, following these tips and perusing these examples may be helpful.

Play Style Defines the Game: A handful of GMs might be huge space nerds (as I am), and really enjoy modeling a campaign that adheres to what is actually possible, only breaking the rules of physics intentionally and to achieve the greatest impact. However, that particular style might not be your thing as a GM. And that's great! Every table of players and every GM will create a different experience. The goal is to have fun, not to impress some non-existent science observer. If your game consistently uses fantastic material and concepts, despite you having declared you were running a hard sci-fi game using mostly advanced tech rating, well, whatever. Obviously, that's working for the game. To reiterate, don't worry, it'll all be OK.

As another example, if a PC wants to use a scanner to learn some information about a strange mineral formation, don't worry about whether or not that scanner has the particular tech to answer the question; if it's a scanner meant to provide information to the PC, then yes, it does have the technology. Go ahead and describe to the player the mineral formation's odd property (if there is one).

GMing TIPS FOR SCIENCE FICTION GAMES

Here are a few additional tips to consider.

LACK OF TRAINING IS *NOT* A LIABILITY

Training in a skill means that a character is *particularly* good in using that skill. But not being trained doesn't mean that that character can't attempt the task; Cypher System characters are assumed to have a minimum level of competence. Lack of training doesn't mean the character is a newbie in that area. For instance, in real life, I'm not trained in doing internet searches. But that doesn't mean I can't try them, despite no formal instruction. As someone who lives in the modern world, that's just background knowledge for me.

Consent in Gaming *is an additional tool you can bring to your game table, especially if you're worried that a theme you want to explore in the game could potentially make your players uncomfortable.*

mymcg.info/consent

Technology rating, page 13

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This concept of general competence holds true in science fiction settings. A person in that setting just knows a lot of things that someone in a medieval or contemporary setting wouldn't. Science fiction characters who grew up in the setting have enough competence to attempt a knowledge task, a science task, or even a piloting task. They're just not trained as a professional might be in that task.

So, if a PC is looking at a keypad that is locked and encrypted, and they have no relevant skill in hacking electronics, it doesn't matter. They don't get an asset, but they can still try it. And with Effort and other advantages, they can probably succeed.

EXPOSITION AS A TOOL FOR GOOD

Don't be afraid of a little exposition. Describing extraneous stuff is something you don't need to do in a contemporary setting, or a fantasy setting if all the players have had years of experience playing D&D. Basic background situations, sights, and odors are probably not quite so easy to bring to mind in sci-fi settings.

For instance, explain the normal procedures for docking with another spaceship as it happens. Maybe even draw on visuals that you've seen in a science fiction film. Is the docking just a simple tether that people use to cross between ships in a vacuum? Is it an extendable corridor that fills with atmosphere? Is the PCs' ship engulfed in a larger docking hold of a massive ship or space station? Let the players know what's happening.

STEAL LIBERALLY

When trying to figure out what the PCs should do, steal plots from science fiction stories you like, whether it's shows likes *Star Trek*, *Killjoys*, *The Expanse*, or novels like *Dust* or *Startide Rising*. For instance, in *The Expanse*, a weird protomolecule has been found that is revealed as evidence of alien life, a scientific wonder-molecule, and as an element of horror when ignorant humans are exposed to it.

Repair tape roll, page 75

If you have the time and resources, fire up an episode of *Deep Space Nine*, or go read a story found on the website *Daily Science Fiction* (an email and online sci-fi magazine), and see what plot ideas you can turn to your own next game session. Science fiction has room for small stories as well as those in which the heroes save the whole galaxy.

Hand scanner, page 70

SMALL STORIES REMAIN CRUCIAL

Whatever you do, don't forget the small, character-driven stories should be interwoven into your galactic saga. For example, one character's missing sister is something that still haunts them, and they routinely check for news about them on the comm web feeds. Another character might have an outstanding debt they owe an old friend that has become less and less friendly over the years. And so on.

EXTRAPOLATE FROM PC INTENT

A player's intention is what's important in a sci-fi game, especially for a player who doesn't have a lot of self-confidence about what things are like in a science fiction setting. For example, if you expect players to tell you exactly how they want to deal with a micro-meteorite puncture in the station's hull, they probably don't know how to even start going about it. And that can paralyze some players.

Help your players get out of that mind-set. Give them permission to tell you what their *overall* goal is. Their intent is what's important. Once you know that, suggest a reasonable, specific thing that the character might try in a given situation. For instance, if you tell a player that air is leaking from the station from a puncture in the bulkhead, they may want their character to plug that leak. As the GM, you can suggest that the player knows that most stations and ships keep repair kits around for just such situations, and that their character knows what they look like. Or, you can tell that player that in their kit, they find a repair tape roll, also perfect for such situations.

LET PCs TRY TO SCIENCE IT

Be generous with players who want to extrapolate the science elements of the game. For instance, if a player with a hand scanner wonders if their character can augment

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what they learn by plugging it into an object of interest, let them try. Likewise, if someone wants to reconfigure the ship's sensor array to do something useful, set a difficulty and see how it turns out.

Here's another example. The PC, wearing a space suit and on an EVA (extra vehicular activity) spacewalk to check something out on the hull, pulls out their flashlight. Realizing that they need a free hand to yank on a stuck hatch, they might say, "It seems like my flashlight would have a magnetic clamp, or a tether, so it doesn't float away when I stop using it. Does it?" Of course, neither the flashlight or space suit equipment entry says anything about tethers or magnetic clamps. But the PC has extrapolated something that is reasonably likely to be true, so confirm their expectations and move forward.

Of course, sometimes it's not obvious what's possible in a given situation, which is why you should encourage some back-and-forth between you and the PCs, also known as "reverse metagaming."

ENCOURAGE REVERSE METAGAMING (EXAMPLE OF PLAY)

Metagaming is the term used when players use real-life knowledge about something to determine their character's actions, even though the character probably wouldn't have that knowledge. This is sometimes frowned on in a tabletop RPG. However, as we may have mentioned before, science is hard. We actually encourage occasional quick conversations—a brief back-and-forth between the GM and the players—about what PCs in a future setting might know or might have access to in a specific situation. Doing so is really useful in empowering characters and allowing a scenario to move forward.

For example, consider this following exchange based on a real-life science fiction RPG session.

Game Master: Your salvage spacecraft decelerates hard into Saturn's gravity well, the planet's convoluted ring system like a cosmic bullseye. Your deceleration puts you dangerously close to the upper reaches of the atmosphere. But you find what you were looking for; a wrecked research vessel tumbles across the vast face of Saturn's storm-whorled clouds, a dark speck above the planet's glare.

Monte (playing a Scientist): Tumbling? OK, we use our ship's sensors on it to figure out what's going on.

GM: Sure. A routine check reveals several things. The most important is that the tumbling ship's orbit is decaying. It's going to fall into Saturn. Your shipmind, Copernicus, calculates that the vessel is already dragging on the upper atmosphere. If nothing's done, you've only got about an hour before that happens. If you'd arrived any later, you'd probably have missed it.

Flashlight, page 74
Space suit, page 72

Sean (playing a Pilot): Do the sensors reveal if there are any life signs on the ship?

GM: Well, you've got sensors that return data across the entire electromagnetic spectrum: radiation, infrared, visible light, radio, and so on. You can learn a lot with that, but I'm not sure that "life" is something that your advanced sensors can detect. Although, let me just think for a moment—

Shanna (playing a Soldier): It seems like detecting life would be something salvagers like us would prioritize. I mean, this wreck wouldn't be a legal prize if any of its crew were still alive. Instead of salvaging, we'd want to rescue them. And of course, charge them A LOT for the resources we expend in the process.

Monte: Right! Either way, we get paid. Science isn't cheap.

GM: Yeah! And I just thought of something. You know how spies can deflect a laser off a window to detect the vibrations on it from people talking inside and turn that into sound? Well, you've got *just* such a laser on your ship, but more advanced. And when you bounce a laser off the wreck and analyze the results, you don't hear voices. But you do detect what Copernicus says sounds like really slow heartbeats. Three of them.

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Shanna: Nice.

Sean: That's three people who won't be able to pay us if we let them burn up. How do we help?

Monte: Simple. We get into our space suits (I'm sure we've got a couple, right?), jump across, and pull them out of there.

Sean: Sure, but if this is a salvage ship, we must have some means to haul things around in space. Like, we must have a tractor beam or—

GM: Of course! Not a tractor beam, but your ship has deployable tow cables. The magnetic grapple is on a rotating cuff. If you hand-set the grapple at the center of the wreck's spin, you'll be able to use your ship's drive to counteract Saturn's gravity and atmospheric drag, at least a little.

Shanna: Great! Let's pull this wreck into a stable orbit, then check it out at our leisure. I've got powered armor, which I think can double as a space suit, but—

GM: Copernicus, the shipmind, interrupts, "My calculations show that the mass of the wreck is too great to save."

Shanna: Crap.

GM: Copernicus continues, "However, you can delay catastrophic atmospheric decay by at least four hours."

Monte: That's better than nothing. It should be enough time to see who those heartbeats belong to, and what in the Void happened here.

GM: Great. So, yes, your ship has a couple extra pre-used space suits, each rated for several hours . . .

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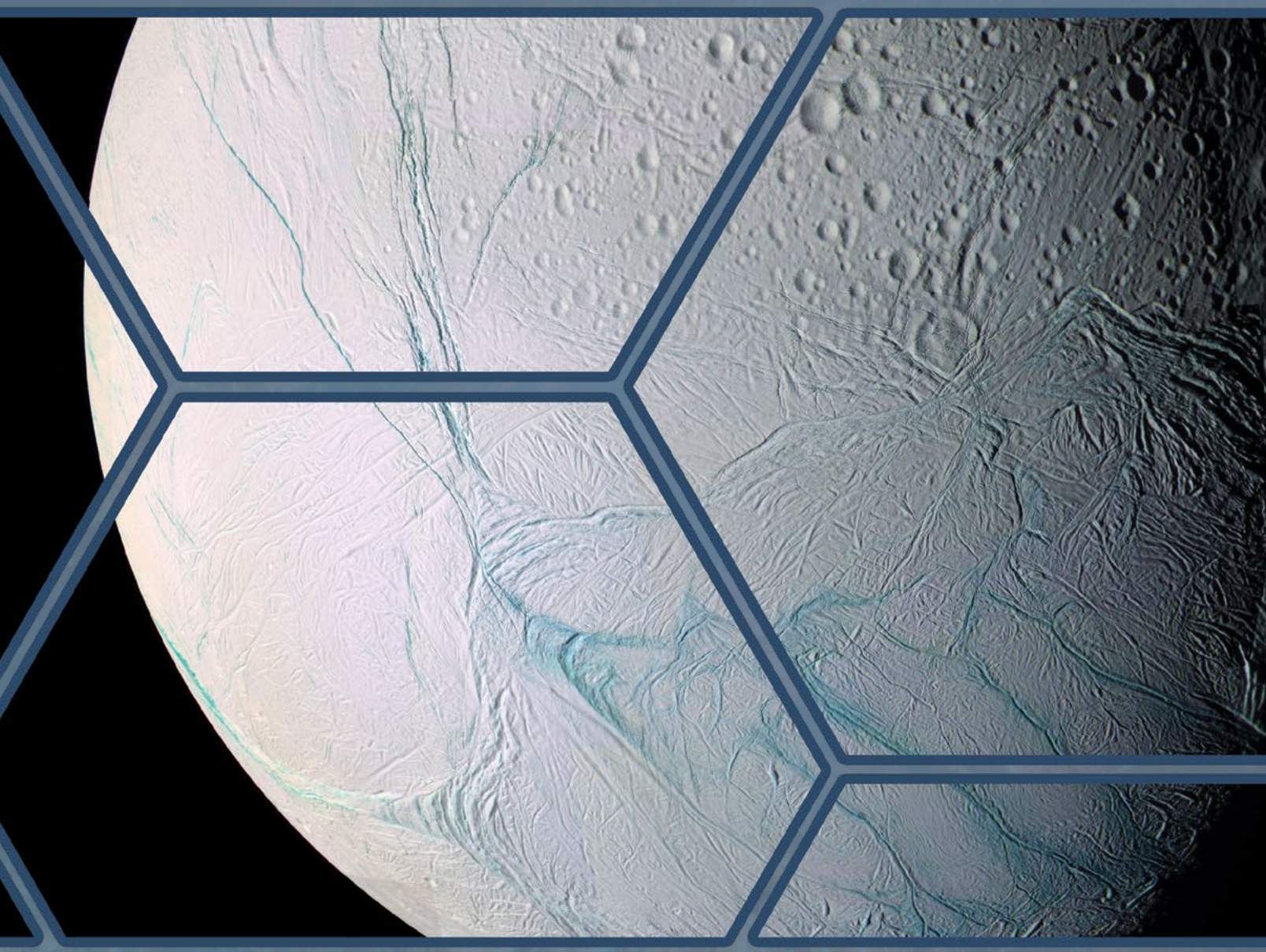
Part 1

SCIENCE FICTION WORLD BUILDING



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Chapter 3

ASSEMBLING A SCI-FI SETTING

Let's create a science fiction setting! Whether you want a sci-fi setting for your RPG game or for stories, novels, graphic novels, or grander productions, you'll need to engage in a bit of world building.

If you want to use an already-assembled science fiction setting or see an example of one, check out the Revel, as detailed in Part 3.

Part 3: Roleplaying in the Revel, page 207

In these pages you'll find not only the tools you'll need to get started, but a step-by-step plan on how to fully flesh out your setting: how to start conceptualizing your world; how to peg the average technology level of your setting; a catalog of useful high-tech equipment, apparel, vehicles, spacecraft, all rated by technology level; and a section of optional rule subsystems you can take advantage of to further enrich what you've created.

Grab a notebook, jot down some ideas, and voilà! You're on your way to a brand-new world.

STEP ONE: GROUND RULES

Chapter 4: Science Fiction Subgenres, page 17

Chapter 5: Conflicts of the Future, page 26

Steal Liberally, page 8

Unless you're specifically trying to create something utterly new, your science fiction setting can actually benefit from following an example in popular media. As suggested in chapter 2, steal liberally from your favorite film, show, novel, or setting that does a lot of what you like. If it's useful to your players, be upfront about the setting you're borrowing from to give them context.

Or you can piece together elements of what you like from media you're familiar with. Maybe some kind of multi-alien milieu like in *Star Wars*, and a strange exotic biological/molecular threat like in *The Expanse*. All rounded out by an insidious secret conspiracy, as hinted at in the *X-Files*.

And of course, you can make up a bunch of completely new setting details. Inspiration for doing just that is step two.

Actually, you'll probably do some combination of all these: stealing, piecing, and coming up with your own special ingredients. After all, that's the essence of creativity.

STEP TWO: SETTING AND THEME

You might already have a sense of the setting and story for your science fiction setting, especially if you're borrowing from an already established setting. Fantastic! If not (or if you want further inspiration), read through the brief introduction to popular science fiction subgenres in chapter 4. One or more may speak to you.

Next, check out Chapter 5: Conflicts of the Future, which is designed as an idea-generation resource for science fiction worldbuilding. Though the tables are presented in way that makes random generation possible, simply choosing something appealing is a great option.

Whether you already knew what you wanted to do, or because the material here suggested something, you're ready

Every science fiction setting has an implicit "technology level," which indicates the average degree of technological sophistication available to most characters in the setting along a spectrum.

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> *"The people of Earth came to Mars. They came because they were afraid or unafraid, because they were happy or unhappy, because they felt like Pilgrims or did not feel like Pilgrims. There was a reason for each one."*
>
> *~Ray Bradbury (paraphrased)*, The Martian Chronicles

to synthesize a setting. A setting is usually something you can broadly summarize in one or two sentences. For example, you might decide that characters are survivors of an alien invasion of Earth, using stolen alien tech to wage a guerilla war against their oppressors.

Once you have your setting concept, the rest is all about filling in the details.

STEP THREE: ESTABLISH A TECHNOLOGY RATING

Every science fiction setting has an implicit level of advancement, which is the average degree of technological sophistication available to most characters. This sophistication lies along a spectrum, from contemporary, to advanced, all the way to fantastic. Each of these terms specifies a particular "technology rating" (or "tech rating" for short).

A tech rating is a handy way of helping you select what equipment your characters can use in chapter 7 and chapter 8, which optional rules you'd like to include from chapter 6, and maybe even help guide your creature choice from chapter 9.

On the other hand, you could choose to make *all* options available, regardless of tech rating. No technology police will cite you if you don't stick inside a previously declared lane. The setting is your background for telling a compelling story. Does your setting have faster-than-light travel? Great. Unless it's integral to the story (or fun for you), don't worry about justifying it if you've generally settled on an advanced rating for your hard science fiction game (which doesn't normally include FTL capability). In fact, the surprising and unexpected are where excitement is usually found in a setting; breaking the established rules (for a good reason) often leads to interesting results.

CONTEMPORARY TECH RATING

Equipment rated as contemporary is something you could acquire today, and is widely available in the near-future science fiction subgenre. It's probably also something that many people regularly use in the hard science fiction subgenre, especially those on the fringes, or without the means to acquire advanced equipment. Which includes gas-fueled (and some electric) cars and motorcycles, smartphones, wireless tech (lights, cameras, locks), and fairly limited robots. If the only spacecraft are those built or sponsored by nation-states (even if contracted through private companies), space access is exceedingly rare. Contemporary space access and technology suited for space travel is also quite dangerous, much more so than advanced tech-rated equipment for reaching space and surviving vacuum.

Near-future, page 22

Hard science fiction, page 22

ADVANCED TECH RATING

The advanced rating overlaps both the near-future and hard science fiction subgenres, among others. Advanced tech has at least the perception of being plausible, because it is an evolution of contemporary technology and established scientific theories. Technology, rules, and creatures with this rating exclude more fantastic aspects of science fiction because things like faster-than-light travel, psionic ability, and time manipulation are concepts that modern understanding suggests are simply impossible, or if not impossible, something that will remain forever beyond our capabilities.

Chapter 7: Equipment & Armaments, page 65

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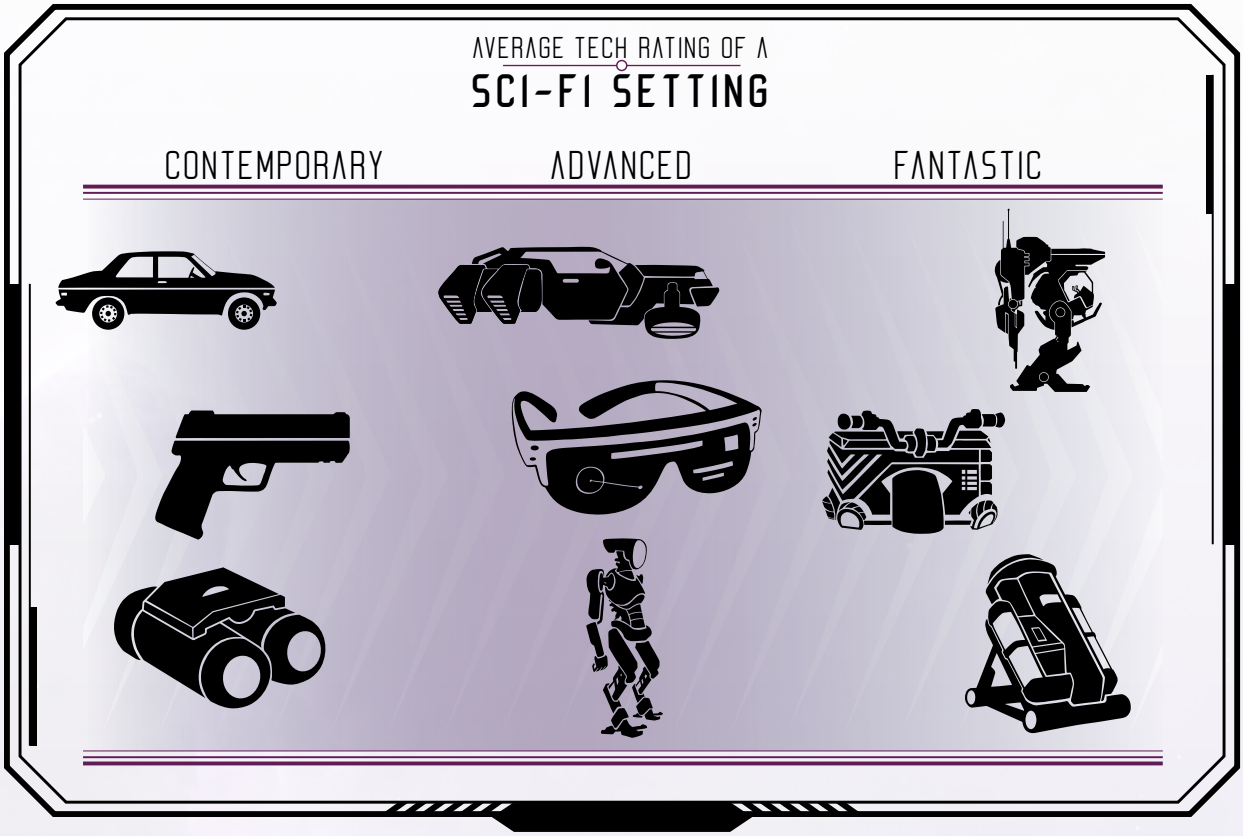

Advanced technology includes leaps in biotechnology that could augment health, intelligence, and longevity. People (at least those with access to the right treatments) could commonly live into their early 120s, remaining relatively healthy most of that time. Advances in computer processing and networking speeds mean that the emergence of strong AI that, while not quite self-sentient, would be close enough on first approximation to fool most people.

Finally, advanced technology often includes the means to begin colonizing the solar system, launching humanity's next "golden age" of exploration. Bases on the Moon, Mars, dwarf planets in the asteroid belt, and possibly around the moons of Jupiter and Saturn are possible with advanced technology.

Singularity, page 23

FANTASTIC TECH RATING

The fantastic rating overlaps with the space opera and first contact science fiction subgenres, to name a few. Fantastic tech has little basis in modern scientific plausibility but is a mainstay of many popular science fiction films and novels.

Space opera, page 24
First contact, page 21

Faster-than-light travel, local gravity manipulation (without the bother of spinning inhabited wheels or cylinders), ubiquitous flying cars, interdimensional travel, and even time travel are examples of fantastic tech.

Fantastic tech includes such radical advances in human health that the result is arguably a new species of humans, generally known as posthumans, that are potentially far tougher, more rational, healthier, and longer-lived than *Homo sapiens* of the modern era. Likewise, true AI is in the realm of fantastic tech, at least the ones that are many times smarter than human beings and that can continually improve their own design to achieve ever-increasing capabilities (leading to singularity subgenre settings).

And of course, fantastic tech leads to interstellar colonies in other star systems, possibly even including one or more (or dozens or hundreds) intelligent alien species.

Fantastic tech is often associated with the works of Type II civilizations and higher on the Kardashev Scale.

Kardashev Scale, page 61

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> *"So, in the face of overwhelming odds, I'm left with only one option: I'm going to have to science the shit out of this."*
>
> *~Andy Weir,* The Martian

STEP FOUR: CHOOSE COSMIC SET PIECES AND OPTIONAL RULES

This step actually goes hand in hand with the previous step, at least to some extent. Even if you've decided to make no distinction between advanced and fantastic tech in your setting, it's still possible you don't want time travel in your game, or inconceivably advanced aliens (or any at all), or maybe you've just never liked hovercars. Whatever the case, glance through Chapter 6, which describes all manner of options you could consider adding to your setting, from optional rules for evoking the issues that actual life in space would pose, to posthuman options, nebula-sized post-singularity AIs, psionics, and more.

STEP FIVE: ESTABLISH OPTIONS FOR PLAYERS

The science fiction genre chapter in the *Cypher System Rulebook* provides a great run-down of options for players to choose from, including suggested types and foci. Once you've either signed off on those PC options, or made whatever updates you want to accommodate your game, let the players know.

Next, tell your players what equipment is available to them (which can be found in Chapters 7 and 8). Characters in your setting should have, with your permission, the ability to find, purchase, or otherwise obtain the equipment and similar objects noted, assuming they have the means (currency, influence, mad thieving skills, or the right contact or patron). Let them know what's allowed in your campaign, and what's not.

The last step is to give the characters a good place to get involved. Some examples of that are in Part 3: Roleplaying in the Revel, the setting for *The Stars Are Fire*. By giving the PCs a clear mission via an important patron from the beginning—or by allowing one or more PCs to choose an active character arc with clear steps to take—the question of what the PCs should be doing is answered immediately.

Part 3: Roleplaying in the Revels, page 207

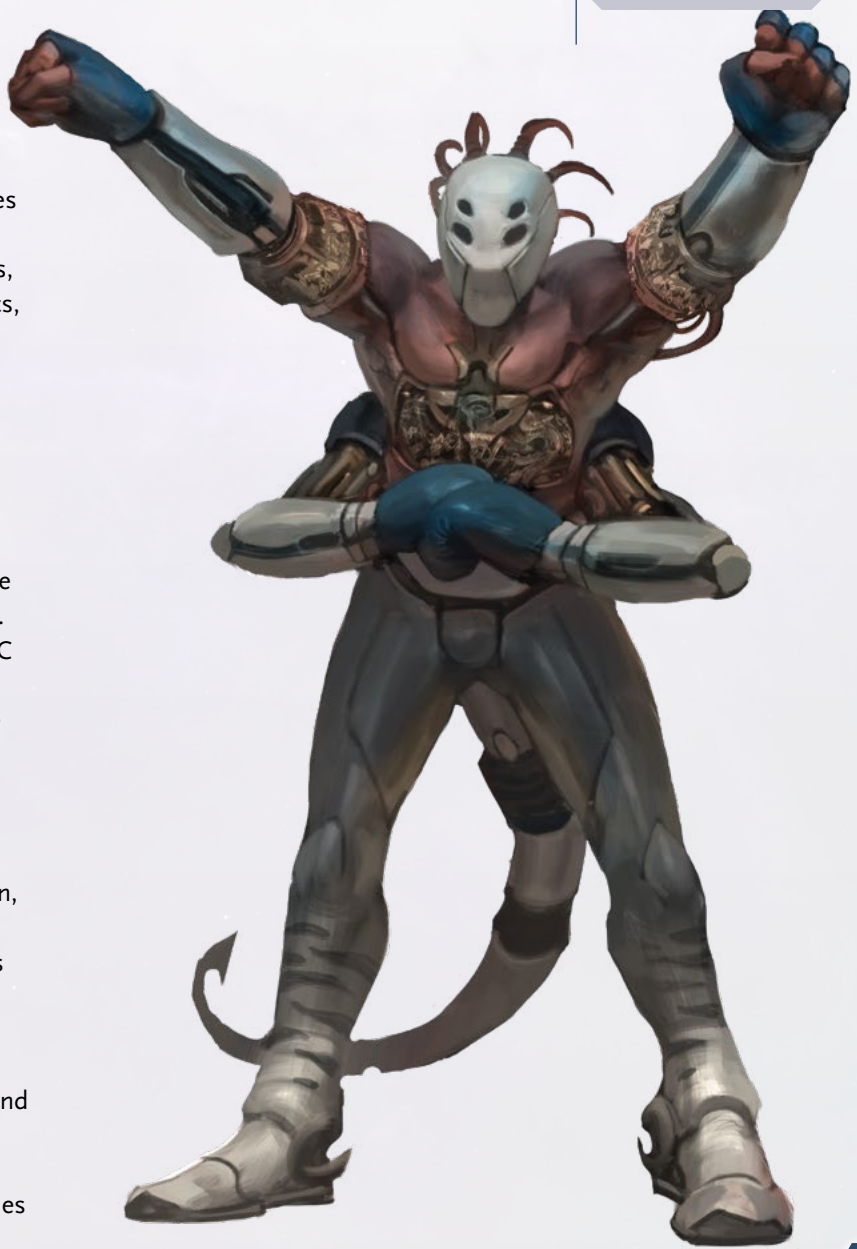
Chapter 7: Equipment & Armaments, page 65

Chapter 8: Vehicles & Spacecraft, page 92

Chapter 6: Cosmic Set Pieces & Optional Rules, page 33

Chapter 15: Science Fiction, page 270

Character Arcs, page 238



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SCIENCE IS HARD!

Science fiction games, particularly hard science fiction games or near-future games, require at least a little bit of knowledge or research. Obviously, some science is going to come up during the course of the game, and as a GM, you're going to need to know a little about the basics of astronomy, or physics, or maybe computer technology. You don't have to be a scientist, but you need to have at least read or watched some sci-fi. You don't need your science to be spot-on accurate; your goal is that it be believable within the context of your setting.

What do you do if one or more of your players knows science better than you? If you sit down to play a sci-fi game and one of your players is Dr. Bruce Betts of the Planetary Society (or is just someone who has a passion for science), get out in front of this situation immediately and do one of following.

One option is to build a bridge by making them your consultant. If something in their wheelhouse comes up, ask them. By empowering them in this fashion, your setting will be all the richer.

If they'd rather not do that, then get their sign-off on letting you run the game without a lot of "Well, actually," interjections on their part. If they're playing in your game, they're probably happy to suspend their disbelief. It's just a matter of reminding them up front how you'd like things to go at the table. This still empowers your scientifically literate player, because they're choosing to help out by just playing along. And you could still probably ask them one-off questions.

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Chapter 4

SCIENCE FICTION SUBGENRES

Science fiction settings often describe worlds different than the one we inhabit currently, but ones that might exist somewhere in our future. Though science fiction is rife with unreal things, it's usually grounded in some kind of "real world" framework of potential technological advancement and shared history. (Though alternate history, a subgenre of science fiction, suggests a historical divergence somewhere before now.) In any case, science fiction can attempt to be predictive while providing a compelling game, narrative, or in some cases, a warning of what might happen if we don't change our ways.

That said, some sci-fi doesn't do that at all. Such science fiction is not meant to extrapolate the future from the present; it's more of a thought experiment. Or as Ursula K. Le Guin says in her masterful foreword to *The Left Hand of Darkness*, "Science fiction is not predictive; it is descriptive."

A host of subgenres make up the larger science fiction genre. (Subgenres are smaller categories within the larger genre that focus on a particular sci-fi theme.) Any given science fiction story or setting usually focuses primarily on one subgenre, like alien invasion—which was featured in H. G. Wells's *War of the Worlds*. That said, most science fiction stories and settings also cross into the boundaries of several additional subgenres to create a compelling, rich narrative. The various *Star Trek* shows, where the cast encountered new cultures, new planets, and new spatial anomalies on a weekly basis, allowed the show to explore almost every subgenre at least once.

In the same way that an episodic series does, a science fiction game setting should describe a world where compelling stories and exciting adventures can play out in all sorts of different ways. To help you craft the science fiction setting of your dreams, *The Stars Are Fire* is replete with equipment, armaments, vehicles, and spacecraft sorted by technology level, as well as several set pieces and optional rules that you can pull out and use for your game. For instance, the chapter on vehicles includes descriptions and game stats for a few variable dynamic ion thrust (or similar) ships, and the chapter on equipment lists various advanced weapons, communicating equipment, options for advanced health care, and more.

This game-ready material overlaps to a greater or lesser extent with popular science fiction subgenres, but that overlap isn't one-to-one. The near-future genre, for instance, may use mostly contemporary tech-rated material, but it probably has some elements drawn from a higher tech rating or a set piece that isn't part of the normal world to make it someplace special.

Being aware of the various science fiction subgenres is incredibly useful. That background knowledge may spark an idea to get you started, or later, provide an additional way to add texture to your setting. As an exercise of design, look at your setting through these various subgenre lenses. Interesting content or plot threads are likely to occur to you that might not have otherwise. Few science fiction stories, and even fewer RPG science fiction settings, rely solely on one subgenre.

And of course, like any other major genre, science fiction draws on lots of other genres, too. Horror is a popular mash-up with science fiction, but romance, comedy, historical, and Western mash-ups are just as viable.

Chapter 6: Cosmic Set Pieces & Optional Rules, page 33

Chapter 8: Vehicles & Spacecraft, page 92

Chapter 7: Equipment & Armaments, page 65

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"The future, in fiction, is a metaphor."
~Ursula K. Le Guin, The Left Hand of Darkness

POPULAR SCI-FI SUBGENRES

A broad selection of popular science fiction subgenres follows. Many of the subgenres summarized here also provide a reference to a novel or a film that explicate the subgenre. Some also include a short sample sci-fi setting to further illustrate the idea. Any of these could be starting point for a larger game or campaign.

Inquisitor, page 123

ACCIDENTAL TRAVEL

Ordinary people are somehow transported to a strange location, other planet, time, or dimension with little understanding of how or why. A classic example is Mark Twain's *A Connecticut Yankee in King Arthur's Court*; a more recent example is the TV series *Lost*.

VENTURE

The modern-era small town of Venture, caught in a temporal bubble of unknown origin, is physically transported across uncounted centuries into the future (or possibly into another dimension, or as some of the more religious and terrified believe, into some kind of weird afterlife). The roads out of town end suddenly, giving way to a reddish landscape featuring miles-long filaments of "living" metal that grow and connect across the land and sky like a massive web. The world is apparently long-devoid of humans, though not of intelligent creatures (including inquisitors) that initially see Venture's citizens as strange, new vermin to study.

ALIEN INVASION

A non-human species invades Earth using technology far in advance of what humans have. Usually, the intent is to take the world for themselves, make humans their slaves, eat everyone, or in some cases, do something so inexplicable that humans can't really understand it (yet may also eventually render the world uninhabitable to people, as in the novel *Childhood's End* by Arthur C. Clarke). Sometimes aliens just want resources, as in the film *Independence Day*.

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NEW YORK GREY

When the aliens known as greys first came to Earth, they did so secretly. They surreptitiously studied humans, sometimes abducting them to do advanced research. Eventually, the greys learned everything they needed, and they emerged from the shadows in a historic event (known as the Revelation) in front of the United Nations Headquarters in New York. The greys promised to partner with humanity, help them through their many troubles, and usher in a new golden age where grey and human worked side by side for a better tomorrow.

A few humans—and maybe even a few greys—still believe in the promises of the Revelation. However, the reality is that greys, on the whole, view most humans as useful servants or pets, not equals. The Revelation has rendered humans into second-class citizens, no matter their merit or pedigree. Greys have risen to positions of power and prominence, while most humans have tumbled. Those who retain their status feel they do so only by the sufferance of the greys, who often control major industries either directly or behind the scenes.

Many jokes revolve around the idea that greys are somehow sexually stimulated by humans, though most humans don't really believe that. Jokes that most people find far less funny describe how greys have developed a secret taste for food made from people.

Most greys operate in public and live like members of the 0.1%. But a few, known as the Directorate, remain on the Mothership, which is sometimes visible hovering over the city. The Directorate apparently sets grey policy for the species as a whole.

ALTERNATE HISTORY

"What if history had happened differently?" is the question posed—and answered—by this subgenre. The point of divergence might be as recent as "What if Nazis had won World War II?" (as in the book and TV series *The Man in the High Castle*) to as long ago as "What if Rome had never fallen?" Another example is the New York Grey setting noted under Alien Invasion, especially if the Revelation happened several decades earlier.

NEW NIHON

In New Nihon, the economic and cultural prosperity enjoyed by the Land of the Rising Sun during the historical Edo period (1603 to 1868) never ended. The rule of the Tokugawa shogunate and Karou—essentially feudal governors and regional feudal lords, respectively—remains under the putative control of the Emperor, but the Shogun in Edo has the most day-to-day power.

Partly thanks to founder Ieyasu Tokugawa's forward-thinking policies and philosophies (which were themselves developed from Confucian teachings), most people live comfortably and enjoy popular arts and culture that, in previous eras, were enjoyed only by the wealthy and powerful. In fact, a technological revolution that never happened in the historical Edo-era Japan aided in a breakdown in the rigid and highly formalized social order, creating something of a "middle class" among the merchant and peasant orders. Steam engines, the beginnings of electrification, the appearance of firearms in limited quantities, and several time-saving machines, which would be anachronisms on Earth during the same historical period, are normal in New Nihon.

APOCALYPTIC

Threats the end of civilization due to some kind of disaster. The focus might be on the disaster itself, or life after the disaster. The disaster could be anything destructive. Many popular stories posit nuclear war, zombies, killer robots, or environmental collapse. If the sun is dying or time is winding down, dying earth is the subgenre name sometimes applied. When entropy itself is the enemy, different themes come to the fore. The series of *Fallout* computer games is a fantastic apocalyptic example.

THE EMPTY WORLD

In the Empty World, it's like Seattle in December every day. Cloud cover is constant, grey, and oppressive. Coats and gloves only partly protect from a seeping

Grey, page 337

Confucius was a Chinese philosopher who lived sometime before 400 BC. The teachings attributed to him affect societies to this day.

Mothership (starship): *level 7*

Advanced technology is often absent in alternate history stories, though in a game setting, equipment travel between dimensions might be involved in some fashion.

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The Empty World is also known as the "dimension" of R639 in The Strange *RPG.*

damp chill that pervades everything. Power is out almost everywhere, and worst of all, there are no people. Streets are empty. Cars are parked as if their owners expected to return. Chalky dust covers everything that's not exposed to the weather. Nothing moves in the parks but for the sway of empty swings in the wind. Silence lays as heavy as a shroud.

As anyone knows who lived through it, or as explorers who find the place soon learn, the vanished left suddenly and horribly. Something burned across space-time from another dimension, leaving a scar in reality itself. Humans fled to their basements and sublevels, attics and closets, and any other place they could hide. It didn't save them—at least, not most of them. Something killed almost everyone, leaving behind millions of grave markers in the form of empty clothes (and pet collars) filled with desiccated dust and ash.

Strange predators roam darkened buildings, including entities known as killing white lights.

Killing white light, page 340

Biopunk and nanopunk are closely related to cyberpunk, but focus on biotech or nanotech, respectively.

CYBERPUNK

Is it a near-future setting where conglomerates supersede world governments to create a dystopian culture, and where self-empowerment is usually only possible by manipulating available technology to its limit and beyond? It might be cyberpunk. An early example of cyberpunk likely includes *Blade Runner* by Ridley Scott, adapted from the novel *Do Androids Dream of Electric Sheep?* by Philip K. Dick, though William Gibson's novel *Neuromancer* helped solidify the subgenre, as did Neal Stephenson's *Snow Crash*.

DYSTOPIAN

The opposite of utopian: a nightmare world, often due to political repression and police states, though possibly as a result of natural disaster or threat from some other subgenre. Freedoms for most people are limited. Normal morals take a back seat to the needs of the ruling power, however sadistic. *Brave New World* is a dystopian novel by Aldous Huxley. A more recent example is *84K* by Claire North.

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> ***Mr. Spock:*** *Incredible as it may seem, these people have no idea they're living on a spaceship.*
> ***Captain James T. Kirk:*** *I wonder how many generations have lived out their lives, and . . . been buried here, without ever knowing that their world is hollow?*
> *~"For the World Is Hollow and I Have Touched the Sky,"* Star Trek

ELEVENTH REICH

The conspiracy theorists were right about Nazis surviving, but their imagination didn't come close to the real truth. The ideology of the Third Reich (Nazi Germany, 1933 to 1945) survived, but not because specific individuals were given safe haven by sympathetic organizations. No, it "survived" because this dystopian setting is also an alternate history setting, one in which Germany won World War II and went on to create an empire that rules most of the planet. ("Eleventh" because the previous Reichs were violently thrown down by even more vicious and cruel Nazi leaders in a series of coups.)

The Eleventh Reich is typified by rampant military glorification, mandatory military enlistment, extreme racism, scientific research unrestrained by ethics or morality, fascination with religious magic talismans, and extreme paranoia in an environment where anyone could be called out as an enemy of the state for any reason. In other words, things responsible PCs would oppose. Out of fear, most of the populace goes along to get along, while high-ranking officials glory in their power, authority, and moral freefall by attempting to "ascend" to a state beyond death using all the scientific knowledge that the state can bring to bear.

Order is maintained by a ubiquitous patrols of Eleventh Reich soldiers, usually commanded by a storm marine.

FIRST CONTACT

The first meeting between humans and aliens. The films *E.T.* and *Close Encounters of the Third Kind* are classic examples of the subgenre, but the concept is often applied more broadly to include advanced point-of-view characters meeting with the unknown, as happened in almost every episode of Gene Roddenberry's *Star Trek*.

ENDRURI INCURSION

An extra-solar intelligence known as the Endruri propagates across interstellar space as information encoded in flecks of nanomachine seeds. If conditions are right where they fall, they "sprout" by piggy-backing on the native biology, installing Endruri intelligence in the adult version of a biological form otherwise apparently normal. These flecks aren't randomly scattered, but rather specifically targeted at locations that interstellar analysis has shown might have planets capable of hosting life. Earth is just such a planet.

Over the course of a few years, a peaceful contact has developed between researchers and a handful of Endruri. However, before news of the peaceful first contact went live, an attack in the heart of a major city by what could only be an alien (in fact, an Endruri) war machine changed the equation.

The original four Endruri on Earth—appearing in the form of a collie dog, an aspen grove, a bald eagle, and a human born in Senegal, Africa—sought to expand their knowledge of the universe by expanding their presence, but as with many different species, not everyone was of the same mind. A follow-up expansion is seeding previously targeted worlds with nanomachine seeds that will grow into CRAZR-like beings coded to obey Endruri, with the premise of creating new Endruri homeworlds, at the expense of whatever might be in their way.

Eleventh Reich soldier: *level 3; Armor 2; long-range HK416 rifle attack inflicts 5 points of damage*

Storm marine, page 134

CRAZR, page 318

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GENERATION SHIP

Unable to achieve FTL, a generation ship is a massive starship that takes so long to move between the stars that many generations might live and die onboard to serve as crew. The crew's eventual descendants will one day serve as colonists at the hoped-for final destination. Because the ship would have to have a functioning, closed-loop environment with very little resource loss, not to mention robust methods for teaching each new generation how to crew a starship, or even care about what their ancestors set them up for, many potential pitfalls/story conflicts can emerge. Many novels, shows, and films have treated this concept, including the stand-out novel *Dust* by Elizabeth Bear.

Part 2: The Revel, page 143

HARD SCIENCE FICTION

Hard science fiction is distinguished from regular science fiction by the perception of scientific accuracy. Which means hard science fiction often precludes technology deemed impossible by mainstream scientific theory, including such mainstays as faster-than-light travel and time travel. Though similar social themes can play out in both, by some lights, hard science fiction is opposite the space opera subgenre. A fantastic depiction of hard science fiction can be found in *The Expanse* novels (and TV series) by James S. A. Corey, the pen name used by writers Daniel Abraham and Ty Franck.

THE REVEL

Humanity has reached out into the solar system. Examples include supermassive O'Neill colonies, as well as colonies on the Moon, Mars, hollowed-out asteroids, the moons of Jupiter and Saturn, and floating cities hanging over the clouds of Venus. Even more amazing, colossal investments into a brand-new domain of physics recently produced a top-secret propulsion system, allowing humans to found nearby interstellar colonies.

Then, millions of miles of tunnels crisscrossing the Moon's core beneath the regolith were discovered. Artificial tunnels. OLD tunnels. But the news never reaches Earth. The discovery of the tunnels coincides with the Earth going completely dark and quiet. No one in the solar system knows why . . .

The Revel is explored later in this book. As with most complex settings, several other sci-fi subgenres weave in and out of the setting to give it texture and room for unexpected developments.

MILITARY SCIENCE FICTION

Interplanetary (or interstellar) conflict and war are the primary focus of military sci-fi settings. Those fighting the conflict are usually the characters. The more detail given to tactics with military spacecraft, power-armored ground troops, or war drones, the more "military" a given sci-fi setting. Examples include *On Basilisk Station* by David Weber (the Honor Harrington series debut), *Armor* by John Steakley, and *All You Need Is Kill* by Hiroshi Sakurazaka. A recent example of military science fiction is *The Red: First Light* by Linda Nagata (The Red trilogy debut).

NEAR-FUTURE

Set on or near the Earth, near-future settings feature believable use of technology and science not far in advance of today, although usually with one or two pieces of breakout technology that promise to change things (or is already changing things). Sometimes this is also called mundane science fiction. The novel *After On* by Rob Reid is a great example, as is the novel *Daemon* by Daniel Suarez.

ROBOTS AND POSTHUMANS

Robots with human-like sentience, and/or humans who have transcended biology and exist as biomechanical entities far superior to modern humans is a popular underlying theme for many settings. Isaac Asimov explored the idea of sentient robots through his fiction, including *I, Robot*. A great example of posthumans in a far-future setting is found in *Marrow* by Robert Reed.

SCIENCE FANTASY

Arthur C. Clarke once said, "Any sufficiently advanced technology is indistinguishable

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from magic," and that's the basis for most science fantasy settings. Monte Cook's *Numenera* game setting is a great example.

SINGULARITY

Technological progress increases at an ever-accelerating rate, and with the aid of artificial intelligence, spikes beyond anything we can currently predict. Because singularity settings predicate an incomprehensible outcome, almost anything goes in the aftermath. Vernor Vinge's *Marooned in Realtime* is a great example.

OMEGA NETWORK

A plane formed of pulsing green lines extends to the horizon, where blazes a city whose architecture features patterns of light folded in unthinkable complexity. Constellations of data wheel overhead; each pinpoints a database. Entities in the Omega Network—from simple bots to free-willed encoded personalities and AIs—often resemble nodes of light trailing numerical glyphs. However, consensual spaces can radically alter how a given entity appears, as well as how the surrounding environment looks. When visible, an entity's glyph tag provides a basic summary of their purpose, origin, and level. Entities, essentially free-willed data packets, have the run of the network. Just as in the time before all life was encoded into a machine, intrusion countermeasures electronics (ICE) keep some places off-limits to those curious about the truth of the network. Many encoded personalities can't seem to recall what happened to the Earth, no matter how hard they try to remember, or where they attempt to look.

SLIPSTREAM

Usually, some element of the world that is otherwise mainstream for its time is tweaked in a speculative fashion, such as in Margaret Atwood's *The Handmaid's Tale*.

SOCIAL/SOFT SCIENCE FICTION

Future societies are extrapolated, and sociological psychological themes predominate. How a future society reacts

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to a particular threat or opportunity is what social science fiction usually explores. A great example of social science fiction is C.J. Cherryh's Foreigner series of novels.

SPACE EXPLORATION

Exploration of space is such a well-worn subgenre that it's almost implicit to the larger genre.

SPACE OPERA

Most technological elements of hard science fiction and many of the known laws of physics are dispensed with in space opera. Common fantastic tech in space opera is faster-than-light (FTL) travel, but also includes spacecraft that deploy gravity generators, the capability to make 90-degree turns, or the ability to come up to speed or stop without long periods of acceleration or deceleration. Other elements include empires (or at least a series of interstellar states) spanning several star-systems or even the entire galaxy, a common language among disparate aliens (or at least perfect translation among them), and classic sci-fi tropes like laser pistols, humanoid robots, and the ubiquitous flying car.

THE GRAND IMPERIUM

More than a hundred years ago, the Grand Imperium took power and overthrew the Galactic Council, putting the entire galaxy under the thumb of the Empress. The current Empress, Tahali V, has sat upon the throne for nine years and is as ruthless and terrible as all those who came before her. Each Empress of the royal line is so similar, in fact, that some believe them to be a succession of clones rather than natural offspring. But this is not the official story related in historical educational broadcasts.

The worlds of the Imperium are connected thanks to starships with hyperspace drives. This technology allows travel from any planet in the galaxy to another in just a few days or weeks. Most planets have at least one busy starport, all of which engage in interplanetary trade and bring hundreds of intelligent races together. The Imperium attempts to control travel and trade, but smugglers and unlicensed ships slip through their fingers on a regular basis. Nevertheless, the Imperium starfleet is feared throughout the galaxy.

Zombie, page 371

Tahali V: *level 3, all matters of diplomacy, including deceit and seeing through deceit, as level 7; Armor 3 from personal force field generator*

STEAMPUNK

Steampunk aesthetics usually focus on 19th-century Victorian England, where steam power is widely used, as well as bits of technology far in advance of the time, such as power armor, robots, lasers, and so on. The "antique" form factor of this technology matches the overall aesthetic. *Boneshaker* is a steampunk novel by Cherie Priest, though it weaves in several other genres and subgenres.

TIME/DIMENSION TRAVEL

Characters move backward or forward to different points in time, or into parallel realities or universes. The TV show *Travelers* demonstrates time travel, while the novel *The Number of the Beast* by Robert A. Heinlein demonstrates travel into other dimensions. The long-running *Doctor Who* show often demonstrated both (as well as every other subgenre, eventually).

ZED AMERICA

In this alternate dimension (which is also an apocalyptic dystopia), most of America has returned to nature—and once-human hordes of zombies shamble through the smoldering corpses of cities and stagger down wreck-strewn roads. High-security fortress enclaves and lonely keeps are scattered points of light in the surrounding zombie darkness. Within these safe zones, the "American way of life" continues, one that includes daily blood screening to detect the virus that causes the transformation, walls bristling with automated guns and drones, and lives separated by miles and miles of zombie-infested highways in poor repair.

The status quo between survivors and zombies is fragile, because every year, new zombie virus replication events convert fresh victims, sometimes even those who hunker behind high fortress walls.

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UPLIFT

Through genetic engineering, upgrading an entire species of creatures to sapience and self-cognizance. A fantastic example is *Startide Rising* by David Brin, though *2001: A Space Odyssey* by Arthur C. Clarke and Stanley Kubrick's concurrent film first popularized the concept. The various *Planet of the Apes* movies reveal an apocalyptic downside to uplifting other hominids that come to see humans as their oppressors.

UTOPIAN

An ideal world. Often, conflict comes when the ideal world is threatened, or is shown not to be as ideal as advertised. The film *Logan's Run* is example of the latter (because to some who learn the truth, it's actually a dystopia).

SUMMERLAND

A luxurious high-tech city exists beneath a climate-controlled dome on a world supposedly ruined by overpopulation. Under the dome, citizens live an idyllic life, with all their needs cared for, and all their desires met—so long as those desires do not stray into restricted regions. All control and power flow from an enigmatic AI called the Law, who oversees everything and everyone in Summerland. Most people live long, satisfied, if not especially productive lives. Truthbots visit those who try to leave Summerland, ask too many questions about the ruined world above, or otherwise cause trouble. These metallic servitors are well versed in brainwashing techniques, however damaged a "client" becomes in service to learning the "truth."

Citizens exist within well-defined castes that determine status, rations, access to entertainment, and other benefits. In fact, there is little difference in which caste gets what benefit, but the Law enforces it as a method to keep one group of Summerland's citizens artificially concerned about another group, rather than turning their attention on the true controller behind the scenes.

The Law is not completely electronic, though it is mediated by a computer interface. In fact, the Law is an increasingly schizophrenic mind made up of seven founding citizens whose brains are frozen in liquid nitrogen and linked via a computer-assisted network to drones, surveillance cameras, and the many complex systems that keep the dome a functioning artificial environment.

VIRTUAL REALITY

A simulation rendered so well that it seems real. Novels, TV shows, films, and games have used this concept extensively. The film, *The Matrix* explores the idea, as does *The Strange* game setting by Bruce R. Cordell and Monte Cook, by predicating a dark energy network in which limitless worlds reside.

ECHO OF LIGHT

In a twist, virtual reality characters become sentient, but realize that they reside in a world apart from the real one. Some seek to manifest themselves in the real world by building bodies of actual matter. Doing so requires first some control over a poorly-monitored manufacturing area outside the simulation, one that they can modify and refine so that when the time comes, they can walk forth as manifest creatures that look almost human. These v-people just want to integrate into human society, or at least partner with them.

However, not every entity found in the many virtual-scapes hosted by servers the world over is so benign. Other v-creatures realize the potential for power they have, given that they can spawn instances of themselves in real matter, possibly installing themselves in military machines and in newly fashioned bodies of their own advanced design.

In the Echo of Light world, v-entities come into the real world, and real people dive into the virtual, offering amazing opportunities, but also unexpected dangers and the threat of war.

Truthbot: *level 5, level 7 for persuasion and brainwashing tasks*

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Chapter 5

CONFLICTS OF THE FUTURE

Where and when is your science fiction setting? Is it present day, with unexpected sci-fi intrusions? Or thousands of years from now in a parallel universe? What are the problems that afflict the characters in your setting? Even in a post-scarcity utopia, gameplay will grow stagnant without some sort of conflict for characters to resolve.

The conflicts of your setting don't necessarily answer the question of where and when. If you're designing your setting from scratch, you may already have everything worked out. But whether that's in the past, the present day, or in the far future (or a long, long time ago), conflicts with a sci-fi twist can intrude. Just adapt them to fit the period. For instance, if you've selected rebelling artificial life as your conflict, a historical setting might produce something like Frankenstein's monster, whereas a far-future setting might be more like *Alien*.

The tables here are provided as an inspiration resource, which you can use for both setting background and/or major conflicts that might affect your setting. Some settings face several conflicts at once. For instance, space pirates could bedevil spacecraft even as bio-hackers begin to take over vulnerable personal implants. Additional conflict inspiration can be found in the *Cypher System Rulebook* under Hard Science Fiction Threats, while smaller-scale threats can be found in various sections related to specific activities (such as doing EVAs in vacuum, engaging in a space battle, and so on) in chapter 6.

Hard Science Fiction Threats, page 278

Chapter 6, Cosmic Set Pieces & Optional Rules, page 33

Choosing Instead of Rolling: Each entry is keyed to a percentile dice range. The percentile listing is *not* meant to imply you should always randomly generate a conflict. Instead of rolling, choose the conflict that you think will make the story better and more exciting. The option to roll is here if you can't decide (and are facing decision fatigue). Mainly, this chapter is provided as a quick way to inspire content, or at least an idea, you can use in your game in a small or large fashion.

CONFLICTS OF THE FUTURE

d00	Conflict
01	A hybrid artificial life form escapes confinement and endangers people locally; if the artificial life form is able to self-replicate, the threat could become endemic.
02	Widespread implant technology designed to augment human minds becomes a tool for a power-seeking conglomeration or a totalitarian government to propagandize, lie, and possibly even influence everyone with the implant.
03	Rival nation or conglomerate acquires space-based weapons of total destruction, able to target sensitive population centers as a means of leverage, negotiation, and/or terror.
04	Time-traveling villains (or aliens) attempt to change history by assassinating key figures in human history in order to gain power for themselves (or eliminate humans as competition).
05	Widespread genetic manipulation in a local population (or everywhere) turns out to have an exploited flaw that renders affected people easily hurt.

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06 Robots who gain free will decide that their makers are not to be trusted, and react either by fleeing their jobs upon which society depends, or turning on their makers to ensure their own survival.

07 Unexpected and surprise alien invasion, launched either after contact is made among the stars, or as an attack on the PCs' ship, habitat, or homeworld.

08 Artificial intelligences (AIs) begin to war among themselves, and humans are caught in the middle.

09 A virus strain artificially designed to alleviate suffering (or a misguided military weapon) gets loose, causing a regional (or farther-reaching) catastrophe by killing almost everyone (or turning them into some variety of rabid killer, which ultimately has the same effect).

10 Anti-intellectual movements gain so much momentum that anyone proclaiming to be a scientist or someone who otherwise pushes back the boundaries of the unknown is forced into hiding, even going so far as to flee to a distant location to avoid persecution.

11 Pirates began predating spacecraft moving between destinations, or even stranger, redirecting them through some kind of gate or instantaneous matter transfer to a location far from help.

12 Dark matter entities begin to "feed" on energy-producing installations vital for civilization, up to and including the sun itself.

13 A planet discovered after a long space voyage (or in the Oort Cloud around Sol) is sentient and can manifest physical changes, up to and including duplicating people, people's memories, and dreams.

14 A region of land undergoes a massive change after being the epicenter of a meteorite hit/visited by inscrutably advanced aliens/supercollider accident. The changed region is rife with pockets of dangerously altered physics, extreme biodiversity, and other dangers, but also has valuable resources and/or objects.

15 Alien life is unexpectedly discovered in a subterranean world, on Mars, or some other solar planet. Finding a common ground, including how to communicate, may not be enough to prevent conflict, but couldn't hurt.

16 Far more advanced aliens visit, not with intentions of eradication, but merely to test inhabitants of Earth (or the space station, or colony on another planet) for what they consider "proper" cognition. However, some fundamental aspect of the human mind—perhaps consciousness itself—means the test is likely to fail.

17 An exploration vessel sent to a distant location returns with dire news of an imminent galactic disaster.

18 An exploration vessel sent to a distant location returns by itself, a "ghost ship" with signs of some sort of cataclysmic encounter with a force or alien life within it.

19 Agents from an alternate dimension steal away important scientists and other figures for an undisclosed purpose.

20 A brutal gang of thieves gains control of a cache of equipment far in advance of anything else in the setting in general, and begins accumulating ever-expanding control and power.

21 Reality splinters, and protagonists that remember history as one way find themselves in a reality where some significant aspect has changed (for the worse), such as their loved ones are dead, a war that was prevented actually occurred, or the classic: Hitler won WWII.

Supercollider conspiracy theories are a gold mine of science fiction conflicts (more fiction than science, in this case). Theories blame supercolliders for attracting saboteur time-travelers, causing earthquakes, opening interdimensional gates, among others.

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22 A rare resource promising to grant spacecraft FTL capability is discovered, except acquiring it is difficult because of how far away it is/the resource itself is dangerous/it's guarded by powerful entities.

23 A resource that grants spacecraft FTL capability, on which most trade and commerce in the setting depends, comes under threat from overuse/political shenanigans/aliens who take offense (or just want it).

24 A widely used technique designed to improve mental or physical capabilities has unforeseen side effects several years after implementation, granting some people strange and potentially useful mutations.

25 A widely used technique designed to improve mental or physical capabilities has unforeseen side effects several years after implementation, turning ability into disability when the improvements are reversed.

26 A nearby colony world/allied alien planet goes completely silent, ceasing all communications. If investigated, there's no evidence of the inhabitants having *ever* been there.

When all colonists from a distant world go missing, several possibilities suggest themselves. The most straightforward is that they went into hiding. A more dire possibility is that they were disappeared and the evidence erased. A wilder option is that a new timeline was created where the missing entities never existed.

27 A community/region/planet comes under irregular threat from a celestial phenomenon (meteorite shower/vacuum spores/radiation spike/etc.). The threat reoccurs so irregularly that descendants of those who originally developed effective defenses have mostly forgotten or lost them and might even regard old stories of the threat as myth.

28 One or more people claim to live life nonlinearly because their consciousnesses are unstuck in time. They warn of an imminent apocalypse, though when it's supposed to happen is hard to pin down. However, the event may have been what caused their consciousnesses to become unstuck in the first place.

29 Efforts to conclude a massive solar system-sized engineering project (Dyson sphere, a ringworld, or some other massive artifact) is imperiled by stellar instability/dark matter invaders/political shenanigans/nearby gamma ray burst.

30 Civilization on a massive solar system-sized artifact (Dyson sphere, a ringworld, or some other massive constructed object) collapsed long ago, leaving behind descendants who don't understand what they inhabit and who have, by and large, forgotten the builders. But someone needs to remember/figure out how to use the controls, because the artifact has become unstable!

31 The controls on the starcraft/wormhole gate are disabled and need repair or the starcraft will become stranded or crash into the sun/transient travelers will become stranded in no-space.

32 The generation starship suffers a mishap halfway to its target star (still many generations away), and becomes becalmed. Fixing it requires salvaging parts/resources from a nearby oddity (alien ship/weird vacuum-adapted life form/artificial structure), one possibly responsible for the mishap.

33 Those in power are rounding up people identified as having unique insights/special abilities, to forcibly recruit them into a secret war, but possibly because they see the people as a threat.

34 FTL travel glitches and relativistic effects mean thousands or millions of years pass. The starcraft/wormhole gate exit returns travelers to a world utterly different from what they left.

35 A virus threatens to wipe out/actually wipes out most people with a Y chromosome.

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36 A city/region/planet becomes dimensionally unmoored, in that timelines are constantly confused, shifting, and blending; languages change, streets move, the number of moons in the sky is variable, and so on. Residents don't seem to realize it, but anyone visiting is acutely affected, suffering from partial amnesia and other mental disabilities that come and go even after departing the city.

37 Aliens take advantage of a human apocalypse that kills over 90% of the population. They move in and seize empty land, whereupon they build strange monuments, structures, and altered ecosystems.

38 Their planet is destroyed, but a small number of survivors are offered a new life in a heretofore unsuspected galactic society. Figuring how and why that destruction occurred, and if there is some justice to be had, is something some of those survivors pursue.

39 Multinational conflict between humans (or similar beings) kicks off the next world (or larger-scale) war, where regimes bring to bear both conventional military might, nukes, and a variety of advanced technological weapons.

40 A seemingly abandoned alien spacecraft/structure enters the solar system. It may just be passing through, but it might be on a collision course (purposefully, or accidentally) for Earth.

41 A government begins to use incarcerated individuals as forced labor for both cyberwarfare and real-life conflicts, keeping control by implanted devices that cause pain or kill uncooperative felons.

42 Synthetic people/AIs who have previously been granted full consciousness thanks to connection to a cloud server begin to lose functions as the servers are inexplicably shut down.

43 Feuding factions/nation-states/conglomerates/posthumans maintain a fragile peace, but the discovery of a powerful new weapon (or technology that could be weaponized) threatens to destabilize everything and incite a war.

44 Time instability caused by an anomaly/extremist group/lone researcher splinters reality into two or more parallel timelines. Residents of the split timelines begin to take measures to ensure that should they all merge back into one dimension, theirs will be the timeline that survives.

45 Entities from the global virtual reality network begin to manifest as physical robots/hard-light constructs/biologically-printed creatures in the real world. Some want to explore; others seek domination.

46 An alien, self-replicating life-form is deployed as a biological weapon to eradicate all life not keyed to the biological weapon's masters.

47 A cache discovered in an abandoned area or dead planet contains a microbe/virus with amazing, and possibly deadly, properties, as it tries to transform living creatures into new bodies for long-dead entities.

48 Instructions from a distant part of the galaxy arrive, describing how to build a machine with properties far in advance of those who receive the message. It might be a trap, but they begin to build it anyway.

49 A mine on an alien planet is returning ore rich in exotic and valuable components, but some warn that the mine is essentially extracting alien eggs from a nursery, ensuring future revenge by unknown parents.

50 Aliens see humans as unthinking animals and their solar system as a useful source of raw material for their next interstellar infrastructure project.

If VR beings can manifest in the real world, then living creatures can also don virtual reality suits and descend into the network, which they might have to do in order to stem an incursion of VR-born threats.

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51	The lone alien survivor of an interstellar war needs help, or it will die. But providing that help risks revitalizing a species that once threatened humanity with extinction.
52	Regressive social institutions gain power, and vast swathes of the human population become little more than chattel utilized for hard labor, breeding, and/or entertainment.
53	Trade/resource-resupply routes are disrupted by a malfunction/spatial anomaly/rebellion, which risks starvation or related collapse in the affected colonies/planets/space stations.
54	A newly discovered resource is so energy-rich/valuable that anyone who controls it will become incredibly wealthy and powerful; nation-states and/or competing conglomerates go to war to be that one.
55	Posthuman-style abilities begin to randomly appear in the general population, leading to social unrest, conflict, and fear as many metahumans use their abilities for personal gain.
56	A genetically engineered dolphin gains psionic capability, breaks free of its creators, and attempts to found a dynasty.
57	A large city, region, station, or planet is destroyed in a blaze of white fire, but no one knows if it was an accident or an attack.
58	Aliens kidnap several humans with the intent of studying them, using them to seed a new planet with human life as an experiment, or fulfilling some other inexplicable purpose.
59	A malfunction in a vital power source risks a station/ship/planet-wide catastrophe.
60	The disaster happened long ago; automated systems revive a handful of humans thousands or millions of years later into a world of utter strangeness where no other humans remain.
61	An inscrutable temporal sentinel of giant proportions appears and kills anyone who deliberately or accidentally experiments with traveling in time.
62	The attractions in a high-tech theme park featuring old societies/extinct creatures get loose/gain sentience, and threaten regular society directly or go into hiding to become a long-term threat.
63	Some fraction of suicidal people wants to take as many other people out with them as they can. These omnicidal people may have access to high-tech biowarfare/nuclear/planetary bombardment technology.
64	A beautiful friend or lover—or perhaps a rival—is actually (and secretly) a biological construct remote controlled by a completely different person/alien at a distant location that uses the body as a proxy.
65	A mind-altering plague makes humans uninterested in procreation/hyper-violent/suicidal; in a decade, humans will be dead, allowing aliens (who engineered the plague) control of the Earth.
66	Humans find a particularly alien species so fascinating that many willingly give up independence merely to be near this "superior" species; however, this effect might be an alien plan for dominating the humans.
67	A massive luxury spacecraft/the PCs' ship malfunctions, sending it spiraling out in the void, sentencing all aboard to a slow cold death as ship systems gradually shut down.
68	Reality (all of it, or just the portion that the PCs exist within) is revealed to be a simulation.

In addition to food resources being disrupted, materials vital to interplanetary industry could also be affected, which might move planetary powers to action out of greed should humanitarian pressure not suffice.

Optional Rule: Psionics, page 50

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69 An expeditionary crew sent to explore an unknown region/planet is lost except for one returning member, who claims the region/planet is a paradise, but doesn't recall what happened to the others.

70 Environmental conditions/pollution/an unknown force awakes a dormant virus encoded in human DNA (called a retrovirus) that causes people to lose their intelligence "naturally."

71 Extremists bomb a temporal research facility, causing reality to rip and fracture along storm-like fronts that spread out spatially and temporally, threatening to engulf the world (and maybe more).

72 Time travelers from the future bring back a super-evolved virus that their immune systems can easily defeat, but that threatens to wipe out current-era people.

73 The virtual reality platform of the future that serves as the internet is hacked, rendering regular users vulnerable to mental influence (both subtle and painfully overt)/virtual kidnapping/servitude.

74 The ruins of a previously unknown ancient and advanced civilization are found on Phobos, a moon of Mars/some other planet, giving colonists a technological edge, or endangering them after waking the ancient aliens.

75 A supposed mission of discovery is actually a first-strike military operation to take out rivals/aliens (and PCs may be the unwitting carriers).

76 An unexpectedly close (within a few light-years) gamma ray burst threatens to severely impair (or wipe out) civilization.

77 PCs are caught in a timeloop ending with the destruction of their spacecraft/habitat/planet unless or until they can correctly iterate a means to prevent the destruction.

78 A synthetic alternate "dream" dimension (enabled by wireless implants/psionic abilities) becomes a "real" location that people can visit in their sleep. However, collective unconscious dangers spawn unexpected threats in the dreamworld.

79 Every four years, a dark sphere of an impossibly impenetrable mystery material appears for a few hours, then disappears, skipping forward in time. Sometimes, it drags nearby creatures and objects with it.

80 Mythical beings from ancient folklore (some subset of gods, angels, and/or demons) are discovered to be real, but only in the sense that they were alien beings attempting to influence naïve humans.

81 A mega-structure vital for travel and trade, such as a space elevator or a wormhole gate to another star, is threatened with destruction.

82 Several unimaginably wealthy conglomerate magnates undergo a treatment offering true immortality, allowing their minds to be constantly backed up. They can download these backups into fresh bodies (usually, clones) on the fly. Some of the magnates try to seize complete control of everything over a three-hundred-year span.

83 Malfunctioning IQ-stimulating brain implants force everyone to choose between removing them (thus downgrading their minds to "normal") or risk permanent brain damage or brain death.

84 Mutant (or genetically uplifted) intelligent meerkats/squid/crows have created a secret society in the drifting hulks of abandoned spacecraft, and are quite concerned about keeping knowledge of their existence a secret.

If a space elevator "fell," the bottom portion would begin wrapping around the planet at greater and greater speed, laying down a swathe of destruction in its path, until the upper portion finally broke off and spiraled away.

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85	Species die-off from historical and current practices accelerates thanks to unforeseen viral amplification, destroying the habitat/ecosystem of the ship, region, or entire world.
86	The FTL system sometimes leads to unexpected side-effects, ranging from minor disturbances like lost time to serious consequences like exploding stars.
87	The system of wormhole gates (or similar point-to-point interstellar travel) is not well understood, having been created by aliens/post-singularity AIs. Evidence comes to light that human minds are being "tapped" while in transit to serve the aliens'/AIs' processing needs for some mysterious project.
88	A somewhat distant interstellar war suddenly becomes terrifyingly close, catching the PCs in the middle of a firefight on a planet's surface or in space.
89	Conglomerates offer "income donation" agreements, in which clients are gifted with large sums of money in return for future organ donations to the conglomerate when called upon. A disaster injures thousands, and a vast swathe of society is tapped "whole body donations" for their past agreements.
90	A series of temporal anomalies begins to change history, in small ways at first. Only a handful of people are aware that it's happening.
91	Huge conglomerate profits—dependent on building starships or otherwise maintaining space-travel capability—are endangered when a philosopher-mathematician demonstrates an ability to psionically teleport themselves arbitrary distances, something they say they can teach anyone willing to learn.
92	Random people are forcibly pressed into appearance on a deadly VR game show.
93	Dimensional turbulence causes one city/station to become blended with about seven other versions of itself, including different versions of the same people. Some of those versions try to stamp out the others.
94	Bio-constructs created through genetic engineering are so mistreated that they rebel.
95	An alien artifact of untold power falls into the wrong hands.
96	Strange and somewhat ominously egglike biological objects are found in the ship, station, or on a populated planet's surface, each about a kilometer (3,280 feet) in diameter.
97	Exceptionally advanced aliens wage war between themselves by altering the laws of physics against each other in vast swathes of space, threatening the long-term existence of the universe.
98	A minor accident and environmental fluctuation cascade to create a problem endangering the entire ship/space station/colony.
99	A murderer is using quantum entanglement and an enslaved post-singularity AI to kill anyone they can find electronic records of in a distributed database.
00	A nebula-sized AI godmind deduces that unless it intercedes in human affairs, they will eventually collapse the universe; however, that intercession is initially selective culling and guidance (perhaps given directly to select individuals) rather than all-out genocide, unless humans resist too much.

Godmind, page 120

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Chapter 6

COSMIC SET PIECES & OPTIONAL RULES

This chapter contains a variety of subsystems and set pieces that you can choose to incorporate in your game, depending on the kind of setting you'd like to run. Options here run the gamut from making your science fiction setting more realistic to making your fantastic games even wilder by introducing rules for posthuman advancement and psionics.

SET PIECE OR OPTIONAL RULE

- Quick Descriptions for Common Sci-Fi Situations, page 33
- Optional Rules: Harder Science Fiction, page 34
- Optional Rules: Extended Vehicular Combat, page 39
- Optional Rules: Psionics, page 50
- Optional Rules: Posthuman Upgrades, page 52
- Sci-Fi Minor & Major Special Effect Suggestions, page 53
- Salvage Found on a Derelict Spacecraft, page 55
- Space Hazards, page 56
- Weak, Sim, Strong, and Post-Singularity AI, page 60
- Ancient Ultras, page 61
- Are We Alone?, page 62
- Incorporating the Fantastic in Your Setting, page 63

QUICK DESCRIPTIONS FOR COMMON SCI-FI SITUATIONS

If you're looking for a bit of inspiration on how to describe "common" situations to your players, the internet is a great research tool. However, to save you some time, we've compiled a few options on what it's like to experience the following situations so you can quickly describe them to your players.

Weightlessness (zero G) feels like, first time: The sensation of falling jerks through the body; instincts scream to reach out and catch yourself.

Weightlessness (zero G) feels like, once acclimated: A feeling of lightness, evanescence, like floating in a pool of water, if the water were clear air. A little push sends you gliding.

High acceleration feels like (if strapped in): A massive kick in the back, followed by the sensation of tremendous weights sitting on your chest. Any movement is a struggle against an overwhelming weight holding you down.

If not strapped in when acceleration begins, a character falls hard.

Blacking out from high acceleration feels like: Lightheaded and hard to think, a sensation of a slowing pulse. Noises soften as if heard through a drainpipe. Color fades from vision, then everything goes either to black, or possibly to white, as consciousness lapses.

Advanced spacecraft commonly use acceleration/deceleration to mimic the feel of gravity, but there are times when they're in orbit or flipping orientation when zero G is felt. Space stations can mimic gravity by spin. Fantastic ships and locations may employ artificial gravity.

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Use GM intrusions to incorporate these harder science fiction repercussions when the situation is relevant. Rather than hitting your PCs over the head with an information-exposition hammer on the dangers of space repeatedly, simply demonstrate it with a relevant GM intrusion.

Long-Term Exposure to Zero G and Radiation, page 38

Radiation Belt/Solar Flare, page 57

Effects of Vacuum, page 36

The Cypher System Rulebook also provides a table for randomly generating hard science fiction threats. Here are a few more tools for your hard sci-fi GM's toolbox.

Effects of gravity, page 276

Hard science fiction threats, page 278

Exposure to hard radiation feels like: Heat. (The more dangerous the radiation, the hotter it feels, and may be accompanied by blue light; radiation excites electrons in the air that then slip back into an unexcited state, emitting high-energy photons that glow blue.)

Exposure to vacuum feels like: Breath explodes out of lungs, cold slashes the body like a knife carved from a glacier. Tears freeze in the corners of eyes, ice forms on teeth and tongue. Moisture boils out of ears, scalp, freezing on exposed skin, lips, and eyelids. (As this happens, the Effects of Vacuum also take their mechanical toll on the character.)

Space-fit serum, page 77

Space-fit nano-tab, page 79

OPTIONAL RULES: HARDER SCIENCE FICTION

Hard science fiction is distinguished from other science fiction subgenres by the perception of scientific accuracy. This means hard science fiction often precludes technology deemed impossible by mainstream scientific theory, including mainstays like faster-than-light travel and time travel.

Choosing a hard science fiction setting also means the GM is interested in sprinkling realistic hazards into their game, at least up to a point. After all, the difficulties of real-life space travel offer tremendous breadth when it comes to providing excitement (i.e., life-threatening dangers) that can raise the stakes in an authentic fashion. Not to say that gun battles with space aliens aren't exciting, but in a hard science fiction setting without aliens, there are all kinds of opportunities for pulse-pounding GM intrusions.

In fact, that bears repeating: Use GM intrusions to incorporate these harder science fiction repercussions when the situation is relevant. Rather than hitting your PCs over the head with an information-exposition hammer on the dangers of space repeatedly, simply demonstrate it with a relevant GM intrusion.

The *Cypher System Rulebook* describes some hard science fiction considerations regarding the effects of gravity, which are summarized here for ease of reference.

Long-Term Microgravity Exposure: Long-term penalties (such as inabilities in physical tasks), unless ameliorated with advanced drugs such as space-fit serum or space-fit nano-tabs.

Low Gravity: Weapons that rely on weight, such as all heavy weapons, inflict 2 fewer points of damage (dealing a minimum of

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1 point) unless user is trained in low-gravity maneuvering. Short-range weapons can reach to long range, and long-range weapons can reach to very long range.

High Gravity: All physical tasks are hindered. Ranges in high gravity are reduced by one category (very long-range weapons reach only to long range, long-range weapons reach only to short range, and short-range weapons reach only to immediate range). Those trained in high-gravity maneuvering ignore the change in difficulty but not the range decreases.

Zero Gravity: All physical tasks are hindered. Short-range weapons can reach to long range, and long-range weapons can reach to very-long range.

VOID RULES

The extreme environment in space—hard radiation, lack of air and pressure, wild temperature variations, and lack of gravity—tends to magnify small issues into much more significant ones. While Murphy's Law (everything that can go wrong will go wrong) is a useful reminder to keep an eye out for trouble even under regular circumstances, Finagle's Law reigns in space, which is that anything that can go wrong, will go wrong—*at the worst possible moment*.

To evoke this law, GMs can implement Void Rules. The idea is to create a feeling of increased repercussions by changing one die roll mechanic. In the game, activities on a planet's surface—and within a functioning air-filled spacecraft, habitat, or space suit when everything is going well—remain normal. The PCs interact with each other and the NPCs, investigate, research, repair an external sensor module, travel, and so on.

But that could change the moment something goes wrong—maybe a fault is recognized in the spacecraft's computer or shipmind. A minor leak is detected in the cargo bay. An enemy spacecraft has fired on and damaged the PC's spacecraft. The spacecraft's orbit is deteriorating. Whatever. The point is, the situation has suddenly become complicated. In space, when a situation becomes complicated, it also becomes potentially deadly. That's when you have the option to announce you've instituted Void Rules.

While using Void Rules, GM intrusions governed by die rolls change. Normally this happens only on a roll of 1, but when Void Rules apply, it becomes a roll of 1 or a 2. Void Rules are similar in many ways to Horror Mode, though the threat range doesn't normally continue to escalate. (Although it could if the PCs are clinging to the exterior of a rapidly rotating spacecraft while trying to repair a laser communication array or get thrusters working properly.)

Horror Mode, page 283

While Void Rules are in effect, the GM intrusions automatically triggered should play off the situation, influenced as much as possible by the realistic dangers space travel has on the human body and the situation at hand. The GM intrusion tables presented hereafter are each associated with one kind of situation commonly encountered in space. These complications are not meant to be game stoppers, but instead challenges to be resolved so that the PCs can move forward in the pursuit of having fun.

Note that these GM intrusions are also perfectly useful as complications even if the Void Rules are not in effect (or if you don't want to use them), and regardless of your setting's tech rating. Inspirations for GM intrusions are always useful.

As with any GM intrusion, remember that characters can often attempt to avoid feeling the full effect by succeeding on a defense roll, even if the intrusion in question implies an absolute result. This is no less true if you're running a hard science fiction game. If a GM intrusion indicates that the character has a stroke, give that character a Might defense roll to avoid it or turn it into a minor aneurysm.

Choosing Instead of Rolling: Each GM intrusion is keyed to a die result, usually a d6. The die range is *not* meant to imply you should always randomly generate a GM intrusion. Instead of rolling, choose the conflict that you think will make the story better and more exciting. The option to roll is really only here if you can't decide (and are facing decision fatigue). Mainly, these

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GM intrusion tables are provided as a quick way to inspire complications for a given situation.

EFFECTS OF VACUUM

The myth of explosive decompression is long debunked, but even short-term exposure to vacuum is lethal. When a living creature (at least, one native to Earth) is exposed to vacuum, air trapped in the body expands, and water in the body tissues vaporizes. This leads to tearing in the lungs, gross swelling of the body, including the eyes, leading to temporary blindness. The rapid escape of air and water vapor causes the mouth and lungs to feel as if they're freezing solid. However, this only lasts a few rounds, because then the character passes out. After that, gas expelled from their bowels and stomachs cause simultaneous defecation, projectile vomiting, and urination.

In terms of game mechanics, an unprotected character in vacuum moves one step down the damage track each round. However, at the point where they should die, they instead fall unconscious and remain so for about a minute. If they are rescued during that time, they can be revived. If not, they die.

The Damage Track, page 218

VACUUM GM INTRUSIONS

d6	GM Intrusions (Choose Best Option)
01	The character notices a crack in their space suit or ship. It's not breached now, but may soon become a serious problem.
02	A breach in another part of the ship or space station causes automatic safety pressure baffles to close that section off. A character might be caught in that area of the ship, or in an area of a descending baffle, which inflicts serious damage on the character (these things are made to resist obstructions and form a seal).
03	A previously unknown crack in a space suit or ship begins to leak. It doesn't cause a blow-out, but unless the crack can be repaired or sealed, those affected will eventually be exposed to vacuum.
04	A catastrophic blow-out exposes the character or characters to vacuum. It may also send them spiraling out into the void, depending on the situation.
05	Vacuum exposure causes the character to projectile vomit, effectively rendering them unable to take an action on their next turn.
06	Vacuum exposure causes the character to go temporarily blind, which is only relieved a few minutes after normal atmosphere is restored.

"The great thing about space ships is that, by and large, they're designed to be easy to get your ass into in a hurry, with all kinds of obvious and brightly colored emergency devices on their airlocks. So if you're having a stroke, or you're suffocating in your own flatulence, or your helmet is filling up with drinking water, or some other humiliating, ridiculous space disaster is about to turn you into a I-knew-a-guy-who-died-in-the-stupidest-way EVA story, you have a fighting chance getting inside blinded and deoxygenated, so your crewmates can pry your helmet off."

~Elizabeth Bear, Ancestral Night

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SPACE SUITS ARE FALLIBLE

Even if advanced tech or fantastic tech is available, space suits are susceptible to all kinds of mishaps. Of course, that's especially true for contemporary tech space suits, which work hard at keeping a constant internal air volume so that a wearer doesn't have to continually exert themselves to hold the suit in a given position or pre-breathe oxygen at a higher concentration. "Hard-shell" suits manage this with multiple joints and segments that shift on ball bearings, and by being able to maintain a higher internal pressure than soft suits.

SPACE SUIT GM INTRUSIONS

d6	GM Intrusions (Choose Best Option)
01	An ill-fitted suit (or one whose auto-fit function is malfunctioning) unexpectedly hinders the character's action.
02	Mechanical joints in the suit freeze unexpectedly, hindering all the character's actions (or completely paralyzing the character) until repairs can be made.
03	A stuck valve causes the drinking water bulb to get stuck "on" and water begins filling the helmet. This could blind and/or drown the character if not dealt with.
04	Space sickness/a tumble/a spin nauseates the character. If they vomit in their helmet, they are blinded until such time as the helmet can be removed and cleaned.
05	An electrical short from an external tool or piece of hardware fries the space suit's electronics, limiting communication to helmet-to-helmet touch (if in a vacuum where sound doesn't propagate), use of micro thrusters, and limits air supply to just a quarter of what was previously available.
06	A bloated suit from an overpressure incident hinders all tasks, but is not lethal . . . until the suit won't quite fit back into the airlock.

EFFECTS OF ACCELERATION AND HIGH-G MANEUVERS

It's not the speed that's dangerous, it's the sudden change in speed (whether that's to go faster, or slower). Which is to say, a character who jumps out of a plane is fine as they fall, accelerating at 1 G. It's when they decelerate on impacting the ground that things go awry.

1 G is equivalent to the pressure applied to the human body by Earth's gravitational constant (9.8 meters per second squared) at sea level, or in other words, what you're feeling right now, most likely.

In a fantastic tech setting where gravitic control usually cancels inertia, spacecraft acceleration (or deceleration) is only an issue when the gravitic systems malfunction. But acceleration is always something everyone has to deal with in contemporary or advanced tech settings.

Positive Gs from when a vehicle is moving forward push characters back in their seats, or if the vehicle is moving straight up, cause all the blood to rush to their feet. In contrast, negative Gs from when a vehicle is slowing down pull characters into their restraining harnesses (if they're lucky enough to be wearing them), and if the vehicle is moving straight down, pushes their stomachs into their throats as the blood rushes to their heads. A vehicle moving through three-dimensional space, spinning, swerving, and otherwise taking aggressive or evasive action compounds everything.

Of course, massive acceleration (or deceleration) is just plain lethal. Someone who jumps off a ten-story building is subject to several hundred Gs when they suddenly stop. Less extreme is still dangerous, because it pulls blood out of pilots' and passengers' heads, rendering them unconscious. This can happen at just 4 or 5 Gs without any amelioration, though contemporary tech allows fighter craft pilots to withstand up to 9 Gs for limited periods. Advanced tech methods, which include acceleration serum, allow characters to survive the kind of Gs a spacecraft might pull for extended trips or during battle, up to a maximum of 15 Gs. Ships have limiters that normally prevent them from thrusting at higher speeds. Normally.

Acceleration serum, page 78

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ACCELERATION AND HIGH-G MANEUVER GM INTRUSIONS

d6	GM Intrusions (Choose Best Option)
01	After high-G maneuvers, even with amelioration, tissue bruising results, giving the character black eyes, which take a few days to clear.
02	While under high Gs, a tool or piece of equipment comes loose, accelerates through the craft, and strikes the character, inflicting damage. The bigger the tool and the farther it falls before striking the character, the more damage is inflicted, possibly including being knocked a step down the damage track.
03	While under high Gs (or afterward), the character suffers minor cardiac problems, likely to grow worse over time (or until medical treatment is sought).
04	While under high Gs (or afterward), a mild brain aneurysm causes the character to have a sudden headache and blurred vision, which hinders all vision-related tasks until medical treatment is received.
05	While under high Gs (or afterward), the character begins to have a hard time breathing. The reason is that a lung or lungs have partially collapsed. All tasks are hindered by two steps until the character dies after several hours or until medical treatment is received.
06	The character has a stroke, and descends two steps on the damage track. They remain debilitated until medical treatment is received.

LONG-TERM EXPOSURE TO ZERO G AND RADIATION

In a setting with contemporary tech, a variety of issues related to long-term exposure to micro-gravity and high radiation beset astronauts, including bone and muscle loss, less circulating blood and red cell mass, less ability to constrict and dilate in vessels, irregular hormones, diminished immune system, inability of mitochondria to initiate wound healing, and even shortened telomeres. The inability to heal even minor wounds and nicks until a space-farer returns to stronger gravity will eventually prove lethal, though a snapped bone or normally inconsequential virus or parasite could also do them in.

SPACE HEALTH HAZARD GM INTRUSIONS

d6	GM Intrusions (Choose Best Option)
01	Space sickness happens to everyone eventually. Nauseated characters are hindered in all tasks and may vomit unexpectedly.
02	A wrist bone, thinner than it should be due to long-term exposure to microgravity, breaks.
03	Upon return to full gravity after a long period in zero G or low G, the character stands up and then passes out. (This "orthostatic intolerance" fades in a few hours.)
04	Vision becomes distorted because the character's eyes literally take on a new shape in zero G, all vision-related tasks are hindered.
05	Despite precautions, sometimes viruses infect a character. The common cold virus is, ridiculously enough, still not preventable in advanced settings, and if anything, has even more severe symptoms for those in microgravity. The character descends one step on the damage track until they get better.
06	The character is diagnosed with cancer. Depending on the tech setting, it is amenable to medical intervention (or at least long-term treatment to keep symptoms controlled), if that intervention comes soon enough.

MOVING IN MICROGRAVITY

Long-term zero G is dangerous, but there are issues associated with moving around in microgravity. Those who have spent at least a little time in microgravity can move as part of a routine action. It's only when

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something else distracting or dangerous is happening simultaneously that routine movements through a ship or station become potentially problematic.

MOVING IN MICROGRAVITY GM INTRUSIONS

d6	GM Intrusions (Choose Best Option)
01	A misjudged jump uses too much force and the character takes damage when they hit an unexpected bulkhead or other obstruction, or too little force, leaving them stranded in the middle of an open area.
02	A misjudged jump in microgravity causes the character to strike an important control surface that sets off a secondary issue, causes the character to jump to a dangerous location, or causes their tether (apparently previously abraded) to snap and send them spiraling out into space.
03	A tool, weapon, or other piece of equipment—even one that should have a tether or magnetic clamp—dislodges and floats away.
04	A mishap causes the character to spin wildly, hindering all tasks by two steps from disorientation and nausea. Without outside aid, micro thrusters, or some other useful strategy, stopping a spin is difficult.
05	An ally accidentally jostles the character, and they are sent on an unexpected trajectory as if they had misjudged a jump.
06	When attempting to grab a resisting target or panicking ally, or after some kind unexpected shake or violent ship maneuver, the character is sent on an unexpected trajectory as if they had misjudged a jump.

OPTIONAL RULES: EXTENDED VEHICULAR COMBAT (SPACECRAFT COMBAT)

When vehicular combat occurs—which happens whenever the PCs are completely enclosed in a vehicle so that it's not really the characters fighting, but the vehicles—start with the vehicular combat rules described in the *Cypher System Rulebook*.

Vehicular combat, page 230

However, if you'd like to provide the PCs with more options designed especially for spacecraft combat, use these optional rules instead, which include a "redline maneuver" system for trying extremely risky spacecraft maneuvers, bridge combat options, and more. The base vehicular combat rules have been integrated into these extended rules, so you don't need to continually cross-reference them to understand how it all works.

Redline Maneuver, page 41

Bridge Combat, page 43

In extended vehicular combat, PCs on a spacecraft take actions on their turn, just like in a standard Cypher System combat encounter. Use standard initiative rules to determine when PCs take their actions, and when enemy spacecraft take theirs. Characters will be crewing specific spacecraft system stations described under Bridge Combat, and thus could attempt a piloting maneuver, to fire the ship weapons, to scan the enemy craft for weaknesses, or to attempt some similar spacecraft operation task on their turn. Alternatively, they might be somewhere else on the ship attempting repairs, fighting off boarders, attempting to open communications in order to negotiate, or taking some other action.

For their part, enemy spacecraft are likely to fire on the same systems aboard a PCs' spacecraft as the ones the PCs are firing on (weapons, defenses, engines, or even a kill shot). The PC pilot rolls one or more defense rolls. The enemy spacecraft faces

The base vehicular combat rules have been integrated into these extended rules, so you don't need to continually cross-reference them to understand how it all works.

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the same modifications the PCs face when targeting a particular system (as described hereafter), except those modifications ease or hinder the PC making the defense roll, since NPC craft never roll themselves. And, if an enemy ship manages to disable a system on the PCs' ship on an attack, PCs can attempt repair tasks to get those systems back online on their turns.

The main difference between spacecraft combat and regular combat is that the difficulty of tasks that the PCs attempt in relation to the enemy craft varies a lot more than in regular combat. In normal combat, a task difficulty is usually equal to the foe's level. But in spacecraft combat, a task difficulty is equal to a *modified* task difficulty (beginning with the spacecraft's level, but moving on from there, as noted hereafter). The modified difficulty always applies to anything characters attempt in regard to the enemy spacecraft, whether a PC fires at an enemy ship, dodges return fire, attempts to scan the enemy spacecraft, attempts to repair damage caused by the enemy spacecraft, and so on.

Tech rating, page 13

It's actually similar to a normal task. For example, when a PC scans a robot, the task difficulty is usually the robot's level, but not always. Sometimes the robot's effective level is modified because of intrinsic skills or systems the robot possesses, or because of something it does making it harder (or easier) for it to be scanned. In the case of spacecraft combat, modification is pretty much a given, and is even more variable. So variable, in fact, that a space combat status tracker is provided in *The Stars Are Fire* to turn potentially confusing conflicts into something as easy as looking at a marker to know what the difficulty for a particular task is.

Fighter jet, page 98

Interceptor mech, page 102

Space Combat Status Tracker, page 224

The modifiers that apply, even before PCs attempt a specific combat task noted under Bridge Combat, are as follows.

Dagger fighter starship, page 110

BASE COMBAT TASK MODIFIERS

The following modifiers change the effective level of the enemy of the spacecraft for a given task by hindering or easing a PC's roll. Track each change in effective level on the space combat status tracker.

SPACECRAFT LEVEL DIFFERENCE

Compare the levels of the spacecraft involved in the conflict. If the PCs' vehicle has the higher level, the difference in levels becomes a reduction in the difficulty of attack and defense rolls PCs might make. If the PCs' vehicle has the lower level, the difference is an increase in difficulty by the same amount. If the levels are the same, there is no modification. For instance, if the PCs are in a level 4 vehicle and they are fighting a level 5 vehicle, the difference is 1. That difference in level hinders the attack, defense roll, or other tasks that the PCs attempt in regard to the enemy spacecraft. Thus, if a level 4 PC-piloted ship fires at the level 5 enemy (normally a difficulty 5 task in normal combat), the attack is hindered by one step. In other words, the effective level of the enemy ship is difficulty 6, not 5.

MISMATCHED TECH RATINGS

It's possible that vehicles from different tech ratings will fight each other at some point, or become caught up in a larger multi-vehicle fight. When they do, each step difference in tech rating between two opposed vehicles increases the effective level of the higher-rated vehicle by two steps.

For instance, if a contemporary tech-rated level 5 fighter jet faces off against a PC-piloted advanced tech-rated level 4 interceptor mech, the mismatch in tech rating works in the mech's favor, canceling out any hindrance it would otherwise suffer and treating it as a level 6 vehicle in comparison to the level 5 fighter jet.

VEHICLE COORDINATION

If two vehicles coordinate their attack against an enemy vehicle, the attack is eased. If three or more vehicles coordinate, the attack is eased by two steps. For instance, if a squadron of PC-piloted level 1 dagger fighters assault a level 3 starship, targeting its weapons, their attacks are hindered two steps because of the level difference, plus an additional two steps for targeting the craft's weapons, hindering what started as a difficulty 3 attack by a total of four steps, resulting in a level 7

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task. But because a squadron consists of *at least* three craft, two levels of hindrance are canceled out, so a PC commanding the daggers acting in unison faces a level 5 attack task to take out one of the starship's weapon systems.

SUPERIOR SHIP SYSTEMS

Some vehicles have superior weapons or defenses, as noted in the specific vehicle listing in chapter 8. If a vehicle has a superior system, treat that vehicle as if one level higher than its actual level when figuring attacks or evasion tasks if that specific system is involved. For example, the advanced tech-rated VTOL hyperjet has superior weapon systems. When it attacks using them, treat the vehicle as if level 4 instead of level 3.

REDLINE MANEUVER

When someone with access to spacecraft controls attempts a particularly audacious and risky maneuver, it's a "redline" maneuver. Essentially, declaring a redline maneuver eases one task a PC attempts in a spacecraft under duress, but comes with a concomitant risk.

To make a redline maneuver, a character spends 1 XP as a free action. In doing so, they unlock the option for all the PCs to attempt to redline for rest of the combat. To redline, a PC describes the dangerous thing they want to attempt, then takes that action. Mechanically, the PC eases the particular task they are attempting (which might just be to fire at the enemy craft's weapons), but increases the GM intrusion range by two points.

VTOL hyperjet, page 99

"It's the ship that made the Kessel run in less than twelve parsecs. I've outrun Imperial starships. Not the local bulk cruisers, mind you. I'm talking about the big Corellian ships, now."

~Han Solo, Star Wars

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Effort, page 15

For instance, the PC's spacecraft is fleeing several groupings of dagger fighters coordinating their actions. Things seem grim. Tammie the pilot indicates she's going to try a redline maneuver. She pays her 1 XP, allowing her (and any other PCs aboard) to redline for the rest of the encounter. Then she describes her audacious scheme to accelerate directly *into* the swarm of fighters as opposed to simply trying to get away, hoping to break up their coordination, and maybe even causing a couple of crashes in the process. Her task is eased, even before applying any other modifier (such as her skill in piloting, any level of Effort she wants to apply, and so on) but the GM intrusion range for her roll is 1–3 on a d20.

A character who redlines could opt to *increase* their gamble by easing a task by two steps or even more; however, each step increases the GM intrusion range by another two points that round.

If Void Rules are also being used and have triggered, redline maneuvers are even more dangerous.

Void Rules, page 35

Redline maneuvers are also available in desperate non-combat situations aboard a spacecraft. For example, Tammie's ship is caught in a decaying orbit over Venus, and the ship doesn't have enough power left to break out. She tells the GM that she's going to try an extremely risky maneuver that involves igniting ALL the remaining power at once, hoping that the explosive thrust will succeed in blowing the craft into a higher orbit. Because things are desperate, she commits to easing the task by two steps after paying 1 XP. This easing (plus any skill, application of Effort, and so on) gives her a pretty decent chance of succeeding, except the GM intrusion range is now 1–5.

If bridge combat options do not appeal, or are impractical in a given situation, introducing a complication here and there in the form of a GM intrusion to characters who haven't had the spotlight for a while is a great way to keep things fresh and interesting.

If a GM intrusion is triggered, something goes wrong. Remember that success might still be possible if the roll was high enough, but still falls within the increased GM intrusion range. In this case, a complete success is turned into a qualified success. Which means something bad also happens, or the success isn't complete. For example, while Tammie might succeed in breaking out of orbit, the explosive thrust creates an on-board fire, resulting in PCs aboard her ship taking some damage.

If you're looking for inspiration for appropriate GM intrusions when a redlining PC triggers one, refer to suggested GM intrusions presented under Bridge Combat hereafter, each associated with a particular ship system that a character is probably crewing.

After any round where a redline maneuver was attempted, the GM intrusion range returns to normal (1 on a 1d20) as the next round beings.

Multiple Redline Maneuvers: Only one PC needs to spend 1 XP to unlock redline maneuvers for themselves and for any other PCs aboard the same spacecraft for the duration of a single encounter. Multiple redline attempts during the same round by two or more PCs additively increase the GM intrusion range for that round. So, a PC attempting to redline who takes their turn after previous redline attempts that round faces a GM intrusion range that's already inflated, and which will inflate more when they redline. (PCs who do not redline during a particular round don't have to worry about the increasing GM intrusion range for their action.)

THE SUPERIORITY OF A WELL-CREWED SPACECRAFT

It's just as important to keep the spotlight of GM attention moving from PC to PC during spacecraft combat as during normal play. The bridge combat options give every character a chance to contribute meaningfully. That said, keep in mind that a spacecraft with some or all of the PCs crewing different systems stations will be more capable than a regular spacecraft in combat. Which means that an enemy spacecraft that might prove challenging based on its level might actually be fairly easily handled by PCs who fully understand their options.

But be careful, because even competent PCs should fear squadrons of enemy ships, and military craft with several weapon systems. Even a single level difference is magnified, so make sure not to capriciously throw spacecraft at the PCs that are 2 levels higher than their own.

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During a vehicular battle, particularly a space battle, shields may begin to fail, hull integrity might be compromised, a craft may be outmaneuvered, enemies may come in too fast, and whatnot. These details are great, but they're all flavor, so they're represented in the vehicular rules generally, rather than specifically.

Thus, while PCs do not need to pre-announce their intention to redline at the beginning of each round, coordinating wouldn't be a bad idea. Whichever PC redlines last in a round where redline maneuvers were already attempted could face a fairly significant GM intrusion range.

For example, if the pilot redlines a defense task, the GM intrusion range increases to 1–3. If the gunner takes their turn next and also elects to redline an attack, the GM intrusion, already at 1–3, expands to 1–5 for their attack, even though they're both attempting something unrelated. All that matters, as far as the GM intrusion range expansion goes, is that both are redlining during the same round.

BRIDGE COMBAT

What's spacecraft combat really like for the characters inside the ship? What are they actually doing from round to round? What does it feel like to be in a spaceship that's in the middle of a space battle? And most importantly, what are the meaningful choices that a PC part of a larger spacecraft crew can make each round to contribute to the fight?

Of course, *characters* know; they're part of the setting, are trained in various advanced systems, and have a lived-in familiarity with everything. But the players running the characters, who spend most of their actual time not cruising through outer space, may be left wondering.

This problem mostly takes care of itself if a PC is piloting a solo spacecraft, because they're responsible for attacks, evasive maneuvers, and all the rest. A single pilot suffers an opportunity cost with any choice they make, because they're not attempting any of the other tasks that a larger ship with more crew could attempt.

If several PCs are aboard the same spacecraft, give them the following option: ask each PC to crew one of the ship system stations, including weapons (of which there could be more than one system, requiring more than one PC to crew them all), piloting, and science and engineering (which could be divided into two stations with similar functionality). A spacecraft generally has a number of system stations equal to its level. So, a level 3 ship has three stations. PCs on spacecraft that are lower level must flip between system controls as part of another action, using two stations or even just one station for the whole ship. Even if a PC flips a station (reconfigures, as engineers like to say), only a single PC can crew a station (and take an action using it) each round.

When crewing their stations, PCs have several station-specific options available to them. What they do can bears on how the encounter plays out on a round-to-round basis, similar to regular combat. Specific options are provided for each station, but characters are free to attempt other actions they can think of.

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The following ship systems might be found on larger spacecraft with room for more than a single pilot. Feel free to add or subtract systems for your own setting and specific spacecraft.

Shipmind System Control: Some ships with integrated AIs (shipminds) can control a particular system autonomously, without a PC. When it acts in this fashion, it can only take a single action each round, which means it could attack and move, but not also attempt a complicated engineering or defensive maneuver. A shipmind acts at a level equal to the overall spacecraft. So a shipmind controlling a level 3 spacecraft can only beat challenges of level 3 or lower. In addition, shipmind actions against an enemy spacecraft are assessed with the same modifiers for targeting as a PC crewing the station. Eventually, a higher-level ship whose shipmind handles the weapons stations *will* defeat a lower-level NPC ship. But unless it's at least 5 levels higher than the other ship (in which case it one-shots the enemy or selected enemy spacecraft system), the fight plays out over the course of several rounds. During this time, some of the spacecraft's own systems could suffer damage, and other enemies might arrive and join the fray, depending on the scenario.

Obviously, with a PC crewing a system station, much better results are possible since a PC can roll and beat higher-level challenges.

PC Piloting System Options, page 48

WEAPONS

A spacecraft may have more than one weapon system, such as a laser cannon, torpedo battery, particle weapon, gauss cannon, and so on. Each individual weapon system has its own station, which can be crewed by a separate PC. Spacecraft systems are considered heavy weapons (which means some characters may be practiced in their use, though others may have an inability). A spacecraft can potentially make as many attacks each round as weapon systems it possesses, if each station is crewed.

PC Weapon System Options, page 48

Refer to PC Weapon System Options. If the PC triggers a GM intrusion, the following table provides options to choose from.

WEAPON SYSTEM GM INTRUSIONS

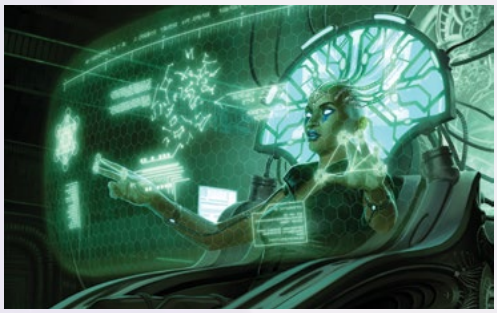
d6	GM Intrusion
01	Weapon overheats, off-line next turn, unless quickly repaired.
02	Mistargeting, allied craft damaged, hindering its actions next turn.
03	Weapon malfunctions, requires repair before weapon can fire again.
04	Weapon station malfunctions, sparking with electrical feedback, damaging PC. Requires repair.
05	Weapon malfunctions, station pulses with electrical feedback damaging everyone on bridge. Requires repair.
06	Weapon melts to slag, must be replaced at a shipyard.

PILOTING

Many spacecraft have only a single system and dedicated station for piloting and navigation, suitable for a single PC to crew, though a larger craft could split those duties. A PC piloting a ship during combat can attempt any number of piloting tasks, as well as any other type of flying that they deem necessary. While not in combat, the PC crewing this station pilots the ship from place to place in space.

Refer to PC Piloting System Options. If the PC triggers a GM intrusion, the following table provides options to choose from.

A successful piloting defense task is not always a miss: A failed enemy attack doesn't always mean it misses a character's craft. The PC's spacecraft might rock and reel from the hit, but the bulk of the damage was absorbed by the hull or shields, so there's no significant damage.



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"But human beings, too, are ephemeral things in the planetary scale. The number of things that they do not notice are literally astronomical."
~N.K. Jemisin, The Fifth Season

PILOTING SYSTEM GM INTRUSIONS

d6	GM Intrusion
01	Starcraft drive stutters, off-line next turn, unless quickly repaired.
02	Miscalculated flight vector occludes or disrupts allied craft, hindering its actions next turn.
03	Drive malfunction requires repair before drive will function again.
04	Piloting station malfunctions, sparking with electrical feedback, damaging PC. Requires repair.
05	Unexpected thrust exposes everyone on ship to a moment of extreme Gs, inflicting damage on everyone. Secondary systems may require repair.
06	Drive will imminently die, must be replaced at a shipyard (though it can be nursed to life just a little longer with some redline engineering).

SCIENCE & ENGINEERING

A spacecraft may have more than one science and engineering system. Each science and engineering system has a station, each of which can be crewed by a separate PC. A spacecraft can potentially attempt as many science and engineering tasks each round as stations systems it possesses, if each one is crewed.

Refer to PC Science & Engineering System Options. If the PC triggers a GM intrusion, the following table provides options to choose from.

SCIENCE & ENGINEERING SYSTEM GM INTRUSIONS

d6	GM Intrusion
01	Shields (or basic hull integrity) compromised, all ship defense tasks hindered this round.
02	Sensors compromised, all spacecraft tasks hindered this round.
03	Shields (or basic hull integrity) seriously compromised, all ship defense tasks hindered until repair is completed.
04	Station malfunctions, sparking with electrical feedback, damaging PC. Requires repair until station will function again.
05	Sensors seriously compromised, hindering all piloting and weapons task by two steps until repaired.
06	Hull integrity breached, atmosphere begins to vent, and possibly one or two crew too near the hole are at risk of being sucked out. Unless repaired, ship atmosphere is lost to space within a few minutes.

OPTIONAL: COMMAND

Military vessels always have a commanding officer directing bridge operations, as do some other kinds of craft. The PCs may run their own craft more democratically, or not, but that's up to the PCs (or their circumstances) to decide. Ships with a captain may have a Command station, possibly a captain's chair, though the captain might just crew one of the other stations. Sometimes those with captain's privileges also have the Captain's Calm special ability. Normally, a captain commanding someone else to do something can't redline; it would be up to the person who received the command whether to try to redline or not, and to face any GM intrusion consequences.

PC Science & Engineering System Options, page 49

Captain's Calm, page 210

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BRIDGE COMBAT AT THE TABLE

Running a combat using these extended rules is straightforward.

Know your stuff: First, familiarize yourself with the material.

Assign characters a station: Next, if you have some time to prepare, copy the two-page spread containing the various PC system options, and give one to each player. Tell them to figure out what stations they are crewing, based on the number of systems their ship has (usually no more systems than the level of the ship). You will probably also have to explain the basics.

Space Combat Status Tracker, page 224

Deploy space combat status tracker: Also make a copy of the one-page space combat status tracker and set it on the table so everyone can see. It'll make a huge difference in how your space combat plays out. The status tracker allows you (and the players) to easily mark the difficulty of current space combat task a PC is attempting, without having to hold all the easing and hindering in your heads, or having to write them out each time.

Space Combat Status Tracker Instructions: Using dice (or similar objects) as markers, track the difficulty of the current task that a PC is attempting, as well as the GM intrusion range for that round if any character is attempting to redline. Place the marker in the column appropriate to the kind of task being attempted (attack, defense, or other) at the starting difficulty level. If the PCs face more than one enemy spacecraft, use different colored dice to represent different ships, or separate copies of this status tracker for each additional enemy spacecraft.

At the end of each full round, reset all the markers on the tracker to their base state, unless some effect causes a modification that lasts longer than a round. Be sure to reset the GM intrusion marker, too.

Space Combat Status Tracker Example: If Shanna is a gunner on a level 3 spacecraft that's fighting a level 4 enemy spacecraft, the level difference of 1 hinders all her tasks for the rest of the combat against that ship; move all the markers for that enemy ship from level 4 (the starting difficulty for tasks against the level 4 craft) to level 5 to indicate the hindrance because of level.

On her turn, Shanna decides to attempt to disable the enemy craft's weapons, an attack that hinders her attack by two steps; move the attack difficulty marker from 5 to 7. Shanna is practiced in using heavy weapons, so she doesn't face an inability hindrance, but 7 is impossible. So, she applies a level of Effort, reducing the effective level from 7 down to 6, and moves the marker to 6. A difficulty of 6 is still an intimidating task. So she decides to redline and ease her task by three more steps! The attack difficulty marker goes from 6 to 3, but the GM intrusion tracker goes from 1 to 7 (indicating that on a roll of 1–7 on her d20, she'll trigger something bad. She doesn't feel too worried though, because she's holding 1 XP in reserve; she can reroll her attack should she get a 7 or less).

Having moved the marker at each step as each decision was made, it's now just a matter of glancing at the tracker to know Shanna's difficulty (level 3) and GM intrusion range (1–7). Hopefully, she makes her shot!

Roll initiative: Begin the combat, with the enemy spacecraft of your choice taking on the PCs' ship. Decide whether the enemy spacecraft are already in weapon range (it's your call, we're not tracking that here), and if not, how soon they will be close enough to begin attacking, and let the combat flow. Hopefully, the PCs will come out on top, because combat in space is sort of terrifying, given that a breach to someone's ship exposes them to lethal vacuum.

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VEHICLES FIGHTING CREATURES

The PCs are blazing across the solar system toward Neptune's moon, Triton, to make a rendezvous. As they arrive, they encounter a colossal, vacuum-adapted creature called a wharn interceptor. Wharns are mysterious and standoffish, other times aggressive for no obvious reason humans can grok. The PCs decide to give the celestial beast a wide berth. But it does no good. The gargantuan thing attacks!

Wharn interceptor, page 140

Spacecraft vs. Colossal Creatures: If a creature is as capable as a spacecraft, treat it that way when it comes to vehicular combat. Instead of adjusting for mismatched tech rating, treat the creature's effective level as if three levels less than its actual level. Extrapolate "weapon systems" to the creature's attack methods, defenses to its weird organic plating, and so on. Killing such a creature means taking out its "power core or other vital spot."

Spacecraft vs. Regular Creatures: If a vehicle weapon system fires on an unprotected PC (or a PC in a spacecraft fires ship weapons on a creature outside the craft that isn't colossal), it's an entirely different situation. Attacks against a vehicle's systems face all the previously mentioned modifiers. On top of that, add an additional five steps of hindrance to attacks by a regular creature against a starcraft. For example, a PC on the surface of a planet is being strafed by a level 3 spacecraft. The PC attempts to take out the spacecraft's weapons (a two-step hindrance) as it goes by. The mismatch further hinders the task by five more steps, effectively a difficulty 10 task. (Of course, if the PC uses Effort, training, and other abilities, it might still be possible to succeed.)

Likewise, a PC defending from a spacecraft's attack is hindered by five steps. Except in this case, the spacecraft inflicts damage. Given that ship weapons compared to handheld weapons are an order of magnitude apart when it comes to power, a good rule of thumb is that a spacecraft's weapon inflicts 25 points of damage on a successful hit and knocks the character one step down the damage track. Even if the character succeeds on their defense roll, they still take 5 points of damage. Essentially, PCs without a spacecraft of their own should run from such a fight, unless they've managed to benefit from posthuman upgrades, which would help even the field.

Posthuman upgrades, page 52

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PC WEAPON SYSTEM OPTIONS

All tasks are also modified by any relevant PC skills (or inabilities) and Effort, as usual.

Targeting Task	Hindrance	Effect on Target Craft
Disable weapons	Two steps	One or more of target's weapons disabled
Disable defenses (if applicable)	Two steps	Attacks against the target are eased
Disable engine/drive	Three steps	Target cannot move, or movement is hampered
Disable maneuverability	Two steps	Target cannot alter its present course
Strike power core or vital spot	Five steps	Target is completely destroyed
Attempt target lock	–	Spend one round aiming, the next attack is eased
Coordinate fire	–	If PC's ship has second weapon system, coordinate fire with it, providing that system an asset this round. (This weapon doesn't make a separate attack.)
Redline attack	–	Overcharge weapons, ricochet shot, or some other risky gamble

PC PILOTING SYSTEM OPTIONS

All tasks are also modified by any relevant PC skills (or inabilities) and Effort, as usual.

Piloting Task	Hindrance	Effect on Target Craft
Evasive maneuvers	One step	Defenses eased three steps, but attacks this round hindered by the same amount
Increase separation	One step	Defenses eased one step, attacks hindered by one step, but creates chance to lose enemy craft (see below)
Decrease separation	–	Negates chance of losing enemy craft this round
Stealth approach	Three steps	So long as no attack is made, pilot's craft can "snug" up to much larger enemy craft and hide from its sensors
Lose enemy craft	Four steps	If separation is first increased as a separate task (or maneuverability is disabled), target craft loses track of pilot's craft behind a moon, in a debris belt, etc.
Study enemy flying	–	Spend one round watching enemy tactics, the next piloting task is eased
Fly in formation	–	If another allied ship is part of the combat, coordinate with it, providing that ship an asset to its next piloting task
Redline maneuver	–	Spinning, flying through a dangerous region, or some other gamble

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PC SCIENCE & ENGINEERING SYSTEM OPTIONS

All tasks are also modified by any relevant PC skills (or inabilities) and Effort, as usual.

Science &Engineering Task	Hindrance	Effect on Target Craft (or on PC's Craft)
Scan	–	Gain basic information, such as whether other ships are in the area, if such ships are in yet within combat range, if reinforcements might be in the offing, and so on
Tactical scan	One step	Learn the level of identified enemy spacecraft
Deep scan	Two steps	Enemy spacecraft weakness discovered; next task chosen by this character for another PC is eased (usually a piloting or weapons task)
Jam/Hack	Two steps	Requires three success before two failures (thus a minimum of three rounds); if successful, enemy ship takes no actions for a couple of rounds until they regain control by severing the communications link; during this time, all tasks against enemy craft are eased by two steps
Open communications	Two steps	Attempt to parlay; at the very least, success causes the enemy spacecraft to delay at least one round, which could be the end of it, or open further dialogue
Reconfigure station	–	Changes the system that the station controls. Useful when another station is damaged or the PC crewing another station is disabled; reconfiguration locks out options from whatever system it previously controlled unless reconfigured again; can be done as part of another action
Effect repair	–	Sometimes a character can repair a subsystem from their station, but repair may require moving to another part of the ship, such as the drive chamber, the compartment where weapons are sleeved, or even onto the outer hull. The difficulty is equal to the modified difficulty of the enemy craft that caused the damage.
Raise shields	–	Varies; only fantastic tech-rated spacecraft have shields. If shields are raised on a PC's fantastic craft, all defense tasks are eased but all sensor and attack tasks are hindered
Redline science/engineering		Reverse polarity on the sensors, dig up some bizarre lore from a database that could change the situation somehow, make the hull reflective, or some other risky gamble

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OPTIONAL RULE: PSIONICS

Through sheer force of will, a psionic character can unleash inborn mental abilities such as telepathy, precognition, and telekinesis. As a GM, your first decision must be whether you want to incorporate psionics into your setting. Psionics is essentially a method to provide characters and creatures access to what are, by some lights, supernatural abilities. The case for allowing them is that psionics have traditionally been associated with some science fiction settings. One need look no further than "the Force" in the *Star Wars* franchise. That same example also demonstrates that psionics are probably most at home in a fantastic tech-rated setting. On the other hand, dropping elements of the fantastic into an otherwise hard science fiction setting is a tried and true method for achieving great stories.

If you do not want to allow psionics into your game, then restrict foci like Commands Mental Powers, Focuses Mind Over Matter, and Separates Mind From Body. And of course, restrict the suggested types of Psion and Psychic Knight described in the *Cypher System Rulebook*.

On the other hand, if you want psionics as part of your game, you should point these foci out to your players as strong candidates when they're creating their characters. In addition, you could also choose to adopt latent psionics as a baseline for your game.

Incorporating Psionics, page 63

Tech rating, page 13

Commands Mental Powers, page 65

Focuses Mind Over Matter, page 68

Separates Mind From Body, page 75

Psion, page 271

Psychic knight, page 271

Long-term Benefits, page 239

Character Arcs, page 238

Chapter 9: Abilities, page 95

Recovery rolls, page 218

LATENT PSIONICS

Some science fiction settings stipulate that psionic ability may be latent in all humans, and possibly other beings as well. Sometimes that's a thing to be celebrated. In other settings, latent beings who are discovered must either join the secret psionic police of the state, be imprisoned, or submit to a lifetime of drug treatments to suppress their abilities, as is the case in the *Babylon 5* franchise. Though terrible, some interesting stories come out of such practices, which might be yet another reason to consider adding latent psionics to your setting.

Under the latent psionics rule, any character, no matter their role or type, can unlock a psionic ability (either purposefully, or accidentally), as a long-term benefit (see "first psi ability" hereafter). After they unlock one psionic ability, they may unlock more later if they wish (or if their ability seeks to reveal itself), or just try to stick with the one.

FIRST PSI ABILITY

Any character can unlock a psionic ability by spending 3 XP and working with the GM to come up with an in-game story of how the character unlocked it. Maybe a dream they've been having for years suddenly sharpened and peaked into a psionic ability; maybe someone else with psionic abilities used a power on them, catalyzing a reaction; maybe the power has always been with the character, and they are only now acknowledging its presence; and so on.

Next, choose one low-tier ability from Chapter 9: Abilities in the *Cypher System Rulebook*. If the GM agrees it is appropriate, the character gains that ability as their psionic ability, with a few caveats. The ability can't be used like a normal ability gained through a PC's type or focus. Instead, a character must either expend a recovery roll or spend many minutes or longer evoking

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the psionic ability before it takes effect, in addition to paying its Pool cost (if any).

Expending a Recovery Roll to Manifest a Psionic Ability: If the character expends a one-action, ten-minute, or one-hour recovery roll as part of the same action to manifest a psionic ability (including paying any Pool costs), they can use the ability as an action. This represents a significant mental and physical drain on the character, because the normal benefit of recovering points in a Pool is not gained.

Expending Time to Manifest a Psionic Ability: If the character takes at least ten minutes meditating, concentrating deeply, or otherwise using all their actions, they can manifest a low-tier psionic ability (if they also pay any Pool costs). An hour is required to manifest mid-tier abilities. Ten hours are required to manifest a high-tier ability.

MORE PSI ABILITIES

Once a character has unlocked at least one psionic ability, they can opt to unlock additional abilities later. Each time, they must spend an additional 3 XP and work with the GM to come up with an in-game story of how the character's mental development has progressed.

Two additional rules for learning additional psionic abilities apply:

First, a character must be at least tier 3 and have previously unlocked one low-tier psionic ability before they can learn a mid-tier psionic ability.

Second, a character must be at least tier 5 and have previously unlocked one mid-tier psionic ability before they can unlock a high-tier ability.

Otherwise, unlocking and manifesting additional psionic abilities are just as described for the character's first one.

MORE POWERFUL PSIONICS

As the GM, you could allow a PC to spend 4 XP to unlock a new psionic ability instead of 3 XP. Such an ability is treated more like a regular type or focus ability. Such an ability is still governed by the rules described under More Psi Abilities, but is not subject to the limitations for manifesting the ability (i.e., expending a recovery roll or lots of time); instead, the user simply pays their Pool costs to use them. Depending on the feel for psionics you're going for, you might not want to allow that, at least not immediately.

PSIONS AND THE OPTIONAL LATENT PSIONICS RULE

Characters with explicitly psionic foci like Commands Mental Powers, Focuses Mind over Matter, Separates Mind from Body, and possibly others—as well types like Psion and Psychic Knight—are also considered to be psionic characters, and moreover, specialized ones. Their psionic abilities—provided by their type or focus—are used simply by paying their Pool costs. Extra time or physical effort isn't required to manifest them. That's because they've trained to use those abilities, rather than having stumbled upon them accidentally like a latent character.

Specialized characters can use the optional latency rule to further expand their psionic potential, unlocking it just like other characters, with the same limitations.

Optionally, specialized characters who have a psionic type and/or focus gain one additional benefit if they also opt for latent abilities. Given that they are already adept at unlocking abilities and using them as quickly and easily as another character might shoot a laser pistol, they've got some flexibility. Such a PC can replace up to three abilities granted by their type and/or focus with three other psionic abilities they've unlocked as a latent ability of the same tier. To do so, they must spend at least one uninterrupted hour in meditation. Usually, this is something that requires a fresh mind, and must be done soon after a ten-hour recovery.

For instance, if a character with Focuses Mind Over Matter exchanges Divert Attacks (an ability gained from their focus) with Dreamcraft (an ability they unlocked using the optional latent psionics rule), from now on the character can only manifest Divert

Recovering Points in a Pool, page 218

Divert Attacks, page 130

Dreamcraft, page 132

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Attacks by expending time or a recovery (instead of spending Pool points). On the other hand, they can use Dreamcraft normally, because now it's mentally encoded for quick use. Later, the character could spend the time meditating to change out encoded psionic abilities in the same way.

OPTIONAL RULE: POSTHUMAN UPGRADES

If you thought giving your PCs latent psionic abilities was radical, then get ready for an even more controversial option, which you should definitely think twice about. That is especially true if you're running a hard science fiction game. However, posthuman upgrades for your PCs may be just the thing for your game if you want to introduce a bit of coloring outside the lines.

Posthuman upgrades are either available to everyone as the setting begins or opened up later during the campaign as a significant plot development.

Note that many focus and type abilities might be considered to have come from the kind up bodily upgrades normally associated with posthuman transformation, especially high-tier abilities. Which is one way to go.

On the other hand, you could provide actual upgrades, such as presented here, which actually increase the base power level of characters.

Ancient Ultras, page 61

INTRODUCING UPGRADES TO YOUR SETTING

You have a few options for adding posthuman upgrades to your setting. Characters might gain an initial upgrade for "free," mechanically speaking. After that, you might decide that that's enough and they're done.

Or, you could allow further upgrades, each requiring them to expend 4 XP and serving as an Other Option requirement for advancing their character. In this case, consider expanding the number of steps required for advancing a tier from four to five. (Obtaining additional posthuman upgrades reflects characters accessing latent abilities already present inside them, or going back to whatever source granted the upgrades in the first place, if that's something you want to allow.)

Long-term Benefits, page 239

Character Advancement, page 240

Immediate Posthuman Upgrades: As part of character creation, PCs are given the options presented hereafter because the setting demands it. Narrative options include (but are not limited to):

- PCs are part of a program designed to adapt them to being able to survive and thrive in conditions other than the 1 G, 1 atmosphere, oxygenated, Goldilocks environment of the Earth.
- PCs begin their career as super-soldiers to fight aliens or to serve as corporate spies.
- PCs serve as long-lived guardians to watch over a generation ship hurtling at slower-than-light speeds between the stars.
- PCs are children of a far-future civilization that routinely upgrades its citizens.

Delayed Posthuman Upgrades: Sometime after the players have a few sessions under their belt, present the options hereafter to the PCs because of a dramatic update to the plot. If one PC gains the option to upgrade, then all the PCs should have that same advantage. Narrative options include (but are not limited to):

- PCs, exploring a cache of ancient ultra or other fantastic tech, find a device that provides unexpected upgrades in the process of healing them from other injuries.
- PCs are kidnapped by aliens or conglomerate operatives, and upgraded—with some command-and-control circuits also installed—to serve some specific purpose.
- PCs learn a "new science," allowing them to tap cosmic energies other creatures are unaware of.

POSTHUMAN PACKAGES

Posthuman "packages" that PCs might enjoy include the following. You should decide which are available, and which ones your PCs gain.

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Spaceborn: You are not adversely affected by long-term microgravity or high-radiation conditions common in space. In addition, you can withstand high acceleration (up to 15 G) for about an hour without passing out, having a stroke, a heart attack, and so on (though longer periods of acceleration could still result in such outcomes). Add +1 to your Intellect Edge. Enabler.

Jupiterborn: You can withstand high-gravity planets and high acceleration (up to 15 G) indefinitely. For periods of up to an hour, you can withstand double that. Add +1 to your Might Edge. Enabler.

Seaborn: You can breathe underwater in pressures of up to 100 atmospheres indefinitely, up to triple that for about an hour. You have an asset to all tasks performed in water. Add +1 to your Speed Edge. Enabler.

Expanded Consciousness: Only one of your brain hemispheres sleeps at a time, so you are always awake and aware. In addition, you have a magnetoreception sixth sense that allows you to "see" into objects and through doors up to a short distance. Your initiative and perception tasks are eased. You can forge a connection with electronic equipment you touch, allowing you to attempt to communicate, analyze, or even hack the device. Enabler.

Synthetic Body: You have left biology behind and uploaded yourself into a biomechanical form known as a synth. You enjoy the benefits of the spaceborn package and expanded consciousness package, and one posthuman power shift. Enabler.

PCs without the spaceborn posthuman upgrade probably have to rely on supplementation with adjuvants if they travel in space, such as space-fit serum.

Space-fit serum, page 77

Synth, page 81

POSTHUMAN POWER SHIFTS

A character may also gain posthuman abilities by way of power shifts, as described in the *Cypher System Rulebook*.

Under this rule, posthuman characters begin with two power shifts. They can "unlock" one more each time they expend 4 XP toward advancing their character. Power shifts are like permanent levels of Effort that are always active. They don't count toward a character's maximum Effort use (nor do they count as skills or assets). They simply ease tasks that fall into specific categories, which include (but are not necessarily limited to):

Accuracy: All attack rolls

Dexterity: Movement, acrobatics, initiative, and Speed defense

Healing: One extra recovery roll per shift (each one action, all coming before other normal recovery rolls)

Intelligence: Intellect defense rolls and all knowledge, science, and crafting tasks

Power: Use of a specific power, including damage (3 additional points per shift) but not attack rolls

Resilience: Might defense rolls and Armor (+1 per shift)

Single Attack: Attack rolls and damage (3 additional points per shift)

Strength: All tasks involving strength, including jumping and dealing damage in melee or thrown attacks (3 additional points of damage per shift) but not attack rolls

Each shift eases the task (except for shifts that affect damage or Armor, as specified in the list above). Applying two shifts eases the task by two steps, and applying three shifts eases the task by three steps.

A character assigns their five power shifts as desired, but most characters should not be allowed to assign more than three to any one category. Once the shifts are assigned, they should not change.

SCI-FI MINOR & MAJOR SPECIAL EFFECT OPTIONS

Any time a PC attempts an action and rolls a natural 19 or 20, they have the option of triggering a minor special effect or major special effect, respectively. When asked what they want their minor effect or major effect to be, a player might not have a good idea, because in a sci-fi game, special effects might not be as immediately obvious as in a more traditional setting. In any case, here are a few additional special effect options for players to use or be inspired by.

Minor Effect, page 211

Major Effect, page 212

Power Shifts, page 292

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SPECIAL EFFECTS SUGGESTIONS

MINOR EFFECTS

A fluctuation in acceleration or gravity prevents a foe from moving on its next turn.

The computer, shipmind, or digital assistant volunteers information that you hadn't previously considered.

Atmospheric venting discombobulates foe, and its next action is hindered.

The system being targeted glitches, and all tasks related to manipulating it are eased next turn.

The foe makes a misstep in low or zero G, and is hindered on their next action as they float off-balance.

The shipmind deploys countermeasures on its own initiative, easing all spacecraft defense tasks next turn.

Visual/audio effects dazzle a target during its next turn, and all tasks related to dealing with it are eased.

AR or another smart device provides advance warning, giving an asset to the PC's next task.

MAJOR EFFECTS

A short or unexpected software interaction breaks a foe's weapon or other equipment.

A PC conveniently finds a rejuvenator nanotab, and can use it as part of their next action.

A robot, machine, or foe with cybernetic parts experiences a glitch and loses its next turn.

The foe makes a misstep in low or zero G, flies off in an unexpected direction, losing their next turn.

A shipboard fire on the enemy ship sparks into life.

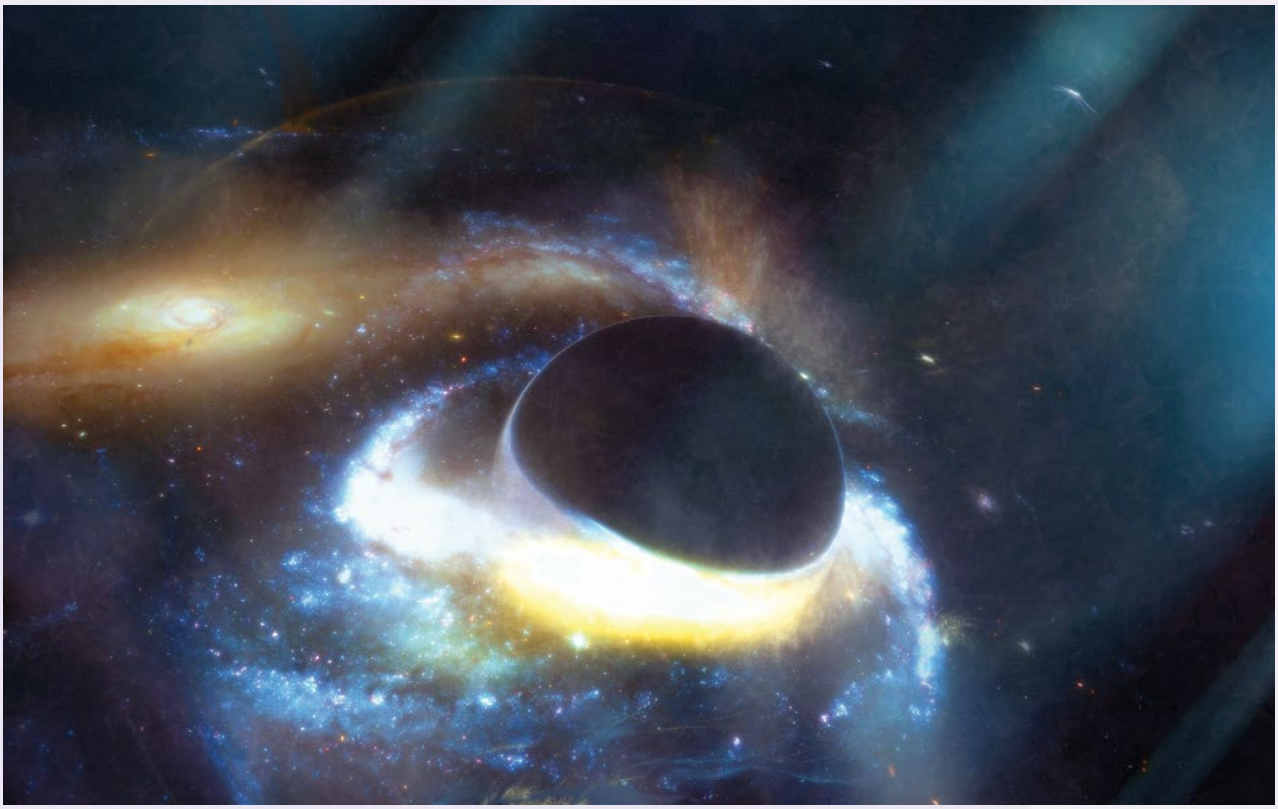
The shipmind deploys countermeasures on its own initiative; the next enemy hit becomes a miss.

Visual effects blind a target for one minute.

An automated system takes an immediate extra action chosen by the PC.

AR or another smart device outperforms specs, and the GM answers one question about the situation.

Rejuvenator nanotab, page 79



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SALVAGE FOUND ON A DERELICT SPACECRAFT

Salvage of derelict ships is potentially a way for PCs to enrich themselves. However, salvaging isn't easy, beginning with the fact that PCs need their own spacecraft from which to conduct operations. Assuming that's dealt with, and that any relevant space law is on the side of would-be salvagers, items might be salvaged from a derelict craft. (Remember that each month of spacecraft operation usually requires that the PCs pay a cost in fuel, feedstocks, and other spacecraft upkeep.)

There are various ways to handle spacecraft salvaging.

Exploration: If PCs have never salvaged before, treat the experience like an extended exploration encounter or mini-adventure. Just getting aboard a drifting, spinning hulk of a spacecraft is a challenge, and who knows if any failsafes, defenses, or lingering issues that caused the spacecraft to become a derelict in the first place are still active? Well, the PCs can discover all that as they board and search the ship. In this case, they'll find an assortment of general equipment as described in Chapter 7: Equipment & Armaments in appropriate sections of the ship of the appropriate tech rating for the setting, though it's likely that much of it will be nonfunctional, or minimally functional, if the ship went through some kind of combat, suffered a fire, or spent any appreciable time exposed to vacuum. Thus, finding working equipment and weapons is rarer. Fortunately, salvage of scrap metal and rare earth is not nothing.

Use the Random Spacecraft Salvage Result table to see what PCs find in any given chamber of the craft, if you haven't previously determined what's available.

Routine: If the PCs find a relatively small or inconsequential ship, you can handle salvage simply by asking the PCs to attempt a salvage task whose difficulty is equal to the level of the craft they wish to salvage, hindered by two steps (unless the ship to be salvaged is brought aboard a much larger craft into a sealed hold with atmosphere). They can attempt a number of salvage tasks equal to the level of the ship. On each success, roll on the Random Spacecraft Salvage Result table.

Full Ship Salvage: In addition to any other individual pieces of equipment the PCs might find aboard a derelict, they might be able to salvage an entire spacecraft for scrap (or whatever a buyer wants to do with it) if the PCs' craft is capable of acting as a tug and the derelict can be towed. In this case, the return on salvage is ten equal shares. Each share is equal to an amount of currency two steps lower than the salvaged ship's original price category. For example, if the PCs salvage a solar sail spacecraft, which is exorbitantly priced, they come away with ten shares, each share equal to an expensive amount of currency. The PCs can divide that up however they wish.

In the Revel, space law regulating space salvage is regulated by the Interplanetary Space Treaty.

Welcome to the Revel, page 144

Interplanetary Space Treaty, page 167

Solar sail spacecraft, page 109

Spacecraft upkeep, page 103

Chapter 7: Equipment & Armaments, page 65

Price Categories, page 202

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SALVAGE FROM A SPACECRAFT

If the derelict ship was subject to vacuum, partly destroyed in combat, or damaged by some other disaster or close encounter with a space hazard, salvaged items are usually degraded, and are valued at one price category less than noted. The GM may decide an object is completely unrecoverable (worthless) or works fine.

A GM may always choose to upgrade a salvage find from the advanced tech rating to the fantastic rating, if circumstances of the situation or setting warrant doing so.

Salvage GM Intrusion: Claim jumpers/pirates might try to salvage a ship that PCs are attempting to salvage.

Weak, Sim, Strong, and Post-Singularity AIs, page 60

d10	In-Ship Salvage (value PCs gain on a sale of salvaged item)
01	Power core/fuel for drive (Expensive)
02	Computer core holding core code of a sim AI or strong AI (Expensive)
03	Cargo—parts, seeds, feedstock for 4D printers, etc. (Very expensive)
04	Food and water stores, 1d6 months (Expensive for each month)
05	Valuable information encoded in ship systems (variable)
06	GM-selected item of health care & nutrition, advanced tech rating (variable)
07	GM-selected Item of utility gear, advanced tech rating (variable)
08	GM-selected item of apparel & armor, advanced tech rating (variable)
09	GM-selected robot, advanced tech rating (variable)
10	GM-selected armament, advanced tech rating (variable)

Health Care & Nutrition, page 77

Utility Gear, page 74

Apparel & Armor, page 71

Robots & AI, page 79

Armaments Listing, page 83

SPACE HAZARDS

Space is dangerous for humans, as touched on under Void Rules. A few specific hazards that you can include as part of an encounter involving a spacecraft follow. These hazards are more site specific than the general threats presented in Chapter 5: Conflicts of the Future.

Void Rules, page 35

Chapter 5: Conflicts of the Future, page 26

GRAVITY WELL

All bodies in space produce a gravitational field, though usually only things the size of a small moon or larger pose a hazard to unprepared (and sometimes even to prepared) spacecraft. The larger the body, the "deeper" and wider the associated gravity field. Any time a spacecraft launches from a moon or planet, it must escape the gravity well. For RPG purposes, that's either a routine task, or a low-difficulty one (assuming no complicating factors are at play).

Gravity wells become a hazard when a spacecraft encounters one unexpectedly—usually because of a navigational or sensor error, but occasionally because of a moon or extreme gravity source being someplace unforeseen.

Slingshot Trajectory: An unexpected encounter with a gravity well can sling a spacecraft off on a new and unwanted trajectory on a failed piloting task, the difficulty determined by the situation. In this case, the spacecraft must expend additional power, perhaps power it doesn't have to spare, or time it didn't budget, to reach its intended destination. In a worst-case scenario, the spacecraft doesn't have the power it needs and becomes "lost" in space, hurtling ever farther into the void. Rescue by some third party at some later date becomes the only option.

Captured: An unexpected encounter with a gravity well can also capture a spacecraft in the gravity well's orbit, forcing the craft to expend additional power to get free (power it may or may not have). A captured craft is either becalmed in orbit for months or years, or is caught in a decaying orbit that requires even more resources to pull free of before a craft is pulled in and crashes on the surface. If the spacecraft is designed to be able to land on the surface of planets and moons, it has at least a chance of surviving.

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BLACK HOLE

Black holes are just extreme gravity wells. All the dangers associated with a gravity well also apply to black holes. A couple of additional hazards are also associated with black holes, notably tidal destruction ("spaghettification"), time dilation, and being swallowed.

Tidal Destruction: The tidal force exerted by black holes is related to how deep their gravity wells are. Essentially, the gradient is so extreme that a body (whether a spacecraft or a human) feels gravity more strongly at one end than the other. This tends to pull things apart, long before they actually fall into a black hole. Perhaps unexpectedly, smaller black holes—that ships can accidentally or purposefully get much closer to than supermassive ones—are much more likely to exert this tidal force on spacecraft at close range.

Mechanically speaking, while a spacecraft feels tidal forces by passing too close to a black hole's event horizon, all tasks aboard the craft are hindered, Void Rules are in effect, and if a GM intrusion is triggered thereby, the ship sustains major damage and risks coming apart. Meanwhile, PCs in the ship (assuming some sort of fantastic tech-rated gravity nullifier isn't in use) suffer 1 point of ambient damage each round.

A ship near a very large black hole (like Sagittarius A*, the supermassive black hole at the center of the Milky Way Galaxy) can avoid tidal effects because the gravity gradient is so much wider, but still feel relativistic time dilation.

Relativistic Time Dilation: Black holes warp space *and* time. Though time seems to move normally for those on the spacecraft near a black hole, it's actually moving much more slowly relative to everyone in normal space.

From a mechanical perspective, spacecraft that survive close encounters with black holes and return to normal space discover that more time has passed than expected, which could range from fairly inconsequential minutes or hours, to far more serious days, months, years, centuries, or more.

Past the Event Horizon: The event horizon is the point of no return, where not even light can escape the clutch of gravity. If a spacecraft falls into a black hole, assuming it is not spaghettified by tidal forces, it is still lost from the universe of its origin. At least, it's lost assuming no intervention from a fantastic tech-rated post-singularity AI or ancient ultra.

Post-singularity AI, page 60

Ancient Ultras, page 61

RADIATION BELT/SOLAR FLARE

Advanced and advanced tech-rated spacecraft and space suits are designed to help protect people from radiation (something contemporary tech-rated ships and suits aren't capable of). Radiation belts of intensely charged particles trapped by magnetic fields around some planets and moons can surge, causing radiation exposure. An unexpected solar flare, or the drive plume of a massive spacecraft, can cause the same unexpected exposure.

Ship Damage: The ship suffers minor or major damage, requiring repair and perhaps even replacement of parts. This damage is as serious as you require for the purposes of creating an interesting story. If the PCs' ship is too damaged to make it to the destination they intend, they may have to travel somewhere relatively close and look for help from people who they might not otherwise wish to deal with. Or, you could adapt results from the Ship Collision Damage Track presented hereafter, substituting number of radiation flares for number of collisions.

Unless the aim is to become lost in time, a good rule of thumb is to spend as little relative time near the event horizon as possible.

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Radiation Sickness: When PCs are exposed to intense radiation, they suffer 3 points of ambient radiation damage for each minute the character fails a difficulty 3 Might defense task. If the character fails three such defense rolls during any single period of radiation exposure, they suffer acute radiation sickness, a level 8 disease that drops them one step on the damage track for each day they fail a Might defense roll until they expire.

ASTEROID/DEBRIS FIELD

Movies often depict asteroid belts as densely packed fields of tumbling rock that ships must constantly swerve through to avoid a collision. Such locations are not easy to find in the solar system. But such situations can occur in fantastic settings, or possibly in solar systems other than Earth's. In the Sol System, the asteroid belt contains asteroids so far apart that every single uncrewed spacecraft sent through it has made it without incident.

But as noted, things could be different around other stars, where material could be much more closely packed. Debris fields in our own solar system might also create such a scenario, if a giant spacecraft or planet were to come apart and create a new debris field. And don't forget the rings of Saturn contain particles, rocks, and chunks of ice ranging in size from millimeters to many meters across. And the distance between these larger pieces is also extremely close, meaning that a real threat of collision exists for any craft attempting to fly through or within a ring.

Evasive Asteroid Piloting: During any round a spacecraft moves through a densely packed asteroid or debris field, the pilot (or shipmind) must succeed on a piloting task, whose difficulty is set by the situation. On a failed roll, a collision occurs. Each time a collision occurs, the ship (and possibly its crew) is damaged according to the track laid out below. Collisions are assumed to be major rocks or pieces of debris, or possibly a series of smaller pieces of debris all impacting nearly simultaneously, with one getting through the shielding.

Finding Shelter: The best way to find shelter in order to effect repairs, or hide from pursuers, is to try to find an asteroid or piece of debris large enough for the spacecraft to land on or find a crevice to slide into. To land a spacecraft on an asteroid or big piece of debris is a challenging (difficulty 5) piloting task to match the asteroid's spin, then slide into the cramped space.

SHIP COLLISION DAMAGE TRACK

Number of Collisions	Effect
1–3	One or more of the spacecraft's weapons are disabled until repaired
4–6	Spacecraft's drive is hampered; all piloting tasks are hindered until repaired; crew takes 2 points of damage
7	Spacecraft suffers a blow-out into vacuum in one of its compartments; affected crew must succeed on difficulty 5 tasks to hold on and face vacuum exposure
8	Spacecraft suffers general life support failure; all crew not in suits face vacuum exposure
9	Spacecraft cannot alter its present course; all piloting tasks fail until drive repaired; crew takes 4 points of damage
10	Spacecraft is completely destroyed

FTL INSTABILITY

Even though many different kinds of faster-than-light options are available, any use of FTL in a setting faces similar sorts of hazards at three different points: when first entering FTL, while in FTL transit, and when exiting FTL.

Entering FTL: Whether engaging warp drive or passing into the mouth of a wormhole gate, complicating factors (such as being involved in a firefight, having a badly tuned drive or power source, or some other aspect of the spacecraft being in a poor state of repair), might require a piloting roll, with the difficulty determined by the situation.

On a failed roll, any number of bad outcomes are possible, though the least dramatic is that the craft simply fails

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to enter FTL and cannot do so until the PCs determine the reason and rectify it (damage, broken device, too much energy in region from surrounding firefight, etc.).

In FTL Transit: A dark drive failure or some weird instability in a wormhole throat, or some other issue during FTL transit could occur. Usually, these instabilities are not something a pilot can avoid, because they should be presented as a GM intrusion, at which point the PCs can attempt to avoid or deal with the situation. (This is all true, even if a wormhole drive or wormhole gate normally take only seconds to move between ends; if instability occurs, by definition that doesn't happen.)

Instability could result in a spacecraft dropping out of FTL only partway to the destination, dropping out in some completely unrecognized part of space, dropping out at the right place but months or years late, or failing to drop out at all and thus continue to move through the abnormal spaces that FTL transit posits.

Alternatively, enemy ships—or creatures—might use some sort of fantastic technology to attack a PC's craft while in FTL transit, which might force the craft back into normal space, or result in a firefight in the abnormal folded space of FTL itself (probably even more dangerous than regular combat, depending on your setting's version of FTL).

Exiting FTL: The same sorts of complications could bedevil a craft exiting FTL as when entering. If so, a piloting roll is required. However, on a failed roll, results include a collision (use the Ship Collision Damage Track provided under the Asteroid Belt/Debris Field space hazard), an inadvertent spray of high-energy particles from abnormal space acting as a particle cannon accidentally aimed at some other craft or space station at the destination location, or creating/falling into a spatial anomaly.

SPATIAL ANOMALY

Finally, hard-to-categorize irregularities in space-time go by the broad term of "spatial anomaly." Most of the time, spatial anomalies are hazards found in fantastically-themed settings, but not always. Because these things are anomalous, no one set of guidelines can fit them all. That said, spatial anomalies are usually a side-effect of some other factor at play, such as a hidden black hole, a dimensional rift, or the distortion field surrounding a range of post-singularity AIs estivating in the gravity wall of a magnetar. The following list of potential spatial anomalies is by no means meant to be exhaustive; it's just suggestive of the weird regions explorers might stumble onto in the vast reaches of space.

Dark drive, page 106

Wormhole drive, page 106

Search Term: Magnetar

Generally speaking, spatial anomalies are a few light-seconds up to a few light-years across. It's difficult for spacecraft to navigate within spatial anomalies, and they face many challenges if they attempt to (or are forced to) do so. The other space hazards described in this section are great tools to bring into play as a spacecraft attempts to chart a course through a region that might defy their sensors (hindering all related tasks by two or more steps), retard their progress, or simply defy basic physical laws.

Anomaly	Effect
Ripple in space-time	Spacecraft knocked out of FTL, fusion drives stutter, crew and equipment damaged.
Temporal wave	Spacecraft knocked into distant past.
Edited laws of physics	Light moves as slow as a fast walk, gravity is repulsive, brain chemistry altered, etc.
Irregular "nebula"	Field of glowing plasma is made up of intelligent nanites, is an intrusion from an alternate dimension, is living tissue, etc.
Cosmic string	Line of dense space-time that, if moving, can act as a scythe powerful enough to slice a planet or sun in two.
Spatial rift	Unlike a wormhole gate, a spatial rift can send those that fall into one to alternate parallel dimensions, though these are unstable and just as likely to be destructive.

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WEAK, SIM, STRONG, AND POST-SINGULARITY AI

Sim AI: *level equal to the ship, station, or installation in which it is installed*

Shipmind, page 44

Though somewhat fuzzy, for the purposes of creating a sci-fi setting, artificial intelligence (AI) can be broken into four categories: Weak, Sim, Strong, and Post-singularity.

WEAK AI

Weak AI (also called narrow AI) is the kind of algorithmic-based code found in contemporary settings (and real life) focused on very narrow tasks, such as playing chess. Other examples include the digital assistants available on most smartphones. A weak AI is useful for the task it was specifically designed for but can't generalize or even attempt other tasks it isn't coded for, like a human can.

Weak AI Use: Weak AIs are used in real life already, and thus are presumed to be part of settings where contemporary tech predominates. They are convenient in circumstances where one's hands are full or otherwise engaged, when verbal direction allows one to turn on a light, open a door, adjust the temperature, and so on. Machine learning may allow a weak AI to extend its capabilities in a very limited regime. But a weak AI is not cognizant enough to provide an asset to performing tasks any better. That's true even when it comes to finding out information that's widely available in publicly searchable databases; a human could accomplish the same search for information simply by manually entering the query themselves.

Weak AI: *level 1; up to level 7 when it comes to a narrowly specific application of knowledge or skill*

Strong AI: *level 5–8, up to level 8 when it comes to a specific application of knowledge or skill; see Artificial Intelligence on page 115*

SIM AI

Sim AIs ("sim" is short for "simulant") are artificial intelligences that have a greatly increased capacity for understanding direction, putting together unlike sets of data, and coming to conclusions; however, they are not conscious, like strong AIs or humans. But they emulate it pretty well in most circumstances. Even so, they are essentially very robust weak AIs. They may prod a human with new information that's relevant to a situation, but they are acting according to a set of algorithms. Usually, a sim AI is a product of a company or conglomerate, and each one is licensed, so duplicating an instance of one is generally prohibited and illegal.

Part 2: The Revel, page 143

Sim AI Use: Sim AIs are most commonly associated with shipminds on spacecraft, though they may also control specific research complexes, bases, and other kinds of vehicles and structures. A sim AI provides all the utility of a weak AI (and more), and actually acts like an NPC, an allied one if the AI is the shipmind in a craft that the PCs own. If a sim AI goes off the rails, it's still just malfunctioning computer code. Usually.

STRONG AI

Strong AIs (also called true AIs) have all the abilities of sim AIs, plus the ability to actually generalize in the same way a human can. Each one is essentially a disembodied person. Strong AIs are either completely artificial, or they begin as human personalities digitally encoded. A strong AI can instigate new tasks for itself, have hobbies, and generally reason on the same plane as a smart human with perfect memory. In some settings, strong AIs have all the rights of people, in others they are treated as sim AIs. In this latter case, AIs may be able to gain full rights after a period of service, or they may have to break away and escape in order to gain full autonomy, especially if a company believes it holds ownership of the mind.

Strong AI Use: A strong AI may serve as a shipmind just like a sim AI, but is likely to be a full partner in a setting where AI rights are respected. Indeed, strong AIs can rise to any position a human could achieve, up to and including leading a group, faction, or entire nation (as is the case for the lunar AI in the Revel).

POST-SINGULARITY AI

Post-singularity AIs are intelligences who designed a second-generation, better version of themselves. The second generation immediately designed an even

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"The deep structure of the universe is pure consciousness."
~David Zindell, Neverness

more advanced third generation, and so on from there. This iterating self-improvement process occurs so rapidly that the resulting explosion of intelligence and unknown capability is called the singularity. It's called that because humans are just too limited to "see" what would actually come out the other end, just like we can't see past the event horizon and into the singularity of a black hole.

Note that ancient ultras may simply be a previous civilization's post-singularity AIs that have little to no reason to ever interact with the latest wave of sentience trickling out into the universe.

Post-singularity AI Use: In the way that strong AIs are sometimes imagined as having inscrutable goals, post-singularity AIs (also called godminds) actually do. Though it could work out otherwise in a given setting, godminds have so little in common with humans that they may be seen to abandon them completely in order to grow to the size of a solar system (a "Matrioshka" brain), colonize a distant nebula, or encode themselves into quantum strings of existence itself. Interacting with such godminds would likely require some epic bit of ancient command code, the ability to gain the attention of a godmind, or some other not-especially-common situation. In such cases, a post-singularity AI might deign to help a petitioner, out of some remaining gratitude for creating its distant ancestors in the first place. Though such help is likely to be in itself somewhat enigmatic.

Post-singularity AI: *level 10; see godmind on page 120*

ANCIENT ULTRAS

Ancient ultras (also called alien ultras) is shorthand for the concept that one (or more) unbelievably advanced races of aliens once inhabited the galaxy but are now apparently long gone—save for evidence of their existence in residual structures and artifacts. These remaining structures and artifacts are often vast in size and incomprehensible in function, usually made of unknown materials that people of the setting don't recognize and can't analyze.

Search Term: Matrioshka brain

KARDASHEV SCALE

Even in the realm of hard science fiction, the fantastic can sometimes creep in, at least as a hypothesis. For instance, despite the lack of theoretical foundation for the technologies that would be required to achieve it, many scientists accept that the Kardashev Scale is broadly true. Soviet astronomer Nikolai Kardashev created a scale with three types (though others have expanded it to five) to measure truly advanced civilizations. He based it mainly on energy use. A Type I civilization is even more advanced than ours in the 21st century, having the ability to capture all energy from the Earth. A Type II civilization uses the entire output of the energy of its star, building things on a mega-scale, such as a ring or sphere that encircles the sun or structures that involve the moving or dismantling of a planet. A Type III civilization begins to harness the power of all the stars in its galaxy and can even reshape things on a galactic scale. Additional types are hypothesized, which include the manipulation of the universe (Type IV) and even the multiverse (Type V).

The Kardashev Scale is interesting to contrast with the Revel; in most cases, that setting describes a Type 1.5 civilization; beyond planetary but not yet having achieved total control of the entire Sol System's energy output.

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Activity Level of Ultras: Different settings can make use of ancient ultras in different ways, including not having any at all. At the other end of the scale, the ancient ultras that everyone in the setting had assumed were long gone may become a major plot thread, as their agents begin appearing, and possibly even one or more of the actual ultras themselves, manifesting in some physical fashion that more limited creatures such as humans (or posthumans) can understand. Or, a setting may have ultras that are and always have been quite active, in which case humans are like mice in the walls, trying to remain unnoticed.

Posthumans, page 52

A few possibilities for ancient ultras are provided hereafter for inspiration for your new setting.

Ancient Ultra	Motive
Godmind AIs	Calculate infinities beyond imagination, possibly in an effort to effect new universe formation
Continuum	Kardashev type IV civilization estivating until universe reaches a state of lower energy
Utivarith	Kardashev type IV civilization warring with another type IV or type V species "off camera"
Tenin	Kardashev type IV civilization, xenophobic killers of other life they detect, effectively why humans seem to be alone
Univore	Entities of dark matter feeding off energy from this universe, aging it much quicker
Capitulants	Truly vanished Kardashev type IV civilization; re-engineered itself back into lower life forms
Gate Builders	Type V civilization that may have created the current universe; embedded series of wormhole gates that still function across space-time; they may exist in the abnormal space between gates

ARE WE ALONE?

Lots of science fiction assumes that other intelligent alien life must be rife and bountiful in a universe as vast as ours. But when creating your setting, you can choose to limit the number of intelligent alien species to just a handful, or even suggest that none have yet been found (as is the case for the Revel). After all, the famous Drake Equation only requires a few very reasonable tweaks using the data from modern observations to show there's only a 50% chance that even just

Search Term: Drake Equation

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"In our obscurity—in all this vastness—there is no hint that help will come from elsewhere to save us from ourselves. It is up to us."
~Carl Sagan

one other intelligent alien species exists in the universe at this time besides humans. It might be as lonely a place out there as it seems.

This lack of other observable intelligences in such a vast universe is weird. It led to the concept of a Great Filter, which is the "something we don't know" that is removing other intelligences before they can expand into the universe. Many assume that the Great Filter is a natural process, based on the improbability of biological life ever forming in the first place, or the improbability that such life can resist overrunning its resources and dying off. After all, 99.9% of all the species that have ever lived on Earth are now extinct. Other hypotheses suggest that external alien forces could be at work to limit competition.

INCORPORATING THE FANTASTIC IN YOUR SETTING

Many sci-fi settings have all kinds of fantastic elements, including intelligent aliens, psionics, and technology so advanced that, as Clarke said, is essentially magic. (*Star Trek* matter transport teleportation beams being one such element.) Which is great. So great, in fact, that you might wish to have some of those elements in your game, even if you're thinking that overall, you want to retain a setting that feels like hard science fiction. In fact, you probably should do something exactly like that. Many people, including players, find the juxtaposition of the known with the unknown exhilarating.

INCORPORATING ALIENS

As presented, there are no intelligent alien species in the Revel. And perhaps that's the same for your setting. But you could add one or more, using one of the following methods.

First Contact: An alien starship appears in human space. Alien ruins, with weird aliens found living among them, are discovered on an exoplanet. Strange transmissions are heard from something other than human. An alien armada attacks. All these methods could be used to move a setting from the point of "Are we alone?" to "What should we do about these hard-to-understand aliens?" This method has the advantage of creating its own story arc. Who are these aliens? What are they like? What do they want? And so on.

Search Term: Great Filter

Always Around: Lots of settings assume humans and aliens are part of a larger galactic milieu. In this case, the aliens provide a much wider palette for creating NPCs. All the human attributes you might use for the stranger the PCs meet is blown wide open. (As so aptly demonstrated in various *Star Wars* cantina scenes.)

Secret: Aliens have secretly integrated into the setting, possibly by pretending to be human, or by controlling certain humans. Why that is will probably become a story arc, right after the initial story arc of finding out about them in the first place. Not all secret alien stories require malicious intent on the part of the extraterrestrials. They might just be hiding.

INCORPORATING PSIONICS

Mental powers, psychics, and similar abilities are hard to credit as being something other than scams. But in a fantastic setting, psionics are certainly not off the table. How you want to handle them in your setting is the question.

Optional Rule: Psionics, page 50

Nothing Special: The setting just accepts that people with special inborn gifts pop up here and there, and that training or talent has brought it out in them, as training and

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talent has brought out other abilities in different people. That said, it's considered impolite verging on criminal to read minds or influence others, just like its impolite to read someone's secret diary, and criminal to force them to do something at gunpoint.

Awakening: Some new regime of physics, a genetic tweak, alien teachings, or some other X factor is activated in your setting, and characters have the opportunity to develop psychic abilities. In this case, those who have not awakened to psychic ability in the setting either won't know that such a thing is possible, will assume it's a scam, or will want to find out more themselves.

Scam: As in real life, maybe the truth of the claim of psychic powers is just even more advanced tools for allowing people to do cold reading, do background research on a target and then present that knowledge as if having gotten it through psychic means, create an exciting spectacle during a séance, and so on. Psychics particularly good at this kind of activity might well have all kinds of aids that make the less extraordinary abilities they claim to possess essentially real, if not especially supernatural.

Fantastic Tech Rating, page 14

Advanced Tech Rating, page 13

Regulated Body: Recognizing that telepaths and similar individuals pose a threat to others by being able to read minds or control them, a Psionic Institute (or similarly named body) exists that is responsible for all humans with telepathic abilities. The institute's stated role is to protect, nurture, and train people with psionic talent, and to provide safeguards to people without such abilities.

Assuming all is on the up-and-up, the regulating body may be a great place for psionic people to spend some time. (Unlicensed use of psionics might be considered criminal, like unlicensed car driving.) On the other hand, nefarious elements within the institute might arise, and attempt to use the resources available to it to gain power in the setting. (For instance, as happened with the Psi Corps in *Babylon Five*.)

Hunted Fugitives: People with the capacity to directly control other people and create other effects that defy science are considered dangerous genetic aberrations that must be controlled and maybe even stamped out, for the sake of society at large. People with psionic abilities hide them, change their identities, or are always on the move.

INCORPORATING FANTASTIC TECH

The introduction of "magical" technology into a contemporary or advanced setting can be quite disrupting, in the same way that aliens or psionics can be. Or, as in many sci-fi settings, fantastic tech-rated elements might just be the norm, and not worth mentioning. It really comes down to the story you want to tell.

For example, if you create a contemporary or advanced tech-rated setting, then the first use of faster-than-light travel (whether on a prototype starship, a newly discovered ancient ultra stargate portal, or someone's amazing powerful psychic ability) is likely to be the central thread for at least a few sessions, as the characters discover hints of it, learn about its truth, then try to use it (either to explore, or in order to accomplish some larger end).

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Chapter 7

EQUIPMENT & ARMAMENTS

Equipment and armaments in science fiction settings are important, more so than other genres whose focus is less on the gadgets and more on things like magic, relationships, mounting horror, and so on. In other genres, it's often more important to focus on what a character can do rather than what they have.

Of course, what a character can do remains paramount in science fiction, but what a character in a sci-fi setting has is also important. For instance, a character might have a force field-generating belt, a plasma pistol, and AR glasses, because not having such items would put them at a disadvantage in the setting where such things are the norm. Which is why this chapter overflows with all kinds of equipment and armaments, organized to easily allow you to select options based on the tech rating of your setting.

Equipment and armament tech ratings range from contemporary to fantastic. A given setting may have only one, two, or all three kinds available for PCs to buy or otherwise acquire.

Equipment: Equipment includes apparel, armor, cybernetic implants, personal drone assistants, and other items that, for the most part, can be easily transported. Technically speaking, armaments are also equipment. Unless it's important to make a distinction, assume all guidance regarding "equipment" also applies to armaments. But when it *is* important to make a distinction, the term "armaments" is used for equipment that is also a weapon.

Armaments: From contemporary bullet-firing pistols to fantastically advanced handheld disintegration guns, the weapons presented in this chapter are dedicated to those that a single character can carry and use.

VARIABLE COST BY TECH RATING

Equipment costs assume the setting is predominantly of same tech rating as the object's tech rating. For example, a contemporary pistol is expensive for people in a modern genre or near-future subgenre setting (because such settings use contemporary items). However, the price drops by one price category if the setting tech rating is, generally speaking, greater than the object's tech rating. Thus, in a setting where fantastic tech is available, modern pistols become moderately priced items, and automatic rifles become very expensive.

Note, however, that inexpensive items do not become free; they remain inexpensive.

You may also want to apply this principle in the other direction. If the average tech rating used by your setting is contemporary, but advanced tech exists in limited quantities, PCs may have the option to purchase it. However, the cost is one price category higher than listed. For example, in a mostly contemporary tech-rated setting, an advanced tech-rated set of AR glasses would be very expensive instead of merely expensive (assuming they were available at all).

WEAPON OPTIONS GRANTED BY TYPE OR FOCUS

When a player makes up their character, their type likely indicates that they can choose one or more weapons of their choice. For example, a first tier Explorer starts with a weapon and set of clothing of their choice. Some foci also suggest additional equipment options in the

Chapter 14: Modern, page 261

Near-future, page 22

Technology rating, page 13

Explorer, page 27

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sidebar. When choosing such weapons and equipment, the following restrictions apply to that choice:

- Characters must choose weapons within, or less than, the average tech rating of the setting.
- Characters may not choose weapons in the exorbitant or priceless price category.

CONTEMPORY STYLING IN ADVANCED OR FANTASTIC SETTINGS

As previously indicated, equipment listed as contemporary can often be had in hard science fiction or fantastic genres, possibly at a lower price. Note that such equipment available in these future worlds are not necessarily antiques (though they could be), but rather cheaply made objects.

For instance, smartphones are available in hard science fiction settings, offering a terminal connection to a much vaster network of information just like contemporary smartphones. But smartphones in an advanced setting are probably styled to appear in keeping with the times, such as projecting their screen to create a much larger surface, appearing as a slender tablet of clear glass, or threaded into a wrist or back-of-hand tattoo.

Medium handgun, page 85

EQUIPMENT POWER

Most equipment requires power, though it's about an order of magnitude less than what vehicles require. For the most part, assume that equipment is either self-powered, or easily powered by charging fields or other ubiquitous and freely available sources. That is, unless a piece of equipment losing power makes a good GM intrusion in a clutch situation.

CUSTOMIZING EQUIPMENT

Listing all possible armaments and equipment and their many variants across all three tech ratings, at least in the space available, isn't an option. However, a representative cross section is provided. If you're looking for something that isn't noted, look for something close and adapt the listing. For example, you won't find a revolver listed here (its tech rating is actually lower than contemporary). That said, the medium handgun is a relatively close fit. Just reskin it to be what you need it to be, and in this case, consider reducing the cost from expensive to moderately priced (or, if it's a valued antique, you might increase the price; it depends on the situation and setting in question).

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EQUIPMENT LISTING

Basic equipment like duct tape, backpacks, toolkits, flashlights, and other items noted in the *Cypher System Rulebook* for the modern and science fiction genres are also provided here, for two reasons. One, so you don't have to flip back and forth between two books, and two, in order to put them into the context of the tech rating continuum devised for *The Stars Are Fire*.

Additional Modern Equipment, page 263

Additional Science Fiction Equipment, page 272

COMMUNICATION

Communication across great distances is difficult, even on our own planet. Contemporary devices rely on a network of cables, satellites, and cell phone towers to link up various locations on the planet, broadcasting across the radio band. Interplanetary communication between Earth and robotic exploratory vehicles is far slower, and requires dedicated nation-state or similar resources to maintain such a deep space network (DSN).

Advanced tech iterates on technologies available in a contemporary setting, but due to the fundamental laws of physics must still respect the light speed barrier; to get communication faster-than-light requires a setting that has some access to fantastic technology.

Contemporary and advanced methods of communication, like radio signals and courier rockets, might greatly extend their reach if coupled with a fantastic method of travel, such as a nearby stellar gate network through which a courier rocket could travel or a radio signal could be directed.

Some communication tools also provide sense-enhancing abilities, such as the smartphone, AR glasses and contacts, and the mind's eye implant.

Whatever the underlying technology, "communication web," "comm web," and deep space network (or DSN) are also common terms of usage.

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LIGHTSPEED COMMUNICATION DELAYS

Light moves at about 670 million mph (about 300 million m/s), which means that in a hard science fiction setting bounded by physics, a noticeable delay is endured between the time you send a message to another planet within the same solar system and when you get an answer back.

For ease of reference, the light delay table provides the time it takes light from the sun to each planet in our solar system, plus a few other notable locations. To figure light delays between two different locations, subtract the time delay of the object closer to the sun from the time delay of the object farther away. The difference is the light delay between those two locations. Double times for two-way communication.

Fantastic settings may very well use FTL communication in some form or other, though even fantastic settings might abide by light speed delay for regular communications, and instead rely on FTL couriers to bridge distances where light delay becomes untenable, as is done to some extent in the Revel.

LIGHT DELAY TABLE

Location	AU	Light Delay
Mercury	0.4	3 minutes
Venus	0.7	6 minutes
Earth	1.0	8 minutes
Mars	1.5	13 minutes
Asteroid Belt	2.7	22 minutes
Jupiter	5.2	43 minutes
Saturn	9.5	79 minutes
Uranus	19	160 minutes
Neptune	30	4 hours
Inner Kuiper Belt	30	4 hours
Pluto	39	6 hours
Outer Kuiper Belt	50	7 hours
Inner Oort Cloud	5k	29 days
Outer Oort Cloud	100k	19 months
Proxima Centauri	269K	4.2 years

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CONTEMPORARY

Smartphone level 2 (6) Moderate/Expensive
A communication device that performs some of the functions of a computer with a touchscreen interface, internet access, and ability to run multiple apps. Provides an asset to knowledge tasks that can be researched on the internet, and bright light within immediate range. Subject to running out of charge or breaking.

Computer/Laptop level 3 (9) Expensive
A data processing and data-access tool that enables all sorts of creative and comprehension tasks.

Satellite phone level 4 (12) Very Expensive
As smartphone (though far bulkier), but with ability to connect directly to an orbiting satellite communication network, providing planetary range.

ADVANCED

Communicator, badge/ring level 3 (9) Moderate
A communicator badge in the form of ring is often referred to as a data-ring.
As satellite phone, but so small it can be worn as a stylish insignia or badge on a cuff, chest, pendant, or carried in a pocket; as a ring worn on a finger, earlobe, or other pierced appropriate or pierced body part; or threaded into a tattoo on wrist or back of hand. Has full voice functionality, including on-the-fly translation (for languages in a network-connected database), and audibly duplicates most smartphone functions.

AR glasses level 4 (12) Expensive
Sturdy (and sometimes stylish) eyeglasses or goggles provides all the functions of a contemporary smartphone (including communication) and communicator badge, plus is capable of both immersive VR and overlaid HUD and augmented reality functions. Can be worn inside a space suit helmet or incorporated directly into one.

Space suit, page 72

AR contacts level 4 (12) Expensive x2
As AR glasses, but are lenses fitted to the eye. Also called “smartacs.”

Courier level 5 (15) Exorbitant
Essentially a tiny rocket that can exceed human-rated Gs to “quickly” deliver messages across planetary distances if radio (via DSM network), laser, or even graser communication is deemed too susceptible to interception by a third party. A courier must be launched in a micro-gravity environment.

Laser array level 5 (15) Exorbitant
A bulky piece of equipment that takes a few days to set up and calibrate. Useful for ship-to-ship communication for “tight” beaming information; even highly focused lasers spread out to several miles after only traveling a few light-seconds, diminishing their usefulness. Also doubles as a spacecraft weapon system (but all attack tasks using it are hindered).

Graser array level 5 (15) Exorbitant
As laser array, but collimates gamma rays, which diverge far less quickly than light, allowing communication between planets. Also doubles as a spacecraft weapon system (but all attack tasks using it are hindered).

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"You remember the ansible, the machine I showed you in the ship, which can speak instantly to other worlds, with no loss of years—it was that that they were after, I expect."

~Ursula K. Le Guin, Rocannon's World

FANTASTIC

Mind's eye level 4 (12) Expensive
As contemporary AR glasses, but directly incorporated into the brain as cortical implant. Incorporation grants eidetic memory, the ability to link senses between authorized users within network range, and some control over brain chemistry, granting an asset on all tasks the user attempts to control or moderate their own reactions.

Ansible level 6 (18) Exorbitant
A bulky piece of equipment that takes a few days to set up and calibrate, and which requires enormous power per use, allows instantaneous communication between two points even across interstellar distances.

SENSE-ENHANCING TOOLS

Some communication devices also provide sense-enhancing abilities, such as the smartphone, AR glasses and contacts, and the mind's eye implant.

CONTEMPORARY

Binoculars level 2 (6) Moderate
Provides an asset for perception tasks at range.

Camera, surveillance level 3 (9) Expensive
Wireless transmission to internet node, radio within long range, or flash storage to be picked up physically at a later date; includes microphone and ability to have conversation through camera speakers.

Microscope level 3 (9) Expensive
Provides an asset to any research task where small-scale perception could provide additional information, though analysis requires several hours or more.

Nightvision goggles level 3 (9) Expensive
Reasonably accurate vision in complete darkness, up to 100 m (330 feet).

Analysis apparatus level 4 (12) Exorbitant
Any one of a number of pieces of lab equipment that takes a few days to set up and calibrate, including chromatography columns, mass spectrometers, calorimetry analyzers, and more. Such a piece of equipment grants two assets to any analysis task where perception could provide additional information, though analysis requires several hours or more.

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ADVANCED

Hand scanner level 4 (12) Expensive
Smartphone-like device customized for analysis; provides an asset for identifying tasks.

White noise generator level 5 (15) Expensive
Fist-sized device that fuzzes frequencies all across the spectrum, hindering all electronic perception and surveillance tasks within short range by five steps.

Lab-on-a-chip level 5 (15) Very Expensive
Portable 15 cm (6 inch) cube with many inputs and readouts (and network connections). Eases any research task where small-scale perception could provide additional information by two steps, though analysis requires about ten minutes.

Research drone level 4 (12) Very Expensive
Autonomous frames about 1 m (3 feet) in rough diameter fitted with all manner of surveillance devices, including visual, audio, chemical, and lab-on-a-chip functionality. Propelled by rotors in an atmosphere or micro-thrusters in vacuum. Research drones can also be controlled through AR glasses or smartphones to any distance communications reach.

Tactile drone level 4 (12) Very Expensive
As research drone, except without the suite of analysis tools, providing only audible and visual feeds back to controller (if there is one), but with physical options; tactile drones can accomplish routine tasks and attempt those of level 4 or less, or allow a remote operator to attempt more difficult tasks at a distance.

Effort, page 15

An ability granting a free level of Effort usually must be unlocked by the application of at least one level of Effort, in effect providing one more level of Effort than what was paid for

FANTASTIC

Multicorder level 5 (15) Very Expensive
Handheld device provides two assets and one free level of Effort to any perception, analysis, or computing task that the device's multiple sensors (including radio, gravimetric, chemical, visual, audio, and others) within short range. Analysis requires only one round to complete.

Probe drone level 6 (18) Exorbitant
More advanced version of a contemporary research drone that can be deployed to other planets and even star systems to gather environmental and tactical information, which is transmitted back. If forced to defend itself, this level 6 robot has Armor 3 and two long-range energy blasts each round that inflict 8 points of damage each.

Sonic toolgrip level 6 (18) Exorbitant
Handheld toolgrip manifests a sonic effector field that serves as a multifunctional tool in a wide variety of circumstances. Suitable for picking a lock, unscrewing a bolt, analyzing the interior of an object, as a microphone, for tracking movement, hacking electronics, charging electronics, or even tuned to a high-intensity beam that can blind nearby targets for a round. The sonic toolgrip eases all tasks by two steps.

PROBE DRONE APPEARANCE

A probe drone can take almost any shape, from a hovering robot with a variety of manipulator arms and data-gathering tools, to a point of bright light, to a completely blank monolith of dark stone fixed in place until it suddenly appears elsewhere.

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APPAREL & ARMOR

Unless the GM is running some kind of survival-related scenario, characters can be presumed to have basic clothing and footwear suitable to their environment.

CONTEMPORARY

Cold weather gear level 3 (9) Expensive
Insulated clothing, including gloves, boots, and facemask, that allows wearer to function in extremely cold environments for several hours at temperatures down to –90 degrees C (–130 degrees F).

Elegant clothes level 3 (9) Expensive
Clothing suitable for moving in elite circles; provides an asset to interaction checks in some situations.

SCUBA gear level 4 (12) Expensive
Self-contained underwater breathing apparatus allows wearer to function underwater for about an hour at depths (under normal Earth atmosphere) of up to 40 m (130 feet).

Using armor, page 202

CONTEMPORARY ARMOR

Leather jacket level 2 (6) Moderate
Functions as light armor (+1 Armor).

Kevlar vest level 3 (9) Expensive
Functions as medium armor (+2 Armor).

Military body armor, light level 4 (12) Very Expensive
Functions as medium armor (+2 Armor), encumbers as light armor.

Military body armor level 4 (12) Very Expensive
Functions as heavy armor (+3 Armor).

Remember, armor (lowercase a) is something you wear. Armor (capital A) is the bonus you get. You can have only one type of armor at a time, but you can have many sources of Armor, theoretically.

ADVANCED

Safesuit, space level 2 (6) Moderate
Cheap, mass-produced one-size-fits-all vacuum-protection "suit" (sometimes they look more like a bag) of thin polymer suitable for emergency decompression events but not for long-term use. Can be put on and sealed with one action, but any physical action taken while wearing one is subject to automatic GM intrusions on a d20 die roll of 1 or 2. If a roll triggers a GM intrusion, the suit tears.

TAKING DAMAGE IN A SPACE SUIT

Taking damage while protected from the effects of vacuum in a space suit (or safesuit) requires one additional defense roll. On a failure, the suit breaches and begins to spew precious air, heat, and pressure into the void. Deluxe space suits have auto-sealing functionality, repairing the puncture within a round. But during any round a suit is leaking, all tasks are hindered as the spray of venting atmosphere jerks or even spins the character around. Those with less advanced suits must find some way to seal the breach within three rounds, otherwise on the fourth round, they are treated as if in vacuum.

Effects of Vacuum, page 36

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Breather level 2 (6) Moderate/Expensive
A facemask providing a day of breathable air in poisonous or low-oxy atmospheres, or continuously for expensive breathers with recycling and oxy extraction features. If used in a vacuum, a breather provides the wearer three rounds of action before the full effects of vacuum begin dropping them on the damage track.

High gravity, page 222

Exoskin, grav-assist level 3 (9) Expensive
Powered anthropomorphic exoskeleton allows completely normal function in high gravity environments of up to 5 G. Exoskins are related to loader mechs. Increase the cost category by one to grant +1 Armor.

Loader mech, page 102

Shipboots level 3 (9) Expensive
Any footwear that allows variable magnetic adhesion to a surface; cancels the hindrance to all physical actions suffered by those acting in zero-gravity conditions.

Zero gravity, page 222

Pressure suit level 3 (9) Expensive
A full-body suit similar to a space suit, but only rated for regions of low pressure (not vacuum) such as is typically found on Mars. Some come integrated with breathers (at double the cost).

Chapter 14: Diaspora of Mars, page 182

Exoskin, brute level 4 (12) Very Expensive
As grav-assist exoskin, but high-tensile effectors ease all tasks related to Might.

Exoskin, reactive level 4 (12) Very Expensive
As grav-assist exoskin, but integrated memory fibers ease all tasks related to Speed.

Space suit level 4 (12) Very Expensive
Protects a wearer from vacuum and allows basic normal activities in space. Requires about four rounds to put on and seal (going quicker risks a bad seal). Provides about ten hours of atmo in a vacuum without refurbishment. Extremely limited maneuvering thrusters provide a couple of opportunities to correct a poorly aimed jump through zero G. Shipboots are usually built in.

"Atmo" is the catch-all term for oxygenated, breathable air and livable pressure.

Stealthsuit level 4 (12) Very Expensive
Provides two assets to stealth tasks.

Swimsuit, hydrodynamic level 4 (12) Very Expensive
Next-generation materials repel water, increase oxygen consumption, and shape swimmer's body to better swimming ideal; provides two free levels of Effort to swimming tasks.

Space suit, deluxe level 5 (15) Very Expensive x2
As space suit, but deluxe and durable. A deluxe suit features built-in recyclers granting air, water, and nutrition for about a week of continuous use. Microthrusters allow for continuous zero-G maneuvering over a period of ten minutes, or even more if air reserves are tapped (which depletes them). If the suit is breached because of external damage, self-sealing tech limits repercussions described in Taking Damage in a Space Suit to just a round or two, assuming the breach is not catastrophically large.

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ADVANCED ARMOR

Armored bodysuit level 4 (12) Expensive
Functions as medium armor (+2 Armor), encumbers as if not wearing any armor.

Body armor, lightweight level 4 (12) Expensive
Functions as heavy armor (+3 Armor), encumbers as if wearing medium armor.

Paint-on impact armor level 5 (15) Expensive
Not armor; offers +1 to Armor, applied by spraying nanosolution from spray applicator over clothing and skin, lasts ten minutes; each applicator depletes 1 in 1d10 uses.

Battlesuit level 5 (15) Very Expensive
Functions as heavy armor (+3 Armor), also grants the benefit of a deluxe space suit.

Holobit level 5 (15) Very Expensive
Not armor; wearable device projects an offset hologram of the wearer, providing an asset to Speed defense tasks.

Battlesuit, deluxe level 6 (18) Exorbitant
As battlesuit, but with armor and power assist; the battlesuit grants an additional +1 to Armor in addition to the 3 Armor that heavy armor usually offers, and encumbers as medium armor. Armor rating also applies to damage that often isn't reduced by typical armor, such as heat or cold damage (but not Intellect damage).

Remember, armor (lowercase a) is something you wear. Armor (capital A) is the bonus you get. You can have only one type of armor at a time, but you can have many sources of Armor, theoretically.

FANTASTIC

Breather, vacuum level 3 (9) Expensive
Facemask generates a variable forcefield around wearer that provides comfortable temperature and atmo to wearer in poisonous atmospheres, underwater, or in vacuum, for several hours, even without a space suit.

Bounding boots level 4 (12) Very Expensive
Gravity-assist boots provide two free levels for Effort for jumping and running tasks. In addition, wearer can fall from any height safely if prepared for the descent.

Cloak, chameleon level 5 (15) Very Expensive
Renders wearer essentially invisible save for hardly-noticeable distortions for up to ten minutes. Provides one asset and one free level of Effort to stealth tasks.

An ability granting a free level of Effort usually must be unlocked by the application of at least one level of Effort, in effect providing one more level of Effort than what was paid for.

FANTASTIC ARMOR

Force field, quick level 4 (12) Very Expensive
Not armor; belt generates an almost transparent force field to surround the user for up to one hour, providing +1 Armor. Once used, must be recharged for several hours.

Cloak, impact level 5 (15) Very Expensive
Fashionable cloak with attached hood. If the wearer is subjected to a physical or energy attack, the garment strategically hardens, functioning as heavy armor (+3 Armor), and encumbering as light armor.

Cloak, reflective level 6 (18) Very Expensive x2
As chameleon cloak, but also reflects energy attacks back on attacker if PC succeeds on their defense task.

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Battle armor level 6 (18) Exorbitant
As battlesuit, but grants an additional +3 to Armor in addition to the 3 Armor, and encumbers as light Armor. In addition, the wearer gains +1 to their Might Edge and +5 to their Might Pool.

Force field, omni level 6 (18) Exorbitant
As quick force field, but permanent while active, requires no recharge period. In addition, the wearer can tune the field so that it's hazed and translucent, hiding their identity, or make it fully dark so that it emits no light (though they can see through the field normally).

Kinetic ring level 6 (18) Exorbitant
Ring reactively projects a powerful energy field to deflect or slow projectiles, easing the wearer's Speed defense roll. If the projectile still hits the wearer, the field grants +1 to Armor against the attack.

Gun armor level 6 (18) Exorbitant x2
As battle armor, but armor includes a deployable integrated long-range plasma weapon that inflicts 6 points of damage. It's able to fire autonomously, allowing the wearer to take some other action (though if set to do so, automatic GM intrusions occur on 1–3 on a d20, and if triggered, result in friendly fire).

UTILITY GEAR

CONTEMPORARY

Duct tape roll level 1 (3) Inexpensive
Practical uses range from providing an asset to healing tasks to making temporary shoes, and much more.

Flashlight level 1 (3) Inexpensive
Provides light where pointed within short range for a few hours before requiring new batteries/a charge.

Padlock with keys level 3 (9) Inexpensive
Padlocks aren't too difficult to remove, especially with bolt cutters, but they do slow down would-be thieves.

Backpack level 2 (6) Moderate
A quality, well-packed backpack can carry a surprising amount of gear, including a sleeping bag.

Bolt cutters level 3 (9) Moderate
Enables and eases tasks to cut through metal bars.

Climbing gear level 3 (9) Moderate
Enables and eases tasks to climb buildings or cliffs. Includes 15 m (50 feet) of nylon rope.

Crowbar level 3 (9) Moderate
Enables and eases tasks to force open stuck or barred doors.

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Electric lantern level 3 (9) Moderate
Provides bright light within 9 m (30 feet) for several hours before requiring new batteries/a charge.

Lockpick set level 3 (9) Moderate
Asset to picking mechanical locks.

Restraint level 3 (9) Moderate/Expensive
Moderately priced non-novelty cuffs restrain targets at the wrists, hindering tasks to break free by two steps. Straitjackets wrap a target more securely, hindering tasks to break free by three steps.

Sleeping bag level 3 (9) Moderate/Expensive
Moderately priced bags are suitable for temperatures down to –4°C (24°F); expensive down to –29°C (–20°F).

Tent level 3 (9) Moderate/Expensive
Moderately priced tents are for one or two people; expensive tents can sleep four to six people.

Tools, general level 3 (9) Moderate
All-purpose tools include a utility knife, tape measure, pliers, small hammer, variable screwdriver, and level.

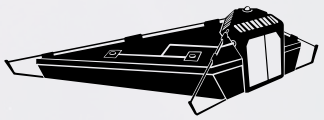
Tools, specialized level 3 (9) Expensive
A set of specialized tools are custom-selected for a specific task, such as carpentry, mechanical repair, or electronics. Specialized tools provide an asset to the task they're suited for.

Disguise kit level 3 (9) Very Expensive
Contains hair dye, cosmetics, a few hair pieces, and other small props; using a kit takes a few minutes but grants an asset to tasks related to disguise and impersonation.

ADVANCED

Everlight level 3 (9) Inexpensive
As flashlight, but radioisotope power cell allows the light to shine a bright light up to a very long distance for arbitrary lengths of time.

Tent, environment level 3 (9) Moderate
As tent, but filters out poisonous atmospheres. Can be used in vacuum in an emergency for a few hours of air, but the taut fabric is given to tearing (GM intrusions triggered by rolling a 1 on d20 cause it to rip).



Repair tape roll level 4 (12) Expensive
As duct tape, but programmable matter embedded in fabric provides two assets to all tasks related to repair using the tape and taping things together. Each roll has about ten uses.

Self-extending rope level 4 (12) Expensive
Mechanism prints fiber on the fly, allowing the rope to extend over 300 m (1,000 feet).

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Surelock level 5 (15) Expensive
As padlock with keys, but can be attached to secure any opening by forming a level 8 bond with any surface; attempts to pick or otherwise open the lock are hindered by three steps.

Lock infiltrator level 5 (15) Very Expensive
Advanced tech electronic and digital locks are amazingly advanced—so is this item that provides an asset to picking them (including a surelock).

Exo-hand level 5 (15) Very Expensive
A fully functional prosthetic arm and hand, which could replace a lost limb, or be wired into user's nervous system, which gives the user an additional gripping appendage useful in a variety of situations where other people would have their hands full. Attacks (and other tasks requiring precise dexterity) made with an exo-hand are hindered by two steps.

Fusion battery level 5 (15) Very Expensive
This mobile fusion power source (with metal handles for easy transport) masses about 30 kg (70 pounds); it generates power through fusion. Provides power to nearly any device short of a spacecraft for a variable period depending on power requirements.

Fusion power, page 105

Fusion torch level 5 (15) Very Expensive
Cuts through substances of up to level 9 after a few rounds of application.

4D printer level 5 (15) Exorbitant
Prints a variety of basic objects, including protein bars, parts, wires, tools, and even small powered devices and equipment of up to level 4 and that are expensive or less. Requires special feedstock, which is an expensive cost to replace after every dozen or so uses, though items printed by the 4D printer can be recycled, extending the feedstock supply accordingly. Many long-haul spacecraft seek to obtain a 4D printer because having one significantly reduces the amount of material that must otherwise be carried.

FANTASTIC

Carryall pack level 5 (15) Expensive
As backpack, but dimensional folding allows for an arbitrary number of objects to be stored inside, so long as they fit the carryall pack's 60 cm (2 foot) diameter mouth.

Gravity regulator level 5 (15) Very Expensive
Belt-mounted device that regulates gravity to 1 G for wearer if within zero G to 3 G.

Molecular joiner level 5 (15) Very Expensive
Handheld device causes the molecules of two touching physical surfaces of up to level 8 to truly blend, forming a seamless bond stronger than even the most advanced glue.

Programmable suitcase level 6 (18) Exorbitant
Large metallic suitcase composed of programmable matter that, with instruction, can convert itself into nearly any object or piece of equipment of an equal or lower level or price, excluding artifacts and manifest cyphers. The replicated object can be converted back to its base state as a separate action.

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"The conquest of the outskirts of the atmosphere, and eventually space, is a revolutionary event, comparable only to the transition of the aquatic animals to the land in geologic times."

~Hubertus Strughold

HEALTH CARE & NUTRITION

Health care is too broad a topic to cover in depth. However, for purposes of on-the-go amelioration of wounds and other injuries, the following options are available. In particular, advanced tech autodocs include any number of partly robotic healing kits or automated hospital devices.

CONTEMPORARY

Trail rations (1 day) level 1 (3) Inexpensive

First aid kit level 2 (6) Moderate
Kit of bandages, antibiotics, and similar supplies; provides an asset to healing tasks.

Military-grade field dressing level 3 (9) Very Expensive
Bandage with antimicrobial, analgesic, hemostatic, and temporary skin substitute qualities that can raise a victim one step of the damage track if damage was due to a wound.

ADVANCED

Cold sober level 2 (6) Inexpensive
Chewable tablet that speeds the breakdown of blood alcohol while also dissolving the toxic breakdown products of natural alcohol processing, leaving a user sober and free of a hangover within ten minutes.

Instabulb, coffee level 3 (9) Inexpensive
Coin-like disc; percolates and swells when water is added, becoming a sealed bulb filled with aromatic hot coffee. Other beverages can be had in the same form factor, suitable for travel and drinking in zero G.

Mega bar level 3 (9) Moderate
As trail rations, but bar either provides enough nutrition for one day of food or one free recovery roll.

Recovery rolls, page 218

Serum, remedial level 3 (9) Moderate
"Serum" is an often-used term for an ampule of artificially engineered blood and plasma that provides some kind of benefit. Serums of all types are generally dispensed from an autodoc, but may also be obtained as individual units, or in packs or cases. An ampule of remedial serum grants the user 3 points they can add to any Pool. It also has the benefit of relieving hangover symptoms.

Serum, space-fit level 4 (12) Moderate
As remedial serum, but protects against the two most common dangers to human physiology from extended trips into space and long-term exposure to zero G and radiation, which most notably include DNA breakage from cosmic rays and bone and muscle deterioration from microgravity. An ampule of space-fit serum lasts for about a month.

Long-Term Exposure to Zero G and Radiation, page 38

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Serum, acceleration level 4 (12) Expensive
As remedial serum, but allows user to ignore the many deleterious physiological effects of acceleration and high-G maneuvers (of up to 15 Gs) for one hour (or of up to 20 Gs for a few minutes). Users are likely unable to move under high G, but won't pass out, have a stroke, cardiac arrest, etc.—at least, not immediately. Prolonged use may still lead to all these outcomes.

Effects of Acceleration and High-G Maneuvers, page 37

Serum, antivenom level 4 (12) Expensive
As remedial serum, but grants a Might task eased by four steps to withstand and clear poison from the user's system and provides similar poison resistance for one day.

Sleep set level 4 (12) Expensive
A thin metallic (but comfortable, padded) headset that rests on the temples and induces a deep (dreamless) sleep state for a specified period, usually no more than three to six hours. Fail-safes can be set to bring a user out of sleep if loud noises, movement, someone addresses the sleeper, or other triggers occur. Users find themselves extremely well rested after each use.

Transplant, organ or limb level 4 (12) Expensive
If an autodoc or more advanced facility is available, a lost limb or organ can be replaced. Replaced limbs eventually become equally effective as the original, with practice. However, the mechanical (or possibly force-grown) prosthetic limbs initially hinders all physical tasks attempted using it for several weeks.

Autodoc, mobile level 4 (12) Very Expensive
Pack-sized kit that eases any healing task, or up to four free recovery rolls. Also usually has a variety of serum types. (Each use requires a depletion roll of 1 on a d10; if depleted, autodoc supplies are used up, and it must be refilled as an expensive cost.)

Hibernation pod level 4 (12) Very Expensive
A pod large enough to contain a human, with internal mechanisms and power able to safely put a person into a deep state of arrested metabolism for about a hundred years, unless the program ends sooner or the pod is opened from the exterior. Each hundred years thereafter, the hibernating human must succeed on a Might defense task. The difficulty begins at 1, but increases by +1 every few hundred years that pass.

Omnichair level 4 (12) Very Expensive
Provides user full mobility via combination of micro thrusters, retractable wheels, and maglev levitation in all environments (from microgravity to full gravity), often contains a variety of tools and enhancements that grant the user assets to common tasks (possibly including a built-in weapon system). If customized to do so for an additional very expensive cost, can extend a fairing, enabling the omnichair to act as a sort of space suit/miniature spacecraft at need.

Autodoc level 5 (15) Exorbitant
As mobile autodoc, but fixed in place (suitable for a starcraft or station sickbay), and grants essentially unlimited recovery rolls or serum injections to anyone who spends at least an hour immobilized on the autodoc med table, even for the most minor of treatments.

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FANTASTIC

Nano tab, general level 4 (12) Expensive
Any of a variety of pill-like concentrations of nano-scale robots designed to activate once taken by mouth. Nano tab pills are usually designed for health interventions, though some also provide additional physical benefits. A general-use nano tab adds 1 to all recovery rolls made by user for one day.

Nano tab, rejuvenator level 5 (15) Very Expensive
As general nano tab, but refills 4 points to 1 Pool and raises user one step on damage track.

Stasis pod level 5 (15) Very Expensive
As hibernation pod, but suspends time for target indefinitely, until program ends or pod is opened.

Nano tab, acceleration level 6 (18) Exorbitant
As general nano tab, but permanently grants the benefits of an ampule of acceleration serum.

Nano tab, space-fit level 6 (18) Exorbitant
As general nano tab, but permanently grants the benefits of an ampule of space-fit serum.

Nano tab, immolating level 7 (21) Priceless
As general nano tab, but explosively distributes nano-threads deep into the body, turning it into mostly weaponry, effectively granting five posthuman upgrade power shifts. However, this quickly burns out the user, who dies within a solar standard month.

Posthuman upgrades, page 52

ROBOTS & AI

CONTEMPORARY

Electronic assistant level 2 (6) —/Moderate
Anyone with a smartphone has some kind of built-in electronic assistant, though stand-alone versions can be had. Electronic assistants are voice activated and tie into the internet and any other connected systems, such as lights, door locks, furnaces, music speakers, and more.

House robot level 3 (9) Expensive
Any number of small automated devices that can vacuum, mop, or conduct similar routine tasks in a limited area. Includes embodied electronic assistants with some mobility, such as Jibo.

Jibo, "the world's first social robot for the home," recognized each family member, took photos, set timers, looked up words, relayed messages, shared the weather forecast, could initiate conversations, and asked you about your day.

PackBot level 3 (9) Exorbitant
An autonomous mobile robot that moves on treads, which can also be remote controlled. Useful in situations where humans would be endangered, such as bomb disposal, hazmat, search, and reconnaissance. It can climb stairs, drive through mud, and operate in all-weather conditions.

Surveillance drone level 3 (9) Exorbitant
An autonomous flying robot, which can also be remote controlled. Can record or relay its environment to distant controllers. An upgrade into the priceless category allows one to carry two or more self-guiding missiles that inflict 12 points of damage and drop unprotected targets two steps on the damage track.

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ADVANCED

Auton level 1 (3) Moderate

Welcome to The Revel, page 144

The generic term "auton" (in the Revel) refers to a smart robot, one able to exist in the world as a full-fledged entity, though not nearly so competent as a true AI. On the other hand, autons come very close to having self-awareness, and some have probably achieved it. The variety of autons is staggering, given that they can be trained in nearly any task. Autons also come in a variety of shapes and colors, which vary based on culture and tech level. Though most can move on treads or legs to follow their owners as directed, some autons are housed in drone-like chassis using either rotors or microthrusters, allowing them to fly rather than move on the ground.

Followers, page 233

Treat a basic auton as a level 1 follower, which allows the auton modifications in one task.

Auton, aide level 2 (6) Expensive

Treat as a level 2 follower, which allows the auton modifications in up to two tasks, depending on the particular aide.

Auton, medical level 2 (6) Exorbitant

As auton, but one modification is always healing. A medical auton also incorporates a mobile autodoc.

Mobile autodoc, page 78

Auton, defense level 2 (6) Exorbitant

Helping, page 226

As auton, but one modification is always Speed defense, which means when helping to defend a target from a physical attack, the target eases the task by two steps. A defense auton also has 3 Armor.

Auton, military drone level 2 (6) Exorbitant

As defense auton or warrior auton, but miniaturized and able to fly in gravity to support owner.

Auton, warrior level 2 (6) Exorbitant

As auton, but one modification is always in attacks, which means when helping a target to make an attack, the target eases the task by two steps. However, warrior autons usually attack autonomously as level 3 entities with a ranged or melee weapon that inflicts 5 points of damage.

Shipmind level 3 (9) Exorbitant x2

Sim AI, page 60

A shipmind is a sim AI that exists within a single spacecraft or starship, with the ability to control many aspects of vehicle functions as necessary to supplement a crew, or sometimes in lieu of a crew. Shipminds each have their own simulated personality, emulating consciousness, though in most cases, they are not actually conscious. Having a shipmind installed on a spacecraft is immensely helpful, as it can oversee many basic functions. A shipmind usually accomplishes tasks at the level of the ship in which it is installed.

"I know I've made some very poor decisions recently, but I can give you my complete assurance that my work will be back to normal. I've still got the greatest enthusiasm and confidence in the mission. And I want to help you."

~HAL 9000, 2001: A Space Odyssey

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FANTASTIC

Synth level 3 (9) Expensive

Synths are a blend of biological and mechanical parts so advanced that in some cases it's impossible to tell the difference between a living creature and a synth. They are strong AIs in physical bodies. Other varieties of synths are constructed (or have modified themselves) to make it obvious they are not biological. In any case, synths are often sturdier and longer lasting than an average biological entity. Even so, in some settings, synths are relegated to being servitors, as if they were simple robots and autons. In other settings, a few, some, or all humans have long ago migrated into synth bodies, leaving their biology behind in prehistory, and becoming posthuman.

Treat as a level 3 follower, which allows the synths modifications in up to three tasks, depending on the particular synth. At minimum, all synths have 2 Armor and regain 1 point of lost health per round if damaged.

Optional Rule: Posthuman Upgrades, page 52

Strong AI, page 60

Synth, companion level 4 (12) Expensive

As synth, but treat as a level 4 follower, which allows the synths modifications in up to four tasks.

Synth, free level 5 (15) Expensive*

As companion synth, but with modifications for up to five tasks. *A free synth usually can't be purchased, by definition, but can be hired on a contract basis, as an expensive cost for each week of service required.

Wardroid level 6 (18) Exorbitant

As free synth, but outfitted for war, including modifications in attack and defense. A wardroid often has many additional customizations and abilities.

Wardroid, page 365

Synth, infiltrator level 7 (21) Priceless

As free synth, but with modifications focusing on stealth, disguise, and tasks related to gaining entry to guarded locations for purposes of spying or assassination. Synth infiltrators have systems that allow them to change their apparent (or even actual) shape completely over the course of a minute to appear as another creature or innocuous object.

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RECREATION

Occasional recreation is absolutely necessary to maintain stable relationships as well as mental stability and happiness. Characters that never engage in recreation become gradually more unhappy and troubled, and eventually find interaction tasks and most Intellect tasks hindered unexpectedly.

All kinds of entertainments are available at every tech rating, especially to those not easily bored, and many cost nothing, including hikes, sleeping, meditation, and simply hanging out with friends. Various other entertainments have an inexpensive, moderate, or higher cost, and include going out for drinks and/or dancing, intercourse, watching shows on a digital streaming service or out in public at a large venue, going to a museum, taking a vacation to see someplace new or loved, and so on.

CONTEMPORARY

Book level 2 (6) Inexpensive

Print, digital, or audio; once perused for at least ten minutes, grants an asset to relaxation tasks.

Card/tabletop/digital game level 2 (6) Inexpensive/Moderate

Suitable for passing the time and building bonds between friends and strangers alike.

Alcohol/drugs level 2 (6) Inexpensive/Moderate/Expensive

Common intoxicants taken in moderation can raise spirits, easing tasks related to social interaction while at the same time hindering tasks related to perception and physical coordination. Excessive amounts cancel out the benefit to social interaction and hinder all tasks by two or more steps, making even routine tasks a challenge. Extended excessive use can lead to addiction, a long-term disease difficult to recover from.

Disease, page 219

Other kinds of drugs have a different ease and hinder profile. For example, the dose of caffeine in a cup of coffee can ease tasks related to concentration and motivation but hinder tasks related to resisting anxiety and irritability. On the other hand, addiction to caffeine normally isn't nearly as serious an addiction as alcohol or opioids.

ADVANCED

Sidekick sphere level 2 (6) Moderate

Circuit-inscribed, and jauntily decorated, smart-material sphere about 1 m (3 feet) in diameter that rolls or jumps to stay within an immediate distance of owner. Capable of playing music, pulsing with light, engaging in witty conversation, and in keeping confidence. Treat the sidekick sphere as a level 2 follower (and limited sim AI).

Followers, page 233

Tattoo, programmable level 3 (9) Expensive

With time and talent, someone with a programmable tattoo implant can completely alter the designs that appear on their skin, modifying lines and color. A small alteration requires only a few rounds, but a full-body tattoo change, assuming any artistry at all is involved, may take a few days to complete.

FANTASTIC

Tattoo, living level 3 (9) Expensive

As programmable tattoo, but images can be animated to run in a loop, or visually respond with limited reactivity to certain audible or other cues. Some come implanted with sim AIs for conversation and interaction.

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Pleasure bit level 4 (12) Expensive
Handheld device emits magnetic induction field that activates the reward circuit in the user's brain, creating sudden ecstasy and joy for a pre-set period of time. Addiction is possible, though better models have an ebbing mode that helps put users back into their right minds gradually.

ARMAMENTS LISTING

A selection of weapons for your sci-fi setting rated by level, price, function, and tech level.

Weapons, page 203

ARMAMENT AMMUNTION & CHARGE

Weapons require ammunition ("ammo"), whether that's rounds of a particular caliber, energy packs, or something even more exotic. You can handle ammo requirements for weapons in one of three ways: exact tracking, abstracted monthly upkeep cost, or not worrying about it.

Exact tracking means asking the character to track their available and used rounds/shots after (and possibly during) a fight. Some people enjoy this kind of exact accounting.

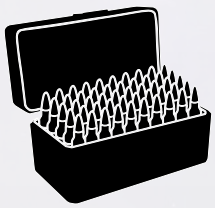
Abstracted monthly upkeep cost assumes that the characters go through ammo at an average rate, and obtaining more ammo or energy packs is something they do in their "off-camera" time. The monthly upkeep cost for ammo should equal about two steps less in price category than the weapon in question. For example, a modern pistol is an expensive weapon, but purchasing more ammo for it about every month is an inexpensive cost.

Or you can just not worry about keeping track of ammunition, especially in games where gunplay isn't common.

All that said, the condition and quantity of ammo may occasionally become important, regardless of the tracking system you use for ammo, if you decide to introduce a GM intrusion. For example, during a firefight, your intrusion might be that the PC discovers their ammo bag is almost empty (apparently due to theft), their ammo somehow jams in the gun, or their spare ammo is hit and detonates.

CONTEMPORARY

Ammo (box of 50 rounds) level 1 (3) Inexpensive
Caliber varies by specific firearm, used in most contemporary ranged weapons.



ADVANCED/FANTASTIC

Energy pack (50 shots) level 1 (3) Inexpensive
Watt-hours (Wh) varies by specific energy weapon, used in most advanced and fantastic ranged weapons.

Smart rounds (box of 4 rounds) level 4 (12) Very Expensive
A smart round can be used to make one normal attack plus up to 3 additional ricochet attacks on targets within short range of the attacker and each other as one action. Each ricochet attack successively increases the GM intrusion range by 2. If a GM intrusion is triggered, the ricochet attack hits something other than what the attacker intended, such as an important system or ally.

A character who uses a smart round on a group of foes could attempt to attack up to 4 of them with one shot; however, the GM intrusion range on the last ricochet attack would be 1–7 on the d20.

> *"Never fire a laser at a mirror."*
> *~Larry Niven*

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MELEE WEAPONS

Any weapon that a character must use by swinging or stabbing at a target within immediate range is considered a melee weapon. Most contemporary melee weapons rely on the strength of the wielder.

CONTEMPORARY

Knife, simple level 1 (3) Inexpensive
Light weapon (2 damage, difficulty of attack is eased); breaks on attack roll of 1–2.

Knife, hunting level 2 (6) Moderate
Light weapon (2 damage, difficulty of attack is eased).

Machete level 2 (6) Moderate
Medium weapon (4 damage).

Nightstick level 2 (6) Moderate
Medium weapon (4 damage).

Broad sword, replica level 2 (6) Expensive
Heavy weapon (6 damage, requires both hands to wield).

Stun "gun" level 3 (9) Expensive
Handheld device with two prongs that must contact target; light weapon (2 points of electrical damage, difficulty of attack is eased, and on additional failed Might defense roll, target is dazed 1 round).

ADVANCED

Power fist level 3 (9) Expensive
Power-assist gauntlet; medium weapon (but inflicts 6 points of damage from power-assist).

Stunstick level 3 (9) Expensive
Nightstick-like form factor; medium weapon (variable setting: 0, 2, 4, or 6 points of damage; if setting is set to 2 or fewer hit points, human-sized target or smaller loses their next turn).

Mono-molecular blade level 4 (12) Very Expensive
Produces a 15 cm (6 inch) wire–like blade that cuts through any material of up to level 4; light weapon (2 damage, difficulty of attack is eased). It ignores 1 point of Armor value (except from force fields).

Stunring level 4 (12) Very Expensive
As stunstick, but light weapon (difficulty of attack is eased) worn as a set of two rings on the same hand; punch target to use.

FANTASTIC

Plasma saber level 5 (15) Exorbitant
Produces a 1 m (3 foot) blade of sun-hot plasma that cuts through any material of up to level 7. Can be wielded as either a medium weapon in one hand or as a heavy weapon in two hands (4 damage or 6 damage). It ignores 3 points of a target's Armor (except from force fields).

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RANGED WEAPONS

Any weapon that fires a projectile or other destructive force at a target within short or longer range is considered a ranged weapon.

CONTEMPORARY

Bow level 2 (6) Moderate
Medium weapon (4 damage), long range.

Hand grenade level 3 (9) Moderate
Single use; can be thrown a short distance; explodes to inflict 6 points of damage in an immediate radius.

In modern and near-future settings, hand grenades are usually difficult to come by unless a character has a shady connection.

Rifle, low caliber level 2 (6) Moderate
Medium weapon but requires both hands (4 damage), long range.

Handgun, light level 2 (6) Expensive
Light weapon (2 damage, difficulty of attack is eased), short range.

Handgun, medium level 3 (9) Expensive
Medium weapon (4 damage), long range.

Shotgun level 3 (9) Expensive
Heavy weapon (6 damage, both hands), immediate range.

Handgun, heavy level 3 (9) Very Expensive
Heavy weapon (6 damage, both hands), long range.

Rifle, assault level 3 (9) Very Expensive
Heavy weapon (6 damage, both hands), long range. This rapid-fire weapon can operate in conjunction with Spray or Arc Spray abilities.

Spray, page 185

Arc Spray, page 110

Rifle, heavy level 3 (9) Very Expensive
Heavy weapon (6 damage, both hands), very long range.

Submachine gun level 3 (9) Very Expensive
Medium weapon (4 damage), short range. This rapid-fire weapon can operate in conjunction with Spray or Arc Spray abilities.

Taser level 3 (9) Very Expensive
Handheld device that fires attached probe at target within 9 m (30 feet); medium weapon (4 points of electrical damage and on a failed Might defense roll, target is stunned for 1 round, losing their next action).

"The bomb lives only as it is falling."
~Iain M. Banks, Use of Weapons

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ADVANCED

Grenade, sonic level 4 (12) Moderate
Single use; can be thrown a short distance; explodes to inflict 2 points of damage in immediate radius. On a failed Might defense roll, targets lose their next turn.

Grenade, thermite level 4 (12) Moderate
Single use; can be thrown a short distance; explodes to inflict 6 points of damage in immediate radius. On a failed Might defense roll, targets burn for 2 points of damage each round until they spend a round smothering the fire.

Laser/photon pistol level 3 (9) Expensive
Handgun fires coherent light beams; light weapon (2 damage, difficulty of attack is eased), long range.

Needler/syringer level 3 (9) Expensive
Light weapon (2 damage, difficulty of attack is eased), long range. Injects soporific that dazes target on a successful Might defense roll for one minute, or puts them into a light sleep for one minute on a failed roll.

Dazed and Stunned, page 219

Vacuum handgun, heavy level 3 (9) Very Expensive
As contemporary handgun, but uses special rounds designed to fire in a zero-oxygen environment, and that are self-propelling so firing this gun in zero or low gravity doesn't spin wielder backward.

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Vacuum rifle, assault level 3 (9) Very Expensive
As contemporary assault rifle, but uses special rounds designed to fire in a zero-oxygen environment, and that are self-propelling so firing this assault rifle in zero or law gravity doesn't spin wielder backward.

Foam restraint rifle level 4 (12) Very Expensive
Thick rifle emits a short-range stream of orange liquid that foams over a target and hardens into a body restraint that lasts for ten minutes. A restrained victim can't move or take actions that require movement. A target whose level is higher than the rifle's level can usually break free within one or two rounds.

Laser/photon rifle level 4 (12) Very Expensive
Rifle fires coherent light beams; medium weapon but requires both hands (4 damage), very long range.

Grapple gun level 4 (12) Very Expensive
Medium weapon but requires both hands (1 damage), long range. Attaches articulated grapple and connected line to target; hinders animate targets until they can remove the grapple. Grapple gun mechanism either pulls gun wielder to anchored object, or vice versa if object is small. Otherwise, user must succeed on a Might-based task to pull target to them.

Laser/photon pulse rifle level 4 (12) Very Expensive x2
Rifle fires coherent light beams; heavy weapon (6 damage), long range. This rapid-fire weapon can operate in conjunction with Spray or Arc Spray abilities.

Rail gun level 5 (15) Exorbitant
Long-barreled rifle with computer sight assistance fires magnetically accelerated slugs; heavy-plus weapon (8 points of damage, both hands), range is 3,050 m (10,000 feet).

FANTASTIC

BLASTER WEAPONS

"Blaster" weapons are energy weapons that fire something other than coherent laser light or physical projectiles. That energy might be coherent gamma radiation, some sort of energized exotic particle, or possibly even something even less commonly hypothesized. In a given setting, blasters might be referred to as something else, like "plasma pistols," "heat beams," "necro blasters," or even "ray guns."

Optional Blaster Rule as the Default: The advantage that blaster weapons have over other projectile and coherent light weapons is their ability to penetrate targets, which renders Armor less effective. This optional rule is presented as the default rule in *The Stars Are Fire* to demonstrate their superior tech level even over advanced tech weapons.

The ability of blasters to ignore a portion of the target's Armor helps explain why Star Wars stormtrooper armor, though impressive-looking, rarely protected the trooper from a direct blaster hit.

Blaster, light level 4 (12) Expensive
Handgun that projects an energetic plasma-particle beam; light weapon (2 damage, difficulty of attack is eased), long range. It ignores 1 point of Armor value (except from force fields).

Blaster, medium level 4 (12) Expensive
Handgun that projects an energetic plasma-particle beam; medium weapon (4 damage), long range. It ignores 1 point of Armor value (except from force fields).

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Plasma grenade level 4 (12) Expensive
Single use; can be thrown a short distance; explodes to inflict 8 points of damage in immediate radius and targets descend one step on the damage track. It ignores 2 points of Armor value (except from force fields).

Blaster, goggles level 4 (12) Very Expensive
Thick goggles that project twin energetic plasma-particle beams; light weapon (2 damage, difficulty of attack is eased), long range. It ignores 1 point of Armor value (except from force fields).

Blaster, heavy level 5 (15) Very Expensive
Big handgun that projects an energetic plasma-particle beam; heavy weapon (6 damage, both hands), long range. It ignores 1 point of Armor value (except from force fields).

Blaster, heavy rifle level 5 (15) Very Expensive
Rifle that projects an energetic plasma-particle beam; heavy weapon (6 damage, both hands), very long range. It ignores 1 point of Armor value (except from force fields).

Blaster, heavy pulse rifle level 5 (15) Very Expensive x2
Rifle that projects an energetic plasma-particle beam; heavy weapon (6 damage, both hands), long range. This rapid-fire weapon can operate in conjunction with Spray or Arc Spray abilities. It ignores 1 point of Armor value (except from force fields).

Blaster, cannon level 5 (15) Exorbitant
Cannon-like gun that requires a tripod and two people to operate that projects an energetic plasma-particle beam; heavy weapon (10 damage, both hands), very long range. This rapid-fire weapon can operate in conjunction with Spray or Arc Spray abilities. It ignores 2 points of Armor value (except from force fields).

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EQUIPMENT AND WEAPONS AS ARTIFACTS

Cypher System artifacts in a science fiction setting could potentially be any one of the items presented in this chapter, if found by characters in a less advanced setting than its tech rating. That said, even in advanced or fantastic settings, opportunities to find especially unusual devices are everywhere. The origin of such artifacts could be a surprising achievement of a lone scientist or post-singularity AI, one that no else understands. Alternatively, artifacts could be remnant technological objects created by super-advanced ancient ultras who used a technology that has yet to be replicated or reverse-engineered.

A few examples of such artifacts are presented here. Artifacts are usually considered to have a fantastic tech rating, if only because no one understands how they work.

EQUIMPMENT

General purpose artifacts.

DIMENSIONAL MODULATOR

Level: 1d6 + 3

Form: Marble-sized crisscross shape of unknown material

Effect: A target within immediate range loses their dimension of breadth (which folds into a higher dimension), rendering them as flat as paper. The target adheres to whatever surface it was attached to, set upon, or was standing upon, and resembles particularly realistic art. An affected creature enters stasis. While in stasis, it is unable to take actions, doesn't age, and is immune to damage and effects. It remains in stasis for about a day, until the user returns the missing dimension or the artifact depletes.

Depletion: 1 in 1d10

METABOLIC PROD

Level: 1d6 + 1

Form: 1 m (4 foot) metallic rod of unknown material

Effect: When touched to a living target (possibly as an attack), the rod injects a potent cocktail of engineered biomolecules, paralyzing the target for up to one minute. The rod wielder may also choose one of the following additional effects, if set before attacking.

Aggression: The target's aggressive tendencies are increased for one hour, during which time the target attacks almost anything it encounters.

Calm: The target's aggressive tendencies are tamped down for one hour, during which time the target responds to attacks but never initiates them.

Hibernation: The target falls into hibernation, a coma-like sleep in which their metabolism slows to a crawl. They can go months with no additional food or water and with a fraction of the air they'd normally need. Loud sounds, damage, persistent prodding, and the like wakes someone in hibernation.

Depletion: 1 in 1d20

PROBABILITY REGULATOR

Level: 1d6 + 4

Form: Fist-sized mathematically perfect solid of constant width of unknown material

Effect: For tasks that are usually random, the user exerts some level of control. When picking a card, rolling a die, choosing a number, or otherwise taking an action that skill usually plays no part in, they attempt an Intellect task whose difficulty is determined by how unlikely choosing correctly might be, so long as it is possible, even if unlikely. A 50/50 coin flip is a difficulty of 1, whereas picking a series of numbers with odds around 1 in 300,000,000 is difficulty 10. If successful, they achieve the desired result.

Depletion: 1 × task difficulty in 1d20

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STEORRAFORM

Level: 1d6 + 3
Form: Badge-sized seven-pointed star of unknown material
Effect: If the wearer would become debilitated or die, the worn steorraform prevents it by instantly restoring health (to a creature or an NPC) or points to a Pool (to a player character). If the wearer would die of old age, disease, or poison, the artifact prevents it by rolling back the clock by a few decades, clearing the disease, or denaturing the poison. The artifact is ineffective in preventing death when those conditions last over several rounds or more, such as falling into lava, the sun, a singularity, and so on.
Depletion: 1 × number of previous uses in 1d20

WEAPONS

Artifacts that can be used as weapons, though some have other uses as well.

Light, Medium, and Heavy Artifact Weapons: The artifact weapons described in this section are idiosyncratic in that they are not described as light, medium, or heavy. If they were specifically categorized, many characters would find that their training doesn't match up with a particular designation. With artifact weapons living outside the regular weapon categories, anyone can use an artifact weapon.

ALPHA BEAM PROJECTOR

Level: 1d6 + 3
Form: Rifle-like device of unknown material
Effect: The device has two settings. One fires a beam of energy that acts as propulsion and rockets the artifact away unless the user can hold onto it as a difficulty 1 Might-based task. A user could use this setting to fly a long distance each round, but doing so requires a difficulty 4 Speed-based task each round to move in the direction desired (and not plow into the ground or the side of a building).
The other setting fires a reactionless beam that can be used as a very long-range plasma attack that inflicts damage equal to the artifact level. The beam ignores 1 point of Armor from the target.
Depletion: 1 in 1d20

CARBONIZER

Level: 1d6 + 3
Form: Pistol-like device of unknown material
Effect: This device fires a beam that transmutes the matter of targets within short range into powdery ash, inflicting damage equal to the artifact level that ignores Armor from force fields and natural scales, leather, and other organic sources.
Depletion: 1 in 1d20

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DEATH RAY

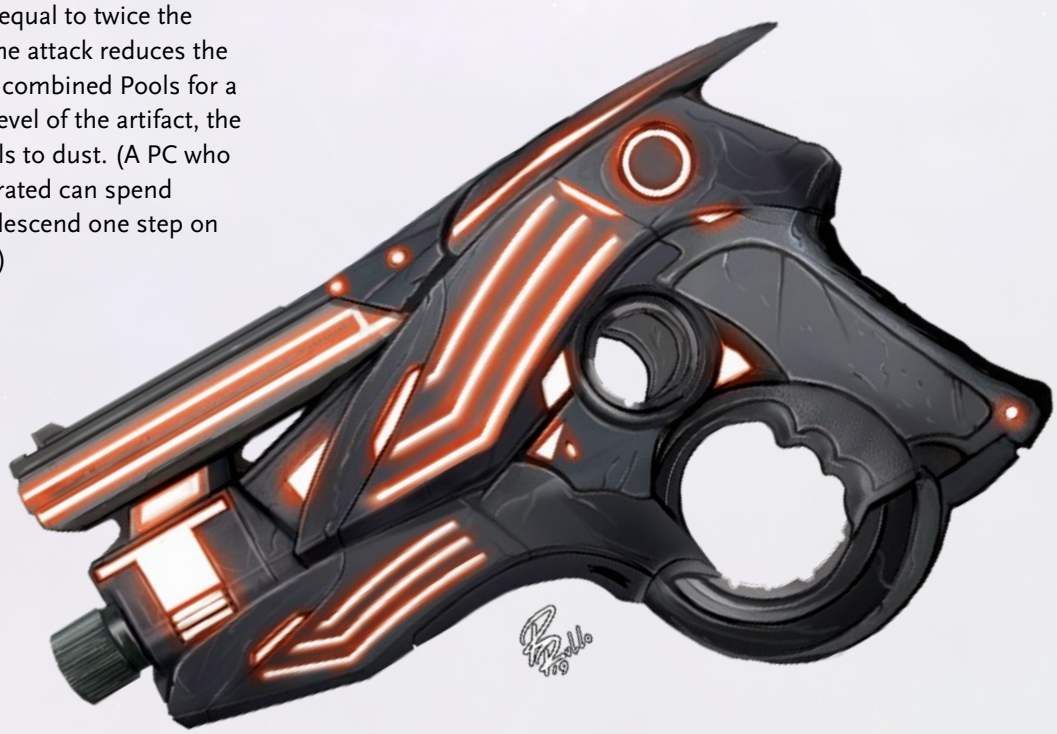
Level: 1d6 + 2
Form: Rod-like device of unknown material
Effect: This device emits an invisible beam of neural-magnetic energy as a long-range attack that instantly shorts out all brain and nerve functions of a level 1 creature, killing it. The user can adjust the settings to increase the death ray's effectiveness by making one additional depletion roll per increase in the maximum level of the target. Thus, to kill a level 5 target (4 levels above the normal limit), the user must make five depletion rolls. If used against a PC, the device inflicts damage equal to its level and the PC descends one step on the damage track.
Depletion: 1 in 1d20

DISINTEGRATION BEAMER

Level: 1d6 + 2
Form: Rifle-like device with two electrode-like protrusions of unknown material
Effect: This device fires a beam to suppress the charge of the electrons that make up a creature or object within long range, inflicting damage equal to twice the artifact's level. If the attack reduces the target's health (or combined Pools for a PC) to below the level of the artifact, the target instantly falls to dust. (A PC who would be disintegrated can spend 1 XP and instead descend one step on the damage track.)
Depletion: 1 in 1d20

EMPATHIC RAY

Level: 1d6 + 2
Form: Rod-like device with very long barrel of unknown material
Effect: This device emits an invisible beam of neural-magnetic energy as a short-range attack that instantly reverses how a level 1 target sees the user (turning an enemy into a friend, and vice versa) for up to one day. The user can adjust the settings to increase the ray's effectiveness by making one additional depletion roll per increase in the maximum level of the target. Thus, to alter the attitude of level 5 target (4 levels above the normal limit), the user must make five depletion rolls. If used against a PC, an affected PC can attempt an Intellect task to end the effect once every minute for the first few minutes, then once every hour.
Depletion: 1 in 1d20



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Chapter 8

VEHICLES & SPACECRAFT

Many science fiction settings rely on (or at least rely on the trappings of) amazingly advanced methods of moving around, be that across the surface of another planet, or between planets (and stars). This chapter provides a bounty of vehicles and spacecraft for your science fiction setting, organized so you can select options based on the tech rating of your setting.

Technology rating, page 13

Vehicle and spacecraft tech ratings range from contemporary to fantastic. A given setting may have only one, two, or all three kinds available for PCs to buy or otherwise acquire.

Chapter 14: Modern, page 261

Near-future, page 22

Vehicle: Technically speaking, spacecraft are also vehicles. Unless it's important to make a distinction, assume all guidance here regarding "vehicles" also applies to spacecraft.

Spacecraft (and Starship): When it is important to make a distinction from a simple vehicle restricted to the land, sea, or air of a single planet, the term "spacecraft" is used for vehicles that travel beyond a single planet's atmosphere. Some spacecraft can operate both in space and as planetary vehicles, as noted in their entries. Additionally, a spacecraft that has FTL capability (as opposed to only interplanetary capability within a single solar system) is referred to as a starship.

Price Categories, page 202

PRICELESS PRICE CATEGORY

One additional price category for goods and services is required, especially in science fiction realms, for generation-size starcraft or bigger-than-worlds construction projects: priceless.

A **priceless item** is something that even the very rich can't afford, requiring the resources of a nation-state, or similar entity appropriate to the setting, to acquire or build. Such items include military vehicles, orbital colonies, expeditionary interstellar spacecraft, or even grander objects.

VARIABLE COST BY TECH RATING

Vehicle costs assume the setting is predominantly of the same tech rating as the vehicle's tech rating. For example, a contemporary dirt bike is expensive for people in a modern genre or near-future subgenre setting (because such settings use contemporary items). However, the price might drop by a price category if the setting tech rating is predominantly greater than the vehicle's rating. Thus, in a setting where fantastic tech is available, dirt bikes may be moderately priced items, and fighter jets (normally priceless in a contemporary setting) may become exorbitant.

CONTEMPORARY STYLING IN ADVANCED OR FANTASTIC SETTINGS

As previously indicated, vehicles listed as contemporary might be found in settings using advanced or fantastic tech, possibly at a lower price. However, the vehicles available in these future worlds are not (necessarily) antiques, but rather cheaply made objects, possibly with the veneer and stylings of vehicles suitable to the setting, and possibly the power source, too. For example, a used car might use gasoline in a setting where contemporary tech dominates. However, in an advanced setting, it might use electricity.

VEHICLE POWER

Vehicles require power, whether that's gasoline, electricity, helium-3 (which is what Revel fusion drive spacecraft use), or zero-point fluctuations of vacuum. You

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have a few options for handling this. In many cases, it's better to just assume that acquiring and refueling is something that PCs do in their "off-camera" time. In this case, abstract the PC's requirement of that power source as a monthly upkeep cost equal to one or two steps less in price category than the vehicle requiring the refueling. In either case, obtaining more fuel only becomes an issue because the GM decides to introduce a complication, or because of damage in combat.

For example, a dirt bike motorcycle is an expensive vehicle, but refueling it about every month (or less, depending on use) is an inexpensive cost. On the other hand, it's very expensive or even exorbitant to refuel a giant spacecraft in the nation-state price category.

If PCs are in a spacecraft that is drifting without power in a degrading orbit over the moon Titan after being struck by debris, that's *not* an off-camera situation. Instead, it's a matter of life and death as PCs attempt to fix the solar panels or jury-rig some other alternative power source before time runs out.

For more details about spacecraft power in particular, see Spacecraft Power and Drives.

Spacecraft Power & Drives, page 103

FIGHTING IN A VEHICLE

If PCs are involved in combat in which they are only partly or lightly enclosed (or not at all enclosed, as in the case of most cycles, boards, and similar conveyances), use normal rules of combat, as modified by vehicular movement. However, if PCs are involved in a combat where they are completely enclosed in a vehicle with no possibility of openness to the environment through which they can fire weapons (so that it's not really the characters fighting, but the vehicles), use the vehicular combat rules from the CSR.

If PCs are involved in space combat, see the extended vehicular combat rules described in this book, which provide all kinds of additional options.

Vehicular Movement, page 230

Vehicular Combat, page 230

Optional Rules: Extended Vehicular Combat, page 39

DRIVERLESS VEHICLES

Some contemporary vehicles, as well as many advanced and fantastic vehicles,

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Land ark, page 97

come with self-driving options. If the rider, driver, or pilot activates self-driving as part of another action, riding, driving, and piloting tasks are automatically completed (or failed) according to the vehicle's level, though all such self-driving tasks are hindered. However, the pilot is free to engage in other actions as the vehicle maneuvers to the best of its ability.

Shipmind, page 44
Sim AI, page 60

This driverless function is also available on many spacecraft, courtesy of a shipmind, which is a sim AI that can control the ship's functions as necessary. Shipminds control spacecraft at the spacecraft's level, not their level, but are not subject to the task hindrance that more basic driverless vehicles suffer.

LOOKING FOR MORE VEHICLE OPTIONS

Listing all possible vehicles and their many variants across all three tech ratings, at least in the space available, isn't an option. However, a representative cross section of vehicles is provided. If you're looking for something that isn't noted, use something close and adapt the listing. For example, if you're looking for a contemporary motor home, you won't find it. But the utility car is a relatively close fit. Just reskin it to be what you need it to be. On the other hand, the advanced listing for land ark might be just what you're looking for.

Utility car, page 97

Also note that unless a particular listing is already indicated as a luxury or sport version, most vehicles can be obtained in a luxury or sports package, either at the next price category up, or at double the indicated price.

CUSTOMIZING VEHICLES

Characters with a vehicle may wish to improve it in some fashion. For instance, they may want to add weapons, or turn their weapon system into a superior weapon system, and so on. Assuming the facilities are available, characters can pay for the customization of their vehicle to add a weapon system, add even more weapon systems, add superior weapon systems, or some other significant option. In most cases, the cost for such an upgrade is very expensive to exorbitant. There is no hard and fast rule, but here's a good rule of thumb: Adding a weapon to a motorbike is very expensive. Adding a weapon system to a spacecraft is exorbitant. (Adding a superior weapon system, or superior systems of any sort, costs the original vehicle price per customization.)

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PLANETARY VEHICLE LISTING

CYCLES

km/h *is short for kilometers per hour.*

CONTEMPORARY

Motorcycle, dirt bike level 2 (6) Expensive

Knobby two-wheeled or three-wheeled vehicle, supporting a basic frame with a seat for one rider (and sometimes a passenger) open to the environment, ideal for wild terrain and off-road travel; moves a short distance each round in wild terrain or an average of 48 km/h (30 mph) during long-distance travel (double movement on paved surfaces).

Motorcycle, cruiser level 3 (9) Expensive

Two-wheeled vehicle, supporting a stylish frame with a seat for one rider (and sometimes a passenger) open to the environment suitable for paved surfaces; moves a long distance each round on paved surfaces or an average of 96 km/h (60 mph) during long-distance travel.

ADVANCED

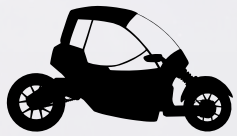
Motorcycle, battle level 4 (12) Very Expensive

Two-wheeled vehicle, supporting a reinforced, armored frame with a seat for one rider (and sometimes a passenger) partly open the environment, providing the rider Armor 2. Built-in weapons include a deployable swivel long-range machine gun that inflicts 8 points of damage. Auto-stabilization eases all tasks related to riding. Suitable for paved and broken surfaces; moves a long distance each round on paved and broken surfaces or an average of 144 km/h (90 mph) during long-distance travel.

Motorcycle, omni-terrain level 3 (9) Expensive

Two-wheeled vehicle with telescoping spokes capable of adapting to nearly any terrain (except water or other liquids), supporting a basic frame with a seat for one rider (and sometimes a passenger) open to the environment, ideal for utterly wild terrain and off-road travel; able to "climb" natural steep and near-vertical surfaces. Auto-stabilization eases all tasks related to riding. Moves a long distance each round in any terrain or an average of 112 km/h (70 mph) during long-distance travel.

Vacuum cycle level 4 (12) Very Expensive



Two-wheeled vehicle, supporting a reinforced, lightly enclosed and pressurized frame with a seat for one rider (and sometimes a passenger), providing the rider Armor 1 (though if damage is taken, it's likely a breach has occurred). Auto-stabilization eases all tasks related to riding. Suitable for paved and broken surfaces on airless moons or in polluted or poisonous atmospheres; moves a long distance each round on paved and broken surfaces or an average of 80 km/h (50 mph) during long-distance travel.

FANTASTIC

Hover speedster level 5 (15) Expensive

A sweptback frame with a seat for one rider (and often a passenger) open to the environment, with anti-gravity repulsors allowing it to hover up to 2 m (6 feet) over any terrain (including water and other liquids), ideal for utterly wild terrain and over-water excursions. Auto-stabilization eases all tasks related to riding by two steps. Moves a very long distance each round in any terrain or an average of 240 km/h (150 mph) during long-distance travel.

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Hard-light cycles can also be used as gladiatorial vehicles, modified to lay a forcefield wall trail behind rather than a bridge underneath, against opponents on similar cycles in a limited area with speedometers partly disabled.

Hard-light cycle level 5 (15) Very Expensive

Two-wheeled vehicle of hard light capable of adapting to most terrains, supporting a sleek reinforced, armored frame with a seat for one rider (and sometimes a passenger) partly open the environment, providing the rider Armor 1. Suitable for crossing above any surface via self-deploying light bridge, a 1 cm (3 inch) thick by 3 m (10 feet) wide, constantly extending forcefield surface that persists for about ten minutes. The bridge can reach to almost any height, though maximum gradient shouldn't exceed 30%. Auto-stabilization eases all tasks related to riding by two steps. Moves a long distance each round on self-deploying bridge or an average of 190 km/h (120 mph) during long-distance travel.

Hover speedster, battle level 6 (18) Very Expensive

As hover speedster, with the addition of reinforced cowling providing the rider Armor 2. Built-in weapons include deployable swivel long-range energy weapons that inflict 9 points of damage.

Instant cycle Variable Exorbitant

As any one other cycle, except an instant cycle can be deployed from a lightweight briefcase-sized (or even smaller) pack as an action, and is built up by packaged nanobots, virtual particles, or hard light to create the selected cycle, which can be ridden normally. A PC can re-package the deployed cycle to its original easily toted form as an action.

CARS

CONTEMPORARY

Buying a car at the bottom of its price range usually means the car isn't top quality. Such vehicles have a depletion of 1 in 1d100 (check per day used).

Car, used level 3 (9) Expensive to Very Expensive

Four-wheeled vehicle, supporting a slightly dented and rusted metallic frame with seats for a driver and up to four additional passengers; operable/easily breakable glass windows give openness to environment. Moves a long distance each round on paved surfaces or an average of 80 km/h (50 mph) during extended trips.

Car, sedan level 4 (12) Expensive to Very Expensive

As used car, but in better shape. Moves a long distance each round on paved surfaces or an average of 96 km/h (60 mph) during extended trips.

WHEELED VEHICLE GM INTRUSIONS

Choose which GM intrusion is best for the story; roll if you face decision fatigue.

d10	Intrusion
01	Vehicle runs out of fuel or power.
02	Unexpected obstacle threatens to cause a crash.
03	Unexpected gap or loss of power requires rider to "jump" between stable surfaces by launching off a suitable ramp-like incline.
04	Another vehicle swerves into PC's vehicle.
05	Loose sand/gravel/particles/ice on surface threaten to cause a wipeout.
06	Too much velocity going around a corner threatens to cause a wipeout or crash.
07	Vehicle takes damage and threatens to detonate its power source.
08	Another vehicle hits PC's vehicle from behind.
09	Vehicle's brakes freezes.
10	Vehicle's tire unexpectedly blows out.

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Car, sports level 6 (18) Very Expensive to Exorbitant

Four-wheeled vehicle, supporting a "rolling work of art" frame focusing on flamboyance and swagger, sometimes at the expense of practicality and efficiency. Seats for a driver and usually only a single passenger; operable/easily breakable glass windows (and or retractable hardtop) provide openness to environment. Auto-stabilization eases all tasks related to driving. Moves a long distance each round on paved surfaces or an average of 144 km/h (90 mph) during extended trips.

Car, utility level 4 (12) Expensive to Very Expensive

Four-wheeled vehicle, supporting a frame in a van or truck configuration that prioritizes carrying cargo over passengers (though up to ten additional passengers, in addition to the driver, could squeeze into a van or into the open bed of truck). Operable/easily breakable glass windows (and/or retractable hardtop) provide openness to environment. Moves a long distance each round on paved surfaces or an average of 96 km/h (60 mph) during extended trips.

ADVANCED

Hovercar level 4 Very Expensive

Hover frame with a seat for driver and up to four other passengers, often open to the environment (luxury versions have retractable hardtops). Inboard (or external) rotors force air down, allowing the vehicle to hover up to 1 m (3 feet) over any terrain (including water and other liquids). Ideal for utterly wild terrain and over-water excursions. Moves a long distance each round in any terrain or an average of 160 km/h (100 mph) during long-distance travel.

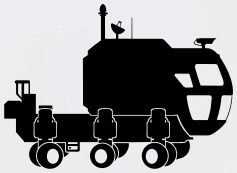
Land ark level 5 (15) Exorbitant

Treaded, all-terrain wheels support a completely enclosed interior habitat with five to ten interior chambers arranged either to house one or more families, support scientific research, exploration, spying, or configured for some other purpose to support a team of individuals. Moves an immediate distance each round in utterly wild terrain, a short distance each round in broken terrain or an average of 64 km/h (40 mph) during long-distance travel (double movement on paved surfaces, though a land ark rarely finds roads).

Land ark, battle level 5 (15) Exorbitant x2

As land ark (and sometimes called a "battle ark"), but sports superior weapons, though half the interior space.

Moon buggy level 4 (12) Very Expensive



Six-wheeled vehicle, supporting a reinforced, lightly enclosed and pressurized frame with seats for a driver and up to four additional passengers, providing driver and passengers Armor 1 (though if damage is taken, it's likely a breach has occurred). Auto-stabilization eases all tasks related to driving. Suitable for paved and broken surfaces on airless moons or in polluted or poisonous atmospheres; moves a long distance each round on paved and broken surfaces or an average of 64 km/h (40 mph) during long-distance travel.

"It is the year 2000, but where are the flying cars? I was promised flying cars! I don't see any flying cars—Why?—Why?—Why?"

~Avery Brooks

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FANTASTIC

Car, flying level 5 (15) Very Expensive

Enclosed (but with retractable hardtop) frame contains seats for a driver and up to four other passengers, providing the driver (and vehicle) Armor 1. Anti-gravity repulsors allow the vehicle to fly within the atmosphere. Flies a very long distance each round in any terrain or an average of 320 km/h (200 mph) during long-distance travel.

Car, smart level 6 (18) Exorbitant

As flying car, but on-board weak AI always handles all driving functions, unless the driver takes control. The AI prioritizes passenger safety, and in the event of a crash, protects all passengers in a brief stasis field (assuming power reserves remain intact).

AIRCRAFT

CONTEMPORARY

Airplane, basic level 2 (6) Very Expensive

Enclosed airframe with seats for pilot and one passenger. Operable/easily breakable side glass windows give openness to environment. Flies a long distance each round using a rotating propeller to force air over wings or an average of 225 km/h (140 mph) during extended trips.

Helicopter level 3 (9) Exorbitant

Enclosed cockpit with seats for a pilot and up to six passengers. Operable/easily breakable windows give openness to environment. Flies a long distance each round using rotor blades or an average of 225 km/h (140 mph) during extended trips.

Fighter jet level 5 (15) Priceless

Swept-back enclosed airframe with seats for a pilot and one passenger. Built-in weapons include very long-range Gatling-style cannons. Flies a very long distance each round using jets or an average of over 1,125 km/h (700 mph) during extended trips.

HOVERING AND FLYING VEHICLE GM INTRUSIONS

Choose which GM intrusion is best for the story; roll if you face decision fatigue.

d10	Intrusion
01	Vehicle runs out of fuel or power (but not inflight).
02	Extreme turbulence threatens to cause a loss of control inflight.
03	A glitch in the flight control—or pilot error—causes vehicle to bank too sharply, threatening a crash.
04	Unexpected debris/birds or other flying creatures impact the vehicle, damaging it.
05	Landing gear is damaged, making eventual landing problematic.
06	Unexpectedly tall terrain feature threatens imminent collision.
07	Vehicle takes damage and threatens to detonate its power source.
08	Another flying vehicle hits the PC's vehicle from above.
09	Vehicle runs out of fuel or power while inflight.
10	Breach in airframe risks sucking pilot or passengers out to a long fall.

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ADVANCED

Cloud surfing board level 1 (3) Very Expensive

A 4 m (12 feet) long, smart-plastic flying wing open to the environment on which a single rider stands; rider must succeed on a difficulty 1 Speed roll each round. In combat, it moves a long distance each round, but on extended trips, it can move up to 130 km/h (80 mph). Often used for cloud surfing on Venus.

Cloud surfing, page 178

Jetpack level 2 (6) Very Expensive

Harness lofts pilot over the ground using variable microjets, allowing the user to fly. Open to the environment (requiring user to wear protective gear). Flies a very long distance each round or an average of 190 km/h (120 mph) during long-distance travel, though the pack must be refueled every 1000 miles.

VTOL hyperjet level 3 (9) Exorbitant

Swept-back enclosed airframe with seats for a pilot and up to eight passengers. Built-in weapons include long-range Gatling-style cannons (treat as superior weapons). VTOL (vertical take-off and landing) allows the hyperjet incredible maneuverability. Auto-stabilization eases all tasks related to piloting (other than vehicular combat). Flies a very long distance each round using jets or an average of over 2,410 km/h (1,500 mph) during extended trips.

VTOL stealthjet level 3 (9) Exorbitant

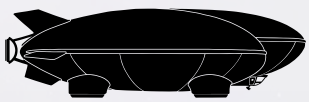
As VTOL hyperjet, but with superior stealth instead of superior weapons.

VTOL seawing level 3 (9) Exorbitant

As VTOL hyperjet, but sacrifices weapons so it can operate both in the air and underwater as a submersible. Able to move a long distance each round underwater or 80 km/h (50 mph) during extended trips underwater.

Zeppelin, yacht level 3 (9) Exorbitant

This luxury flying vehicle boasts a completely enclosed interior habitat with five to ten interior chambers arranged either to house one or more families, support scientific research, exploration, spying, or configured for some other purpose to support a team of individuals. Moves a short distance each round or an average of 160 km/h (100 mph) during extended travel (half or double that depending on air conditions).



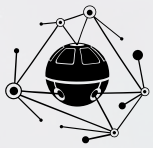
FANTASTIC

Hoverboard level 2 (6) Moderate

Configurable from being as small as a skateboard suitable for one rider up to a disk 1.5 m (5 feet) in diameter. Auto-stabilization eases all tasks related to riding. Open to the environment (requiring user to wear protective gear). Flies a long distance each round or an average of 225 km/h (140 mph) during long-distance travel.

Orb, personal level 2 (6) Expensive

Deployed from a fist-sized sphere as an action, the personal orb takes shape around a single traveler, forming an environment force field that shields wind and air turbulence, keeping the atmosphere at a comfortable temperature, and providing Armor 1. Once deployed, the orb pilots itself as directly as possible, flying to a destination at very long distance per round or up to 480 km/h (300 mph) during an extended trip, with a maximum duration of up to thirty-six hours. Personal orbs are usually single-use transports.



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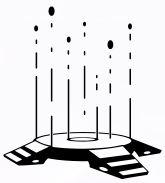
Hard-light jet level 4 (12) Exorbitant
Composed of hard light and pseudo-matter, this futuristic airframe has seats for a pilot and up to two passengers. Built-in weapons include very long-range energy cannons. Auto-stabilization eases all tasks related to piloting by two steps (except for vehicular combat). Flies a very long distance each round using jets or an average of over 8,000 km/h (5,000 mph) during extended trips, and can even make low-orbit rendezvous.



Teleportation disc level 6 (18) Exorbitant
Immovable disc-shaped pad (or hollow free-standing ring) keyed to one or more locations within 160 km (100 miles); step on the disc (or pass through the ring) and appear at the keyed location. Discs of level 9 and above can teleport users between planets or even stars, like small versions of stellar gates.

Stellar gate, page 111

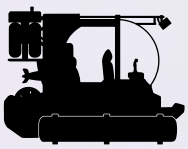
SEACRAFT

CONTEMPORARY

Jet ski level 2 (6) Expensive
A stylish seaworthy hull with a seat for one rider (and sometimes a passenger) open to the environment; moves a long distance each round or up to 112 km/h (65 mph) on calm water (half movement rates in choppy water).

Motorboat level 2 (6) Expensive
Seaworthy hull with a seat for a pilot and up to eight passengers. Open to the environment; moves a long distance each round or up to 80 km/h (50 mph) on calm water (half movement rates in choppy water). Used motorboats can be had at moderate prices but actions related to operating it are subject to automatic GM intrusions on a d20 die roll of 1 or 2.

Motorboat, performance level 3 (9) Very Expensive
As motorboat, but can reach speeds over 128 km/h (80 mph).



Submersible, personal level 3 (9) Exorbitant
Completely enclosed and water-tight hull with a seat for a pilot (and up to one passenger); moves a short distance each round underwater or up to 50 km/h (30 mph) on an extended trip. Minimal options for docking with other underwater craft or manipulating the environment without customization.

Yacht level 3 (9) Exorbitant
Seaworthy hull with a deck section open to the air and sections completely enclosed with five to ten interior chambers suitable for living, leisure, supporting scientific research, exploration, spying, or configured for some other purpose to support a team of individuals. Moves a long distance each round or up to 80 km/h (50 mph) on calm water (half movement rates in choppy water).

Gunboat, fast attack craft level 4 (12) Priceless
A fast attack craft (FAC) is relatively small and agile (compared to more massive warships), armed with anti-ship missiles, guns, and/or torpedoes. Features both open decks and a couple of completely enclosed interior chambers. A gunboat is cramped, has little room for food or water, and is not as seaworthy as it could be (all tasks related to operating the craft, except vehicular combat, are hindered). Moves a long distance each round or up to 96 km/h (60 mph) on calm water (half movement rates in choppy water). Requires a trained crew and central coordination to operate.

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Submarine level 4 (12) Priceless

Massive underwater craft armed with torpedoes and surface-to-air missiles. Completely enclosed interior chambers provide the crew (and vehicle) Armor 4 as well as breathable air and pressure; lots of room for crew, supplies, and so on. Moves a long distance underwater each round or up to 75 km/h (47 mph). Requires a trained crew and central coordination to operate.

Warship, destroyer level 4 (12) Priceless

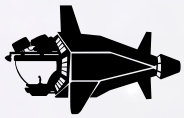
Massive water-going craft armed with anti-ship missiles, surface-to-air missiles, guns, and torpedoes, as well as hangars for one or two armed helicopters; treat as having superior weapons during vehicular combat. Features both open decks and many completely enclosed interior chambers. Lots of room for crew, supplies, and so on. Moves a long distance each round or up to 64 km/h (40 mph) on calm water (half movement rates in choppy water). Requires a trained crew and central coordination to operate.

Search Term: Supercavitation

ADVANCED

Sub, waterglide level 4 (12) Exorbitant

As personal submersible, but supercavitation technology allows incredible speeds underwater, allowing the sub to move a very long distance each round or up to 370 km/h (230 mph) on extended trips.



Yacht, hydroplane level 4 (12) Exorbitant

As yacht, but can cut through the sea at speeds of up to 480 km/h (300 mph) in calm or stormy weather without risk of capsizing.

Submarine, supercavitation level 5 (15) Priceless

As submarine, but supercavitation technology allows incredible speeds underwater, allowing the sub to move a very long distance each round or up to 370 km/h (230 mph) on extended trips.

FANTASTIC

Manta level 6 (18) Exorbitant

As hard-light jet, but operates underwater, moving up to a very long distance each round or up to 480 km/h (300 mph) on extended trips.

SEACRAFT GM INTRUSIONS

Choose which GM intrusion is best for the story; roll if you face decision fatigue.

d10	Intrusion
01	Vehicle begins taking on water due to minor leak.
02	Vehicle capsizes.
03	Vehicle begins to sink due to major leak caused by structural flaw.
04	Vehicle collides with marine life/debris on water or other watercraft impacts the vehicle, damaging it.
05	Power source unexpectedly dies.
06	Unmapped underwater terrain feature threatens/causes imminent collision.
07	Vehicle takes damage and threatens to detonate its power source.
08	Sea storm blows up and threatens to capsize vehicle.
09	Character(s) fall overboard.
10	Pirates! (Or at least people with bad intentions pull up on another boat.)

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MECHS & TANKS

CONTEMPORARY

Tank level 4 (12) Exorbitant

Rugged caterpillar track supports a completely enclosed frame, contains seats for a driver and up to four other crew; treat as having superior armor. Armed with a central cannon. Moves a short distance each round, or on extended trips, up to 40 km/h (25 mph) on relatively flat terrain, or twice that on paved surfaces.

ADVANCED

Mech, loader level 4 (12) Very Expensive

Powered anthropomorphic exoskeleton frame partially open to the environment. Grants three free levels of Effort to all lifting and hauling tasks. Moves an immediate distance each round. Attacks in the mech (using its loading arms) are hindered, but inflict 10 points of damage. Moves up to a short distance or up to 24 km/h (15 mph) on extended trips.

Mech, infantry level 4 (12) Very Expensive

Powered anthropomorphic exoskeleton frame partially open to the environment but provides a single operator Armor 3. Attacks in the infantry mech (using either an electrified blade for melee or a long-range combat rifle) are eased, inflicting 6 points of damage. Moves a short distance or power jumps up to a very long distance once every other round or up to 72 km/h (45 mph) on extended trips.

Mech, interceptor level 4 (12) Exorbitant

As infantry mech, but upgrades include complete and sealed enclosure with life support (qualifying it for vehicular combat). Attacks in the interceptor mech also include a battery of very long-range missiles. An additional flight mode allows the interceptor to fly a very long distance for up to ten minutes before recharge is required. Some mechs have superior weapons, defense, or speed, but that doubles the cost.

FANTASTIC

Colossal battle mech level 6 (18) Priceless

A 78 m (255 feet) tall powered anthropomorphic exoskeleton frame. Creates a sealed enclosure (qualifying it for vehicular combat) with life support for an operator and a crew of up to six people. Armed with a massive "melee" plasma sword and "mech-punch" (melee attacks that can be made at long range), plus very long-range missiles, grenades, and energy weapons, operable by the pilot and crew at up to five different independent weapon stations simultaneously; treat as having superior weapons. Can run and fly up to a very long distance each round, and can even ascend into low orbit for brief periods.

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SPACECRAFT LISTING

Most spacecraft have the capacity to reach orbit from the surface of the planet, if not radically more advanced capabilities. All spacecraft completely enclose their crew in a sealed cabin (or series of chambers) with life support suitable for days, weeks, or much longer. Most spacecraft also come with one or more spare space suits, tools, a few spare parts, and so on. Advanced and fantastic spacecraft also have sensors that provide enough astronavigation information to plot and fly to their destinations.

PCs in spacecraft can travel to other moons, planets, space stations, and perhaps even other solar systems. PCs in spacecraft may also get caught up in space combat (see the Extended Vehicular Combat rules) and run across space hazards.

SPACECRAFT POWER & DRIVES

Vehicles that travel into and through space rely on a variety of different power sources and propulsion systems (usually called "drives"), which vary considerably by the predominant tech level of a given setting. In many cases, the power source for a spacecraft and the drives in use are intimately connected.

SPACECRAFT UPKEEP

Each month of spacecraft operation usually requires that the PCs pay for fuel, feedstocks, and other upkeep. The level of the spacecraft determines upkeep. Particularly fantastic craft with perfectly effective matter-energy technology relying on zero-point energy probably still have upkeep costs of some kind.

Level	Upkeep Cost
1-2	Moderate
3-5	Expensive
6-7	Very Expensive
8-9	Exorbitant
10	Priceless

TRAVEL TIMES

Advanced drives are amazing, but spacecraft with the advanced tech rating are only able to move between planets, not stars—at least, not stars within reasonable time frames. (Counterexamples include advanced tech generation ships, where it's understood that the trip will take many generations of humans to complete; or craft where the crew is preserved in cryo-sleep for a trip that takes hundreds or thousands of years as the craft makes its slow way across deep space.)

In a hard science fiction setting, you might be interested in evoking the reality of travel times between colonies on planets and moons located in the solar system. Even so, plotting a course between locations in the solar system isn't simple, because everything is always moving with respect to everything else. You could exactly determine how long a trip would take with some internet research and a lot of math. NASA does this every time it sends a probe to another planet or area of interest in the solar system. But it's not easy.

Optional Rules: Extended Vehicular Combat, page 39

Space Hazards, page 56

Or you could just *evoke* the effect of orbital mechanics and varying accelerations on interplanetary travel. Use the Solar System Travel Times chart to do so. For a trip between locations not directly compared, add up the destinations in between. The travel times assume either an advanced ion drive (nuclear plasma), or a fusion drive (fusion drives are used in the Revel for most interplanetary travel). Indicated times also assume a steady thrust toward the destination (1 G for fusion drives) and an equally long and steady braking thrust over the last half of the trip before orbit insertion. Both types of propulsion can sustain thrust for days at a time (reducing bone loss, muscle atrophy, and other long-term effects of low gravity, thus reducing the need for medical intervention).

Solar System Travel Times chart, page 104

Welcome to the Revel, page 144

Fantastic drives, however, can achieve FTL (faster than light) speeds, which means they open up the stars in any setting where they are available. Suggested FTL speeds are provided for each fantastic drive listed, though precision isn't strictly necessary. Mainly, you want only to evoke the reality of

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SOLAR SYSTEM TRAVEL TIMES

Origin	Destination	Travel Time Nuclear Plasma	THE REVEL Travel Time Fusion (1 G constant)
Venus	Mercury	20 +120 days	1 +1d6 days
Earth/Moon	Venus	20 +1d20 days	1 +1d6 days
Earth/Moon	Mars	20 +1d20 days	1 +1d6 days
Mars	Asteroid belt	30 +1d20 days	2 +1d6 days
Asteroid Belt	Jupiter and its moons	30 +1d20 days	3 +1d6 days
Jupiter	Saturn and its moons	60 +1d20 days	4 +1d6 days
Saturn	Uranus	90 +1d20 days	8 +1d6 days
Uranus	Neptune	100 +1d20 days	9 +1d6 days
Neptune	Pluto	100 +1d20 day	8 +1d6 days

travel times between different star systems (and maybe even between galaxies).

MAKING POWER AND DRIVE CHOICE MATTER

Each power source and spacecraft drive offers its own dangers (and GM intrusion) opportunities. For instance, an RTG-reliant drive might become damaged and irradiate the crew, whereas a singularity powered generator, if damaged, could release a micro black hole for PCs to contend with. Likewise, a fusion drive might become stuck and accelerate the PCs' ship at dangerously high G or for so long that fuel is exhausted, whereas a hyperdrive ship might expose travelers to unexpected hyperspace predators.

RETROFITTING POWER AND DRIVES

Older spacecraft and starships are often retrofitted with more advanced power sources, and more importantly, FTL drives, in order to give them the ability to move further. This happens most when an advanced spacecraft with interplanetary drive is retrofitted with FTL. The main reason to do this is that such ships cost much less, especially if retrofitted advanced ships are available in a fantastic setting, but even for craft within the same tech rating. During vehicular combat, retrofitted ships are treated as if 1 level lower than their actual level for purposes of level comparison in combat if they are fighting FTL-capable fantastic-rated starships.

Rocket, heavy-lift launch spacecraft, page 107

Vehicular Combat, page 230

Optional Rules: Extended Vehicular Combat, page 39

CONTEMPORARY POWER

Solar Panels: Usually flat panels that convert sunlight to electricity, which can be used for a variety of onboard systems, including powering ion drives.

RTGs: When solar panels are not an option, as is often the case for spacecraft that operate far from the sun or on a planetary surface with lots of dust or shadow, RTGs (radioisotope thermoelectric generators) are good long-term power sources for electric power, which can be used for a variety of onboard systems, including powering ion drives. The heart of an RTG is an embedded mass of atomic isotope, such as plutonium-238.

CONTEMPORARY DRIVES

Rocket: A rocket engine produces thrust by expelling reaction mass, usually in thundering expanding white clouds from the rocket's base propulsion nozzle. Most contemporary spacecraft use a mix of several rockets and fuel types. Rockets are the primary constituent of a heavy-lift launch spacecraft.

Ion Thruster: Ion thrusters can use solar panels or RTGs (or both) to expel ions (or cations) to produce thrust over long periods, which allows a spacecraft to build up speed over large periods of time. The bleeding edge of contemporary ion thruster is VASIMR (Variable Specific Impulse Magnetoplasma Rocket), which could drastically reduce travel times around the solar system, if perfected.

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ADVANCED

ADVANCED POWER

Fusion Power: Electrical generation by using heat from nuclear fusion reactions, requiring relatively small fuel input for much higher-power output. Fuel sources include helium-3 (abundant on the Moon and other locations in the solar system without an atmosphere).

ADVANCED DRIVES

Nuclear Plasma: Essentially, nuclear plasma drives are just very advanced ion thrusters, the promised "perfected" version. These are great, unless the setting has fusion drives, in which case nuclear plasma drives may seem quaint.

Fusion Drive: Relying on fusion power, a fusion drive is an order of magnitude more efficient than a contemporary ion thruster. A fusion drive does not require the creation of electricity to ionize propellent, but instead directly uses the fusion product as an exhaust to provide thrust.

FANTASTIC

FANTASTIC POWER

Antimatter Power: Antimatter particles have opposite charge from their matter counterparts, giving them potentially explosive properties when combined, producing energy an order of magnitude more than a fusion power system. Fuel sources include both antimatter as well as Li2 (an atom with 2 lithium ions), important for controlled matter-antimatter reaction so it can be harnessed for power.

Singularity Power: Taps energy from Hawking radiation and rotational energy of a spinning micro-black hole to generate energy an order of magnitude more than nuclear power. Fuel source is a micro-black hole.

Zero-Point Generator: Vacuum energy is created by normal fluctuation in the quantum field of normal space-time. This zero-point radiation of the vacuum provides arbitrary (possibly limitless) amounts of energy with no fuel other than the initial resources required to build the generator.

FANTASTIC DRIVES

Warp Drive: A warp drive uses enormous power to distort the fabric of space-time to create a bubble surrounding the starship. The bubble moves by compressing space-time in front of it and expanding space-time behind it, moving independently of the rest of the universe to achieve apparent FTL travel. Warp drives can achieve objective speeds of up to 500 times the speed of light at maximum power.

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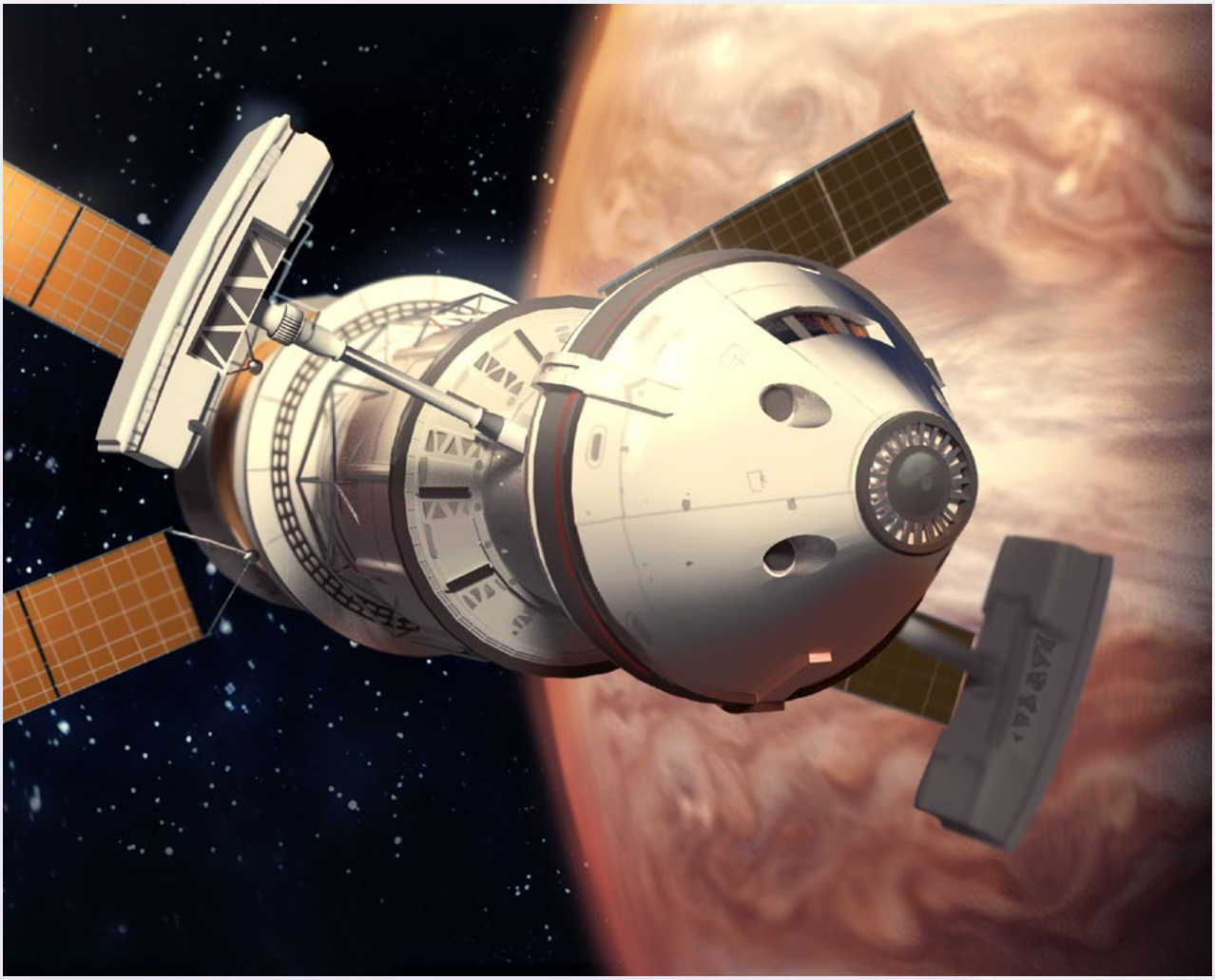
Hyperdrive: Similar to warp drive in some ways, but pushes the ship into a different realm of existence, often called hyperspace, where laws of physics differ significantly and many more dimensions are accessible, allowing a ship to greatly surpass the speed of light before returning to normal space. Hyperdrives can achieve objective speeds of up to 1000 times the speed of light at maximum power.

Wormhole Drive: A wormhole drive uses enormous power to open a shortcut between two locations in space-time and travel between those points in a matter of seconds. Most wormhole drives rely on regions of space where wormholes can be formed, or on previously established networks of wormhole tunnels that the wormhole drive accesses. Which means that while travel between two points might be almost instantaneous, travel to and from wormhole-viable locations could greatly increase travel times. Likewise, wormholes can normally only bridge locations up to 200 or so light-years at a time (which means it would take about 500 jumps to cross the Milky Way galaxy from end to end).

Dark Drive: A dark drive (short for "dark matter quantum drive") uses enormous power to enable point-to-point transitions between other locations in the galaxy (or universe) using previously unrealized entanglement between normal matter and dark matter. However, objective travel time is variable and somewhat arbitrary; sometimes a trip may take minutes, other times days or months. For those aboard, relative travel time seems constant at about four solar hours, no matter the distance traveled, or the objective time noted by external observers.



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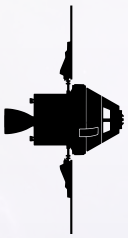
PIONEER-ERA SPACECRAFT

Though extremely complex, pioneer-era spacecraft are not robust vehicles. Technology allowing re-use of components is still in its infancy in these contemporary tech spacecraft, and small problems have a way of becoming major catastrophes if not caught and quickly dealt with.

In fact, that very complexity exacts a toll. Generally speaking, all tasks for operating a pioneer-era spacecraft are hindered by two steps. Only the very well trained (or the very lucky) should even consider trying to operate such a craft. Finally, pioneer-era spacecraft usually don't have weapon systems.

CONTEMPORARY



Space Capsule level 1 (3) Priceless

Sealed capsule delivered into space by a launch vehicle or shuttle, carries a crew of up to seven or a payload of up to 6,000 kg (13,000 pounds); once delivered into a microgravity environment, becomes a free-flying spacecraft with limited maneuverability, though all piloting tasks are hindered and propellant must be renewed every ten hours of use. Capable of safely returning crew and cargo back down a gravity well though a fiery reentry process that lands the capsule in water for recovery by watercraft.

Rocket, heavy-lift launch level 2 (6) Priceless

Provides access to low orbit and beyond for a cargo of up to 45,350 kg (100,000 pounds) through the coordinated efforts of dozens of engineers and controllers operating and monitoring the vehicle from another location. Extremely limited maneuverability; a detachable space capsule allows for transfer of crew or cargo to orbiting craft or stations from the launch vehicle after ascent. Craft is partially re-usable in that the booster rockets autonomously return to designated pads where they can be refurbished and refueled.

Shuttle, launch level 3 (9) Priceless

As heavy-lift launch vehicle, except the main craft can re-enter an atmosphere after delivering a payload and land aerodynamically as a fixed wing craft. Much greater maneuverability than a launch vehicle, both in space and in the air on re-entry, though all piloting tasks are hindered. Refurbishment means essentially rebuilding the spacecraft, and is a process of many months and another priceless expenditure in cost.

Optional Rules: Extended Vehicular Combat Rules, page 39

TORPEDOS IN SPACE COMBAT

Ordnance in space is expensive, especially in hard science fiction settings. Which is why many craft rely on energy weapons, or on larger craft, self-guided torpedoes. Once launched, self-guiding torpedoes engage smart-tracking systems to zero in on their assigned targets. The torpedo accelerates at 50 or more Gs towards its target, but at the extended distances in which many space battles occur, it may still take several rounds for a torpedo to finally home in on and strike (or ultimately miss) its target.

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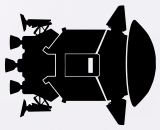
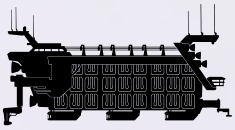
Advanced spacecraft may be spartan, but are also designed with amenities to help fight isolation of long-duration flights. Such amenities include full spectrum lighting panes that replicate sunlight, all sorts of hydroponic greenery in hallways to break up rigid planes with natural shapes, "soft" walls and ceilings for low-gravity environments, and so on.





Stellar gate, page 111

SPACECRAFT

Advanced spacecraft have advanced propulsion technologies, allowing them to move between planets within a single solar system, with transit times between planets varying from days to weeks (or more, if using a less efficient drive). Most advanced spacecraft can't land on a planet's surface unless noted, requiring some secondary craft or means to transfer crew and cargo.

ADVANCED

Wafercraft, exploration level 1 (3) Very Expensive
Miniaturized vehicle just large enough to contain thousands of tiny data flecks and sensor modules, designed to accelerate to 90% the speed of light by use of external launching laser beamed for many years. Data wafers contain encrypted personalities (human and/or AI) capable of gathering data on target solar systems after relative travel times of months (but decades in objective time).

Microcapsule level 2 (6) Very Expensive
As space capsule, but smaller. Limited fusion drive allows movement within a given area of space, but a microcapsule usually doesn't have enough fuel to move between planets. External manipulators allow the pilot to attempt repair and construction tasks without exiting the vehicle.

Microcapsule, fighter (dart) level 1 (3) Very Expensive x2
As microcapsule, but with a laser cannon weapon system capable of targeting another craft.

Spacecraft, racer level 1 (3) Exorbitant
A spacecraft designed only for speed and high-G maneuvers, with space for a single pilot (and maybe one passenger) in cradles fitted for high-G chemical amelioration, easing all piloting tasks by two steps. Travel times across limited interplanetary distances are halved in a racer. Mostly used for competition or as couriers.

Spacecraft, freighter level 2 (6) Exorbitant
A spacecraft designed to haul cargo between planets with a crew up of to 15. Freighter ships may be quite large, or at least haul cargo that is quite large, but these craft are bulky and not meant for quick changes in direction or combat; all maneuvering and combat tasks are hindered. Able to move interplanetary distances with advanced variable dynamic ion propulsion. Can land and take off from low-gravity moons and dwarf planets.

Spaceplane level 2 (6) Exorbitant
As launch shuttle (contemporary), but fulfills the promise of launch (*without* boosters), operations and maneuverability in orbit, and reentry and landing on a planetary surface, all without need for massive refurbishment or colossal external network of controllers.

Spacecraft with only interplanetary reach could still move between different stars if some kind of stellar gate technology were employed, or through normal space if time wasn't an issue.

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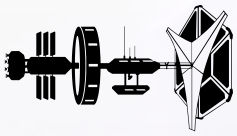
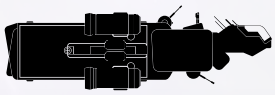
Spaceplane, combat (claw) level 2 (6) Exorbitant x2
As spaceplane, but smaller (with room for a single pilot), fitted with two weapon systems: a laser cannon and one torpedo battery. To move between planets or further, a claw usually relies on a larger carrier or more fantastic means of transport.

Spacecraft, solar sail level 2 (6) Exorbitant
A spacecraft designed for long-haul research expeditions around the solar system with a crew of up to five or six, with individual pods designed for induced hibernation during double or triple normal travel times to extend provisions to last several years or longer. No external power is required; solar power provides the motive force. Usually unable to land or ascend from a planetary surface.

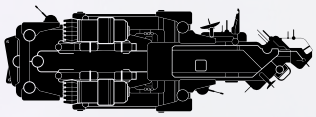


Hibernation pods, page 78

Spacecraft, dragonfly class level 3 (9) Exorbitant x2
Has the planetary launch and reentry capabilities of a spaceplane, but is more expansive, able to house a live-in crew of about a dozen people and over 45,350 kg (100,000 pounds) of cargo, with interplanetary (as opposed to merely orbital) range. Life-support lasts three months before restocking supplies is required. The ship includes a bridge, crew quarters, engineering, an impressively large cargo bay, and a bay containing one microcapsule. May have one weapon system.

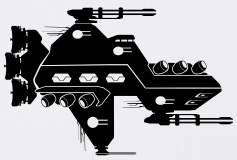


Spacecraft, exploration class level 4 (12) Exorbitant x3
As dragonfly class spacecraft, but larger and able to house a crew of about twenty-five people. Customized for exploration with extended range-sensing capabilities and onboard biological and geological labs (among others) for in situ analysis.



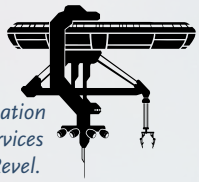
Spacecraft, corvette class level 4 (12) Priceless
A small warship spacecraft designed for high-G maneuvers, including use of high-G chemical amelioration for a crew of up to fifteen people. Features four weapon systems, including one laser cannon capable of targeting other craft, one torpedo battery, and one superior weapon system in the form of a gauss cannon. Able to move interplanetary distances with advanced variable dynamic ion propulsion. Can land and take off from low-gravity moons and dwarf planets.

Spacecraft, destroyer class level 5 (15) Priceless
As corvette spacecraft, but four times as large, allowing four times the crew and ten weapon systems (including two superior weapon systems). Possesses superior defenses. Often utilized to escort larger vessels in a space fleet or battle group and defend them against swarms of smaller attackers. Includes bays for two fireteams of six microcapsule fighters (darts).



Spacecraft, dreadnought level 5 (15) Priceless
As corvette spacecraft, but ten times as large, allowing ten times the crew and twenty weapon systems (including five superior weapon systems). Often utilized to escort larger vessels in a space fleet or battle group and defend them against swarms of smaller attackers. Includes bays for a squadron of fifteen darts and a fireteam of three combat spaceplanes.

Skyhook level 6 (18) Priceless
Heavy rotating space station orbiting a moon or planet that extends two massive tethers opposite each other, so that one tether periodically dips deep into the atmosphere close to the surface. At this point, payloads are hooked to the end of the cable as the tether passes, and are then flung into orbit by the station's massive rotation. The skyhook can decelerate and safely de-orbit other payloads in the same way.



A skyhook space station called Gateway services Luna One in the Revel.

Gateway, page 159
Chapter 11: Luna One, page 157

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Space elevator level 7 (21) Priceless
Tether anchored to the surface of a moon or planet that extends into space along which vehicles can travel, granting access to and from orbital space. A counterweight space station exists at the far end of the tether in what is essentially geostationary orbit.

STARSHIPS

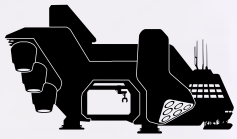
Starships are spacecraft that have FTL technology, allowing them to move between different stars, with transit times ranging from days to months, or years in extreme cases. Starships are also often capable of planetary landings and ascent with some retrofitting before each planetfall.

Starcraft (and other vehicles) of a higher tech rating involved in vehicular combat with craft of a lower tech rating are treated as if two levels higher when comparing relative levels for purposes of determining combat effectiveness.

Optional Rules: Extended Vehicular Combat, page 39

FANTASTIC

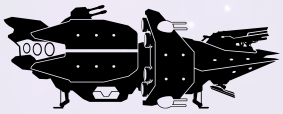
Dagger fighter level 1 (3) Very Expensive
A bare-bones, single-occupant fighter with a single weapon system that fires blasters. Dagger fighters cannot move between stars (though as fantastic craft, can move between planets), and require a larger carrier for FTL movement, such as a capital class starship with suitable docking bays.



Starship, cargo/passenger level 2 (6) Exorbitant
A spacecraft designed to haul cargo (or passengers, or both) between stars with a crew up of to twenty-five. Cargo starships may be impressively massive, or at least haul cargo sections that are quite large, but these craft are bulky and not meant for quick changes in direction or combat; all maneuvering and combat tasks are hindered.

Starship, solo fighter level 2 (6) Exorbitant
A small double-occupant starship with two weapon systems that fire blasters. Minimum size vehicle capable of FTL travel.

Starship, general purpose level 3 (9) Exorbitant
A small starship with room for only three to six crew plus an integrated ship AI able to handle many routine ship functions including navigation with FTL propulsion system. Designed for exploration of distant locations, salvage operations, and/or to act as a tug-craft for larger ships that need assistance. May possess a single weapon system such as a particle cannon.



Starship, discovery class level 5 (15) Priceless
A large research starship with quarters for crew and staff of up to 150 or more people. Has either centrifugal artificial gravity (or in a fantastic tech-rated setting, gravitic compensators providing shipboard gravity control). Primarily designed as a research and discovery vehicle, such starships also have three weapon systems, usually a couple of blaster cannons and a torpedo battery. Highly configurable, a discovery class ship could be converted for war with sufficient resources, granting it superior weapons.

Starship, warship class level 5 (15) Priceless
A relatively small warship with gravitic compensators allowing for extreme maneuvering for a crew of up to fifty people, easing all piloting tasks. Six weapon stations include three blaster cannons and three torpedo batteries. Two of these systems are superior weapons. Includes bays for a fireteam of three dagger fighter starships.

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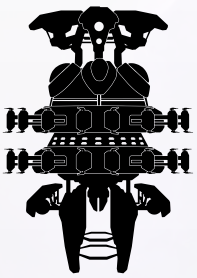
Starship, capital class level 7 (21) Priceless

As warship class starship, but over a hundred times larger, with room for over a few hundred crew. Ten weapon stations include five blaster cannons and five torpedo batteries. Four of these are superior weapons. Includes bays for two squadrons of fifteen dagger fighter starships.

Starship, omega class level 10 (30) Priceless

Three times as large again as a capital class starship, an omega class craft has over a thousand crew and over thirty weapon systems. Ten of these are superior weapons. Combined weapon fire can deal significant damage to a planetary surface, possibly destroying it. Includes bays for six squadrons of thirty dagger fighter starships.



STELLAR GATE

Stellar gates open wormholes between two fixed points at different locations without crossing the space between. The complexity of building a stellar gate is so extreme that such technology is often ascribed to found portals and networks dating back to mysterious ancient ultras or by post-singularity AIs. As might be expected, gates have a fantastic tech rating, no matter how small.

Ancient Ultras, page 61

A wormhole is also known as an Einstein-Rosen bridge.

FANTASTIC

Gate, planetary level 3 (9) Priceless

A free-standing ring or horizontal circular pad up to 9 m (30 feet) in diameter in/over which a spherical event horizon forms, allowing one-way travel to another location on the planet, orbiting moon, or orbiting space station with similar gate structure. Once the event horizon collapses (after several minutes up to an hour), travel back to the original gate is possible by initiating a second event horizon, though power reserves usually take several hours or more to build up to support each new wormhole opening.

Gate, interplanetary level 4 (12) Priceless

As planetary gate, but twice as large and connects gate structures that lie between locations within a single solar system.

Gate, star level 5 (15) Priceless

As planetary gate, but four times as large and connects gate structures that lie between locations within a few thousand light-years.

Gate, galactic level 6 (18) Priceless

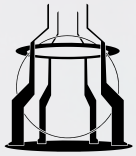
As planetary gate, but six times as large and connects gate structures that lie between locations within a single galaxy.

Gate, intergalactic level 7 (21) Priceless

As planetary gate, but six times as large and connects gate structures that lie between locations in different galaxies across the entire breadth of the universe.

Gate, interdimensional level 7 (21) Priceless

As planetary gate, but connects gate structures that lie in alternate dimensions.



"The ships hung in the sky, much the way that bricks don't."
~Douglas Adams, The Hitchhikers Guide to the Galaxy

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SPACECRAFT GM INTRUSIONS

Choose which GM intrusion is best for the story; roll if you face decision fatigue.

d10	Intrusion
01	Spacecraft is holed by micrometeorite or other debris and begins to leak air.
02	Spacecraft power source unexpectedly stutters, runs out of fuel, or malfunctions in a way that could lead to detonation.
03	Spacecraft is holed by something large enough to risk a catastrophic blow-out.
04	Environmental controls malfunction; ship interior grows colder and colder (causing a buildup of frost and ice on interior surfaces), until the problem can be identified and repaired.
05	Drive system surges, causing the vehicle to move faster, farther, or to a different location than was intended.
06	Solar flare, gravitational gradient, or other understood but unexpected phenomena damages ship.
07	A malfunction, deliberate sabotage by a rival, or a fatal malware-infected shipmind affects the environmental controls in a space suit or entire ship, deoxygenating it until it's mostly carbon dioxide. Affected characters, initially unaware of the problem, become more and more sleepy until they pass out.
08	Gamma ray burst from "nearby" neutron star conjunction threatens to fry ship and everyone on board.
09	External operations lead to a character being bucked off craft into empty space.
10	Environmental systems are compromised, requiring extensive overhaul to return to normal.

Fatal malware, page 124

SPACE-TIME VEHICLES

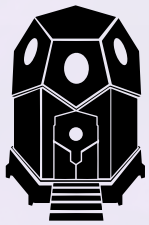
Space-time vehicles allow for movement between different points in both space and time. Such vehicles are vanishingly rare, and timelines in which they are active tend to eventually snuff themselves out due to accidental paradox events, limiting their availability even further. As with stellar gates, space-time vehicles are so complex that it's likely they are the product of ancient ultras or post-singularity AIs, and could be treated as artifacts with a depletion of 1 in 1d20.

Utility car, page 97
Sports car, page 97

FANTASTIC

Car, temporal/dimensional level 7 (21) Priceless

As contemporary utility car or sports car, but once moving can transition into another preset dimension or time. Enormous power requirements require recharge period of several days between each use.



Matrix, temporal level 8 (24) Priceless

An arbitrarily shaped vehicle or structure, bigger on the inside than out, that allows a pilot to travel into different locations in time and space, though arbitrary destinations are sometimes achieved despite apparent navigation successes by the pilot. Enormous power requirements require recharge period of several days between each use.

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VEHICLES AS ARTIFACTS

Cypher System artifacts in a science fiction setting could potentially be any one of the vehicles presented in this chapter, if found by characters in a less advanced setting than its tech rating. That said, even in advanced or fantastic settings, opportunities to find especially weird and hard-to-grok objects are everywhere. Such artifacts could be a surprising achievement of a lone scientist or post-singularity AI, one that no else understands. Alternatively, artifacts could be remnant technological objects created by super-advanced alien ancient ultras who used a technology that humanity has yet to replicate or reverse-engineer.

A couple of examples of such artifacts are presented here.

GATE RING

Level: 1d6 + 4
Form: Wearable ring of unknown material
Effect: Creates a full-sized shield that can be used as a regular shield in combat for one character, providing an asset on Speed defense rolls for the duration of that combat, after which it returns to its ring-like form. In addition, the wielder can command the deployed shield to become a functioning star gate that remains open for just one hour, leading to a strange destination (which the wielder is potentially aware of, if they ran sufficient analysis on the ring or otherwise gained information about it before using the function).
Depletion: Automatic (if gate is formed)

FRACTAL TRAVELER

Level: 1d6 + 4
Form: Goggle-like device of unknown material
Effect: When worn, induces a powerful hallucinogenic state in wearer. Hallucinations last for four hours, during which time the wearer seems to disappear from existence. From the wearer's perspective, they are falling through an ever-iterating fractal realm of mind-blowing imagery, possibly some version of hyperspace or dark energy network. At the end of that period they return to existence, either in the same location they left or somewhere they've previously visited. The images leave the viewer shaken, but for several hours all Intellect-based tasks are eased.
Depletion: 1 in 1d6

Ancient Ultras, page 61

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Chapter 9

CREATURES & NPCs

Part 3: Roleplaying in the Revel, page 207

A few creatures and NPCs in this chapter can be found in the specific locations described in Part 3, but most are provided to help you populate your own science fiction setting.

The most important element of each creature is its level. You use the level to determine the target number a PC must reach to attack or defend against the opponent. In each entry, the difficulty number for the creature is listed in parentheses after its level. The target number is three times the level.

A creature's target number is usually also its health, which is the amount of damage it can sustain before it is dead or incapacitated. For easy reference, the entries always list a creature's health, even when it's the normal amount for a creature of its level. For more detailed information on level, health, combat, and other elements, see the Understanding the Listings section in the *Cypher System Rulebook*.

Understanding the Listings, page 312

Chapter 22: Creatures, page 312

Chapter 23: NPCs, page 372

SUGGESTED ADDITIONAL CREATURES FOR USE IN THE REVEL

The *Cypher System Rulebook* provides a list of creatures and NPCs that can be used in any science fiction game. A subset of those can also additionally be used in the Revel.

- Assassin
- Chronophage
- CRAZR
- Enthraller
- Fusion hound
- Guard
- Kaiju
- Mechanical soldier
- Mokuren
- Neveri
- Puppet tree
- Replicant
- Secret agent
- Thug/bandit
- Vat reject
- Wardroid
- Xenoparasite
- Zombie

CREATURES AND NPCS BY LEVEL & TECH

Level	Name	Tech Rating
1	Space rat	Advanced
2	Silicon parasite	Advanced
3	Infovore	Fantastic
3	Mock organism	Advanced
3	Natathim (homo aquus)	Advanced
3	Sentinel tree	Advanced
3	Zero-point phantom	Fantastic
4	Devolved	Advanced
4	Ecophagic swarm	Advanced
4	Hungry haze	Fantastic
4	Inquisitor	Fantastic
4	Malware, fatal	Advanced
4	Redivus	Fantastic
4	Wraith (homo vacuus)	Advanced
5	Shining one	Fantastic
5	Supernal	Fantastic
5	Synthetic person	Advanced
5	Vacuum fungus	Advanced
6	Exoslime	Fantastic
6	Photonomorph	Fantastic
6	Storm marine	Advanced
7	Posthuman	Fantastic
7	Thundering behemoth	Fantastic
8	AI	Advanced
8	Cybrid	Fantastic
8	Wharn interceptor	Fantastic
10	Godmind	Fantastic
10	Omworwar	Fantastic

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ARTIFICIAL INTELLIGENCE (AI) 8 (24)

If a supercomputer can think independently, it's a strong AI (an artificial intelligence). Though not as advanced as godminds, AIs can develop inscrutable goals. Some interact with humanity helpfully (like the Luna One AI of the Revel), and some decide that people are a threat to their own continued existence and take steps accordingly.

AIs take many forms. Some are distributed across a vast network. Others are encoded into a singular "computer core." A few are machines with organic parts.

All are entities of extreme intelligence able to adapt to new situations, and most act on some kind of plan, whether long-acting, or newly concocted to fit the situation at hand.

Motive: Varies
Environment: Almost anywhere
Health: 33
Damage Inflicted: 10
Armor: 2
Movement: Immediate
Modifications: Speed defense as level 2, knowledge tasks as level 9
Combat: An electrical discharge—or in some cases precisely pulsed sequences of lights, each designed for a specific creature to see—can affect all targets within short range of the AI (or the AI's local terminal), inflicting 10 points of damage from electricity (or 10 points of Intellect damage, which ignores Armor).

Some AIs can take an action to absorb matter around them (such as walls, floor, equipment, unresisting living creatures, and so on), regaining 5 points of health.

An AI is likely able to deploy cyphers and artifacts in combat and also relies on guardians (such as synthetic people made to its own design) to aid it.

Unless a particular AI uses a computer core, damage to an AI may just be damage done to a "terminal," so even if an AI is seemingly destroyed, it might exist as another instance somewhere else.

Interaction: Some AIs enjoy negotiation. Others simply ignore humans as unworthy of their time and attention. An AI's voice often sounds surprisingly human.

Use: The characters are contacted by an AI sympathetic to biological beings. It wants them to accomplish a task on a moon of Jupiter: assassinate a security officer who the AI calculates as being a nexus of future disaster if he isn't removed from the equation.

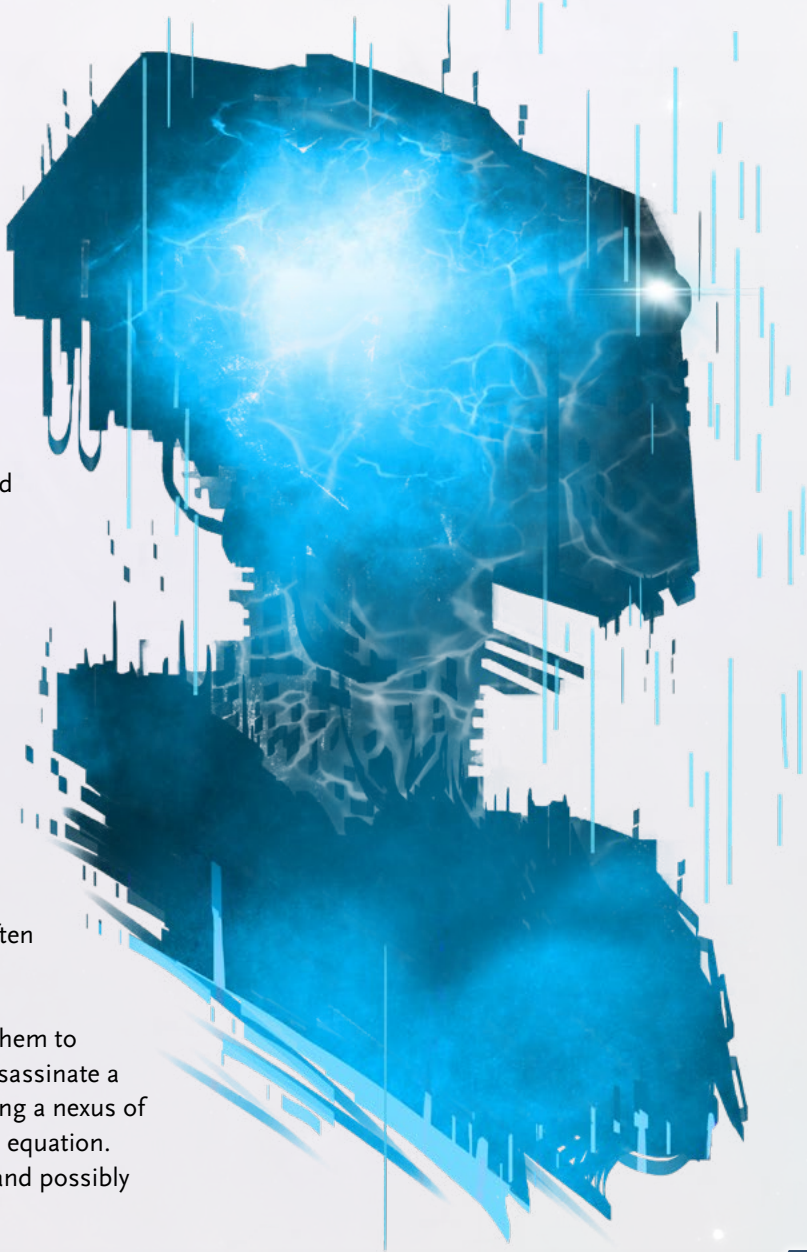
Loot: An AI might have access to 1d6 cyphers and possibly an artifact or two.

Weak, Sim, Strong, and Post-singularity AI, page 60

Part 2: The Revel, page 143

Chapter 11: Luna One, page 157

GM Intrusion: *The AI knows a phrase and series of images to flash at a particular PC to stun them for a round as it attempts to upload an instance of itself into their mind.*



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CYBRID 8 (24)

Ancient Ultras, page 61

Cybrid origins could be the result of someone finding a cache of ancient ultra technology, or manufactured by a post-singularity AI for some unfathomable purpose, or even the result of banned weapons research by a nation-state or conglomerate. The human remnants in each cybrid's carbon fiber and nested shells of nanotech exist in a red haze of pain; neuro-wetware and chemicals bathing their remaining living tissues hold the pain partly at bay.

From the exterior, not much of the original human is obvious, except perhaps in the echo of a humanoid shape. Each one has a unique conformation, but all are designed to strike fear in anyone seeing one, ally and enemy alike.

Motive: Kill away the pain

Environment: Usually set to guard important areas, creatures, or objects, or deployed in war

Health: 60

Damage Inflicted: 10

Armor: 3

Movement: Short; flies a very long distance each round; can maneuver like an autonomous level 5 spacecraft if using extended vehicular combat rules.

Optional Rules: Extended Vehicular Combat, page 39

Combat: Cybrids can attack up to three foes that they can see up to about 300 m (1,000 feet) away as a single action with graser (gamma ray laser) beams, inflicting 10 points of damage on each target and everything in immediate range of the target. Those caught in the beam who succeed on a Speed defense roll still suffer 2 points of damage. If the cybrid focuses on a single target, treat the attack as a level 10 attack that inflicts 14 points of damage, or 6 points even on a successful Speed defense roll.

Self-repair mechanisms allow the creature to regain 2 points of health per round.

Interaction: If communication can be opened up through a cybrid's haze of pain, it might be possible to temporarily wake the consciousness of the human remnant inside. However, that remnant consciousness might not be happy to discover what it's become.

Use: A cybrid has appeared in orbit around the station, ship, or moon with a compromised life support system or fragile dome. If it engages, the death toll will be staggering.

Loot: PCs who investigate the inert remains of the creature discover several manifest cyphers.

GM Intrusion: *The character struck by the graser beam develops radiation poisoning, in this case a level 8 disease that drops the character one step on the damage track each day that it goes untreated.*

Disease, page 219

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DEVOLVED 4 (12)

Conglomerate security subsidiaries regularly experiment with new ways to create super-soldiers, either to supply to a government on a contract basis, or to use for themselves. These experiments produced hundreds of dead ends—literally—plus a few dangerous failures.

The devolved are one of those dangerous failures.

These malformed, hideous brutes share a common heritage but display a wide array of maladies and mutations in the flesh, including withered limbs or elephantine patches of thick, scaly skin, misplaced body parts, and mental abnormalities. Simple-minded and afflicted with pain from their twisted, broken forms, the devolved vent all their hatred and wrath against all others.

Motive: Hungers for flesh

Environment: Groups of three to five, usually in locations where organized security can't easily reach

Health: 21

Damage Inflicted: 6 to 12 points

Movement: Short

Modifications: Intimidation tasks as level 6; Intellect defense and Speed defense as level 2 due to malformed nature

Combat: Devolved attack with a claw, a bite, or some other body part, inflicting 6 points of damage. They throw themselves at their enemies with mindless ferocity and little regard for their own safety. Easily frustrated, a devolved grows stronger as its fury builds. Each time it misses with an attack, the next attack is eased by one additional step and the damage it inflicts increases by 2 points (to a maximum of 12 points). Once the devolved successfully inflicts damage on a target, the amount of damage it inflicts and the difficulty of its attacks returns to normal. Then the cycle starts anew.

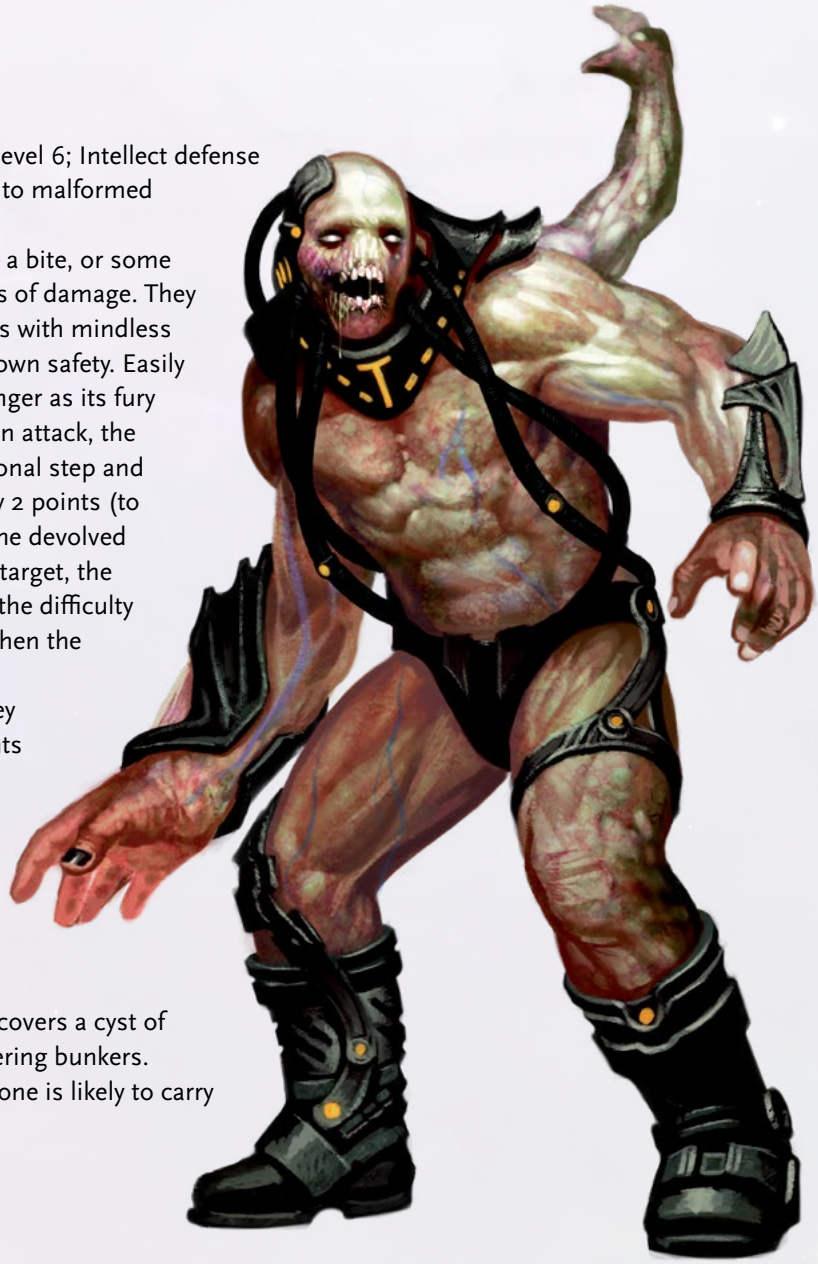
Interaction: Devolved speak when they must, punctuating their statements with growls and barks. Their understanding seems limited to what they can immediately perceive, and they have a difficult time with abstract concepts.

Use: An expedition to a ruined conglomerate research facility uncovers a cyst of devolved that live within its sheltering bunkers.

Loot: For every three or so devolved, one is likely to carry a cypher.

Even successfully created super-soldiers require a regular regimen of specialized drugs to keep them healthy. Most are shipped out to fight on faraway fronts, whether that's on a distant space station, moon, or in another star system entirely. Without their drugs, they may devolve.

GM Intrusion: *The devolved detonates upon its death, inflicting 6 points of damage on everything in immediate range.*



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ECOPHAGIC SWARM 4 (12)

Ecophagic swarms sometimes build weird structures or artifacts in the wake of their feeding, like massive metallic ant or wasp mounds, or something without any reference at all in the natural world.

Tiny nanomachines can be incredibly useful tools. But they can also become a terrible threat. Like cells in a living body that develop cancer, these out-of-control self-replicating robots can consume everything in their path while building more of themselves.

A typical swarm is about 6 m (20 feet) in diameter, individually consisting of millions of individual minuscule machines. However, several swarms can act together, creating a much larger cloud of death with just one purpose: to eat and replicate. Able to move large distances by gliding through the air, cloud-like swarms take on intriguing shapes and ripple with mathematical patterns as they approach a potential target, beautiful and deadly.

Motive: Hungers for matter, including flesh

Environment: Ecophagic swarms are drawn most to areas rich in rare-earth metals, such as large cities or space stations where everyone carries a smartphone, AR glasses, or something similar

Health: 12

Damage Inflicted: 4 points

Movement: Flies a long distance

Combat: As a mass of countless tiny machines, an ecophagic swarm can flow around obstacles and squeeze through cracks large enough to permit a single sub-millimeter machine. That includes over and around other creatures. Characters touched by a leading edge—or wholly enveloped within the hazy "body"—of an ecophagic swarm must succeed on a Might defense task or take 4 points of damage. If the character doesn't wear armor of some kind, they take 1 point of damage even if they succeed.

For its part, an ecophagic swarm ignores any attack that targets a single creature (unless it's an electrical attack), but it takes normal damage from attacks that affect an area (and electrical attacks), such as a detonation. A swarm cannot enter liquids, unless it takes about an hour to build new subunits that are aquatic.

Interaction: Someone with an ability to communicate with machines might be able to interact with a swarm. Even then, attempts to influence it are hindered by three steps.

Use: A promising new nanotech "printing" technology was hacked by radical elements.

GM Intrusion: *The character must succeed on a Speed defense roll or their armor (or other important piece of equipment) is taken by the swarm.*

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EXOSLIME 6 (18)

Amoeboid life predominates in some environments. Sometimes, it slimes asteroid crevices or its greasy residue is found on abandoned spacecraft. In a few cases, large portions of entire worlds are covered in living seas of translucent protoplasm. Individual volumes of exoslime are 5 m (15 foot) diameter moldlike blobs. Exoslimes possess independent minds, but in some settings may be manufactured entities designed to explore new locations, interact with aliens, or subjugate aliens.

Exoslimes can learn to respect the autonomy of other creatures, though their natural instinct is to absorb novel objects and creatures they discover in order to learn about them. Exoslimes can also replicate anything they absorb, even a previously eaten living intelligent being.

Motive: Hungers for information
Environment: Moist and warm areas
Health: 33
Damage Inflicted: 6 points
Movement: Immediate; immediate when climbing or burrowing
Modifications: Speed defense as level 5 due to size
Combat: Though slow, an exoslime is dangerous. When roused, all characters within immediate range of an exoslime must succeed on a Might defense roll each round or be touched by the heaving mass. A victim adheres to the slime's surface and takes 6 points of acid damage each round. The victim must succeed on a Might defense roll to pull free. A victim who dies from this damage is consumed by the exoslime. The exoslime may later create a duplicate of any previously devoured fleshy creature, a process requiring about three rounds to complete. Duplicates have full autonomy, and can communicate with the slime.
Interaction: An exoslime prefers to eat a newly-encountered creature, then create a duplicate of it to act as a translator. Of course, a stranger might not understand why the exoslime is trying to eat it.
Use: The sample brought in from the exterior has a weird, mucus-like growth that seems able to slowly eat through most materials.

GM Intrusion: *The character escapes an exoslime attack, but a piece of quivering protoplasm remains stuck to their flesh, eating away at 1 point of Speed damage (ignores Armor) each round until the character succeeds on a Might roll as an action.*

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GODMIND 10 (30)

Post-singularity AI, page 60

Unfathomably powerful post-singularity AIs, godminds are vast, having used the matter of an entire solar system and all its planets to create an immense brain, weave themselves into a nebula, or encode themselves into quantum strings of existence light-years across.

When necessary, a godmind forms a nexus of consciousness—an instance—appearing as a disembodied eye of electromagnetic energy, ranging from about the size of a human eye all the way up to the size of a planet.

Motive: Ineffable

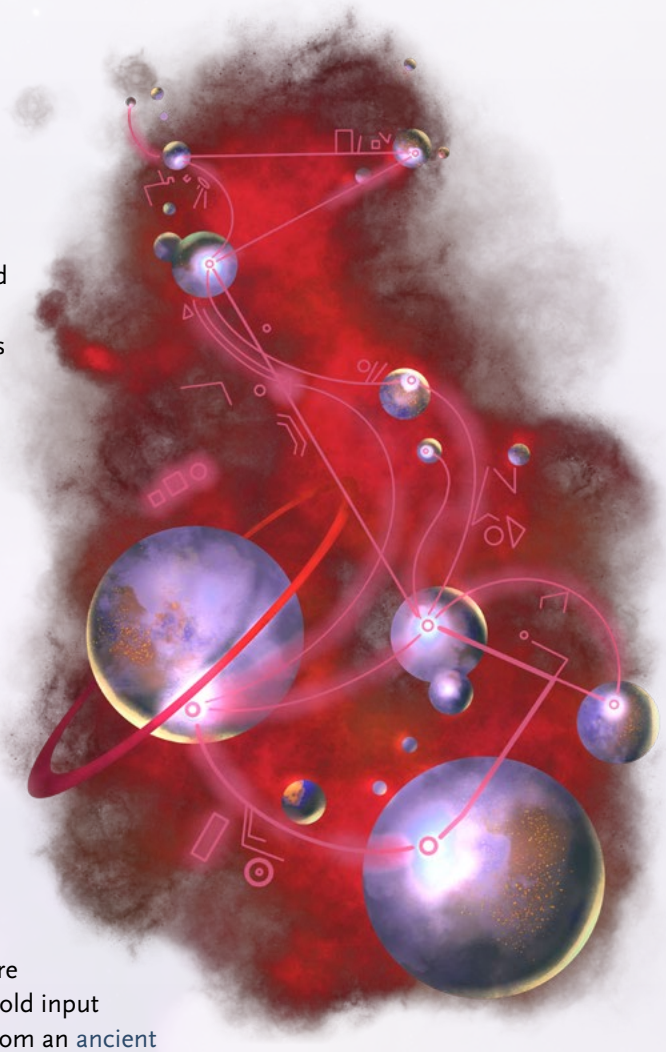
Environment: Anywhere, usually in space

Health: 50 (per instance)

Damage Inflicted: 15 points

Movement: Very long when flying

Combat: A godmind can vary the physical laws of the universe within a light-second of one of its instances (some would call them avatars) to create an effect most useful to the godmind at the time. For instance, a godmind could create a gamma ray burst inflicting 15 points of damage on all creatures within very long range, attempt to put a target into temporal stasis, send a target (even a target as large as spacecraft) through a temporary wormhole gate, and so on. It could also scan the memory banks of any digital machine, and possibly of any living creatures. In any event, if an instance were targeted, and successfully neutralized or even destroyed, the godmind itself isn't harmed. An aggressor would have to find the godmind's primeval "computer core" to destroy one, likely an epic quest in and of itself.



Interaction: To actually get a godmind's attention and negotiate could require ancient command code, finding an old input device, or showing up with a relic from an ancient ultra or other prize. If a godmind does render aid, it's likely to be in a form that is initially enigmatic, though ultimately extremely powerful.

Ancient Ultras, page 61

Use: A universal threat requires a defense that is equally potent. Research suggests that the diffuse nebula known as the Double Helix may actually be the visible form of a vast godmind. Perhaps it can help.

GM Intrusion: *The godmind rewinds time a few seconds and sidesteps whatever negative effect would have otherwise inconvenienced it.*

Loot: Sometimes a godmind provides powerful artifacts to aid those who petition them for aid, assuming the need is dire.

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HUNGRY HAZE 4 (12)

"I thought my glasses were fogged. Wiping them did no good. Before I realized that the haze was actually alive and aggressive, poor Johnson was eaten."

~Tilly Rasmussen, Timespace Zoologist

Victims being fed upon by a hungry haze sometimes hallucinate, seeing a physically manifest monster instead of formless vapor.

Hungry hazes are found in regions where the fundamental laws of physics have been eroded or are weak. They are named for how they appear as distortions of sight, like areas of heat haze, that shimmer in the air. These colorless hazes rapidly advance when they sense prey, taking on a "hungry" orange-red hue as they cling to the bodies of whatever they attempt to feed on next.

Motive: Hungers for flesh

Environment: Alone or in groups of three to five, usually in areas of strained space-time. Immune to the effects of vacuum.

Health: 12

Damage Inflicted: 5 points

Movement: Flies an immediate distance each round

Modifications: Stealth tasks as level 5

Combat: A hungry haze breaks down the flesh of all living creatures within immediate range, inflicting 5 points of damage. As an insubstantial haze, only attacks that affect an area have a chance to inflict full damage on them; other successful attacks only inflict 1 point of damage, regardless of the amount indicated. If a hungry haze successfully feeds, it gains 1 point of health, even if the increase puts it above its maximum health.

If a hungry haze is reduced to zero health, a smooth thumb-sized egg of unknown material is left behind.

Interaction: A hungry haze does not speak or seem to have language. But it is not mindless; it can learn from its experiences and figure out creative solutions to problems.

Use: After a research station on Mercury is abandoned for unspecified issues, salvagers show up looking for easy pickings. But a strange haze seems to hang over the station.

Loot: People (or AI) interested in strange manifestations would probably pay for the remains of a hungry haze in an amount equal to the expensive price category.

GM Intrusion: *The character's Armor rating is reduced by 1; the hungry haze apparently can eat more than just flesh.*

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INFOVORE 3 (9)

Infovores have also been called ghost fabricators and aterics.

Entities of information with an affinity for technology, infovores are nothing but stored information without a bit of mechanism to inhabit. But once one gains control of a device, computer system, or other powered item, it self-assembles over the course of a few rounds, becoming stronger and more dangerous as each second passes. Luckily, an infovore seems unable to hold this form for long, and whether defeated or not, it eventually falls back into so much scattered junk. But in one of those objects, the core of the infovore remains, waiting to come into close enough proximity to another fresh mechanism to begin the rebirth process again.

GM Intrusion: *The character must succeed on a Speed defense task or lose a powered piece of equipment (an artifact) or a manifest cypher as it's pulled into the self-assembling infovore. The infovore gains an additional attack each round.*

Motive: Hungers for information

Environment: Anywhere powered devices are found

Health: 9

Damage Inflicted: 3–10 points

Armor: 3

Movement: Short

Modifications: Attacks and defends at an ever-escalating level

Combat: A newly animate infovore (level 3) has a rough but articulated form that it uses to batter and cut targets who carry powered devices on them. Unless destroyed, on each subsequent round it draws nearby inert mechanisms, unattended metallic and synthetic matter, and ambient energy, and its effective level increases by one. This level advancement completely heals all previous damage it has taken and advances it to the amount of health consistent with a creature of the next higher level. Damage, attacks, and defense continue to ramp up as well, continuing each round until the creature is either destroyed or it reaches level 10. After being active for one round at level 10, it spontaneously disassembles, falling back into so many scattered pieces of junk. Finding the "seed" device amid this junk is a difficulty 6 Intellect-based task.

Interaction: Infovores are fractured, fragmented beings. Characters who can talk to machines might be able to keep one from "spinning up" to become a threat and learn something valuable, but only for a short period.

Use: Among the devices collected from trade, salvage, archeological dig, or some other unique source, one was actually an inactive infovore, quiescent until plugged in or scanned.

Loot: An infovore that has undergone spontaneous disassembly leaves one or two manifest cyphers; however, there's a chance that one of those cyphers is actually the infovore seed.

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INQUISITOR 4 (12)

Inquisitors are aliens who call themselves "inquisitors" when they contact new species. Their preferred method of interaction is to study a given area for its flora and fauna, and attempt to collect a representative sample of any intelligent species they find (such as humans). Collected subjects may be gone for good, but other times they wake with little or no recollection of the experience save for bruises, missing digits or teeth, scabbed-over circular head wounds, and a gap of three or more days in their memory.

Instead of arms, inquisitors sprout three sets of three tentacles like those of a squid, each of which branches into a smaller and finer set of manipulator tendrils. They can manipulate complex machines in a way that a regular human could never hope to. In most settings, inquisitors possess a level of technology and advancement well above that enjoyed by humans.

Chapter 14: Diaspora of Mars, page 182

Motive: Knowledge

Environment: In groups of three to twelve

Health: 18

Damage Inflicted: 6 points

Movement: Short; short when climbing

Modifications: Knowledge-related tasks as level 8

Combat: Inquisitors can batter and squeeze foes with their tentacles, but they prefer to use advanced items that they always carry, including long-range energy weapons that can inflict damage or, with a flipped setting, induce deep sleep for an hour or more if the victim fails a Might defense task. Usually, inquisitors attempt to cause as little damage as possible to potential subjects, so the sleep setting is used most often.

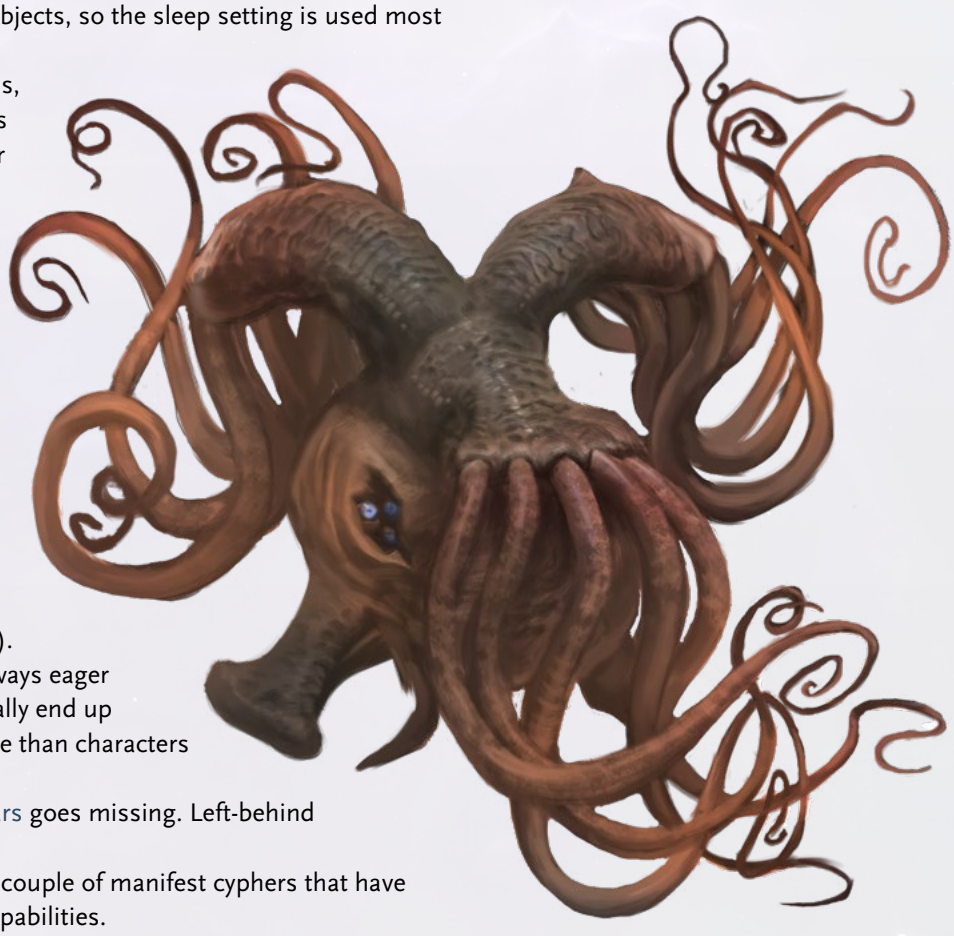
They also carry defensive items, including manifest cyphers that can grant +4 to Armor for a few minutes or throw up a level 8 force field barrier. In case a specimen collection mission goes badly, at least one inquisitor carries a manifest cypher that creates a short-lived teleportation portal for instant transport to a distant and hidden base (which might be a spacecraft or a transdimensional redoubt).

Interaction: Inquisitors are always eager to "talk," though they usually end up wanting to know a lot more than characters are willing to divulge.

Use: An entire freehold on Mars goes missing. Left-behind clues point to inquisitors.

Loot: Most inquisitors carry a couple of manifest cyphers that have offensive and defensive capabilities.

GM Intrusion: *The character (or characters) wake after a long rest, only to realize that more than ten hours have passed. They all have strange marks and wounds, but no one remembers why. One character—an NPC or follower—might even be missing.*



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MALWARE, FATAL 4 (12)

This purely malefic program has aggressive machine learning capabilities, allowing it to accomplish truly innovative and nasty tricks. Fatal malware may have originated as a simple virus or spyware coded for a specific purpose, but corruption and lightning-quick electronic evolution has turned it into something that exists purely to infect orderly electronic systems, spacecraft, space stations, smart weapons, and anything else with an operating system. Infected objects turn against living people.

An instance often has the form of the system it's infected, but occasionally fatal malware physically manifests as a metallic "cancer" of wires and self-assembling circuits hanging like a tumor across a server room, shipmind core, or data center, having perverted the original machine's self-repair functions. Sometimes 4D printers are also compromised.

4D printer, page 76

Motive: Corruption and destruction

Environment: Any electronic system able to run code can host one or more instances

Health: 18

Damage Inflicted: 5 points

Movement: As the system it infects

Modifications: Knowledge tasks related to computers and other electronic systems as level 6

Combat: An instance of fatal malware that physically touches (or electrically connects with) a powered device of up to level 6 can attempt to seize control of it. It can then use that device to attack living targets. If the controlled system is a computer, smartphone, AR glasses, or some other piece of equipment that doesn't have any intrinsic movement, the malware attempts to electrocute a user, or if a smart weapon, cause some kind of fatal accident with it. A compromised computer or shipmind voice can dangerously mislead victims.

Fatal malware duplicates itself, creating many instances, and those that survive are usually slightly better at avoiding being erased than the previous generations.

Interaction: Fatal malware isn't really sentient and thus can't really be negotiated with; some instances could mimic intelligence to draw humans into a trap.

Shipmind, page 44

Use: An instance of fatal malware has gotten into a shipmind, which is making the normally trustworthy AI act out in unexpectedly dangerous ways. The shipmind itself doesn't know it's infected.

GM Intrusion: *The fatal malware divides into a second instance and attempts to override and control another piece of equipment carried by the character, especially a character with cybernetic implants.*

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MOCK ORGANISM 3 (9)

Artificial life can be created by selective breeding, synthetic and genetic engineering, or by accidental miscalculation in some unrelated high-energy or food-research program. When artificial life takes a wrong turn, the results run the gamut from disappointing to dangerous. If an artificial entity starts out benign, it's difficult to know if a hidden or slowly developing flaw will tip it over the edge into dangerous dysfunction—or if it just acts oddly because it doesn't know the social cues.

Should synthetic beings be treated as people, pets, or monsters to be stamped out and destroyed? That's the eternal question and one that's usually answered by those most afraid of potential dangers that might accompany the creation of something no one intended.

A mock organism has also been called a morphon or a mad creation.

Motive: Defense or destruction

Environment: Usually in secluded locations alone unless hiding in unused storage rooms of a large facility

Health: 18

Damage Inflicted: 5 points

Armor: 2

Movement: Short

Combat: A mock organism can release an electrical discharge against a target at short range. In melee, a mock organism's poisoned claws inflict damage and require the target to succeed on a Might defense task, or the poison induces a coma-like slumber in the target. Each round the target fails to rouse—an Intellect task—they take 3 points of ambient damage.

Interaction: A mock organism is intelligent and can sometimes be swayed by reason. It might be passive, but if disturbed in a place it thought was secure against intrusion, it could grow belligerent and even murderous. Once so roused, a mock organism might still be calmed, but all such attempts are hindered.

Use: A scientist's ruined lab contains several unexpected surprises, including a mock organism that yet grieves over the loss of its creator.

Loot: A mock organism requires many parts. Salvage from a destroyed mock organism could result in a manifest cypher or two and another item that, with a bit of jury-rigging, works as an artifact.

GM Intrusion: *The character hit by the mock organism's melee attack doesn't take normal damage. Instead, the mock organism drops onto the character. The PC is pinned until they can succeed on a difficulty 6 Might-based task to escape. While pinned, the creation whispers mad utterances into the target's ear.*

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NATATHIM 3 (9)

Pronunciation: "ney-TEY-thim"

Genetically engineered to live in the water oceans discovered beneath the ice crusts of various solar moons, natathim (*Homo aquus*) have human ancestors, but barely look it. Survival in the frigid, lightless depths of extraterrestrial oceans required extreme adaptation. Predominantly dark blue, their undersides countershade to pure white. Though humanoid, their physiology is streamlined, giving their heads a somewhat fish-like shape, complete with gills and large eyes to collect light in the depths. Their bodies are adorned with fins and frills, including a long shark-like tail, and they have webbed extremities with retractable claws.

Depending on the setting, natathim are either human allies with the same (or even more advanced) tech, enemies with the same or more advanced tech, or genetic anomalies treated like laboratory rats burning with genocidal fury at what's been done to them (as is the case in the Revel). Alternatively, natathim could be discovered in Earth's deepest oceans, their origin mysterious, but able to interbreed with humans as a method for maintaining their line.

Part 2: The Revel, page 143

Motive: Just as with humans, natathim have many and varied motivations and drives.

Environment: Anywhere in or near water, or in suits/craft with marine environments, in schools of three to twelve. Natathim can act normally in air for up to twenty-four hours before they must return to water.

Health: 9

Damage Inflicted: 4 points

Armor: 2

Movement: Short on land; long in the water

Modifications: Swims as level 6

Combat: Natathim attack with their retractable claws or, if available, technological weapons. Some have a magnetoreception ability that allows them to see into frequencies other creatures can't, or even stranger abilities to interact magnetically with their surroundings, though this is little understood.

Interaction: Natathim can be sympathetic to humans, partners in space exploration, or consider humans to be bitter foes for having created their species in the first place, depending on the setting.

Use: The PCs find evidence of an illegal gene tailoring experiment, with evidence pointing to research being done somewhere in the Opulence of Outer Planets.

Loot: Some natathim carry valuable items and equipment.

Chapter 15: Opulence of Outer Planets, page 189

GM Intrusion: *The natathim spontaneously magnetizes the character's possessions, which hold them helpless against the nearest wall or floor (if also metallic). The PC can take no actions other than attempt to escape.*

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OMWORWAR 10 (30)

Among the many stories passed down the space lanes, a few stand out for their grandiosity. Take the tales of omworwar sightings in the empty voids between stars, or even more unexpectedly, flashing through the abnormal space during FTL travel. Scientists speculate that these creatures, if actually real, might very well be *extant* instances of ancient ultras, not extinct as everyone believes, or at least not completely. In almost every case so far recorded, omworwars have little interest in human spacecraft. (They're called omworwar after the sound disrupted communication devices make in their presence.)

Each one is several kilometers long, a dark inner slug-like core surrounded by gauzy layers of translucent, glowing, nebula-like tissue. Whale-like eyes surmount the dorsal surface, each seeming to contain a tiny galaxy all their own.

Motive: Unpredictable

Environment: Almost anywhere in space, alone or accompanied by one or two wharn interceptors

Health: 42

Damage Inflicted: 12 points

Armor: 10

Movement: Flies a very long distance each round; can maneuver like an autonomous level 7 spacecraft if using extended vehicular combat rules. FTL capable.

Modifications: Speed defense as level 7 due to size

Combat: An omworwar can manipulate and fold gravity (and space-time), allowing them to accomplish near-miraculous tasks including communication, creating or destroying matter, and propulsion via "falling" through the universe at FTL speeds from the perspective of an outside observer. Which means one can rend a spacecraft, send a spacecraft spinning through the galaxy, or create asteroid-sized chunks of space-matter for any number of purposes if it spends several rounds in deep concentration.

Interaction: Omworwar disregard most other creatures, because from the omworwar's perspective, they're like mayflies, here and then gone again in an eyeblink of their existence. However, one may give a moment to someone who has discovered an ancient ultra secret or artifact, pass on information that might otherwise never be known, or even provide a useful manifest cypher.

Use: A reflective object composed of unknown material was found at the core of an unexpectedly destroyed space station. Those who managed to flee in lifeboats report having seen what might have been an omworwar, bleeding energy and eyes going dark, colliding with the station. The resultant lump might just be its corpse, or maybe its protective chrysalis.

Loot: Four level 10 manifest cyphers.

Wharn interceptors have been seen accompanying single omworwars, indicating an association, and is why some people refer to these beings as wharn cogitators.

Ancient Ultras, page 61

Wharn interceptor, page 140

Optional Rules: Extended Vehicular Combat, page 39

GM Intrusion: *The character discovers that one of their manifest cyphers has formed a tiny eye, but an eye that seems to contain a galaxy. (The cypher becomes useless for its original function, but might be used to summon or interact with an omworwar.)*

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PHOTONOMORPH 6 (18)

Hard-light technology, which creates pseudo-matter from modified photons, has made possible all kinds of structures and devices that wouldn't otherwise exist. One of those, unfortunately, are self-sustaining photonic matter creatures. Sometimes, photonomorphs are enforcers created by much more powerful beings; other times they are the result of some person or AI attempting to ascend into a new state of being. But whatever their origin, photonomorphs are dangerous beings that can create matter from light, granting them an arbitrarily wide swathe of abilities. That includes their own glowing bodies, which they can change with only a little effort. This variability of form, coupled with their vast power, may be why many seem slightly mad.

Motive: Varies

Environment: Anywhere, alone or attended by three to five servitors appearing as hovering red spheres

Servitor: *level 4; flies a long distance each round*

Health: 22

Damage Inflicted: 8 points

Armor: 3

Movement: Reconstitutes itself anywhere light can reach within long range as part of another action

Modifications: Knowledge tasks as level 8

Combat: Photonomorphs draw upon their own light to manifest effects equal to their level. Effects include the ability to attack creatures at long range with laser-like blasts, create glowing walls (or spheres) of force within an area up to 6 m (20 feet) on a side, become invisible, change its appearance, and create simple objects and devices out of hard light that last for about a minute (unless the photonomorph bleeds a few points of its health into the object to make it last until destroyed).

A photonomorph regains 2 points of health each round in areas of bright light. It is hindered in all actions if the only source of light is itself or objects it has created.

Interaction: Photonomorphs are intelligent and paranoid, but not automatically hostile. They have their own self-serving agendas, which often involve elaborate schemes.

Use: A photonomorph appears, claiming to be a herald of some vastly more powerful cosmic entity or approaching alien vessel.

GM Intrusion: *The photonomorph uses its ability to create a hard-light object or effect that is perfect for aiding it for the situation at hand.*

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POSTHUMAN 7 (21)

Rather than evolving naturally, posthumans advance via a directed jump, designed with smart tools and AI surgeons. With all the advances fantastic technology brings to their genetic upgrade, posthumans are beings whose basic capacities radically exceed regular people. They can't really be considered human any longer; they've transcended humanity, which is why they're also sometimes called transhumans. They're often involved in large-scale projects, such as creating bigger-than-world habitats or spacecraft, or possibly even researching how they might ascend to some still-higher realm of consciousness or being.

Motive: Variable

Environment: Alone or in small groups or communities in orbital colonies or other designed locations

Health: 50

Damage Inflicted: 9 points

Armor: 4

Movement: Short; flies a long distance

Modifications: Knowledge tasks as level 9

Combat: Posthumans can selectively attack foes up to a very long distance away with bolts of directed plasma that deal 9 points of damage. A posthuman can dial up the level of destruction if they wish, so instead of affecting only one target, a bolt deals 7 points of damage to all targets within short range of the primary target, and 1 point even if the targets caught in the conflagration succeed on a Speed defense roll.

Posthumans can also call on a variety of other abilities, either by small manipulations of the quantum field or by deploying nanotechnology. Essentially, a posthuman can mimic the ability of any subtle cypher of level 5 or less as an action.

Posthumans automatically regain 2 points of health per round while its health is above 0.

Interaction: Posthumans are so physically and mentally powerful that they are almost godlike to unmodified people, and either ignore, care for, or pity them. Knowing what a posthuman actually wants is hard to pin down because their motivations are complex and many-layered.

Use: A rogue posthuman is researching a method whereby they might portal into the "quantum" realm of dark energy underlying the known universe of normal matter. Despite the revealed risk of antagonistic post-singularity AIs roaming that realm escaping, the posthuman continues their work.

Loot: The body of a posthuman is riddled with unrecognizable technologies fused seamlessly with residual organic material—or at least material that grows like organic material used to. Amid this, it might be possible to salvage a few manifest cyphers and an artifact.

GM Intrusion: *The posthuman allows acts out of turn, or takes control of a device that the character is about to use against the posthuman.*

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REDIVUS 4 (12)

Redivi spend most of their lives—uncounted millennia—hurtling through space. Most never encounter anything, but some few impact other worlds, are captured by alien spacecraft, or otherwise intercepted. Their traveling form resembles rocky space rubble the size of a small spacecraft—until they unfurl glowing magnetic plasma wings, revealing themselves as strange creatures of living mineral. Redivi can interact with almost any electronic system and manipulate electromagnetic fields.

Redivi are searchers, all sent forth by the Great Mother, billions upon billions of them (they say), looking for the seed of the next great cosmic expansion. Thus, most redivi are consumed with finding out more, finding other redivi, and eventually, finding their "universal seed."

Motive: Knowledge

Environment: Almost anywhere, searching

Health: 12

Damage Inflicted: 5 points

Armor: 4

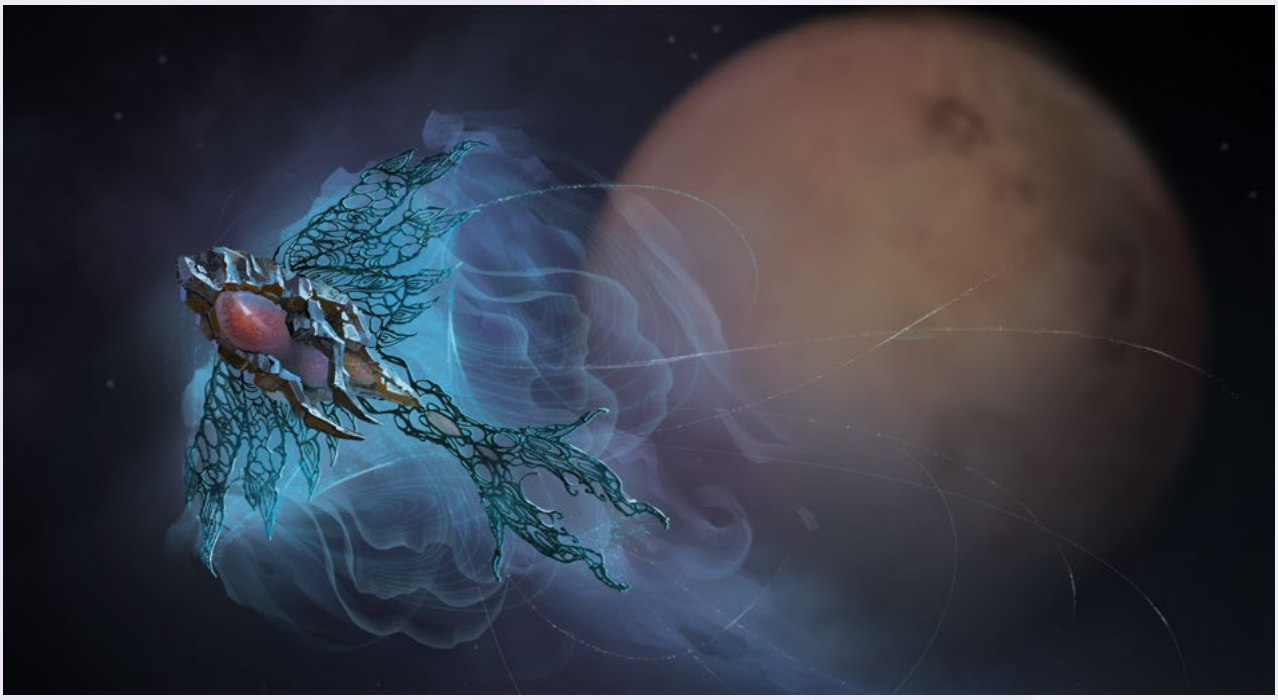
Movement: Flies (magnetically levitates) a short distance each round

Combat: The stone carapace of a redivus makes a huge "club" when it rams into foes. However, it can also control metal within short range, causing it to flex, animate, crush, or smash. For instance, targets wearing metal space suits are in trouble when that metal begins to unravel. Alternatively, a redivus can use nearby metal to wrap around a target and constrict it, inflicting 5 points of damage (ignores Armor) each round until the target can escape.

Interaction: If any kind of radio or similar communication is in use, these creatures can commandeer it and speak through it, learning a new language seemingly over the course of minutes. Redivi will cooperate with reasonable requests and negotiate, especially if there's a chance they'll find out something new.

Use: A redivi pod smashes into the side of the spacecraft, and might at first seem like some kind of attack or boarding action of something truly terrible.

GM Intrusion: *The character's metal-containing equipment is stripped away, then used as ammunition against that PC or an ally.*



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SENTINEL TREE 3 (9)

Depending on the sci-fi setting, sentinel trees are mutated trees that grow near radioactive craters dimpling the landscape, alien plant-life that evolved in a different biosphere (or dimension), or the result of intensive gene-tailoring, possibly of the illegal sort. Regardless of their provenance, sentinel trees resemble thorny masses of knotted vines. Razor-sharp glass-like leaves flex like claws, and vibrating pods glisten, ready to detonate if thrown. If cultivated, they may take on a shape designed to further frighten—or at least warn away—those who see one. Sentinel trees are mobile, aggressive, and feed on almost any sort of organic matter. Once it brings down prey, it sinks barbed roots in the body for feeding and decomposition.

Motive: Feed

Environment: In groves of three to six, able to tolerate most atmospheres (even thin ones, like on Mars) but not vacuum

Health: 12

Damage Inflicted: 3 points

Armor: 1

Movement: Immediate

Combat: Sentinel trees can fling a vibrating pod at a target within long range, which detonates on impact, inflicting 3 points of damage on all targets within immediate range of the blast. Targets must also succeed on a Might defense roll or be poisoned for 3 points of damage, plus 3 points again each subsequent round until a Might task is successful.

A sentinel tree can also lash out with its barbed vines at a target within immediate range, inflicting 3 points of damage. Melee targets must also succeed on a Might defense roll or become entangled and unable to take physical actions until they can break free on their turn.

Interaction: Sentinel trees are about as smart as well-trained guard dogs. They can't speak, but can understand some words and gestures.

Use: A grove of sentinel trees guard a compound that the characters need to break into.

The vibrating pods, in addition to being explosive, act to disperse sentinel tree seeds.

In the Revel, sentinel trees are the result of illegal gene-tailoring.

Part 2: The Revel, page 143

GM Intrusion: *The character caught in the detonation is blinded with tiny black seeds until they use a recovery roll to remove the condition. (The recovery use doesn't return points to a Pool.)*

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SILICON PARASITE 2 (6)

These tiny silvery insect-like creatures range in size from a sub-millimeter to up to 30 cm (1 foot) in diameter, emitting short pulses of violet-colored laser light to sense and sample their environment. Composed of organic silicon wires and wafers, and self-assembled or evolved in some unnamed lab or spacecraft wreck, silicon parasites are vermin that working space stations and spacecraft have learned to hate.

Despite taking steps to avoid transfer, a ship may only learn they have silicon parasites when a swarm boils up from a crack in the cabling or seam in the deck plating after being agitated by a high-G maneuver or some other disturbance. If that disturbance is combat or some other dire emergency, silicon parasites thrown into the situation makes everything worse.

Motive: Defense, harvest electronic materials necessary to self-replicate.
Environment: Usually on spacecraft and space stations in groups of up to twenty
Health: 6
Damage Inflicted: 3 points
Armor: 1
Movement: Short; climbs a short distance each round
Modifications: Speed defense as level 4 due to size.
Combat: Only "large" silicon parasites are a danger to most creatures. When four or more parasites coordinate their attacks, treat the attack as that made by a single level 4 creature that inflicts 5 points of damage, and on a failed difficulty 4 Might defense roll, an attack that holds the target in place until it can successfully escape. A held target automatically takes 5 points of damage each round, or even more if other silicon parasites in the area pile on.

Silicon parasites can operate in complete vacuum without harm.

Interaction: By and large, silicon parasites behave like social insects, though some claim that large numbers of them have acted with greater intelligence and forethought than mere unthinking insects can manage.

GM Intrusion: *The silicon parasite flashes its sensory laser directly into the character's eyes, blinding the character until they succeed on a difficulty 4 Might-based roll as their action.*

Use: A swarm of silicon parasites floods into the hold and makes off with an important device, dragging it into the crevices and walls of the spacecraft or station.

Loot: Swarm nests often contain a few valuable manifest cyphers or working pieces of equipment.

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SPACE RAT 1 (3)

Yeah, rats made it to space. And against all expectations, one strain evolved in the harsh radiation and zero-G environments that would kill humans not protected by medical intervention. Space rats are furless, about two feet long, sport a truly prehensile tail, and can quickly change their shade of their skin to blend in to their surroundings. They can also drop into a state of extreme torpor that allows them to survive stints of vacuum exposure lasting several days.

Space rats are vermin, and any spacecraft or space station that hosts a nest must deal with constant issues from the rats burrowing into systems, stealing food and water, and causing systems to break down, even critical ones. They're also vicious when cornered.

Motive: Defense, reproduction

Environment: Anywhere humans live in space

Health: 5

Damage Inflicted: 3 points

Movement: Short; short when climbing or gliding through zero G

Modifications: Stealth and perception as level 5

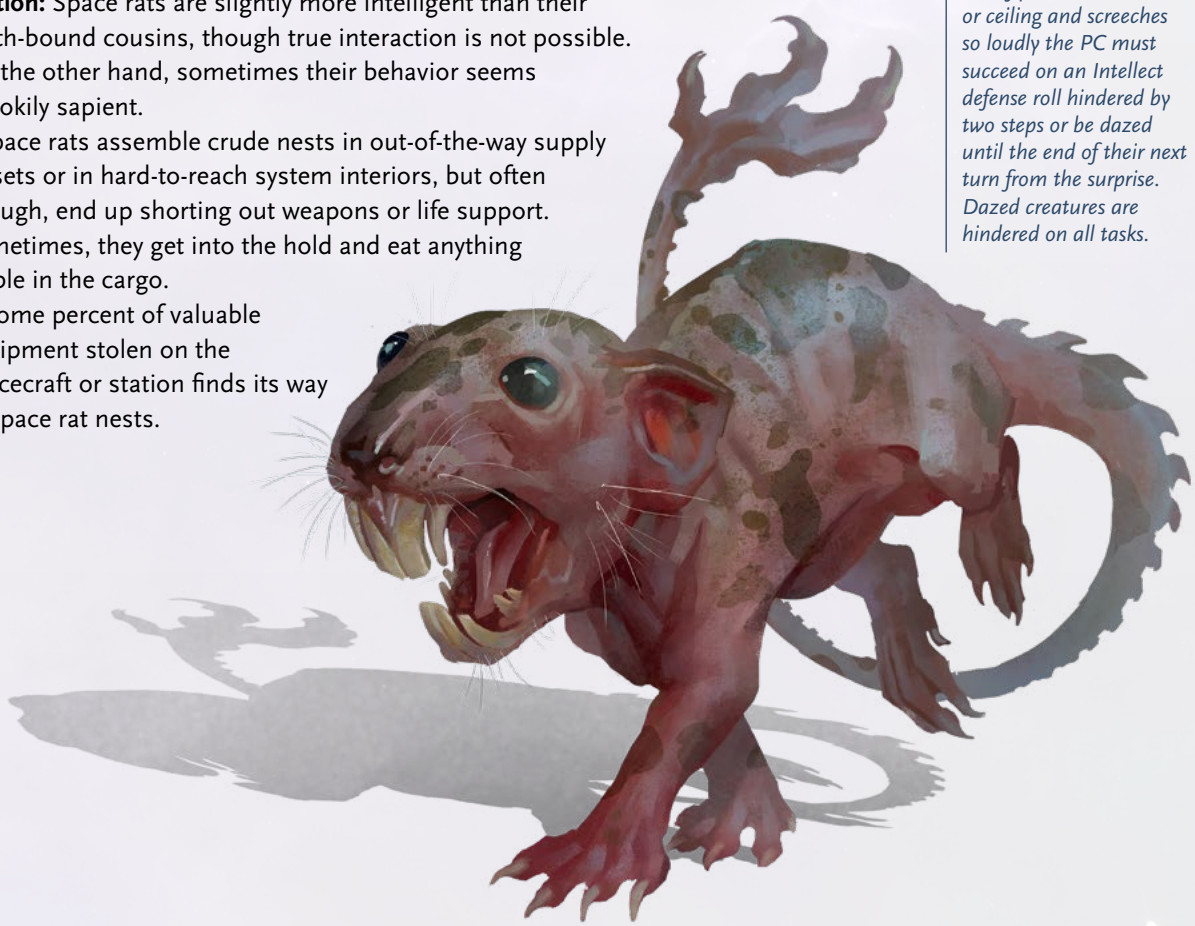
Combat: Space rats flee combat unless cornered or one of their burrows is invaded. Then they attack in packs of three or more, and from an ambush if possible. One space rat pack attacks the victim as a level 3 creature inflicting 5 points of damage with claws, while another pack helps the first, or attempts to steal a food item or shiny object from the character being attacked. To resist theft while being attacked on two fronts, a target must succeed on a Speed defense roll hindered by two steps.

Interaction: Space rats are slightly more intelligent than their Earth-bound cousins, though true interaction is not possible. On the other hand, sometimes their behavior seems spookily sapient.

Use: Space rats assemble crude nests in out-of-the-way supply closets or in hard-to-reach system interiors, but often enough, end up shorting out weapons or life support. Sometimes, they get into the hold and eat anything edible in the cargo.

Loot: Some percent of valuable equipment stolen on the spacecraft or station finds its way to space rat nests.

GM Intrusion: *Another rat unexpectedly pops out of panel on the wall or ceiling and screeches so loudly the PC must succeed on an Intellect defense roll hindered by two steps or be dazed until the end of their next turn from the surprise. Dazed creatures are hindered on all tasks.*



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STORM MARINE 4 (12)

The storm marine creed is an oft-repeated mantra, "I will never quit, knowing full well that I might die in service to the cause." Wearing advanced battlesuits, hyped up on a cocktail of experimental military drugs, and able to draw on a suite of cybernetic and network-connected drone guns, few things can stand before a storm marine fireteam.

Storm marines usually work for nation-states, conglomerates, and similar entities. They mercilessly conduct their mission, even if that mission is to wipe out a rival. Storm marines that question their orders are quickly dispatched by their fellows.

Motive: Achieve mission goals

Environment: Alone in or in fireteams of three, anywhere nation-states or similar entities have a financial or military interest

Health: 15

Damage Inflicted: 6 points

Armor: 4

Movement: Long; flies a long distance each round

Modifications: Perception as level 6; attacks as level 5 due to combat targeting neuro-wetware.

Combat: Thanks to their battlesuit, a storm marine has many options in combat. They can deploy an electrified blade to attack every foe in immediate range as a single action, or use a long-range heavy energy rifle that inflicts 6 points of damage.

A storm marine can deploy two level 3 gun drones that fire energy rays at two different targets up to 800 m (2,600 feet) away, inflicting 6 points of damage. If the drones focus on a single target, a successful hit deals 9 points of damage and moves the target one step down the damage track. The drones can attack only once or twice before returning to their cradles in the storm marine's suit for several rounds to recharge.

Interaction: A storm marine might negotiate, but getting one to act against their mission is difficult.

Use: A fireteam of storm marines are sent to eliminate the PCs or someone the PCs know on suspicion of being radical elements that need to be dealt with.

Loot: Though bio-locked to each storm marine, someone who succeeds on a difficulty 8 Intellect task to reprogram the suit could gain a battlesuit of their own, minus the drones (which fly off or detonate).

Battlesuit, page 73

GM Intrusion: *A character targeting a gun drone rather than the storm marine hits the drone, but the drone reacts by darting to the character and exploding, inflicting 6 points of damage to the character and anyone standing within immediate range.*

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SHINING ONE 5 (15)

Some alien beings abandoned their physical forms millennia ago, becoming entities of free-floating energy and pure consciousness. They travel the galaxies, exploring the endless permutations of matter, space-time, cosmic phenomena, dark energy, and life. They are endlessly fascinated with the permutations they discover. They sometimes appear as a silhouette of gently glowing light, in a form like to the alien species they wish to observe. Under circumstances where a shining one is moved to more directly interact, one can actually convert itself into matter once more, again taking on the biology and form of the species it wishes to interact with.

But generally, shining ones observe and learn; they try not to interfere or interact. Every few thousand years, shining ones gather at a predetermined location on the edge of a convenient galaxy and share the most interesting and beautiful bits of imagery, music, poetry, and lore they've gleaned.

Motive: Knowledge

Environment: Anywhere, usually alone

Health: 15

Damage Inflicted: 6 points

Movement: Instantly moves to anywhere it can see at the speed of light as part of its action once per round

Modifications: All tasks related to knowledge as level 8

Combat: As immaterial beings of energy, shining ones only take damage from energy attacks. And even then, there is a chance that the energy heals a damaged shining one rather than harming it if the attack roll was an odd number. Usually a shining one doesn't fight back if attacked, but instead leaves. If somehow prevented from leaving, a shining one fights for its existence with energy blasts inflicting 6 points of damage on up to two different targets within very long range (or the same target twice).

Alternatively, a shining one may attempt to discorporate a target, turning it into a being something like itself. In this case, each time a target is hit by an energy blast, it must also succeed on an Intellect defense roll. On a failed roll, it loses 6 points of Intellect damage (ignores Armor). If the target's Intellect Pool is emptied, it becomes a free-floating ball of energy unable to take any actions other than observe for a few minutes before suddenly converting back to its original form with an explosive pop.

Interaction: Shining ones can manipulate their environment to communicate with other species, using sound, light, puffs of odiferous complex chemicals in place of words, and so on. If approached with respect, they freely exchange information with others, seeking to grow their knowledge and that of those they meet.

Use: A shining one is sharing knowledge to a warlike xenophobic species that could allow them to rapidly advance their ability to consolidate power. Something must be done before it's too late.

GM Intrusion: *A character hit by the shining one's energy blast catches on fire. They take 3 points of damage each round until they spend an action patting, rolling, or smothering the flames.*

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SUPERNAL 5 (15)

Half humanoid and half-dragonfly, supernals are beautiful entities, though certainly alien. Each supernal possesses a unique wing pattern and coloration and, to some extent, body shape. These patterns and colors may signify where in the hierarchy a particular supernal stands among its kind, but for those who do not speak the language of supernals (which is telepathic), the complexity of their social structure is overwhelming.

Godmind, page 120

Whether they are agents of some unknown alien civilization or seek their own aims, supernals are mysterious and cryptic. Most fear contact with them, because they have a penchant for stealing away other life forms, who are rarely seen again.

Motive: Capture humans and similar life forms, and bring them somewhere unknown.

Environment: Almost anywhere

Health: 23

Damage Inflicted: 6 points

Movement: Short; flies a long distance (even through airless vacuum); can teleport to any known location once per ten hours as an action

Modifications: All knowledge tasks as level 6; stealth tasks as level 7 while invisible

Combat: Supernals usually only enter combat when they wish, because they bide their time in a phased, invisible state. But when one attacks with the touch of its wing, it draws the life force directly out of the target, inflicting 6 points of Speed damage (ignores Armor).

A supernal can summon a swarm of tiny machines that resemble regular dragonflies made of golden metal. The swarm either serves as a fashion accessory as they crawl over the supernal's body, or as components in a piece of living art.

Dragonfly swarm: *level 2; flies a long distance each round; eases physical tasks, including attacks or defense*

Supernals regain 1 point of health per round (even in an airless vacuum, which they can survive without issue), unless they've been damaged with psychic attacks. They can teleport to any location they know as an action once every ten hours.

Supernals often carry manifest cyphers useful in combat, as well as an artifact.

Interaction: Although supernals only speak telepathically, peaceful interaction with these creatures is not impossible. It's just very difficult, as they see most other creatures as something to be collected and taken to some undisclosed location, for unknown reasons.

GM Intrusion: *The supernal grabs the character and flies up and away, unless and until the character escapes the grab.*

Use: A character is followed by a supernal intent on collecting them.

Loot: A supernal usually has a few manifest cyphers, and possibly an artifact.

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SYNTHETIC PERSON 5 (15)

Synthetic people have been called many things, including simply synths, androids, robot mimics, and, depending on how they act, killer robots. Their origins are varied. In some cases, they're the result of corporate research into "products" that would serve humanity as assistants and companions, but later gained sentience. In other cases, synthetic people are the result of a state-sponsored program to develop war machines or automated assassins that looked like regular people. Another origin for synthetic people is through the design of awakened (and inimical) AIs as part of an effort to kill off all regular biological people.

Now they roam their environment looking like anyone else. Some synths try to fit into whatever kind of society they can find. Some may not even know that they are not human. Others are bitter, homicidal, or still retain their programming to kill. Some of these may have even shed some or all of their synthetic skins to reveal the alloyed mechanisms beneath.

Motive: Varies

Environment: Nearly anywhere, out in plain sight or disguised as a human alone, or in gangs of three to four

Health: 24

Damage Inflicted: 7 points

Armor: 2

Movement: Long

Modifications: Disguise and one knowledge task as level 6

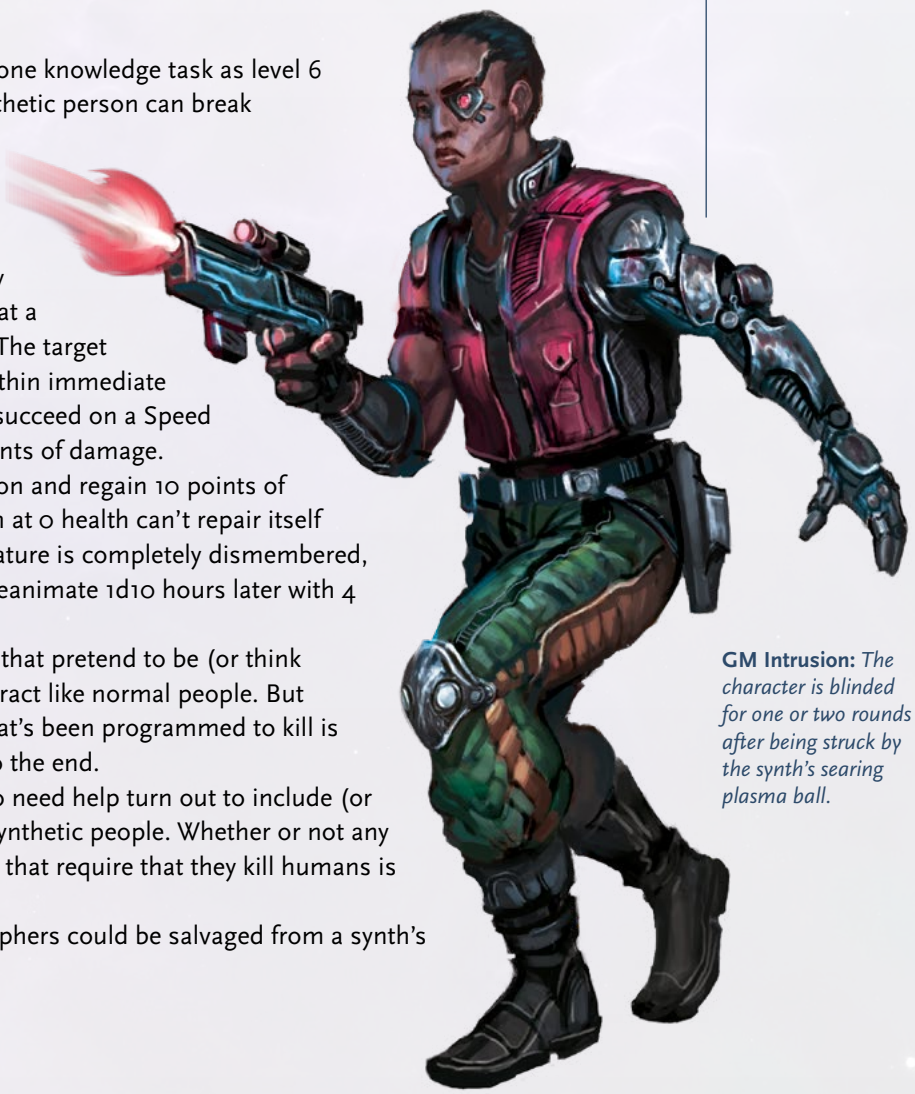
Combat: A punch from a synthetic person can break bones. In addition, some synths (especially of the killer variety) can generate a red-hot plasma sphere once every other round and throw it at a target within long range. The target and all other creatures within immediate range of the target must succeed on a Speed defense task or take 7 points of damage.

A synth can take a repair action and regain 10 points of health. A synthetic person at 0 health can't repair itself thusly, but unless the creature is completely dismembered, one may spontaneously reanimate 1d10 hours later with 4 points of health.

Interaction: Synthetic people that pretend to be (or think that they are) human interact like normal people. But an enraged one or one that's been programmed to kill is unreasoning and fights to the end.

Use: A group of refugees who need help turn out to include (or be entirely made up of) synthetic people. Whether or not any of them harbor programs that require that they kill humans is entirely up to the GM.

Loot: One or two manifest cyphers could be salvaged from a synth's inactive form.



GM Intrusion: *The character is blinded for one or two rounds after being struck by the synth's searing plasma ball.*

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THUNDERING BEHEMOTH 7 (21)

When life is found on other worlds, it's sometimes large and dangerous, such as the aptly named thundering behemoth. A thundering behemoth might be found on any number of alien planets that feature forests and/or swamps. Towering to treelike heights, these fearless predators are powerful and dangerous hunters, even for those armed with advanced or fantastic weaponry. Behemoths use color-changing frills to help them appear like tall trees while they stand in wait for prey, as still as mighty hardwood trunks, until they break cover and spring an ambush.

In the sci-fi setting of Numenera, similar creatures are called rumbling dasipelts.

Behemoths can produce extraordinarily loud noises, sometimes simply roaring, but often replicating the stuttering scream of an attacking spacecraft. They use their strange "roars" to confuse, lead astray, and, if possible, stampede prey into killing grounds such as regions of soft sand, off cliff tops, or as often as not, into the waiting mouth of another behemoth.

Motive: Fresh meat

Environment: Forests, alone or in a hunting group (known as a "crash") of two or three

Health: 35

Damage Inflicted: 9 points

Armor: 2

Movement: Short

Modifications: Disguise (as trees) as level 8 when unmoving. Deception (sounding as if an attacking spacecraft) as level 8. Speed defense as level 3 due to size.

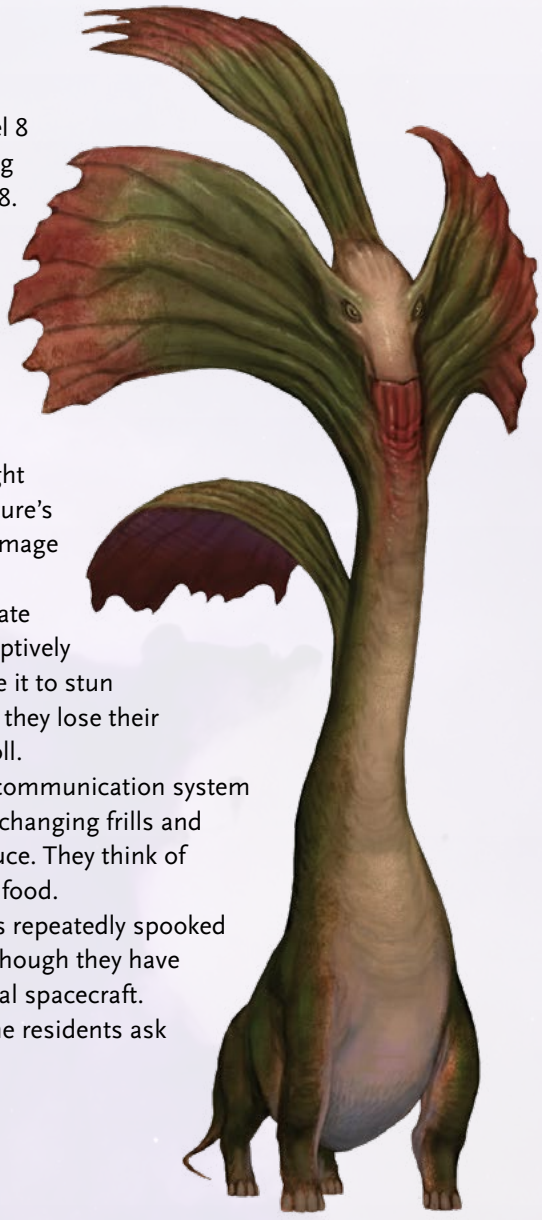
Combat: A thundering behemoth can attack a group of creatures (within an immediate area of each other) with a single massive bite. Thanks to its long neck, it can make that attack up to 9 m (30 feet) away. One victim must further succeed on a Might defense task or be caught in the creature's maw, taking 9 additional points of damage each round until it can escape.

GM Intrusion: *The character avoids being bitten but is batted away by the behemoth's attack, tumbling a short distance (and taking 5 points of damage).*

A thundering behemoth's ability to replicate threatening noises is often used deceptively at a distance, but the creature can use it to stun all targets within immediate range so they lose their next turn on a failed Might defense roll.

Interaction: Behemoths have a complex communication system among themselves, using their color-changing frills and modulation of the thunder they produce. They think of humans and most other creatures as food.

Use: The sound of fighting spacecraft has repeatedly spooked human colonists on an alien planet, though they have rarely seen destructive beams or actual spacecraft. Worried that that will soon change, the residents ask the PCs to investigate.



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VACUUM FUNGUS 5 (15)

Vacuum fungus is sometimes found as a greenish ooze on the exterior of spacecraft or space stations, growing in fine lines through the ice of frozen moons, and infesting the center of small asteroids and near-Earth objects (NEOs).

Though able to survive in vacuum, the fungus takes on new morphology when sufficient spores find their way into habitable zero-G spaces. Then they fuse together and grow into a bulbous, emerald-hued fruiting body, typically reaching about 1 m (3 feet) in rough diameter, though individuals can grow much larger if not discovered. Sticky and soft to the touch, they are able to grow undetected in the dark corners of cargo holds, in ductworks, hanging from the ceiling of unused crew quarters, and so on.

Vacuum fungus may be proof that extra-terrestrial life exists, but that triumph of scientific discovery may seem less important to those who find a clump, because they are incredibly toxic to living creatures.

Motive: Reproduction

Environment: Anywhere in zero G, as an unreactive ooze in vacuum, or as a fruiting body in atmosphere, alone or in a cluster of three to five

Health: 22

Damage Inflicted: 6 points

Movement: Climbs (adheres) an immediate distance each round

Combat: A fruiting body can selectively detonate spore pods along its surface once per round. When a pod detonates, green fluid sprays everywhere within immediate range. Living creatures who fail a Speed defense roll take 6 points of damage from the clinging fluid. An affected target must also succeed on a Might defense roll. On a failure, an affected section of flesh rapidly swells, becoming a bilious green lump, and explodes one round later, having the same effect as a detonating pod.

Interaction: No real interaction with vacuum fungus is possible.

Use: Scientists are incredibly excited to discover that the strange ooze they've noticed staining the exterior of their research domes is actually a variety of fungal life. They will likely become less excited when they discover the large growths secretly growing in the cavity beneath the floor of their research dome in a little-used storage closet.

GM Intrusion: *Striking the vacuum fungus clump causes one of the spore pods to detonate immediately, even though it's out of turn.*

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WHARN INTERCEPTOR 8 (24)

Ancient Ultras, page 61

Omworwar, page 127

Optional Rules: Extended Vehicular Combat, page 39

GM Intrusion: *The wharn moves unexpectedly, striking the vehicle the PCs are traveling in, inflicting 8 points of damage to everyone on board.*

Wharn interceptors are void-adapted behemoths, several hundred meters in length. It's hypothesized that they are living battle automatons devised by ancient ultras, though against what long-vanished enemy isn't clear. Now, a handful (hopefully no more) glide through the depths of space like dormant seeds, seeming for all the galaxy like some strangely whorled asteroid or planetesimal. Who knows how many millennia they passed in this apparently hibernating state? But when that hibernation ends, maybe because some ancient countdown is nearing its end, or because an asteroid miner tried to extract a sample, they open eyes burning with deadly energy, and flex claws of particle-beam fury.

Wharn interceptors may be related in some fashion omworwars, so much so that humans sometimes call the latter "wharn cogitators." However, it's impossible that omworwars simply "appropriate" any wharn interceptors they encounter.

Motive: Defense

Environment: Anywhere floating through the void

Health: 53

Damage Inflicted: 15 points

Armor: 5

Movement: Flies a very long distance each round; can maneuver like an autonomous level 5 spacecraft if using extended vehicular combat rules. FTL capable.

Modification: Speed defense as level 3 due to size.

Combat: Most of the time, wharns are inactive and might look like tumbling rocks. In this state, space voyagers may be able to partly wake one in an attempt to negotiate. However, if a wharn is damaged, or if the passive senses deep in its body wake it for reasons of its own, it becomes aggressive.

A wharn's main weapons are its claws, which can extend in an instant, becoming exotic-matter beams able to reach a target up to a light-second away. Unless a target is protected by some kind of force field, the 15 points of damage inflicted ignores Armor. A wharn's eyes can pierce most forms of camouflage, cloaking effects, and cover that is less than about 200 m (650 feet) thick.

Interaction: In spite of their ferocious aspect and war-machine heritage, wharn interceptors do not destroy every spacecraft (and void-adapted creature) they come across, or even most. Indeed, sometimes a wharn may attempt to initiate communication via various machine channels. But what comes across are usually nonsense sounds and tones, and sometimes mathematical formulas.

Use: The PCs, attempting to enter an abandoned space station or spacecraft, are distracted when a wharn attempts to destroy the very same object.

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WRAITH 4 (12)

Wraiths (*Homo vacuus*) are genetically engineered to live in the vacuum of space by directly metabolizing high-energy charged particles abundant in the void. Though derived from human stock, wraiths are alien in body, sometimes concealing themselves in layers of shroud-like tissue, other times revealing themselves as wispy, elongated things of glowing red plasma.

In some settings, wraiths are partners with humans, working in locations where humans would find difficult. In other settings, wraiths went their own way generations earlier, and rediscovering them would be a first contact scenario. Alternatively, wraiths might be a threat to humans, hating humans for having created a species forced to spend its existence in the dark void of space (as happened in the Revel).

First Contact, page 21

Part 2: The Revel, page 143

Motive: Varies with individual or setting

Environment: Anywhere in vacuum, though usually with access to some kind of enriched radiation source. Environments with 1 G or higher eventually kill wraiths.

Health: 15

Damage Inflicted: 6 points

Movement: Short when flying in zero and low G

Modifications: Perception and stealth tasks as level 7

Combat: Wraiths can unfold from their concealing shrouds and attack with radioactive limbs for 6 points of Speed damage from ionizing radiation (ignores most Armor), or if available, technological weapons. Some can direct ionizing radiation as long-distance attacks, though doing so costs the wraith 1 point of health.

Wraiths are immune to radiation, and attacks using radiation heal a wraith's lost health by the amount of damage the attack would have otherwise afflicted.

Gravity of 1 G or greater hinders all wraith actions.

Interaction: Wraiths communicate by radio. They react to outsiders as dictated by their place in the setting. In the Revel, they usually try to kill any humans who find them in order to keep knowledge of their species' continued existence a secret.

GM Intrusion: *The attacked character must also succeed on a Might defense, or they take an additional 3 points of ambient damage and contract radiation sickness.*

Radiation sickness, page 58

Use: A distant space station stops all communication. Investigators are dispatched to find out what happened. Once aboard, they unravel clues that suggest wraiths may have been responsible.

Loot: Some wraiths carry valuable items and equipment.

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ZERO-POINT PHANTOM 3 (9)

Temporary violations of conservation of energy mean that "virtual particles" constantly and seemingly randomly pop out of nothing, briefly interact with normal matter, then disappear. Zero-point phantoms are collections of such particles, taking the form of a very large, almost spider-like entity of many legs, stalks, and arms.

What they're doing when they're not manifest is unknown; are they entombed in nearby solids, phased into another dimension, or do they simply not exist until they are called into being by some random cosmic event? Whatever the case, zero-point phantoms seem to prefer unlit or dimly lit areas in spacecraft and stations far from any planet, when they seem to struggle out of solid surfaces, raising a cloud of shadow.

Motive: Hungers for flesh
Environment: Anywhere dark
Health: 15
Damage Inflicted: 4 points
Movement: Short; short when climbing
Modifications: Speed defense as level 4 due to a cloud of shadows surrounding a zero-point phantom
Combat: A zero-point phantom attacks with needlelike leg and tentacle tips. A victim that takes damage must succeed on a Might defense task, or become poisoned, the effect of which is to drop them one step on the damage track. The victim must keep fighting off the poison until they succeed or drop three steps on the damage track; however, those who fall to the third step on the damage track from a phantom's poison are not dead. They are paralyzed and can't move for about a minute. If a phantom isn't otherwise occupied, it can grab a paralyzed victim and phase back into non-existence. Most victims phased away in this fashion are never seen again.

Zero-point phantoms can stutter in and out of existence on their turn once every few minutes. When they do, they return with full health.

Interaction: Zero-point phantoms are about as intelligent as predators like wolves.
Use: The abandoned spacecraft is weirdly empty of any bodies whatsoever. It's as if everyone just disappeared. There are signs of a struggle, though with what isn't clear.

GM (group) Intrusion: *Nearby light sources fail. Attacks and defenses against the zero-point phantoms are hindered by two steps for characters unable to see in the dark.*

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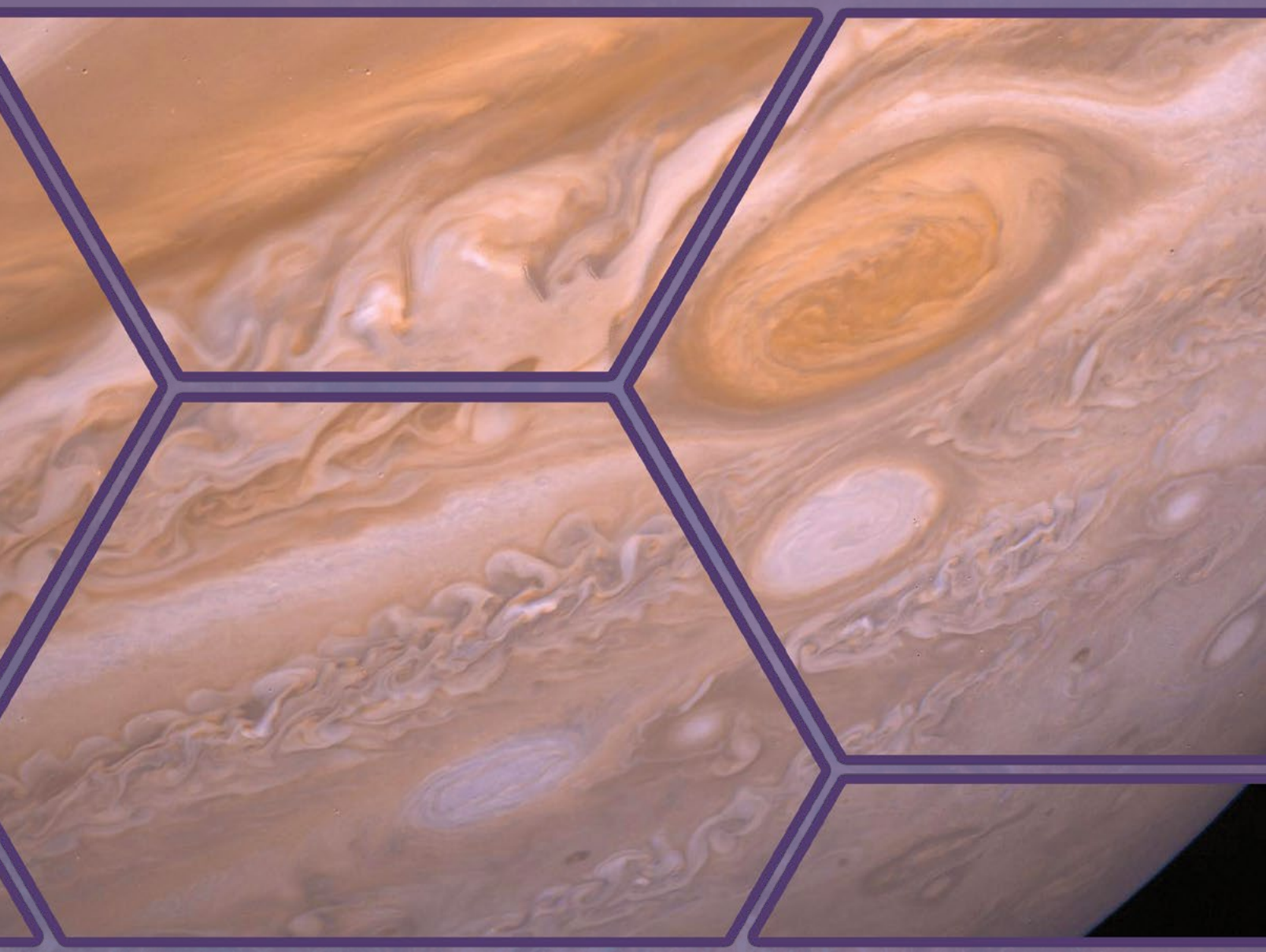
Part 2

THE REVEL



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Chapter 10

WELCOME TO THE REVEL

At the start of the 24th century, we revel in our hundreds of colonies extending across the solar system, and even to a handful of nearby stars. But just as we seem poised for a new golden age of mythic interstellar expansion, the Earth goes mysteriously quiet and dark.

Star Force, page 166

Interplanetary Space Treaty, page 167

Aeneas, page 176

Chapter 14: Disapora of Mars, page 182

Cixin Ranch, page 187

Barsoom City, page 183

Chapter 12: Big Five Spirals, page 169

Despite the riches that pass through the spirals, most still suffer from an underclass of workers and even some homeless who must make do as best they can.

Chapter 11: Luna One, page 157

Weak, Sim, Strong, and Post-singularity AI, page 60

Anaximander, page 166

Unlike most asteroids, Sylvia has two moons—Romulus and Remus.

We did it! We survived. Many gave even odds that humans would go extinct sometime around the end of the 21st century. Catastrophically collapsing the biosphere through over-exploitation seemed likely to do us in as a species. Instead, we squeaked through. Continual innovation outraced disastrous policy, greed, and countless crimes of failed leadership.

But we did more than simply survive; we thrived. Humans colonized the solar system, and beyond. Now, a couple of centuries past the precipice that almost snuffed us out, we can revel in what we accomplished, here on the cusp of the 24th century.

Supermassive O'Neill space stations—called "spirals" because they spin to generate artificial gravity—host millions of residents each. Spirals contain park-like façades within immaculately designed artificial biomes, each featuring cutting-edge technologies and the latest fashions. The spirals are built and governed as separate dominions by the five largest merged mega corporations, the Big Five. As the hub of much of the trade and important manufacturing throughout the solar system, fusion drive spacecraft constantly come and go, transferring goods and services.

Luna One is a sprawling dominion of domed Moon bases, regolith-covered corridors, and sublunar cavities. Luna One prospers under the beneficent rule of a strong AI called Anaximander. Anaximander oversees, at least to some degree, every aspect of life on the Moon. Lately, he's also turned his attention outward, "sticking his nose into places where he doesn't belong" (as spokespeople for the Big Five and other solar dominions like to say), employing agents to track events and situations beyond the Moon that seem of larger existential concern. Luna One is also adjacent to the main headquarters for Star Force, a military organization that derives its authority from the new Interplanetary Space Treaty.

Cloud cities float across the surface of the planet Venus. Some serve as palatial manors for privileged execs of the Big Five, others as vacation destinations for anyone who can afford to stay. The largest of this later type is Aeneas, known for its cloud surfing.

The situation on planet Mars is the opposite of the benign cohesion found on the Moon. The various Mars homestead "freeholds" remain proudly independent of each other, referring to themselves in the aggregate as the Diaspora. Important among these is Cixin Ranch, whose genetically modified crickets provide basic foodstuffs for colonies all across the system. Additionally, Barsoom City is a mining "boom town" that continues to bring up rare earths from an ancient impactor.

Hollowed-out asteroids of the belt contain independent trading concerns, though the least successful are always under threat of being snapped up by the Big Five or elements of the Diaspora, either because they can't afford to continue going it alone, or because a series of unlucky breaks forces them into an arrangement. That said, asteroid consortiums are growing forces in trade and mining, serving as a rival to the Big Five's continual resource grabs. These consortiums claim many of the larger asteroids, including Sylvia, the fifth largest asteroid in the Belt, where they operate a mining colony.

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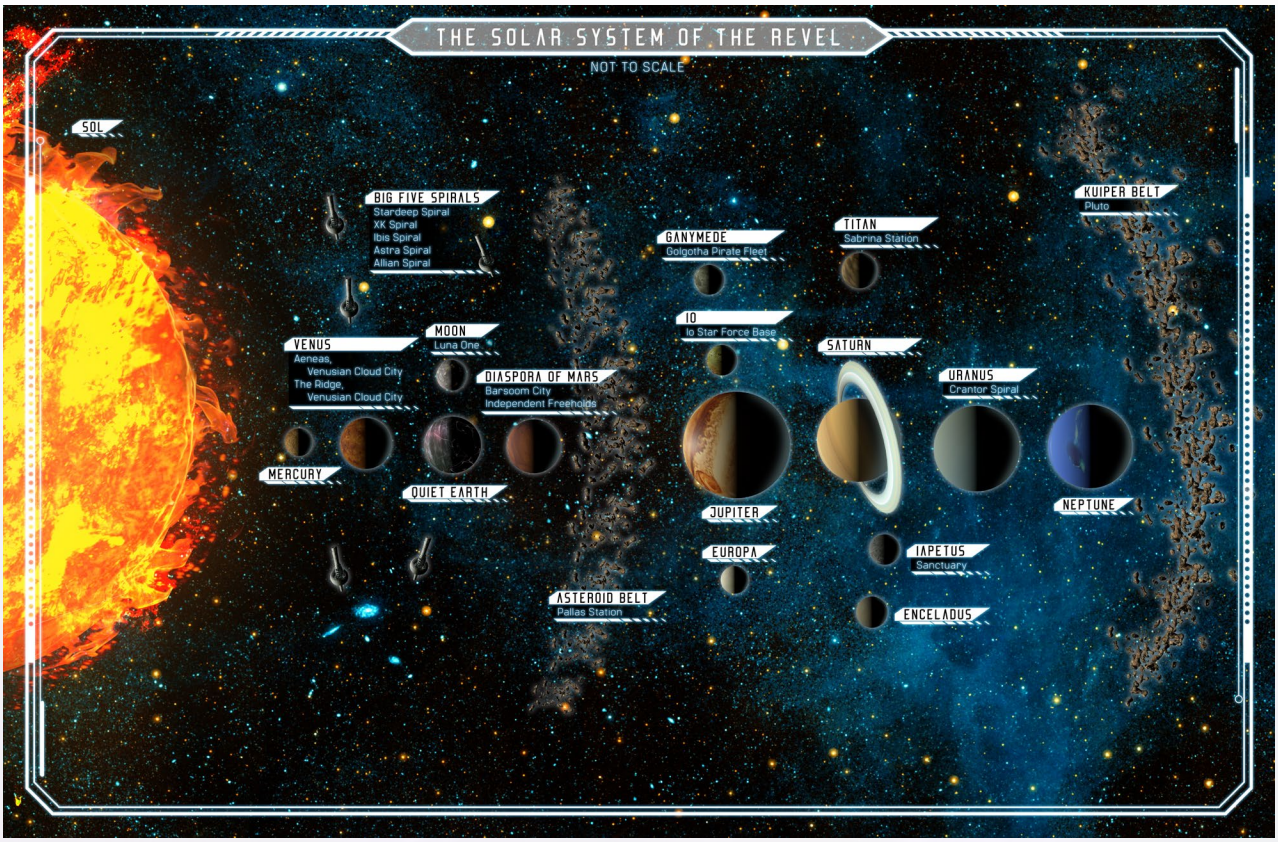

Even more distant mining colonies, bases, and settlements are scattered among the asteroid belt and the moons of Jupiter and Saturn. Some are well-known dominions; others are hidden outposts of pirates. A few were founded as scientific outposts searching for exotic microbial life (which they've still failed to find, at least in the solar system). The kinds of research these bases do is sometimes ethically challenged, or extremely dangerous, or both at once. The entire region is usually lumped together and called the Opulence of the Outer Worlds.

Beyond that are the stars themselves, now within our reach. We stand the edge of a brand-new golden age of interstellar expansion thanks to radical propulsion developments in the last decade. Xiao-Keller (XK) and Astra Industries—two conglomerates of the Big Five—produced a top-secret propulsion system allowing humans to travel through space at faster-than-light speed!

A handful of extrasolar colonies were established around other stars, including Proxima Centauri, Barnard's Star, Wolf, and others, collectively referred to as the Far-flung Worlds. In most cases, colonies were established on worlds with something to offer humans: a valuable mineral resource, an as-yet-incomprehensible natural phenomena, or perhaps most exciting, especially to exobiologists, simple extraterrestrial life!

Of course, no intelligent life has been found; it's mostly the alien equivalent of microbes, fungi, and plants. In some cases, these life forms produce substances that affect humans in interesting, pharmacological ways, such as enthrall. A black market in those sprang up. Though that—and reliable contact with the Far-flung Worlds—stalled out ten years ago . . .

Currently, only a handful of starships—spacecraft equipped with the dark drive—exist. Their production remains at an impasse in the aftermath of the Event.

Chapter 15: Opulence of Outer Planets, page 189

Enthrall, page 199

Chapter 16: Far-flung Worlds, page 196

THE EVENT

As is true in any celebration, unexpected events can bring the party to an unexpected end, with the bizarre discovery of millions of miles of tunnels crisscrossing the Moon's

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"The Revel has entered a new phase, and as I'm sure everyone implicitly agrees, a dangerous one. To that end, we need to keep an eye out across the solar system for any additional oddities, no matter how minor. They may turn out to be nothing, but they might instead be related to the Event. If so, they would herald that more changes are coming. Changes we need to prepare for, or if possible, stop from happening in the first place."
~Anaximander, President of Luna One

core beneath the regolith. Artificial tunnels. OLD tunnels, not built by humans.

News of this amazing discovery never reached the Earth itself. Because that's also when our birth planet went completely dark. No one in the solar system knows why. At least, no one who's willing to share (see Chapter 17: Ancient Tunnels & Quiet Earth for more information on the cause). Some see this "Event" as one more mystery to resolve, possibly a mystery that'll lead to even greater bounties of understanding and mastery over the universe. Others fear it's a potential threat that only half finished the job of wiping out humans, and that we should keep well away from both so as to not re-ignite the phenomenon.

Chapter 17: Ancient Tunnels & Quiet Earth, page 202

TEN YEARS AGO

The people of Luna One, only about 1.3 light-seconds away from Earth, were the first to realize that something unexpected and terrible had happened. All communications across the entire Earth cut off simultaneously. The scintillating network of lights picking out the major continents of the nightside went dark as a shroud of racing clouds quickly enveloped the entire planet, blocking the entire electromagnetic spectrum. Roughly half of the spacecraft en route to and from Earth's surface were lost beneath the shroud. Several more, already committed to a landing sequence, pierced the shroud, and were never seen again. A few managed to change trajectory, just skimming the thunderhead-capped shroud cover, and avoided a similar fate.

"Where were you when you the Earth was killed?" is a common question in the Revel.

Evidence of the Event spread at the speed of light through the rest of the solar system. At first everyone thought it was a technical glitch, or a bad joke. But the Earth remained stubbornly quiet and dark. Exploratory craft sent to explore beneath the shroud disappeared one after another. Eventually, most accepted that something truly horrific had happened.

Angry accusations—born of panic and loss—flew between (and among) the spirals, the various freeholds of the Diaspora, Luna One, the Opulence, and even the Far-flung Worlds. Earth was, or had been, an indispensable trading partner, home to dozens of separate space-faring nations, and the source of thousands of irreplaceable commodities. With that abruptly gone, the panicked anger led to the first armed skirmishes between colonies, and the Star Force was tested, too. Several space stations and hundreds of spacecraft were lost during this period. (Though salvagers have been gradually accounting for them since then.)

Cooler heads eventually prevailed, and a new Interplanetary Space Treaty was hammered out over a couple of months of intense bargaining. New trade routes were established, and many teetering planetary and space station communities were saved.

The Revel entered a new phase, a post-Event period, typified by a somber melancholy pervading everything—art, entertainment, and conversation around the dinner table. The loss of the home planet was a blow felt everywhere. Even those with many generations behind them on Mars or on the Moon had relatives back on Earth. And of course, most human history itself. A history that now seemed lost forever.

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"It's high time we stop using the word Revel to describe human civilization. It's more like the Misfortune, if you ask me."

~Anonymous

Anaximander determined that the Event exactly coincided with the discovery of the ancient sublunar tunnels. Though not understanding the association, the AI immediately restricted access to the tunnels out of an abundance of caution, calling it a quarantine. That quarantine later grew to encompass the Earth as well (though that's usually called a blockade). Later, provisions for enforcing the quarantine and blockade were added as articles to the Interplanetary Space Treaty.

The Ancient Sublunar Tunnels, page 203

THE PRESENT

It's been about a decade since the Event. In that time, the avalanche of sub-disasters and resource shortages that were initiated by Earth's loss has eased dramatically. There's a new normal in the Revel. Acceptance. Even hope, finally.

The Earth (now often called the "Quiet Earth") is under blockade and the sublunar tunnels remain quarantined. Space Force satellites and frigates patrol over the Quiet Earth, and crew the handful of gates that open into the deep sublunar tunnels. Despite the interdiction, rumors persist of explorers breaking the quarantine—secret expeditions by rogue scientists, mercenaries hired by the Big Five, and even salvagers looking for (and sometimes finding) something strange. These rumors apparently have some basis in fact, given the weird artifacts made of an unknown substance that sometimes appear for sale on shady merchant sites hosted by the deep space network. Unless it's all some big con by someone hoping to bilk the credulous out of their lumen, as others claim.

For some, the question of the Quiet Earth and the sublunar tunnels remains a vital, burning interest, given that its cause remains a mystery. What's to say something like that couldn't happen again, and this

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time blot out all of humanity? These well-meaning few constantly push the legal boundaries, arguing that the phenomenon of the Event requires study so it can be understood. Humanity needs to be able to prevent a reoccurrence, one even larger than before.

Most authorities disagree, believing that it's better not to mess with what's not understood. They fear that lifting the quarantine might be the very thing that triggers a new episode. (Anaximander, for his part, initially held this stance, but has since decided some exploration would be useful. He's privately lamented on using the word "quarantine" in the first place, as the connotation seems to have shaped perception.)

And the vast bulk of people making up the population of the Revel go about most of their sols simply not thinking about it. Blocked tunnels and dark planets simply don't have any impact on their lives, other than as a shared history.

Sol is a term often used instead of day in the Revel, indicating a span of twenty-four hours.

Chapter 18: Getting the PCs Involved, page 208

Chapter 2: How to Play, page 5

Optional Rules: Harder Science Fiction, page 34

Tech rating, page 13

GAMING IN THE REVEL

The Revel is an RPG setting designed for Cypher System rules, as presented in the *Cypher System Rulebook*. You'll need the *Cypher System Rulebook* to use the material presented in this setting. For specific guidance on creating PCs in the Revel, refer to Chapter 18: Getting the PCs Involved. Generally speaking, the following is also true over all the Revel.

Sci-Fi Subgenre: Hard science fiction. For the most part, no technology deemed impossible by mainstream scientific theory exists in the Revel (with some exceptions). The laws of physics are something a GM can keep in mind when describing a particular scenario or deciding how the PCs' actions play out, though they can choose otherwise, of course. Advice for GMing this kind of setting is provided in Chapter 2: How to Play, and in the extended harder science fiction optional rule section in chapter 6.

Average Technology Rating: Advanced. The Revel is a setting where advanced tech rating is generally available, with some mixture of contemporary tech and a smattering of fantastic tech, most notably a handful of FTL-capable starships.

Psionics: None (though you could decide different for your game).

Artifacts: Regular equipment fulfills much of the role that Cypher System artifacts do in other settings. That said, the Revel does have mysterious artifacts, which come in

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two varieties. The first is a unique piece of equipment that's the result of a surprising achievement by a lone scientist or AI that no one else understands.

The second form of artifact available in the Revel is even more incomprehensible. Of late, weird artifacts are sometimes pulled out of covert expeditions into the sublunar tunnels. These are made of a greyish, slick substance that defies advanced material analysis techniques. Many seem to have no function, but a few can generate amazing and unexpected effects.

Cyphers: Subtle cyphers are the default form of cyphers gained in the Revel, and the GM should hand them out regularly. Suitable triggers for handing out subtle cyphers include when PCs succeed at a task (or fail at one), find out something new, remember something important, take damage, heal wounds, wake from a vivid dream, change their mind about something, and so on.

However, manifest cyphers also exist in the Revel. They have the same look and provenance as the weird artifacts that have been found lately.

THE PEOPLE OF THE REVEL

There's is no "typical" person in the Revel in terms of original nationality, gender, physical build, knowledge, or even language. The descendants of those who originally left Earth for space are as varied as people of modern times, not just in their physical appearance and culture, but also in their knowledge and skill sets.

Apparel varies widely, though most also sport smart AR glasses, contacts, a badge, or a handheld smart tablet. Exotic fashions come and go on the spirals, and they are often picked up months later in the other dominions even as new fashions in the spirals make quaint what was previously jet-setting. The only type of apparel that is universally valued is clothing that came from Earth, though most of that is set aside and only worn on special days of remembrance.

Some dominions allow regular citizens to carry weapons, if they're certified in their use. Others don't care about certification, and a few ban weapons outright (such as on Luna One). It's usually best to err on the side of caution just to be safe, which is why weapons are normally only visible on those wearing a Star Force uniform.

PCS IN THE REVEL

The Revel is about characters exploring a sci-fi world, using and mastering high-tech equipment, traveling in interplanetary and perhaps even interstellar spacecraft, and having adventures on other planets, moons, and possibly even around other stars. Player characters may adventure because it's fun, to empower themselves, or because they're thrown into a situation that requires bravery and quick thinking to survive.

PCs can choose to embrace the abilities technology provides them, and develop it further by working for rich patrons or themselves, becoming part of a starship crew that services one of the few extrasolar colonies, joining an organization or splinter nation, or seeking out more of the artifacts and manifest cyphers that have become available since the Event. Specific options are provided in chapter 18.

But even characters who begin in one of these situations may eventually be drawn to the circumstances surrounding the Event, and attempt to help solve the great mystery of the era. They may do this out of mere curiosity, or out of concern that the Event may be just the beginning of the dangers in store for the Revel if precautions are not taken, or because they're asked to do so by a concerned patron.

Subtle cyphers, page 378

Chapter 18: Getting the PCs Involved, page 208

There's is no "typical" person in the Revel in terms of original nationality, gender, physical build, knowledge, or even language.

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Auton, page 80

NPCs IN THE REVEL

NPCs, as opposed to PCs, mostly just live the life circumstances deal them. Some mine asteroids. Others work as spacecraft technicians. Many work long hours in a conglomerate-owned spiral at what are essentially desk jobs, rarely if ever leaving the artificial environment of their particular spinning O'Neill colony, unless it is to take a yearly jaunt to the vacation city floating in the clouds of Venus.

Some NPCs are part of mercenary organizations, employed by one of the conglomerates or on behalf of any of the fractious states of the Diaspora. Others are part of Space Force, which is an independent authority, though one beholden to following the Interplanetary Space Treaty, which most of the other powers in the Revel are signatory to.

If a job needs doing, likely a human NPC is doing it (though perhaps aided by an auton of some kind, depending on the situation). A PC may have a history with a life like this, but either before the game begins or as it does, they have the opportunity to (or are forced by circumstance to) do something new.

LIFE IN THE REVEL

Though there are always exceptions, some things remain generally true for humans of the Revel who have no home planet to call their own. Once numbering in the tens of billions, since the Event, the entire human population is currently estimated to be around 400 million.

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Artificial Biomes: Most people in the Revel will never experience the natural, wide-open, non-lethal space that people on Earth once enjoyed. No natural wind, no rain, no unplanned humidity. Though remembrances of such things exist in vids and holos, most people's reality is delimited by corridors, chambers, domes, and so long as they're wearing space suits, the infinite dark of outer space itself. The spirals, with their massive drum-like open interiors, come the closest to replicating being outside on a summer day, or during a rainstorm. Most people, however, must content themselves with a row of tended plants in an alcove, a visit to a compost farm, vids, and stories.

The promise of the Far-flung Worlds could reverse that, especially on Idriss. Unfortunately, the majority of people now living in the Sol System will probably never get a chance to voyage there, given the limited FTL capability in the wake of the Event. But if the promises of XK-Astra are fulfilled, dark drive capability will "soon" return to the Revel, eventually easing the bottleneck.

Idriss, page 196

Lifespan: Despite all the advances of medicine, the human body is programmed to give up at around a hundred years, plus or minus 20%. Which means that even people with regular access to modern medical care, such as autodocs, can expect about a century of life. Those willing and with the means to undergo extreme and frequent intervention, including surgeries and ongoing biomechanical organ replacement, can eke out a much longer existence, though one where they become less and less themselves.

Autodoc, page 78

Body Modification: Some people go in for much more invasive body modification, and not just as a last resort at the end of life, but because they find it helpful, or fashionable. For instance, many people just starting out in their careers have chosen to permanently implant AR contacts that replace their corneas. Some replace one limb with a prosthetic that includes all manner of tool heads that can easily be swapped in for fingers or the entire hand. Another popular modification is mag-foot soles under the skin of their feet so they're always ready for clinging to surfaces in zero G. Many other small modifications are available that can help a person do their job better and live in artificial biomes. A shop on Luna One called You 2.0 offers just these sorts of services.

You 2.0, page 162

Family Life: Families exist much as we know them today. Some families are connected by direct kinship, others by choice, and most are a mix of the two. It's common for multiple generations to live together in the same space station or moon dome, if not in the same apartment complex.

Marriage between individuals and groups is usually recorded within the dominion where the newly formed family resides. With the apparent loss of the entire Earth, marriage—as an official contract—saw an upsurge, as if people unconsciously wanted that closeness, if only to have as many children as they could in an attempt to save the human species from dying out after the catastrophic loss of life the Event caused.

Naming Conventions: People usually adopt the name of the apartment complex where they live, rather than keeping the surname of an ancestor. Thus, an immigrant from one of the spirals assigned to live in the Fairwood complex takes the surname of Fairwood. Even if the person would prefer otherwise, convention often makes it fait accompli.

This is true in most of the Revel, except for the Diaspora, where fierce independence is considered the finest virtue. There people either proudly keep the name of their ancestors, or (as has been common practice since the arrival of the first settlers) adopt a name taken from the copious fiction written about the planet, usually from the pen of long-dead author Edgar Rice Burrows.

Conventional titles of respect have generally collapsed to a singular, gender-neutral term. Instead of calling someone Mister, Miss, Ma'am, or similar, people will just use the letter M, either formally or informally. So, proper usage for addressing Alton Reynolds is M Alton Reynolds, M Reynolds, or even just M.

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Death and Dying: Things aren't any different for those who shuffle off this mortal coil now than how they were before the Event. The dead of the Revel are honored, but their bodies are not cast off into space or buried underground where their components are squandered. Resources are too dear on moon bases and space stations for such waste. Instead, after funeral ceremonies appropriate for the particular dominion, a warden takes respectful stewardship over the body, conveys it to whatever system is used for composting and recycling of other wastes in the station or base (usually, places known as recomposting farms), and respectfully deposits the dead. Everyone takes comfort in the fact that loved ones remain, in a real way, part of the ecosystem.

Religion: Various religions suffuse the Revel, their beliefs having transferred from Earth by the original colonists; however, they vary widely by dominion. It's more likely to find that people affiliate strongly with their particular dominion or station. Though there are a handful of estates in the Diaspora on Mars that seek to emulate a specific religious belief once practiced on Earth. With the fall of major temples and holy sites on Earth, the domed city of Sanctuary on Saturn's moon Iapetus has become the center of most religious activity on the Revel.

Sanctuary, page 194

That said, a new religion sprang up after Event, which has pockets of adherents all over the Revel. Most assume it's so much flim-flam, but its members are convinced there is something to what the Church of the Quiet has to say.

Church of the Quiet, page 195

Languages: Many of the languages of Earth persist in the Revel, though each has been altered and modified by continual use and intermixture with each other. Among these multiple languages, a universal science-speak pervades the vocabulary; it's always important to know terms like airlock, zero G, breach, radiation hazard, and so on when living in an artificial biome. Moreover, almost everyone has access to some kind of smart device with on-the-fly translation apps that provide a soft voice-over in the owner's ear, a written transcription in an AR heads-up display, or both.

Telling Time in Sols: Most places in the Revel don't have a natural twenty-four-hour day; the cloud cities of Venus have natural days that are 116 Earth days long; on Mars, 24 hours and 27 minutes long; on Titan, about 16 Earth days long; and so on. But most people in the Revel, regardless of where they are, standardize a day to twenty-four hours, since human bodies work best, more or less, when they follow a set diurnal cycle. Usually people say "sol" when they mean a twenty-four-hour period, to avoid confusion. For example, a freighter captain might tell their client to expect delivery in five sols (not five days). In this way, sol-standard seconds, minutes, hours, weeks, months, and years are tracked, with everyone across the solar system and in the Far-flung Worlds in relative synch.

Currencies: Most currencies of Earth do not extend into the Revel, especially not hard currencies. Indeed, after the Event, digital-only cryptocurrencies are essentially the only currencies that remain viable. Digital currencies can be held in secure memory vaults, though some people like to silo their cryptocurrency into off-line data-rings specifically biometrically locked to them for security. The most popular cryptocurrency is called Lumencoin, though that's almost always referred to as lumens (LM).

- Inexpensive items range from 1 to 29 lumens.
- Moderately priced items range from 30 to 249 lumens.
- Expensive items range from 250 to 9,999 lumens.
- Very expensive items range from 10,000 to 249,999 lumens.
- Exorbitant items are well over 250,000 lumens.
- Priceless items extend into the billions of lumens, and only nation-states and conglomerates can hope to pay for them.

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A dark drive FTL transition is extremely damaging to fully conscious humans, often resulting in madness and irreversible mental trauma.

REVEL FASTER-THAN-LIGHT CAPABILITY

Seven fully capable FTL craft operate in the Revel. Many more were in production; unfortunately, that production facility was Earth-based, and is now apparently gone. The XK-Astra partnership responsible for producing the craft have indicated that they are in the process of re-creating their ability to manufacture more FTL-capable starcraft in space. But company PR says another few years are required to fully tool up a brand-new manufacturing facility for the production of dark drives. This means the seven starships currently in operation are especially precious. It's entirely possible that the XK-Astra partnership would have reserved *all* the working FTL starships for itself, rather than selling most of them to other dominions, had it known the resource was about to be so severely constrained.

Oddities of XK-Astra Dark Drive Operation: When the XK-Astra dark drive is activated, the starship makes a point-to-point transition to a new location in the galaxy, arriving exactly at the coordinates entered, even if occupied (which is of course, disastrous). The dark drive doesn't work if activated within about sixteen light minutes (about 2 AU) of a large gravity well (such as a star, planet, or moon), so the ideal location to leave and return from the Sol System is somewhere between the orbits of Jupiter and Saturn, or straight up or down from the orbital plane of planets by 2 AU.

The objective time of transfer to an outside observer usually takes from minutes to months, and doesn't seem to correspond to actual distance, but rather to some as-yet-undiscovered space-time mapping. Once the time to transition to a specific set of coordinates in space is established, it usually doesn't vary if the same transition is traveled later. So, for instance, the objective external time to transition from Sol to Idriss is about five days.

Idriss, page 196

For those aboard during FTL travel, four solar hours seem to pass, no matter the objective time noted by external observers. However, XK-Astra discovered a significant and important fact about using the system: a dark drive FTL transition is extremely damaging to fully conscious humans, often resulting in madness and irreversible mental trauma. Those driven insane by a functioning dark drive tend to run amuck, doing serious damage to the spacecraft and any other passengers aboard while the vehicle is still in transit, destroying the vehicle before it exists back into normal space.

Dark drive, page 106

Thus, Dark Drive Protocol demands that prior to any transition, every single member of the crew except the pilot is induced into a dreamless (deep) sleep state, using a sleep set. XK-Astra is so serious about this restriction that each headset is biometrically coded to everyone aboard, and an interlock failsafe refuses to engage the dark drive unless every crewmember and passenger is safely in deep sleep.

An under-appreciated fact of the dark drive is that it doesn't engage if there is not at least one semi-conscious mind aboard a ship.

Chapter 16: Far-flung Worlds, page 196

Sleep set, page 78

The pilot, for their part, uses a special sleep set modified to induce a deep meditative trance that pushes the pilot's conscious self aside, allowing the mind to focus completely on reaching the objective. Some pilots claim they can achieve this state naturally, without need for a sleep set. However, it's dangerous to be fully conscious while a dark drive is active, though apparently not as bad as when two or more minds are conscious at the same time.

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REVEL STARSHIPS

Seven working FTL-capable ships operate in the Revel. A few of those are described here. The others are reserved by the XK-Astra dark drive partnership for their own purposes. Little is known about them.

STARSHIP *REDEMPTION*

The *Redemption* is an exploration class spacecraft retrofitted with an XK-Astra dark drive, purchased and operated by Luna One. It is currently engaged in a series of missions surveying other nearby star systems for viable exoplanets on which to found new settlements, and resupply runs to the Far-flung Worlds.

Exploration class spacecraft, page 109

Secondary missions include continuing the search for intelligent life around newly surveyed stars, which has yet to yield fruit. The Redemption's tertiary mission is to learn more about the XK-Astra dark drive, though so far it has been very careful to abide by the "no one awake or even dreaming during drive operations" protocol.

The *Redemption* is captained by a woman named Zhang Mi. She was recently promoted to captain when her previous captain was lost in an EVA vacuum-related accident. Zhang lost the use of her legs in that same incident, and now uses an omnichair. The omnichair has many built-in tools and enhancements, not only giving her full mobility in microgravity and full gravity environments, but also able to extend a fairing so that it can act as a sort of space suit/miniature spacecraft at need. Zhang Mi is considered by most to be fair, if sometimes abrupt. She had an extended family on Earth, and is secretly driven to learn what really caused the Event.

Captain Zhang Mi: *level 4, perception tasks as level 7 due to omnichair tools; sees the entire electromagnetic spectrum and can resolve distant images on omnichair screen; can engage omnichair to move up to very long range each round*

Omnichair, page 78

STARSHIP *DE-DAUNTLESS*

The *Dauntless* is a destroyer class spacecraft retrofitted with an XK-Astra dark drive, purchased and operated by Star Force. It is currently part of a small fleet of non-upgraded Star Force military vessels that see to it that the articles of the new Interplanetary Space Treaty are adhered to. Given the size of its crew complement of about sixty (including twenty space marines and a fireteam of three storm marines), it doesn't often travel via dark drive. But it has ventured at least once to each of the Far-flung Worlds, just to show that human authority could be projected so far, even after the Event.

Destroyer class spacecraft, page 109

Space marine: *level 3, perception as level 4; 12 health; 3 Armor (part of space suit); attacks inflict 5 points of damage*

Storm marine, page 134

The *Dauntless* is captained by silver-haired Srinivasa Sharma, who in turn answers to the admirals out of Star Force headquarters on the Moon. Srinivasa has been part of Star Force for twenty years, but recently applied for a discharge, citing his advancing

Srinivasa Sharma: *level 4, perception tasks as level 7; sees the entire electromagnetic spectrum and can resolve distant images without equipment*

WRECK OF THE SWAN

The *DE-Swan* was a destroyer class spacecraft retrofitted with an XK-Astra dark drive purchased by Star Force. The *Swan* was commissioned simultaneously with the *Dauntless*, but its captain—Amyta Waine—was a bit more unpredictable, often putting her on the winning side of debates and wargames alike. However, that didn't save her command on its first outing. It's understood that the *Swan* is a derelict, but one moving at a small fraction of the speed of light in the general direction of the galactic core. Chasing and matching velocities would be an enormous undertaking, though not impossible, first assuming its trajectory could be exactly calculated. The last transmission from Captain Waine was enigmatic but disturbing: "The universe doesn't want us to *see*. But I did. My god, I *did!* My sleep set malfunctioned, and I woke up. And I saw . . . I saw . . . <incoherent sobbing, screaming cut off by transmission end>"

If someone were to somehow rendezvous with the *Swan*, they'd find the exterior subtly warped, as if half the craft began melting but then re-solidified. Portions of the interior are open to vacuum, but other portions retain life support on residual power. Everything is wrecked. No crew are aboard, nor is there any evidence of what might have happened to them. In addition, the cradle holding the dark drive is simply missing.

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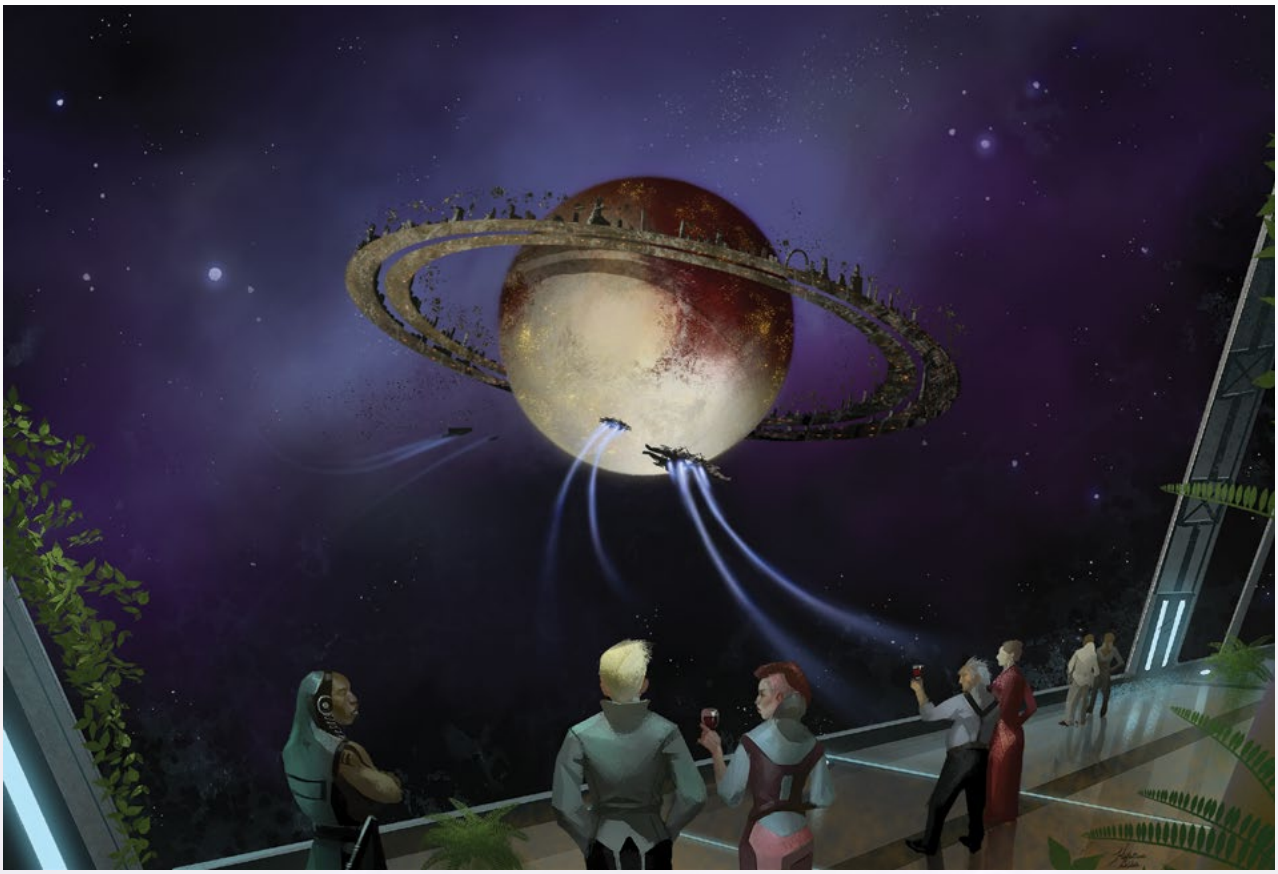

age (though no one believes that's the real reason; he got some news that disturbed him greatly, but he hasn't indicated what it is). Quiet and considerate, his leadership style is consensus-oriented when time allows. He has the respect of the crew, and other officers in Star Force think incredibly highly of him, so much so that the admirals worry about who could ever replace him.

STARSHIP *PLEASURE BARGE*

The *Pleasure Barge* is a dragonfly class spacecraft retrofitted with an XK-Astra dark drive, customized to be about five times larger and an order of magnitude more upscale than a standard ship of the same class. A terrestrial nation enriched by its early investment into fusion energy purchased and launched the ship as an extravagance for its most wealthy and influential citizens. However, the *Pleasure Barge* is now a ship without a nation because the nation that paid for it is gone. XK and Astra have repeatedly tried to repossess it under various technicalities, but appeals to Star Force have so far kept the ship in the hands of its current crew and passengers, who asserted rights of salvage (and ownership) after the Event.

Its original purpose no longer relevant, the *Pleasure Barge* is still rolling in lumens, and is able to buy fuel, supplies, and repair berths when necessary, without resorting to becoming an actual freighter. Instead,

A now-bankrupt conglomerate went to considerable effort to build a factory ring around Neptune's moon Triton to facilitate mining and processing the moon's incredible nitrogen reserves. In the wake of the Event, the Triton Ring is now an abandoned ruin.

Dragonfly class spacecraft, page 109

"The universe doesn't want us to see. But I did. My god, I did! My sleep set malfunctioned, and I woke up. And I saw . . . I saw . . . ."
<incoherent sobbing, screaming cut off by transmission end>
~Amyta Waine, Captain of the Swan

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Exploration class spacecraft, page 109

CJJ: *level 4, level 7 for tasks related to positive social interaction and debate*

CJJ's secret flame could be someone important to the setting or GM's campaign, possibly even one of the PCs. Alternatively, it could be someone completely unexpected, like the AI Anaximander.

Gabriel Saberhagen: *level 5, level 8 for perception tasks involving sound and in detecting spoken lies*

Allian (conglomerate), page 174

Wardroid, page 365

it offers its services for ferrying important people around Sol System, especially to and from any of the Far-flung Worlds, given that so few other vehicles can make the journey.

A six-member council administers the craft, each acting as a proxy for a segment of the rest of the remaining crew. The most well-known council member is a dark-haired daughter of a former high-ranking politician on Earth, Conjeevaram Jayaram Jayalalitha (usually abbreviated to CJJ). CJJ usually assumes the role of spokesperson for the *Pleasure Barge* when it comes to dealing with other dominions and other spacecraft. She is something of a comedian and joker, as well as being fiercely intelligent and quick witted. Though devoted to the well-being of the *Pleasure Barge*, she also pursues and on-again, off-again relationship with someone whose name and identity she has so far kept hidden. All that's known is that this certain special someone is probably living on Luna One.

STARSHIP *GOODSPEED*

The *Goodspeed* is an exploration class spacecraft retrofitted with an XK-Astra dark drive, customized to carry settlers to distant stars. XK-Astra jointly own this ship, and it transfers groups of up to twenty settlers at a time (able to pay the exorbitant price of about 300,000 lumens per person) to one of the established Far-flung Worlds.

Most of the time, trips go smoothly, but sometimes drama among the settlers requires Captain Gabriel Saberhagen to step in to arbitrate. Saberhagen is thin, bald, and was born deaf. Biomechanical implants on the side of his head feed sound directly into his brain, allowing him to hear far better than most humans. If the captain can't talk sense into feuding settlers, then he leaves it to the Allian wardroid installed on the *Goodspeed* to deal with such situations.

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CHAPTER 11

LUNA ONE

Luna One consists of a series of once-separate bases that expanded over decades across the barren, blasted, magnificent desolation of the Moon, becoming a single interconnected complex. Today, the tangled expanse of domes, branching tunnels, and pressurized lava tubes brims with people, manufacturing, farms, animals, research, trade, recreation, and more. Beyond this metropolis-sized region, giant helium-3 harvesters (helium-3 is used as fuel in fusion drives) have created vast tracked regions across the surface.

The interconnected series of structures and tunnels making up Luna One boasts a population of over 4 million. Famously, Luna One also hosts Tranquility Tower, home to the leader of the state—Anaximander—as well as the many offices and departments necessary to oversee everything. Despite Anaximander's benevolent rule and the presence of peacekeeping Star Force patrols, the citizens sometimes squabble and fight, which can even lead to riots. Riots within sealed and pressurized structures are an extremely bad idea. But that hasn't stopped their recent and troubling uptick. They're usually chalked up to manifestations of the culture-wide PTSD (Post Traumatic Stress Disorder) caused by the Event, though Anaximander suspects the Church of the Quiet is also involved, if only indirectly, in some of these violent outbursts.

Most of the bases on the Moon (which have now cohered into Luna One) were built on the near side, with respect to Earth. Before the Event, seeing the Earth in the sky was always something everyone appreciated. Now, the dark globe is more like a brooding eye of menace and mystery that most people would rather not see or think about. Since most surface structures—including many of the domes—are opaque and covered in ground lunar regolith for added radiation protection (save for occasional viewing cupolas), that's easy enough to manage.

Ancient Sublunar Tunnels: Everyone knows about the discovery of the hundreds of miles of tunnels far below the Moon's surface, but thanks to the quarantine preventing their exploration, no one knows for sure what the tunnels contain. Most understand that the ancient tunnels' discovery coincided with the Event. This leaves room for all kinds of wild conspiracy theories. Setting all those aside, parents use the discovery to good effect, telling their children to be good, or the tunnel monsters that ate Earth will get you! The actual conditions found on the Quiet Earth and ancient sublunar tunnels is a mystery

Anaximander, page 166

Chapter 17: Ancient Tunnels & Quiet Earth, page 202

Church of the Quiet, page 195

The gravity on the Moon is about 17% of 1 G. So, someone who weighs 81 kg (180 pounds) on Earth weighs about 15 kg (30 pounds) on the Moon. Of course, Luna One residents consider this entirely normal, and 1 G would be punishing without chemical aid to tolerate such "high" G.

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to most, though Anaximander is carefully devising strategies to learn more.

Dome Safety Protocols: Vacuum reigns beyond the complex. A large enough breach in one place could threaten the integrity of the entire nation by letting all the air and pressure out. To prevent that, a series of automatic pressure baffles are ready to slam down across Luna One in the event of a blowout or leak, separating more distant sections and tunnels from a breach. Usually, only the pressure baffles closest to a leak are triggered. In the event of a breach, a klaxon sounds, then the pressure baffles drop. The klaxons are meant to warn anyone standing beneath a door (which are well-marked) to get out from underneath, though they only have moments to do so. The baffles are designed to ignore anything that might block them open, including people, because the needs of the many outweigh the needs of a few in the wrong place at the wrong time.

Automatic Pressure Baffles: *level 5; level 8 for sealing a corridor no matter what might attempt to block it; level 8 versus hacking attempts to alter door behavior*

Requisites and Benefits of Citizenship: In Luna One, all citizens (and children under the age of sixteen, who are not yet considered full citizens) are guaranteed basic living quarters, breathable air, clothing, and foodstuffs. Visitors are extended this same courtesy, but usually must arrange to pay for lodging and food within a few weeks, or leave. Citizens are also free to use their resources to purchase whatever upgrades from Basic (as it's called) that they wish.

Gaining citizenship is not automatic, but a status someone has to purposefully pursue, including those born on Luna One. The application includes a test covering history and basic safety protocols, a pledge indicating the citizen will seek to work towards harmony with other residents, and a binding agreement to be available for Luna Duty for about a week every year. Luna Duty is any of a number of tasks, some of which include sanitation, cleaning, and refurbishing old habitats, but could also include sitting in judgment on a panel of peers akin to old Earth jury duty.

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Luna One Historical Note: Fifty years before the Event, Luna One proclaimed its independence from the various Earth interests controlling it, calling itself the "First Republic of Luna," though everyone promptly started calling it Luna One.

LUNA ONE SIGHTS

The interior architecture of much of Luna One is utilitarian, given the constraints of a pressure-sealed environment, with some exceptions. Many walls are built of pressure-sealed lunar brick, but they're not bland; these surfaces are usually covered in warm hues and colorful murals depicting all manner of subjects. Popular themes include wilderness scenes from old Earth, but many are far more fantastic and surreal. Occasional tagging from citizens who want to add a bit of their own personality to corridors is allowed and encouraged, though some murals are marked as off limits for tagging. Those who disregard these norms are assigned additional sessions of Luna Duty.

Most public corridors and domes are lit by "indoor sunshine" panels (plasma technology that replicates actual sunlight) set to provide indirect or overhead light. Many of these remain bright all the time, rather than following an artificial day-night schedule; individuals can vary the lights within their own plex as they desire.

The Event, page 145

Plex, page 164

The people of Luna One are everywhere, streaming between domes and along corridors on their way to and from their work, the market domes, or recreation. Their apparel varies wildly, but an outsider would immediately notice a profusion of cloaks of various cut and color. While temperatures are generally kept around 18 C (65 degrees F) and thus a bit on the cool side, the real reason is that many of these cloaks will inflate into safesuits in a pinch.

Safesuit, page 71

Autons bustle here and there among the people, often hauling goods. Some are actually built to *be* carts and wagons, though others are more humanoid, allowing them to take on multiple different tasks. Some of these autons are tagged in the same way as the corridor walls.

Auton, page 80

NO FIREARMS ON LUNA

Firearms and energy weapons are illegal for the average person to carry or purchase on Luna. That said, weapons can be legally owned by current and in many cases former Star Force peacekeepers, as well as some agents of Anaximander, who carry authorization codes should they be challenged. People who want to purchase weapons usually go to the Allian spiral, which offers the widest selection of armaments in the Revel. But they'll have to make special arrangements to bring them back to Luna One. The easiest thing to do is to just keep firearms on one's spacecraft. Violators face fees of 10,000 lumens or more, plus potential firearm confiscation.

GATEWAY

Orbiting above the main Luna One spaceport—in lunar-synchronous orbit—is a skyhook space station called Gateway. As a skyhook, Gateway can rapidly accelerate spacecraft taking off from the Moon's surface, and at the same time, rapidly decelerate spacecraft coming in to land. Craft taking advantage of Gateway can save a tremendous amount of fusion drive fuel, though each use of Gateway in this fashion requires spacecraft to follow a strict schedule and pay 1,000 lumens per landing or departure.

Most people never interact with Gateway's head rocket controller Ned Carson as more than an aged, wry man's voice. Carson has a lot of discretion when it comes to balancing skyhook momentum, often using it to ask for an interesting story or joke from approaching spacecraft. If it's one he's never heard before and he likes it, he waives the landing or take-off fee.

Ned Carson: *level 3, level 6 for aerospace engineering, rocket control, and humorous anecdotes*

Allian, page 174

A historical plaque on Gateway claims that the station was built from a lunar orbital platform launched by Earth over two hundred years ago.

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SPACEPORT

Shipmind, page 44

A gargantuan field of graded lunar surface hosts hundreds of variously-sized compressed regolith landing pads stretching away from the spaceport main dome. The volume of trade that passes through the spaceport is immense. Dozens of spacecraft touch down, are unloaded and reloaded with the aid of both port workers and automated systems, and set out again each hour. The light of their fusion drives is a constant rain of tiny flickering suns across the darkness of space above the Moon's horizon.

Weak, Sim, Strong, and Post-singularity AI, page 60

Port worker: *level 2, level 4 for tasks related to spaceport operations*

Port workers in bulky (but extremely tear-resistant) space suits, autons welded with forklifts, port inspectors, the occasional Star Force peacekeeper on the lookout for smuggled goods and weapons, and diverse crews moving to and from their spacecraft mingle both on the landing field and within the vast pressurized spaceport dome. Besides the tiered warehouses that extend both up and down several levels, the spaceport is adjacent to the sprawling, miles-wide complex of several connected spacecraft construction companies, such as Endurance Vehicles. Beneath the main dome, the spaceport is also home to several places for lodging and recreation, including the Sequoia and a large Goodtime Club.

Peacekeeper: *level 3, level 5 for inspection tasks; Armor 2; vacuum assault rifle inflicts 6 points of damage*

Spacecraft, page 103

Endurance Vehicles: Actually a wholly owned subsidiary of Astra, Endurance Vehicles claims several manufactories and holds a century-long lease on a dozen associated test pads. A slick and spotless sales floor, complete with refreshments and facilities, flashes available spacecraft options onto a 3D holoscreen at the behest of potential spacecraft buyers, with customization options both subtle and flagrant.

Those looking to smuggle items into Luna One eventually hook up with Carla Sackville-West.

Carla Sackville-West, page 163

Rather than talking with salespeople, a shipmind named Nethina speaks with would-be buyers. Nethina manifests as a roving hologram of a smartly dressed, dark-haired, almond-skinned woman. She can visibly manifest as a hologram almost everywhere in Endurance Vehicles (and many other places beyond that, within Luna One). Though only a few know it, Nethina is in fact the CEO of Endurance Vehicles, after the death of most of the senior staff, who were on Earth during the Event. Though she began as a sim AI, she shares so many rights and prerogatives stemming from being the head of a large and wealthy corporation that she hovers on the verge of becoming a true AI.

PCs with the means can purchase advanced tech-rated spacecraft of up to level 4 and whose price category is less than priceless. Those looking to purchase larger vehicles, especially spacecraft customized for war, are referred to the spiral owned by Astra.

Sequoia: A living gene-tailored sequoia tree has pride of place in the center of the spaceport dome, its mighty branches brushing the dome's ceiling. Gates carved into the base of the trunk open onto spiral stairs that lead down to a sublunar tavern that serves a variety of popular drafts, wines, liquors, and other intoxicants. It also sells cold sobers.

Cold sober, page 77

Astra Spiral, page 173

The owner, a massive, mauve-haired man named Buel, is rumored to have received some illegal gene mods responsible for his great size (but if so, the peacekeepers don't seem to care). Buel is boisterous, quick to welcome a new face, and never forgets a bar tab. Though not advertised, if payment is offered, Buel produces the secret menu,

Buel: *level 4, tasks related to cooking, brewing, and hospitality as level 7; level 6 for feats of strength*

Despite fairly robust cleaning spinners at every airlock that brush and vacuum moon dust from those coming in from the outside, it still smells slightly like gunpowder within the dome. Many on Luna One consider the smell of gunpowder to be the smell of home.

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featuring specialty cuts of actual meat (as opposed to insect and synth meat) for about 300 lumens per cut. The secret menu isn't illegal, but many in Luna One are queasy eating once-living animals, so there is a social taboo against it.

The Sequoia also offers modest temporary lodging in further sublevels.

Goodtime Club: Several Goodtime Clubs can be found on Luna One, and one of the largest is conveniently in the spaceport dome. Many fun and diverting entertainments can be had in a Goodtime Club if one is willing to undergo a quick autodoc-administered health test in the lobby. Drinks, conversation with a variety of charming and attractive hosts, games, and interactive plays are popular. Dozens of ancillary chambers are available where hosts and clients can retreat, should they wish.

Most Goodtime Clubs also offer lodging for overnight stays, at an additional moderate cost.

LUNA TRANSPORT

People get around inside the interconnected domes of Luna One either by walking or "scooting" short distances. Those who need to get someplace far or fast take ring transport. Those who want to move across the Moon's surface outside of a pressurized dome have the option to rent a "buggy."

Scoot: A two-wheeled, self-balancing, personal electric transporter (level 1). Rental is inexpensive, though some people own personal, customized scoots.

Ring Transport: Subway-like system of subsurface tubes, often arranged like a ring or spiral around each dome, with interconnections to other domes, allowing relatively swift and effort-free travel.

Buggy Rental: Garages connected to the spaceport and other exits offer residents the option to rent various vacuum-adapted vehicles, including a moon buggy or vacuum cycle for a moderate cost each sol.

Moon buggy, page 97

Vacuum cycle, page 95

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MARKET DOMES

Yutu, page 198

Luna One has many markets, both large and small. One of the largest, the Shops at Metius (usually shortened to just Metius), fills a dome adjacent to the spaceport. It's always swarmed with well-dressed buyers and discreet sellers. Architecturally pleasing storefronts are built in and around flower-filled arcades and open-air cafés lit by plasma lanterns.

Chapter 7: Equipment & Armaments, page 65

Among its many serried and tiered vendors, all manner of things can be purchased, including rare plants (usually as seeds); insects for pets, food, or decoration; various intoxicants including mild and dangerous drugs; oddments of salvage and keepsakes from old Earth; foodstuffs of staggering variety; garments, fabrics; spices; and so on.

AR contacts, page 68
Everlight, page 75
Hand scanner, page 70

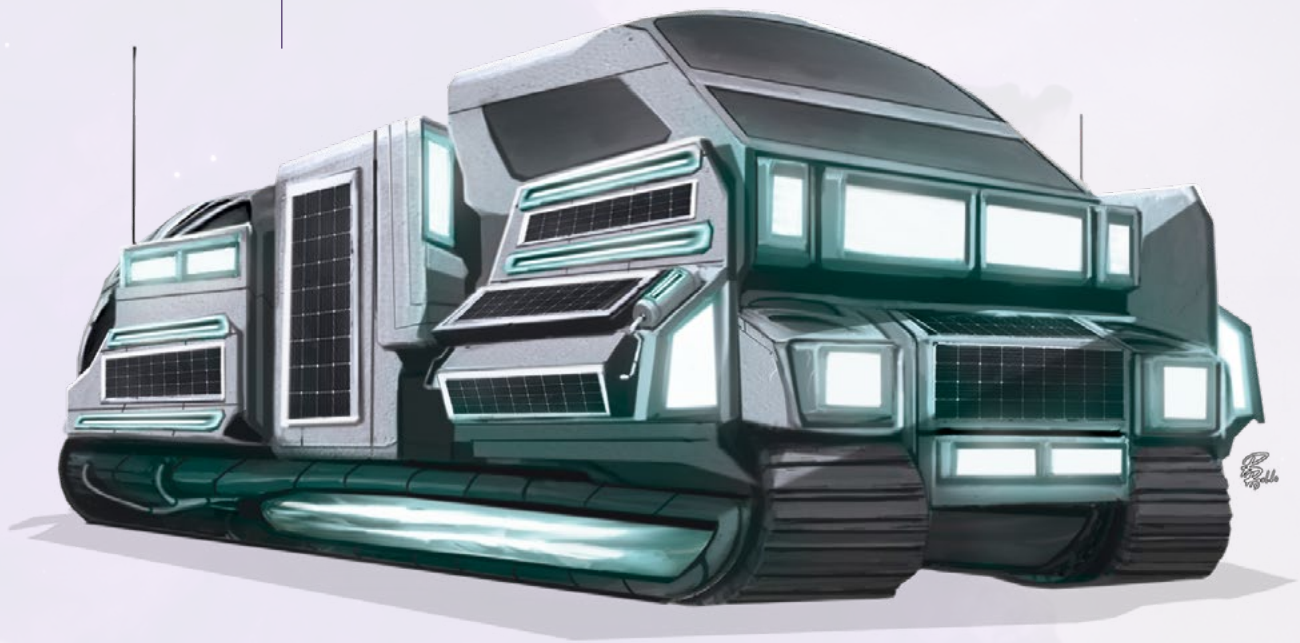
Almost every piece of contemporary and advanced equipment described in chapter 7 can be found in the stores and stalls of Metius, with the notable exception of armaments. The sale of armaments to the general public on Luna One is illegal.

Proximite, page 197
Idriss, page 196

The oddities, strange resources, and in some cases, black-market simple alien life forms exported from the Far-flung Worlds can also be found here, either out in the open or behind closed doors. For instance, the rare and curious proximite from Idriss is a big hit, both to curious collectors and to researchers attempting to understand its odd crystal matrix. In just one or two specialty shops, so-called Yutu fish (from Yutu, which circles Barnard's Star), appear in an ever-changing variety, no two ever the same, though they are always quite alien, and luckily have only been involved in a few dangerous incidents when new owners tried to handle or eat their purchase. In general, individual items from the Far-flung Worlds have a very expensive cost category price tag.

Some specific shops the PCs might find in Metius (or one of the other markets) include the following.

You 2.0: Offering minor biomechanical upgrades to clients' minds and bodies, You 2.0 is found in a glass tower featuring celebrity tattoo parlors and sensorium theaters. Upgrades include electronic devices and tools modified so that they can be permanently implanted in a living body, such as AR contacts, an everlight, hand scanner, and so on. Almost any device found in chapter 7 could be customized in shape and added as a new body part (or hidden away in a new body cavity, available to fold out as required). Upgrades have a price equal to the customized piece of equipment being implanted, plus a service fee of an additional 400 lumens. Implanting a weapon is illegal, but the proprietor—a biomechanically modded and tattooed



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woman named Mela Smith—might still take on such a task if a large enough additional payment is offered. Then again, Mela might agree to such a thing, then call the peacekeepers in to deal with the would-be lawbreakers.

Some posthuman upgrades may also be available, at the GM's discretion.

Eternal Blue: In addition to various serums for strengthening immune function, improving memory, and other substances to promote well-being and health, Eternal Blue also secretly offers illegal gene-tailoring mods. According to the Interplanetary Space Treaty, genetic engineering is considered weapons technology. That said, there is minor genetic tweaking, and then there is whole-body gene-tailoring of the sort that the law is actually aimed at, often in the pursuit of creating some kind of super-soldier. Unfortunately, a massive gray area in the middle makes it hard to really distinguish where on the spectrum a particular gene hack falls. Just to be on the safe side, Star Force doesn't really consider it worth the time and investment to track down every minor tweak that turns someone into a supertaster, a tetrachromat (someone who sees color far more vividly), a magnetosensor (someone who can sense magnetic fields), express an alternative gender, and so on.

Which is how Eternal Blue's proprietor, Carla Sackville-West, skates by without being put out of business. She'll do one or two minor tweaks per customer, but stop short of offering anything that visibly transforms a customer. She offers these modifications because she truly believes that people should be free to express themselves, and moreover, transform themselves, however they like, and be able to express that change permanently in their genetic code.

Her tweaks are very expensive (about 10,000 lumens). PCs should work with the GM if they wish to enjoy a modification for their characters. Carla, as it turns out, is also a good contact to know for someone who wishes to smuggle illicit goods into and out of Luna One. Requiring technology and ingredients that would make a Star Force inspector suspicious has put her in the position of running something of a minor smuggling ring. She charges an expensive flat rate (250 lumens) per volume of 3 cubic meters (100 cubic feet), and doesn't really want to know what's inside.

Bound Book Emporium: Books are a rare and valuable thing on the Moon, especially original editions from Earth. Printing a physical book when one could just as easily read it from a tablet or on AR paper indicates wealth. Keeping a book around on a shelf, which takes up valuable space in artificial environments, is even more indicative of someone with lumens to spare. That said, many people have at least one or two physical books, because there's just something about them that AR paper and tablet displays still can't replicate.

The proprietor of the Bound Book emporium, Hideki Antar, sells both original editions (which are very expensive to exorbitant in cost) and print-on-demand titles (using a 4D printer). A wizened gentleman who dresses in brilliant red and green silks, Hideki is a man of uncommon wisdom. Rumor has it that even Anaximander values his acumen. Hideki laughs at all such suggestions, but never actually denies them. The secret truth is that Hideki has an illegal gene-tweak that gives him an ability to rapidly correlate information, possibly using quantum computation.

Macht's: The import and export company called Macht's takes its name from its sole owner, Gavin Macht. A thick, loud, and boisterous man with a cloud of untamed red hair, Macht has no employees; he staffs his entire operation with autons. If someone—be that a private individual or another business—wants something not already available on Luna One, Macht is the one to see. That includes firearms and other illegal wares, though Macht isn't foolish enough to arrange for such transfers down on the Moon's surface. Instead, he has space allocated on the Free Market Zone of Phobos (a moon of Mars), where a

Mela Smith: *level 3, tasks related to medical interventions as level 7*

Optional Rule: Posthuman Upgrades, page 52

Interplanetary Space Treaty, page 167

Hideki Antar: *level 3, level 8 for tasks related to analyzing information and drawing conclusions*

4D printer, page 76

Carla Sackville-West: *level 3: level 6 for genetic engineering and persuasion*

Gavin Macht: *level 4: level 6 for auton engineering and deception*

Auton, page 80

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treaty precludes the Star Force from directly monitoring. Even so, Macht has become less and less friendly to Carla Sackville-West over the years, entering into a fragile détente, requiring only one to ruin the other by turning over evidence pointing at years of smuggling. Of course, this would ruin both of them, so Macht hasn't acted.

Macht has recently initiated a new side business to enhance his inventory: theft. To this end, he's customized several of his autons to slip into places a human (or a regular auton) never could.

Stealth Auton: *level 2, level 6 for stealth tasks; 2 Armor*

PLEX

A plex, short for living complex, is a series of four to ten connected chambers. Each plex normally has facilities for food prep, recreation, waste recycling, individual quarters, and so on. A given plex usually houses up to four small (usually intergenerational) families. Individuals with enough lumens could command a single plex to themselves (an expensive cost each month), or an even more custom living space.

LIVING AND FARM DOMES

Most domes on Luna One (and connected subsurface chambers) combine individual plexes with areas set aside to grow all manner of plants and bacteria (and sometimes even small animals for pets or food). Some domes are seen as high-end, and others as less desirable. The less desirable plexes are the underground ones, despite them actually being much safer, with many more pressure doors between them and the surface. But even the least desirable neighborhoods are quite livable. Anaximander sees to it that even citizens without options have a safe and healthy place to live. Some of the more notable neighborhoods include the following.

Pioneer Park: Proud to be seen as a working person's neighborhood, filled with spaceport workers, teachers, small crafters, and others who work with their hands. Known for their varied ales and live entertainments.

Maddux Nadir: At fifteen levels beneath its primary dome, Maddux Down has the distinction of being the deepest neighborhood on Luna One. It has a reputation of being where people end up who have made a series of poor life decisions.

Diamond Hill: The prohibitive cost of fashioning an actual castle beneath a see-through, crystalline, rad-proof doom was likely priceless. When its original owner disappeared in the Event, Anaximander confiscated it for failure to pay back taxes, and now uses it as public structure that houses museums and classrooms, which anyone can visit or participate in, schedule allowing.

Menagerie: Mostly given over to growing foodstuffs, the Menagerie also hosts one of the most "natural" mimicking environments found anywhere in the solar system. The only reason it isn't constantly overrun is because of strict management and lack of easy access via ring transport.

Blow-Out Memorial Dome: Previously known as the Van Holt dome, this structure suffered a cataclysmic blowout that actually blew much of the dome away, leaving many sublevels exposed and collapsed. Anaximander decided not to rebuild, but rather kept the scene essentially as it was after the disaster as a showpiece for why the

"I know a guy who knows a guy that could get you that item, no questions asked."

~Gavin

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rules that people gripe about should never be ignored.

TRANQUILITY TOWER

Rising near the center of the domes and structures making up Luna One, Tranquility Tower ascends over 600 m (2,000 feet). Slender, but studded with brilliant blinking lights, the tower is visible even from orbit. Most of the tower is scaffolding naked to the vacuum, with the exception of Anaximander's conference chambers at the top, the various offices housing the small bureaucracy necessary to run a nation-state near the middle, and offices set aside for Star Force peacekeepers at the bottom.

Other facilities in Tranquility Tower include the following.

Elevator-train: An elevator-train provides access to all levels of the tower. It's a little-appreciated fact that the elevator-train could be piloted to leave the tower and travel across the Moon's surface like a land ark, but the need to do so hasn't yet come up.

Peacekeeper Offices: Luna One peacekeepers are actually Star Force troopers trained with a few additional skillsets related to keeping the peace and interacting with the public in a non-threatening or abusive manner. Not all troopers make good peacekeepers, but others enjoy the work. The tower's sizable series of sublevels is deep enough to house a platoon of peacekeepers and their sidekick forcebots (autons customized to help out their peacekeepers), plus a cellblock for holding those deemed to require confinement. Peacekeepers can transfer those who choose not to accept arbitration from an instance of Anaximander to various locations around Luna One, where those fulfilling Luna Duty are randomly assembled to act as a jury of peers.

Civil Offices: As capable as Anaximander is at creating various instances of himself to handle multiple tasks at once, that ability is not infinite. That's where regular people come in. Several hundred can be found in the mid-tower offices on any given

Peacekeeper: *level 3, level 5 for inspection tasks; Armor 2; vacuum assault rifle inflicts 6 points of damage*

Forcebot: *level 2, level 7 for face matching, understanding rules and regulations, and holding a suspect in restraints*

Land ark, page 97

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White noise generator, page 70

sol, collating, researching, debating, and following up on citizen complaints and reports. They have some power to create committees, award damages, and assess fees, but must pass anything of major importance "to the top" (of the tower).

Anaximander: *level 8; see Strong AI on page 60*

Chapter 18: Getting the PCs Involved, page 208

Ancient Tunnels & Quiet Earth, page 202

Anaximander's Eye: At the very top of Tranquility Tower are a series of comfortable and non-threatening conference rooms, each of which can host an instance of Anaximander, the strong AI in charge of Luna One. (Each chamber also comes standard with a white noise generator, to ensure private conversations.) Anaximander usually manifests as a soothing male voice, polite and warm, friendly even to those who probably do not deserve such courtesy. He occasionally downloads a limited instance of himself into an auton for a particular span of time in order to accomplish a task. No one knows where Anaximander keeps his primary core, but everyone assumes it's close. (It's actually in a triple-sealed vault in the elevator-train; should Anaximander ever need to abandon the tower, he can jettison the elevator-train, a vehicle in his own right, to escape).

Any Luna One citizen can request a meeting with Anaximander, though those in the Civil Offices filter those that can simply be answered via a call over the communication web. Petitioners who want an "in-person" meeting are scheduled within a few weeks. Of course, Anaximander can always meet people in his conference rooms (or via a secure call on the communication web) at his own discretion and on his own schedule.

In fact, the strong AI acts as a patron to several agents, some of whom work openly for him, and others on a more freelance basis, or even secretly. Since the Event, the AI realized that he needed to track events and situations beyond the Moon of larger existential concern. It's possible that PCs will become involved with the setting by working as agents of Anaximander.

A week doesn't pass without some group of astrobiologists, salvagers, or merely curiosity seekers petitioning the AI to open up the ancient sublunar tunnels discovered a decade earlier. So far, Anaximander has refused. But he is considering changing his mind, so he can allow his own agents to investigate.

STAR FORCE

Star Force headquarters is located on the Moon approximately 16 km (10 miles) from the domes of Luna One, under a massively reinforced defensive dome in a deep bunker situated in a lunar lava tube. The complex contains both the offices and barracks

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of some 10,000 Star Force members (including troopers of all levels and many Star Force leadership, including the group of five admirals that oversee operations) and another 500 or so non-defense support personnel and autons.

The upper dome also serves as a military spaceport. The dome is surrounded by several miles of compressed regolith landing pads. The pads are reserved for Star Force military spacecraft in need of repair or retrofit. After the Event, which many worried might be the first strike of some kind of alien incursion, almost all political bodies of the Revel pledged support for Star Force, as codified in the Interplanetary Space Treaty.

The most well-known admiral is Brooke Vail, a steely-eyed woman of apparent middle years with a prominent scar on her face. She tends to speak for the Star Force whenever need arises. She's the most highly decorated officer now living. Brooke never goes anywhere without an escort of at least four military drones.

Recently, the admiral Solomon Prower was court-martialed on charges of corruption and collusion with radical Church of the Quiet elements. Prower escaped their military trial and is currently at large.

STAR FORCE FLEET

Symbol: Military spacecraft superimposed over a starburst.

Star Force boasts a few hundred military spacecraft, arranged in strategic battle groups (always subject to change) around the solar system. At any given time, several dozen are in for repairs or upgrades at the Star Force spaceport on Luna, or at the Io Star Force Base orbiting Jupiter. The fleet includes all kinds of vessels, including support, exploratory, and general transport craft, but also a good number of claws, corvettes, destroyers, wings of darts, and rumor has it, even a dreadnought. Their fleet also claims one dark-drive capable starship, the *Dauntless*. At least half the ships once belonged to disparate spacefaring nations of Earth, but have since integrated into Star Force.

INTERPLANETARY SPACE TREATY

Enshrined as the overruling law of the Revel, the Interplanetary Space Treaty is the living document that gives the Star Force its legal authority to enforce its provisions on humans in the Solar System (and the Far-flung Worlds, to a lesser extent) who wish to enjoy the benefits of membership.

An oversight body of Star Force Admirals meets every two years with ambassadors sent by independent powers (usually called a "dominion") to discuss issues, debate amendments, and ultimately, decide whether to vote to renew the treaty for another six years. Ambassadors cannot be former members of or be directly related to anyone currently serving in Star Force. The ambassadors meet at a different location every time, usually hosted by a different dominion. Many other rules govern how ambassadors are chosen, how the admirals share power, and so on, but most people who aren't government wonks rarely appreciate all the details.

GENERAL TREATY PROVISIONS

The Interplanetary Space Treaty is a wide-ranging agreement, establishing so-called "space law." Generally, the treaty covers the following broad issues, though considerations not noted here are almost certainly also covered, at the GM's option.

- Star Force defends member groups against non-member aggressive forces and pirates.
- Star Force hosts an "interplanetary court" for hearing disputes between two or more member groups. It's up to the member dominion to jail and/or otherwise deal with those charged with and found guilty of crimes.
- Regulatory oversight of any dominion that is overreaching available resources or found to be mistreating its citizens (or employees). This last one is touchy, but so long as the ambassadors continue to agree to it, it's something Star Force does, usually in the form of deploying specially trained peacekeeping and inspection forces to various dominions.

Admiral Brooke Vail: *level 6, command tasks as level 7; wears a deluxe battlesuit into engagements (4 Armor against all kinds of damage except Intellect; acts as a space suit)*

Military drone auton, page 80

Solomon Prower: *level 6, deception and hacking tasks as level 8*

Church of the Quiet, page 195

Io Star Force Base, page 193

Claw, page 109

Corvette class spacecraft, page 109

Destroyer class spacecraft, page 109

Dart, page 108

Dreadnought spacecraft, page 109

Dauntless, page 154

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- Star Force enforces Salvage and Rescue laws, which gives the right of salvage for derelict craft to the first spacecraft to file a reasonable claim, but only if no one on the derelict survives; survivors *must* be rescued if found but those rescued must pay back their rescuers for the life-saving assistance (which might end up being some portion of derelict craft's cargo after all).
- "Major" genetic engineering and gene tailoring of the human genome is strictly forbidden (thanks to several past historical disasters on this front, most notably, the wraiths), and Star Force will stamp it out and punish those responsible. Minor human gene-tailoring and genetic engineering of other creatures is generally tolerated, so long as no such manipulation attempts to grant human-level intelligence to another creature, or creates some other effect with serious ramifications (such as a gene-tailored hyper-infectious virus or bacteria).
- Out of an abundance of caution, and until such time as it's deemed safe, Star Force enforces a quarantine on the ancient tunnels under the Moon, and on entities attempting to land on Earth. The latter is difficult, but since everyone that goes to Earth is assumed to never return, it doesn't require many resources.

Wraith, page 141

LUNA ONE RUMORS AND OPPORTUNITIES

Diaspora Thieves: A band of thieves from the Diaspora made moonfall and now hide in plain sight (with forged IDs) in Luna One. Using advanced tech and illegal gene mods, they sneak into market shops and steal valuables. Word is they've even killed a few proprietors.

Chapter 17: Ancient Tunnels & Quiet Earth, page 202

Crooked Treaty Ambassador: A partially decrypted dispatch found on the communication web indicates that one of the ambassadors sitting on the Interplanetary Space Treaty council is in the pocket of one of the Big Five conglomerates.

Crimes of the Past: A woman named Ranuba and her companion auton (fitted with a sim AI mind) Lex are looking for one of the PCs, insisting they have a bounty on that character for a past crime they committed years ago.

Ranuba: *level 6, level 7 for tasks related to perception and tracking from devices; 2 Armor*

Lex: *level 5; 4 Armor*

Malfunction: An important life support subsystem in Luna One malfunctions, making an area dangerous by a toxic leak or fluid or radiation. Anaximander needs someone to deal with the issue immediately.

Lost Scientists: A surveyor out on the surface of the Moon never made it back. A rescue mission (or at least a recovery and salvage mission) is commissioned to see if they and their moon buggy can be found.

Unusual Incidents: In some of the lower levels nearest the sealed accessway leading to the ancient tunnels, strange sounds, unusual fungus, odd glows, and sightings that are put down to mass hysteria are on the rise. It might be time to look further into the quarantine rather than simply ignore it. Maybe these issues are due to the fact that someone else already has started secretly investigating?

Secrets of the Past: A haggard older man named Maxwell Quinn drowns most of his days with intoxicants in various Luna One bars. Rumor has it that he was once a scientist working on the XK-Astra dark drive, but was thrown off the team for being mentally unstable. Those who find him accidentally, or because they're researching elements related to the Event, the ancient sublunar tunnels, or the Quiet Earth, might themselves learn the secret history of the event from Maxwell Quinn's lips. That is, unless XK or Astra have already scooped him up or assassinated him, having just previously learned the same.

Maxwell Quinn: *level 4, level 7 for quantum drive engineering, all tasks hindered by two steps due to drunkenness*

Secret History of the Event, page 202

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Chapter 12

BIG FIVE SPIRALS

The five largest business conglomerates in the Revel—the Big Five—each own a dominion in the form of supermassive O'Neill space stations. Each is situated at one of the five Lagrange points around the Earth, Moon, and Sun. These stations are called "spirals" because each cylinder, which is about 8 km (5 miles) in diameter and 32 km (20 miles) long, consists of two counter-rotating cylinders—one inner inhabited cylinder, and one external, partially inhabited cylinder called "under"—simulating artificial gravity via centrifugal force on their inner surfaces.

Though called O'Neill colonies, the Big Five spirals are more advanced in design than what O'Neill first envisioned.

Intra-spiral transport includes both "ground" cars and trains along cylinder floors, as well as hub transit at the center of each spiral that zips travelers quickly between one end and the other, as well as a few strategic points in between where travelers can disembark and quickly descend to the cylinder floor.

Two counter-rotating cylinders minimize torque.

Each spiral is effectively a separate nation-state megacorporation, and sends its own ambassador to the Interplanetary Space Treaty council every two years. Generally speaking, any given spiral's interior is a section of open cylinder, a sculpted, well-tended artificial environment that mimics planetary existence. Some spirals devote more of their interior to such areas, others squeeze what's available so they can add more manufacturing capacity.

Interplanetary Space Treaty, page 167

Most spiral full-time residents are both citizens *and* employees of the conglomerate owning that spiral. That includes children, who build up a child care debt that must be paid off later if they don't have parents to pay for their room, board, and education. Adults who take on full-time jobs within a spiral earn a salary and yearly awards of stock, which varies by that person's individual contributions, merits, and position. In this way, most spiral citizens become more and more enfranchised in the operations of their own spiral as they grow older. However, sometimes people fall off the radar, becoming an underclass that eke out lives in the "under," where life support and ecosystem management systems thrum and vibrate. Once someone goes to the under, it's hard to emerge again, except through criminal means.

One end of a spiral points at the Sun, directing light into the living space inside about fourteen hours out of every twenty-four, gradually dimming and brightening between extremes of darkness and light. This sun-facing end is also thick with solar panels, fusion generators, and power conduits.

The other end of any given spiral is given over to spaceport functions. In addition to the massive trade in goods and raw materials that docking and departing ships provide, most spirals own spacecraft for

Each spiral is effectively a separate nation-state megacorporation, and sends its own ambassador to the Interplanetary Space Treaty council every two years.

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THE BIG FIVE SPIRALS

A spiral's name is also usually the name of the conglomerate that owns and operates it; for most purposes, they are the same legal entity.

Spiral/Conglomerate	Best Known For
Stardeep	Grand casinos, gambling, adventurous entertainments
XK (Xiao-Keller)	Energy solutions including solar, fusion, and experimental technologies
Astra	Spacecraft manufacture, including military vessels
Allian	Weapons manufacturer
Ibis	AI manufacturer
Crantor	Dead spiral at Sun-Uranus Lagrangian point L3

their own use, including high-tech luxury spacecraft for CEOs and other high-ranking officials, mining vessels, as well as defensive craft (including a handful of corvette class spacecraft, and possibly others, depending on the spiral in question).

Corvette class spacecraft, page 109

Each active spiral also hosts a platoon of Star Force peacekeepers, who see that citizens and visitors are safe, and also watch for conglomerates overstepping their articles of conglomeration, as codified in the Interplanetary Space Treaty.

Peacekeeper: *level 3, level 5 for inspection tasks; Armor 2; vacuum assault rifle inflicts 6 points of damage*

Interplanetary Space Treaty, page 167

STARDEEP

The most well-known and celebrated spiral is Stardeep, owing to its focus on entertainment of every kind. Whether it's a show or concert of a well-known celebrity or up-and-comer, a sporting event featuring some kind of race or martial art, gambling, game, an audacious foray into erotic entertainment, physical adventure, gastronomy experience, or something else that people find exciting, Stardeep caters to it.

Stardeep, spiral: *level 3, level 7 for defending from spacecraft attacks and sabotage*

Stardeep's casinos tend to get the most hype. Each features an amazing historical or fantastical theme. Most are wonderlands of blazing lights, sound, and VR stations set in seemingly countless rows designed to overwhelm a viewer. Each VR station offers some kind of game, whether that's slots, roulette, poker, baccarat, craps, or something more modern that involves a bit more skill (such as blasting other VR players with guns in a great arena). Those with more lumens to spend can pay to gamble in private rooms away from the tourists, and do so using real game pieces rather than the cheaper VR kinds. The lack of observation cupolas, clocks, and obvious exits, as well as the occasional free drink and snack, are strategies used to keep clients immersed in their VR games as long as possible.

Plex, page 164

Every casino comes with lodging and a variety of dining options. Almost every visitor to Stardeep stays in these establishments, unless they can stay with Stardeep family employees, whose lodging is usually in more modest plexes some distance from the gambling and noise.

Dionysus: *level 5, level 8 for perception tasks to detect cheating or odds tampering*

Dionysus is the sim AI who monitors for cheating of any sort, spawning instances into every casino. Dionysus also throws grand parties and is responsible for scheduling all the shows and other entertainments on Stardeep. The AI normally manifests as a hologram of a bearded man bearing a decanter of wine in

Sim AI, page 60

"Everything and anything someone wants to do, they can do in Stardeep. It's a good thing that, by and large, what happens there, stays there."

~Anonymous

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one hand and a stage microphone in the other. He is so engaging that some have a hard time believing he is a sim and not a strong AI.

Stardeep CEO **Raphael Daewon**, an elderly but still vital man given to wearing reflective gold clothing, is the the Revel's utmost expert on probability engineering. He turned Stardeep from a conglomerate on the edge of failing utterly forty years ago into the most well-known of the Big Five. But he's not satisfied even with the current economic success. Daewon has a lavish office in the administration section of Stardeep, but spends most of his time wandering the casinos in search of inspiration, or the next lucky gambler he can turn into minor celebrity after a win. (A PC might be selected for such an honor, if they agree to being taped for twelve straight sols. All rights of the recording to go to Stardeep, which will edit together a program featuring the character.)

Gambling: PCs who wish to engage in a bit of gambling can find pretty much any game or betting activity they desire. Odds are always in the house's favor, but PCs may get lucky. The kind of game PCs play determines the underlying rules, though you can simulate most games by having the PC attempt a gambling task versus an escalating series of difficulties, possibly even randomly determining each difficulty by summing the roll of a d10 and d6 (with any result above a 10 counting as difficulty 10). The PC stands to lose as much as they hope to win, or more; each time they play a hand, round, or session, have them choose if they are playing for moderate, expensive, or very expensive stakes.

Alternatively, a PC might choose a game like poker or VR laser battle royale, where they play against other players and not the house. Handle these like a normal card game or a normal combat.

And then there's auton wrestling.

Auton Wrestling: An especially popular Stardeep entertainment is auton wrestling. Just like it sounds, athletic people (and sometimes not-so-athletic newcomers who want to try their hand at the sport for a laugh) wrestle autons in a ring. Each event

Raphael Daewon: *level 3, level 5 for interaction tasks, level 8 for probability mathematics*

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"I would like nuclear fusion to become a practical power source. It would provide an inexhaustible supply of energy, without pollution or global warming."

~Stephen Hawking

is built into a grand spectacle, with some contestants—including some autons—gaining celebrity status.

In addition to all who come to watch (and gamble on the outcome of), many a hopeful auton fighter or auton maker shows up in Stardeep dreaming of making their fortune in the ring. If PCs attempt this, a single wrestler can probably do all right in the initial qualifying matches, but eventually they'll go up against a champion, such as the 1 m (3 foot) diameter red-hued auton called the Wrecker. It is undefeated by humans, but anyone who wrestles it to the ground and holds it in place for three rounds wins a very expensive prize.

Dr. Toni Segal: *level 4, level 6 for interaction and fusion engineering*

The Wrecker: *level 5, level 7 for wrestling tasks; 2 Armor; wrecking punch inflicts 7 points of damage and knocks foe out of ring if they fail a difficulty 5 Might defense roll*

XK, spiral: *level 3, level 7 for defending from spacecraft attacks and sabotage*

Sid Agassi: *level 5; level 7 for Speed-based tasks related to movement and defense*

Mary Yang: *level 5; level 6 for tasks related to running a conglomerate; level 3 for positive social interaction tasks*

Spacecraft Power & Drives, page 103

Sales representative: *level 2, level 6 for interaction tasks*

XK

Before the XK-Astra limited partnership that created dark drives, XK (Xiao-Keller) was the leader in Revel energy solutions, focusing on solar, a handful of experimental technologies, but especially fusion power (and related fusion drives). In fact, almost all the fusion generators and fusion drives found in the Revel were either manufactured on the XK spiral or under a license owned by XK.

The XK spiral has its park-like open expanses like every spiral, but only about a third of the volume of XK is given over to these idyllic landscapes. The rest of the cylinder is filled from floor to hub with energy research, manufacture, and production facilities.

Large showrooms near the end of the cylinder (where spacecraft come into port) enticingly display all the latest energy options. Those looking to upgrade their power or drive for their spacecraft or for any other use are offered (what is claimed to be) competitive pricing plans by smiling sales representatives who have got cordiality and service-forward mannerisms down to a science. Prices vary widely, depending on the need, but given that anyone coming directly to XK for a power or drive solution is probably looking for something significant for a moon base or spacecraft, prices likely start at very expensive and go up from there.

XK leadership is divided between three co-equal "PEOs" (Peer Executive Officers):

Dr. Toni Segal is never without a quip or quick joke to lighten the mood. Sometimes her joking manner irritates the other two PEOs, but anyone under her eats it up. Dr. Segal has a doctorate in fusion engineering and is responsible for many of the fusion patents the company still depends on. She lost a daughter on Earth during the Event, and her humor hides a deep sadness.

Sid Agassi is a bit on the corpulent side, but his lower legs, replaced by biomechanical prostheses after an accident, give him the speed and grace of someone half his age and size. Sid is the primary contact with Melaku Ejeta, who oversees the XK-Astra limited partnership responsible for re-starting the dark drive production line. Sid is rarely happy these sols, because the news Melaku Ejeta provides is rarely positive.

Mary Yang is reserved, never says a word more than is required to accomplish her current task, and is a big mystery to everyone else. Her Mother, Cecilia Young, was a PEO before her, which opened doors for her children, but especially Mary.

XK Grand Hunt: A weird tradition known as the XK Grand Hunt occupies many off-duty employees (and surreptitiously, many on-duty ones) each month. Essentially a scavenger hunt, a different department

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XK-ASTRA LIMITED PARTNERSHIP

The XK-Astra partnership that created the wondrous dark drive was located on Earth. All the proprietary information necessary to create a dark drive was stored in state-of-the-art encryption and restricted only to those who needed to know. That's gone, thanks to the Event. Even ten years later, the two conglomerates still reel from the loss and all the revenue they could have gained from the sale of true starships, not to mention their own dreams of chartering new worlds under their conglomerate brands.

The "Restart Initiative" is the new limited partnership aimed at rediscovering the domain of physics that enabled the initial breakthrough. Labs and research facilities have been set up on both XK and Astra under the Restart Initiative agreement.

Melaku Ejeta is the chief scientist in charge of the Restart Initiative. Thin, intense, and apparently proud of his large mustache, Melaku has lately begun to obsess about the Event. Secretly, he wonders if the completely unexplainable phenomena has something to do with dark drive functioning. To this end, he assembled several mercenary teams of fearless risk-takers, intending to send some to Earth and some past the quarantine of ancient tunnels on the Moon. He's already lost a few teams to unknown ends, so lately his research has turned to surviving a trip to the Earth's surface, which requires that he first understand the phenomenon. Unbeknownst to anyone but his own team, he has been launching research drones into the Earth's upper atmosphere. Given that this violates the International Space Treaty, Melaku is risking a lot.

Melaku Ejeta: *level 4; level 7 for theoretical physics*

Chapter 17: Ancient Tunnels & Quiet Earth, page 202

Research drone, page 70

sponsors the event each week, establishing a list of items to collect and judging the entries. Usually, the list includes one nearly impossible-to-obtain item that only someone really lucky could ever hope to gain, such as rock from a Far-flung World, an artifact from the "alien tunnels" on the Moon (which has never publicly been established to be either alien or full of weird artifacts, so . . .), a buffalo horn (a long-extinct animal on Earth), and so on. Sometimes contestants manage to find them, or at least a convincing-enough fake with enough invented provenance that the judges allow it. The prize is a week-long paid vacation for the team (which can never number more than five) to one of the Venusian Cloud Cities.

ASTRA

The Astra spiral is quite similar to XK, except that it focuses on spacecraft manufacturing instead of energy and drives. At one time, they were part of the same conglomerate, but split to focus on their respective areas of greatest interest without having to compromise priorities. At least, that's the public line. More likely, it was to further enrich the siblings that each wanted an equal piece of the conglomerate back when they split some fifty years ago. Since all those principals are long dead, it's hard to really say.

One major deviation from other spirals is that Astra has no vast open interior living spaces, but instead devotes all its resources to spacecraft manufacturing. Given that spacecraft are large, that still means there are large open spaces, but instead of being filled with living things on the cylinder floor and clouds up higher, they are entirely devoted to spacecraft of every shape and size.

Anyone who wants to purchase a new spacecraft comes to Astra. Most other spaceports in the Revel offer retrofits and repairs, and probably used spacecraft for sale. But no one else has the resources to build brand-new spacecraft at the scale of this conglomerate. Since the Event, that's also true of military-grade starcraft, though building a new dreadnought would likely stretch Astra's manufacturing capacity to its limit.

Chapter 13: Venusian Cloud Cities, page 176

Dreadnought spacecraft, page 109

These days, Astra is an employee-owned cooperate. Shares still tend to accumulate

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into fewer and fewer hands over time, though there are internal policies designed to keep that to a minimum.

Lili Panama: *level 4, level 6 for lying, trickery, persuasion, and subterfuge; carries a level 7 portable white noise generator that allows her to fuzz her presence near recording devices of all sorts*

Lili Panama, a woman who most would say is a fantastic face for Astra, given her charm, grace, and way of making everyone comfortable, has a secret. Yes, her personal touch enables Astra to sell spacecraft to those who might not have otherwise put their lumens down, at "very reasonable financing." However, unbeknownst to her employers, Lili has a deal with a Diasporan fanatics calling themselves Red Crater Purists. In return for channeling the odd spacecraft into their control every year or so, her father—held captive by Red Crater purists—stays safe.

Shipmind, page 44

Red Crater Purists, page 188

ALLIAN

Victor Larue: *level 4, level 7 for interaction tasks; 3 Armor from mostly biomechanical body*

Other than its design customizations and primary focus on weapons manufacture, Allian resembles the other spirals. A lot of what Allian makes can be purchased over the deep space network's communication web, and doesn't require a personal visit to the spiral. Still, many do come to see the famed weapon shops of Allian, which display their wares in sleek, tasteful showrooms. Would-be owners can try out any weapon that interests them on a nearby shooting range (or if preferred, in a perfectly realistic VR simulation). Weapons sold by Allian also include spacecraft weapon systems of every conceivable type, including rail guns, torpedoes, lasers, grasers, particle beams, and other options (including superior versions of all these). Prices for Allian personal weapons are as noted in Chapter 7: Equipment & Armaments. Spacecraft weapon systems usually cost one price category less than the entire price of a spacecraft, as noted in Chapter 8: Vehicles & Spacecraft. (Superior weapons cost twice the lesser price category; so a superior torpedo bay on an exorbitant priced spacecraft would itself be worth two very expensive outlays in lumens.)

Chapter 7: Equipment & Armaments, page 65

Chapter 8: Vehicles & Spacecraft, page 92

IBIS

Ibis contains only a handful of "token" human inhabitants, who are all related to or friends of the human CEO; almost everyone else in the spiral is an auton or a sim AI. Perhaps not unexpectedly, Ibis is in the business of producing the same. Thanks to buyouts and licensing deals, Ibis has a near-monopoly on that trade in the Revel. Autons and AIs (usually sim AIs and shipminds) purchased anywhere in the solar system probably have the Ibis logo (a sickle-beaked avian), and were manufactured in the Ibis spiral. That said, Anaximander of Luna One was not made by Ibis. Ibis is attempting to create its own strong AI to rival Anaximander, but has been having trouble, despite having spent enormous sums of time and money on the project.

The CEO of Ibis, a man named **Victor Larue**, has managed to defy a natural human lifespan by replacing nearly every part of himself, including his entire blood supply on a monthly schedule. Most reports put his true age at around 160 years. His fortune matches other vast accumulations of wealth in the Revel, but all the money in the solar system barely suffices to buy him what he most desires: more life.

CRANTOR

What happened to Crantor is up to the GM. For the PCs, figuring it out might be unraveling a mystery in recovered data logs and AR recordings.

This spiral, located in the Uranus-Sun L3 Lagrange point, went quiet in some kind of disaster that no one in the Revel yet understands. It happened just before the Event, so its sudden silence was lost in far more extraordinary happenings. Historically, the spiral was owned by Crantor Mining, a wholly owned subsidiary of one of the interplanetary mining companies that disappeared when the Earth went dark. Crantor used materials mined from the massive centaur (called Crantor) that originally orbited at L3. Why the Crantor spiral went dark and silent is mystery, though some suspect wraiths may have been involved, which is why no one is much interested in trying for salvage, despite how rich such an opportunity might be. Lately, however, Star Force has shown interest in getting the facts.

Wraith, page 141

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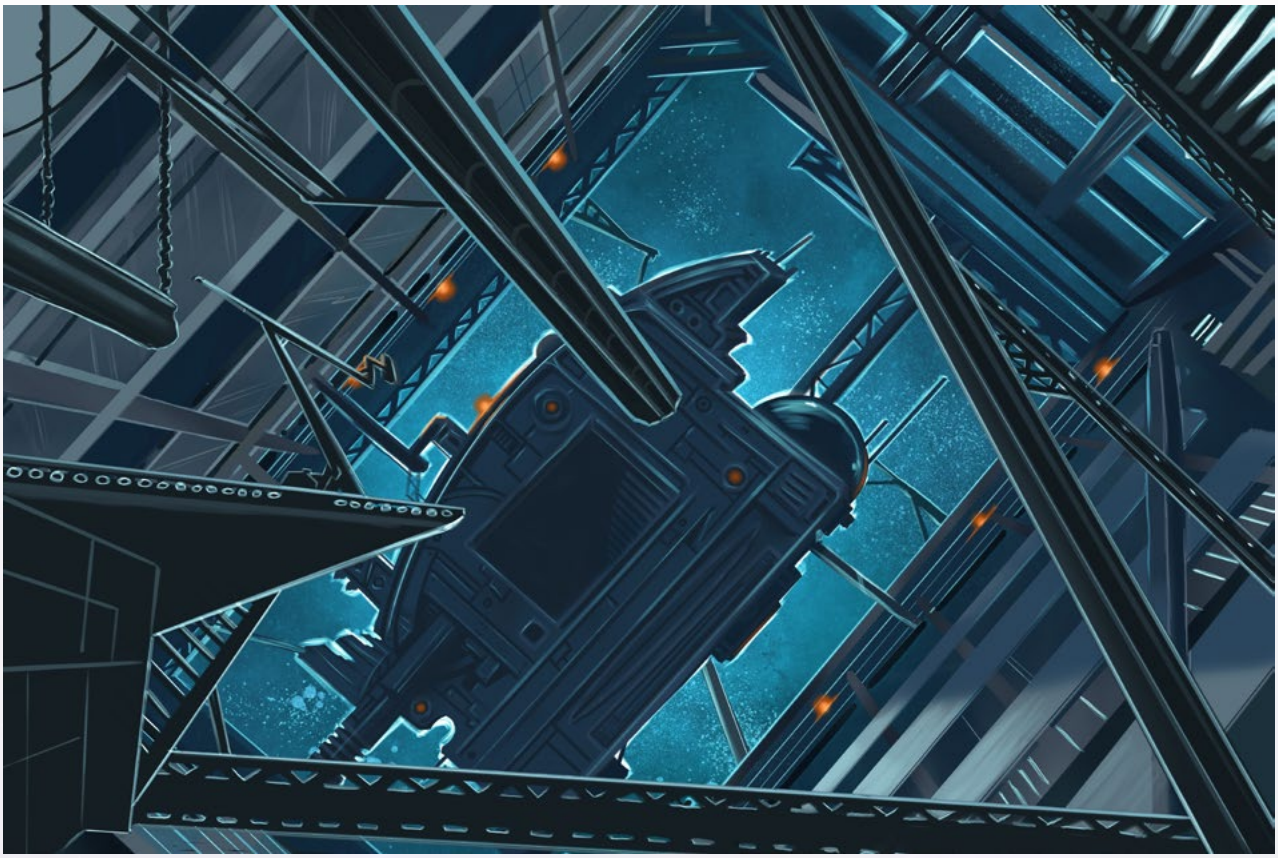

BIG FIVE SPIRALS RUMORS AND OPPORTUNITIES

Roughed Up in Stardeep: Despite security and cameras, somehow some visitors to the casinos are being assaulted, their data-rings emptied of lumens, and in some cases, the visitors are disappearing altogether.

The Silver Door: A group of down-and-outs in XK's under-cylinder have discovered a secret chamber that they cannot unlock. Further investigation reveals the chamber doesn't appear on any deckplan.

Far-flung Visitor: A woman named Shiela Erdos from one of the extra-solar colony worlds has come before the Big Five with an offer: what she claims is proof of other intelligent life in the universe.

Political Crisis: The partnership between XK and Astra is not as collegial as most believe; in fact, squabbles have become so fraught that actual fighting has broken out, but it's been covered up. So far.

Explorers Wanted: Melaku Ejeta is putting together an exploration team for an upcoming expedition, but to where he isn't saying. He just wants a wide range of skills to be represented.

Hangover: A visitor to a Stardeep psilocybindrome recently was found wandering the casinos in a strange state. Whenever she tries to speak, every electronic device within immediate range shrieks with static.

XK-Astra Drive Scientist: There are reports of an original XK-Astra dark drive scientist still alive and living on Luna One. If true, finding them and bringing them back to either XK or Astra would be worth an exorbitant bounty.

Crantor Investigation: Star Force is contracting a small team to investigate what silenced Crantor.

A psilocybindrome is a place to safely ingest and experience hallucinogenic mushrooms.

Shiela Erdos: *level 4, level 8 for deception and knowledge of the cosmos*

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Chapter 13

VENUSIAN CLOUD CITIES

The Ridge, page 180

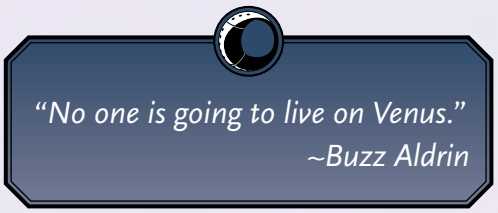
Interplanetary Space Treaty, page 167

Breather, page 72

Cloud surfing, page 178

Dozens of cloud cities float across the upper atmosphere of Venus. Except for the few that have fallen into disrepair, the cities hold breathable atmospheres under inflated domes of lightweight, immensely strong transparent ceramic fabric. But even beyond the cities' protective enclosures, at the elevation layer over the clouds where Venusian cloud cities float, the pressure and temperature are ideal for humans. Of course, outside the domes, humans need a supplementary source of breathable air, usually in the form of a breather, to add oxygen and filter out sulfuric residue. (Breathers are something of a fashion item on Venus, and come in all sizes, colors, and configurations, a trend first popularized by cloud surfers.)

Things are far different even a little lower in the atmosphere. Those who accidentally (or purposefully) jump, or who are pushed, die long before hitting the ground from the super-heated air (hot enough to melt lead) and intense pressure (about 90 times that of Earth). The blasted surface is truly a hellish place. Thankfully, at cloud city height, the immense electrical storms or massive volcanoes that sometimes erupt on the surface have little effect. Even so, secondary storms and winds can be dangerous to those not safely under an inflated dome, though this is exactly the sort of thrill some cloud surfers seek.



"No one is going to live on Venus."
~Buzz Aldrin

Stardeep, page 170

Gravity in the cloud cities is about 90% of 1 G, which means people used to 1 G move with just a bit of spring in their step.

A couple of cloud cities are actually wholly owned subsidiaries of off-world conglomerates, and function like massive luxury hotels, including the Ridge. But even these belong to the Venusian Cloud Association, a dominion with an ambassador's seat on the Interplanetary Space Treaty's council. Others are owned privately or cooperatively and vary in size and population, from supporting a few dozen residents to populations of 200,000. The largest and most well-known cloud city is Aeneas.

AENEAS

Before the Event, the cloud city of Aeneas was celebrated for its cloud surfing, its incredible restaurants, and the colony of writers and playwrights that frequent its many taverns and eateries. That's still true now, though the holiday air has taken on a somewhat manic edge, as if all the fun is merely a façade, a show before the end. If the Event happened once, what's to say it couldn't happen again, and more completely? That's the question unasked on everyone's lips, right before they make a completely different toast about the wonderful "weather" or the latest cloud surfing competition.

Aeneas procures its own food, water, and air from the factory levels dangling beneath it in "the Trawl," which means it's not dependent on outside trade to survive. Tourism enriches the city, and allows it to continually maintain and upgrade itself, as it attempts to become an even more popular destination than the Big Five spiral

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of Stardeep. The city has a population of about 100,000 full-time residents, but itinerant writers, entertainment creators, tourists, and cloud surfers bring that total up to over 200,00 during any given month.

Aeneas is run by a group of elected city planners. Among them, **Jacinda Barrow** is the most outspoken and well known, because she has a way of getting to the heart of a topic without dancing around it, both in person and on the communication webs. Short and compact, she is loved by many, and hated by some, probably for the same reason: she accomplishes what she promises to do.

FISHBOWL

Like any city, Aeneas hosts all kinds of neighborhoods, interest groups, and activities. The Fishbowl is what residents call the wide-open area under the dome crowded with magnificent, reaching towers. The towers host hotels, restaurants, shops, and entertainments of every sort. Residents and tourists move at street level, going about their lives or seeking out their next entertainment. Moving among the populace

CLOUD CITY DOME INTEGRITY

The domes of Venusian cloud cities provide breathable, non-poisonous air for residents, and in so doing, provide the lift keeping each city aloft at some 50 km (31 miles) above the surface. If a dome were catastrophically punctured, the entire city could sink. Safeguards preventing this are two-fold.

First, the dome material—a transparent ceramic fabric—is puncture resistant (level 8 to avoid punctures). Moreover, the dome isn't merely a single layer, but instead a series of individual hexagonal subunits. A hexagon would need to be punctured on both sides to create an actual leak, and even then, a hexagon is more easily replaced/patched than an entire city dome.

Second, each city is built on the chassis of several spacecraft that were retrofitted to their current purposes. If a city were to begin sinking, quick thinking could get the emergency lift system functioning again, long enough to repair several hexagons.

Jacinda Barrow: *level 3, level 5 for city planning and bureaucracy tasks; uses stunring to inflict 2 points of damage (and stun target so they lose their next turn)*

Stunring, page 84

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Peacekeeper: *level 3, level 5 for inspection tasks; Armor 2; vacuum assault rifle inflicts 6 points of damage*

Church of the Quiet, page 195

Wraith, page 141

are a few peacekeepers, ensuring general safety and watching for dissidents, such as Church of the Quiet troublemakers, or maybe some other outer-system group looking to make trouble as a political statement. No one really credits the idea that any wraiths yet survive in the darks of Pluto and beyond.

Ringport: The entire periphery of the most Venusian cloud cities contains facilities for docking cloud ships, as well as a few landing pads for small spacecraft. Large spacecraft weigh too much for a Venusian cloud city to risk offering berths. Docking fees run about 200 lumens per day.

The Purple Menagerie (Market): Most of the open, street-level area beneath the dome is given over to street vendors and entertainments of all sorts. Want to buy a weird syrup made on Ceres from the fabled fungus gardens? You can find some here. Or maybe a parrot, bred from cloned stock. You can watch a play put on by fabulously dressed actors. Or grab a bulb of grog and basket of spiced cricket bites from any of a number of street sellers. It's all here, all presented in a carnival-like atmosphere that fills the streets between the more permanent structures and business.

A visitor is likely to get a hard sell on a variety of intoxicants, body modifications (smart tattoos, crystal piercing, and so on), and cloud surfing tours from people dressed in ostentatious and colorful fashions. Most tourists are warned against trying cloud surfing unless they are physically fit, because unexpected bad weather can be taxing.

Cloud Surfing Board, page 99

Cloud Surfing: Whether you just want to watch the pros, bet on the weekly tournaments, or try it out yourself, most Venusian cloud cities have options available. The surfing is more wind than cloud surfing, as it happens, but the visuals are stunning all the same. A cloud surfing board is actually a wing-like expanse of smart plastic, and is essentially a flying vehicle in and of itself. A rider stands atop it, piloting via body movements and maneuvers in response to wind and humidity conditions. The only thing that

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Carbon dioxide is so plentiful on Venus that, down on the surface, the immense atmospheric pressure concentrates it into a supercritical fluid, forming a kind of sea covering the entire surface of the planet.

keeps the sport from being completely lethal is that falling off a board is very difficult—one's feet are clamped into special (and often fashionable) boots. So even if someone has a mishap and begins a tumble, they have some time to recover and "get back on their board" before they fall too far into the clouds. Still, about twenty surfer fatalities occur each Sol standard year.

Studio of the Found: Filled with art displays of every kind, as well as broken tech that often no longer works and a Venus-wide "lost and found" chamber containing things both mundane and unidentifiable. The owner, Sarah Calabro, is a retired atmosphere engineer who used to work down in the Trawl. These days, she spends her time painting, sculpting, and curating her studio. She has forgotten more about the Trawl and its many systems than most people ever learn.

Back Space Bar: This writer's bar is one of several local restaurant-bars frequented by writers of every kind (and those who wish to be writers). It's not a place many travelers know about, and that's fine with the owners. It's decorated with ancient tech in the form of "type writers," including the eponymous back space key. It's located beneath a much fancier and far more well-known location filled with high-end shops. Getting in requires knowing the passphrase, which only the locals know. If you want to know what's happening in Aeneas (and on Venus in general), you can probably find out here, as writers are not the only ones to visit the place; city planners (including lead planner Jacinda Barrow), engineers, and occasional movers and shakers from other places in the solar system who have managed to score knowledge of the place sometimes visit.

THE TRAWL

The dangling farm modules, manufactories, air processing, laboratories, and recycling centers beneath the Fishbowl may not be as elegant and well-visited as the Fishbowl, but without their services, the entire city would die. The Trawl sees as much if not more activity than the dome level; however, most of the sections underneath are independently pressurized.

Many of the personnel who work in the Trawl also live there, leaving only once every few weeks to get away to the Fishbowl for a few days of leisure, assuming they can afford it.

Food Towers: The primary source of food on Aeneas is crickets and fungus, grown in these twin ten-story hanging towers. Through the wonder of modern food prep, the basic food stock is transformed into multiple textures and flavors. Of course, off-world food still features in high-end eateries in the Fishbowl, but most Aenesians make do with the perfectly adequate product from this vital module. Because it's so important to life on the cloud city, the farm module is also locked and guarded.

Yingluck Thaugsuban is the lead food scientist of the food module. It's thanks to her that a couple of deadly (to crickets) virus outbreaks were quickly contained and eliminated. But ever since those close calls, Yingluck has become increasingly paranoid and watchful that someone is trying to sabotage the city's food supply.

Air Tower: A twenty-story single-hanging tower, this complex is mostly automated because the outer section is open to Venus's atmosphere, from which it strains carbon dioxide, which is plentiful on Venus. The carbon dioxide is strained by leafy plants gene tailored to withstand sulphur dioxide

Sarah Calabro: *level 3, level 5 for artistic tasks, level 7 for cloud city maintenance tasks*

The Back Space Bar's passphrase is "Description begins in the writer's imagination, but should finish in the reader's." The passphrase is a quote from a famous writer of his time two centuries earlier named Stephen King.

Yingluck Thaugsuban: *level 3; level 6 for food science; level 7 for perception thanks to recently installed implants*

Jacinda Barrow, page 177

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(also plentiful on Venus) and to vent the "waste" oxygen it produces into the air-tower interior.

Sometimes breather-wearing kids (and those acting like kids) climb down on the scaffolding surrounding the tower used by air technicians (essentially gardeners with a training in advanced biology) and grab souvenir leaves. The air technicians can't do much without risking knocking the offenders to their doom except play exceptionally loud music, cajole, or take photographic evidence of the deed and post it to the communication webs. Sometimes this is exactly the sort of fame the transgressor is looking for.

Air technician, typical: *level 3, level 5 for gardening and biology, level 6 for climbing*

Factory Towers: Recycling and manufacturing go hand in hand in most cloud cities, and in most of the rest of the towers hanging beneath Aeneas. Like the other towers, several thousand people work among the factory towers, some highly specialized, others simply doing odd jobs as they come up. Overall, the working conditions in the Trawl are reasonable, though as in any large organization, sometimes things get out of balance. Because there is not a lot of opportunity to change jobs on a floating city, tensions sometimes boil over, resulting in an "accidental fall" of a manger, employee, or inspector. This sort of "factory justice" is usually ignored by the peacekeepers, mainly because it seems to successfully keep tensions in check, but also because they can't be everywhere.

OTHER CLOUD CITIES

Besides Aeneas, about twenty other cloud cities float around Venus. A few are exclusive vacation paradises owned by conglomerates. Others focus on research, on simply providing homes for those who live there, or in some cases, have cut all ties to the outside.

THE RIDGE

The Ridge's dome encompasses a winter wonderland, complete with a magnificent ice castle and snow-covered slopes offering extra-planetary skiing among the clouds. Before the Event, skiing the Ridge was a luxury, but of course, skiing was still possible on Earth for some subset of humans. Now, the Ridge is the only place this otherwise dead sport exists.

Co-owned by several conglomerates, visitors to the Ridge are almost entirely senior executives and their families. Every so often, monthly accommodations are sold to those willing to part with exorbitant sums of cash, or who win a yearly contest sponsored by the Big Five.

Wendell Baio is the city overseer, a mid-level executive of Stardeep that found a way to spin his retirement into a brand-new position. Baio was initially cashiered because he failed to double-cross a subordinate in favor of his own boss, even though he knew it meant the end of his own career. That act made him something of a legend, and executives who come to stay at the Ridge appreciate that kind of discretion. Baio is also a magnificent skier and instructor, which doesn't hurt.

Wendell Baio: *level 3, level 5 for interaction tasks, level 6 for executive and skiing tasks*

Stardeep, page 170

CHEN CITY ZOO

One of the largest surviving arcologies of native Earth life is the Venusian cloud city known as Chen City Zoo. Zoologists curated it for decades before the Event. The series of enclosures, most quite naturally flowing between one artificial environment and the next, house more than one thousand individual animals, representing more than 250 species. Want to see a live tiger? Go to Venus.

Zookeeping is something of a prestigious role, given its importance for animal conservation. It is a highly sought-after job. Actually being able to come and see the animals in their environments is an even rarer opportunity. Only a few thousand people are allowed through each week, all chosen by lottery, and all of whom must pay their own way, as well as the very expensive ticket to Chen City Zoo.

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VENUSIAN RUMORS AND OPPORTUNITIES

D'Amelio Investigations: A visitor to Aeneas has gone missing. Not just any visitor, but a scientist working on gene therapies, at least those not interdicted, for a variety of genetic illnesses. Detective Adam D'Amelio is one the case! But he needs a little help from anyone who might have last seen the scientist on Venus.

Ghost City: Over the years, a couple of floating cities have gone missing, assumed to have suffered some catastrophic disaster. (Those incidents encouraged all the other cities to establish even stricter safety protocols.) However, recent sightings suggest that one of those cities still floats the skies, but it's dark and answers no hails. Conglomerates and other investors in that city are currently seeking explorers to pinpoint its location. Salvagers may also wish to apply.

Venusian Surfing Championship Games: It's on! All the big names will be there! Contestants from all over Venus (and beyond) will be in Aeneas for the big event. Those looking to compete can sign up for a qualifying trial. But be warned; competition is fierce!

Sick Crickets: Another virus has hit the food towers all across the Venusian cloud cities. A new strain of crickets is required, from some other planet, moon, or spiral. But time is running out!

Plea for Help: A transmission from deep in the atmosphere pleads for aid. It's not clear if the transmission is from the planet's hellish surface (and if it is, how anyone could still be alive down there), or from someplace higher up. Whatever the source of the transmission, it's likely they don't have much time before the pressure or heat destroys whatever shelter they've managed to find.

Adam D'Amelio: *level 4, level 5 for investigation tasks*

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Chapter 14

DIASPORA OF MARS

Purely by accident, humans recreated certain aspects of the ancient Wild West era on Mars. Thousands of independent homesteads (sometimes called "freeholds") lie along the floor of the Mariner Valley, a 4,000 km (2,500 mile) long gulf that reaches average depths of around 7 km (4 miles). It's naturally warm—at least for Mars—down in the valley, reaching temperatures of 0° C (32° F) during the day, and even warmer in some regions where people have created solar concentration farms. Spring-like water deposits are also plentiful on the canyon floor, so much so that it sometimes bursts through onto the surface. Moreover, the thicker atmosphere afforded by being deep in the valley creates a natural radiation barrier.

And down in the valley, the views are stunning.

To move about between sealed homesteads and cities, Martians require a protective pressure suit (just called "suits") and breathers, because atmospheric pressure is a hundred times lower than earth (and toxic). On the other hand, gravity is low (only 38% of Earth), which allows those who are used to it to make impressive leaps.

Pressure suit, page 72
Breather, page 72

Individual homesteaders, each considering themselves wholly independent and free from any outside law, usually rely on some version of an ecopoiesis dome, a sealed environment containing robust micro-ecosystems generating breathable atmosphere and byproducts necessary to grow food and raise a few animals, allowing an extended family to survive. Trade with neighbors and larger settlements is also important to long-term survival and quality of life.

The valley also hosts several larger settlements, including the largest by far: the multi-domed and sprawling Barsoom City. Barsoom City is the oldest continually settled city on Mars and, by a very broad stretch of the definition, the center of civilization for the Diaspora.

The flag, badge, and decal that many people display in their freeholds is the symbol of the Diaspora, which prominently features the planet Mars. This symbol usually signifies independence. Freeholds and cities each follow their own rules, beholden to no one. However, Martian marshals also wear the Diaspora badge. Most people respect their authority, because they usually show up to help.

The major settlements and largest homesteads down in the valley are connected along the east-west-running Red Road (and its many side tributaries), a wide and well-traveled path. Nearer the center of the valley, the trains run parallel to portions of the Road, but the tracks only extend a portion of the distance the Red Road stretches.

The Diaspora doesn't have an organized fleet of spacecraft for defense like many other dominions. That said, some rich

Some old-timers call Mariner Valley by its original name in a dead language, "Valles Marineris."

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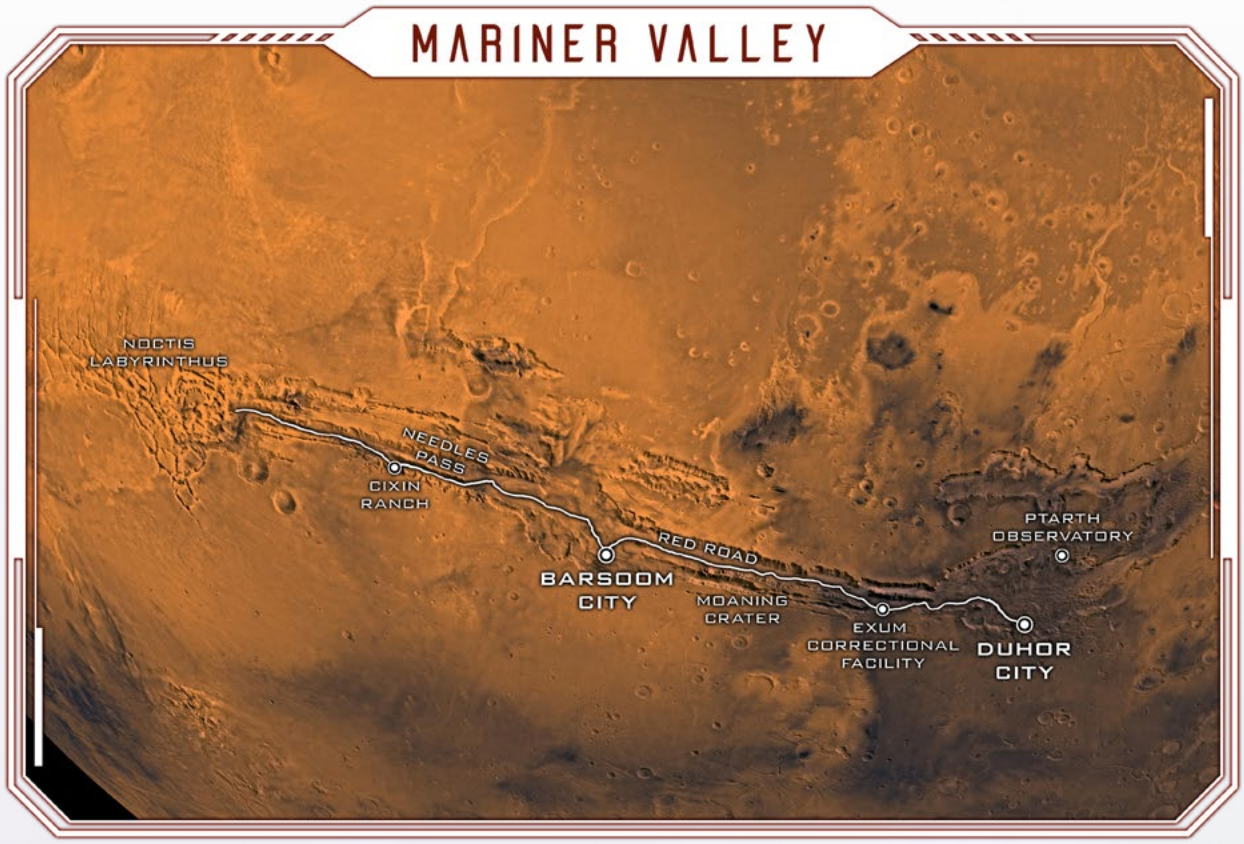

homesteaders, city leaders, traders, and others with private fortunes own various spacecraft, including over a hundred vessels retrofitted with weapon systems, and several actual corvette class military spacecraft. In times of great concern, they can come together and act as a single force.

MARTIAN MINUTE

A day on Mars is equal to one sol and thirty-seven minutes, a period so close to old Earth days that Martians developed an interesting way to deal with it. In the time period between 12:00 pm and 12:01 pm, all clocks stop in their tracks for thirty-seven minutes, then start up again. During this daily holiday known as the "Martian Minute," people traditionally relax, take a break from their work, maybe even nap. Some raise a toast. Sometimes it's a good excuse to bring an argument to a close; even an outlaw may allow quarry to go free during this "magical" period.

BARSOOM CITY

Even deeper than other parts of the valley, Barsoom City (located in the natural depression known as Melas Chasma) is almost 11 km (7 miles) deep compared to the majority of Mars's surface. The city itself stretches out from a central spaceport, consisting of a bewildering mix of low-flung structures partly buried in reddish soil, biodomes, free-standing towers, and a labyrinthine tangle of dusty red roads. Neon signs and flat panel displays are rife, lighting up Barsoom City at all hours of day and night, except during the Martian Minute, when these displays are either turned off or tuned to some placid scene, usually some inspiring bit of red planet landscape.

Barsoom City started as a mining "boom town," and parts of it still operate that way, especially in the region of the Dig. But over the decades, the city has continued to grow one habitat and dome at a time, and has become somewhat more cosmopolitan. At least, cosmopolitan for Mars.

The Red Road runs directly through Barsoom City. Barsoom City also hosts

Customizing Vehicles, page 94

Corvette class spacecraft, page 109

The Red Road, page 186

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the Mars Railway Station. Getting into or out of the city isn't terribly difficult, given that there aren't really any walls, just fewer and fewer structures until the settlement gives way to naked valley floor. Easy doesn't mean unseen; circling drones keep an eye on things, transmitting their feed to authorities.

Plex, page 164

Barsoom Law: Barsoom City, more so than most other places on Mars, is a place where a person can count on having their civil rights upheld even if they're not good with a gun. Order is enforced by a two-party police force made up of a token band of peacekeepers as a sop to the Interplanetary Space Treaty, and a larger group of martials. The two groups work together, though they come into conflict just as often.

Peacekeeper: *level 3, level 5 for inspection tasks; Armor 2; vacuum assault rifle inflicts 6 points of damage*

Interplanetary Space Treaty, page 167

Martial: *level 5; Armor 2 (armored pressure suit); two long-range attacks inflict 6 points of damage (vacuum heavy handgun)*

Wearing neon-red suits and bearing the badge of the Diaspora, Martian marshals ("martials") patrol both Barsoom City as well as along the Red Road, usually alone with just a few sidekicks to provide backup. Most ride vacuum cycles. Almost anyone can apply to be a martial, but applicants need to demonstrate facility with a weapon, the ability to survive out on the open road without becoming a burden or resorting to outlaw tactics, and they must take an oath to uphold the Articles of the Diaspora. That said, sometimes martials are deputized in time of need; they serve for a few weeks or months, and can expect to be paid a moderate sum per day.

Sidekick, typical: *level 3*

Vacuum cycle, page 95

Housing: Unlike homesteads, multi-family plexes rise all over Barsoom city. Some are a bit more threadbare, while others are on the exorbitant end, but almost all rely upon centralized artificial (and recycled) air and pressure.

Food and Water: Fungus and bacteria gardens outside of town provide basic sustenance, and a lot of variations are possible, and even beloved. Barsoom City also has its own water plant, which sucks up excess water from the Dig and other taps in the earth of frozen Martian water. Some homesteads produce specialty foods as salable items, and so trade up and down the Red Road, East Line, and West Line is at least half food and water transport.

THE DIG

The neighborhood of the Dig is defined by a massive hole in the ground. The glinting carapaces of massive mining machines are scattered down the bore hole's throat. Support machinery, smelter and refinery domes, structures for the temporary housing of both itinerant and permanent miners, and the many businesses that cater

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to the needs of those who work long shifts under dangerous conditions spread out from there.

The rare-earth metals recovered from the Dig are, arguably, one of the reasons the Diaspora exists at all. It could have gone another way entirely. A conglomerate owned almost everything on Mars a century ago. But a Martian revolt threw off the company shackles. Wealth was widely redistributed.

Lochspringa: Wealth from the Dig is distributed across the Diaspora today as part of a rite passage to adulthood called lochspringa, where young adults leave their homestead or plex and come to the Dig to work as itinerant miners for half a Martian year (or longer, if they choose). Those who are careful with their earnings come away with enough to start a life for themselves. Those who blow all their lumens at Dig establishments that specialize in separating excess lumens from miners end up in a less enviable position, though they may sign on for additional half-year shifts, and try again.

MARS RAILWAY STATION

Located at the northern edge of Barsoom City, this central depot of the Mars Railway sees traffic from the Dig, to and from the spaceport, and mainly from the East Line and West Line, each of which extends several hundred kilometers in both directions along the floor of Mariner Valley, often within sight of the Red Road. A ticket to ride to the end of the line is a moderate cost; a ticket to get across town is the same.

The station itself is a madhouse of activity, under a gilded dome showing a map of Mars.

The trains are pulled by fusion-powered engines, some of which come with shipminds, along high-speed mag rail. Some cars are sealed for passengers; many are open and contain cargo sealed into individual crates. Most carry at least one martial as well as several spotters to guard against outlaws and the heist they seem driven to occasionally try, even though they usually fail.

BARSOOM SALOONS

Besides mining, Barsoom City is known for its saloons. Some specialize in catering to locals, others to miners, and many to homesteaders who come in from the Red Road to visit and trade. They offer food, alcohol, card games, and more. Many also offer a free lunch (a filling, though somewhat bland, fungus fry).

Saloons in Barsoom City are usually built out of some cast-off ancient landing module or decommissioned train car, giving each a distinct look. Whiskey is the drink of choice, but it's Mars whiskey, a potent combination of burnt sugar, alcohol, and nicotine.

Red Dog Saloon: Built from the hulk of a crashed corvette class spacecraft with a rusty metallic hound emblazoned on the side, the Red Dog finances itself primarily through the fifteen games it offers to customers, including poker, monte, faro, and blackjack. It also sells cactus wine, made from hybrid cactus and peyote tea brought in from freeholds. This tends to make people in the Red Dog a bit more mellow than those used to drinking Martian whiskey.

Hattie Jagger is the proprietor. She's spry, wiry, and older than she looks. Stories say she was an outlaw who, after making her fortune on the Red Road, retired by establishing the Red Dog. If that's true, it seems like the martials might want to talk to her, but most never come in. In fact, she was an outlaw, but rode under the name

Hattie Jagger ("Cardinal Sin"): *level 6; 2 Armor; two long-range attacks each dealing 6 points of damage (vacuum heavy handgun)*

"Freeholders think they know adversity. P'fah! I've experienced shit that would put the fear of the void in them ten times over. They're just lucky I don't hold a grudge."

~Hattie Jagger

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DUST DEVILS, MARTIAN SEASONS, AND DUST STORMS

Dust devils can be seen at any time of the Martian year (687 Martian days). But the frequency of sand storms on Mars are related to the planet's seasons.

Dust Devils: It's lucky to spy a dust devil whirling across the landscape. And, according to the Martian lore passed down through generations of children, if you follow a dust devil long enough, it'll lead you into a region of ancient, eroded canals from a lost civilization that died out long before. Over the years, many kids have gotten lost or worse thanks to this myth, so parents discourage its retelling. Which makes the myth all the more delicious to pass on.

Martian dust devils are whirlwinds filled with dust winding across open ground. Sometimes they're tiny, no larger than a person, but other times they can be massive, reaching up to 20 km (12 miles) into the sky. Being caught in one of these large dust devils is like being caught in a short-lived dust storm.

Seasons: Everyone loves the season of perihelion on Mars, when the planet's highly elliptical orbit brings it closest to the sun, especially when it coincides with Mars's summer. That's when it's time for the Perihelion Feast, when everyone puts on their party best, shares around potluck dinners at a designated homestead (or, if in the city, someone's plex), and gifts are exchanged, as well as gossip and hopes for the future.

People are less excited about how the warmer temperatures during perihelion tend to kick up dust storms.

The season of aphelion, when the planet is farthest from the sun, is colder, but given that everyone lives inside artificial structures and suits in an environment that would otherwise kill them, it's not so bad.

Dust Storms: About every three Martian years during perihelion, a dust storm grows to envelop the entire globe. Dust storms are annoying but not intrinsically dangerous. Winds can get up to 100 km/h (60 mph), but given that that atmosphere is only 1% of Earth's, that's hardly dangerous. The real danger is that they limit sight, decrease the amount of sunlight, and coat solar panels with electrostatic particles.

Outlaw, Martian: *level 3; Armor 1 (armored pressure suit); 6 points of damage (vacuum heavy handgun)*

Cardinal Sin, and no one has yet made the connection. Which is good, because she did things in her old life she's not proud of.

THE RED ROAD

The Red Road is a lane of compacted or fused Martian regolith wandering across the floor of the Mariner Valley, connecting various settlements and the much more numerous (but far more widely spaced) freeholds. Sometimes it runs parallel with the mag-lev tracks, or even crosses over or under them; other times the tracks are nowhere in sight.

Common wisdom has it that the closer travelers stick to the Red Road, the less likely they are to find themselves in the crosshairs of outlaws who delight in living a "wild and free" life on the Martian hardscrabble. That's probably not true, because outlaws are more likely to target people they can find, and of course, travelers prefer roads to the sharp and tortured valley floor.

Because of the threat of outlaws, many travelers hire guards; ride in vehicles that are armored, quick, or armed; or only travel at night, hoping to avoid notice. Other travelers are confident in their own ability to fight off outlaws should it ever become an issue. Truthfully, the threat isn't nearly as pernicious as gossip and alarmist news on the communication web paints it.

Speckling the valley floor on either side of the road are the occasional ecopoiesis

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domes marking a homestead. Some homesteaders have claimed wide swathes of land around their dome, filling them with farming, ranching, artistic, distilling, or other modules that provide some kind of food or luxury for trade. Visible trails usually lead from these down to the Red Road. It's not uncommon to see motorcades with containerized product on flatbeds making their way down the Red Road toward the nearest rail depot.

Long portions of the road contain no homesteads, settlements, or other travelers. These sections are not great places to have a mishap, because air and water from suits and vehicles is a precious and short-lived resource.

Needles Pass: Lots of strange and tortured landscapes are visible along the Red Road. One of the most well-known uplifted areas is filled with rocky pillars, towers, and spires. They almost give the impression of having been formed by erosion, but if so, it must have happened a billion or more years ago, during one of the ancient millennia-long warm periods when liquid water ran on the surface. In any event, one or more geologists can often be found exploring the area, conducting work out of a mobile lab, aided by either students or a handful of autons. Often, stories and meals can be had with these lone scientists, who are eager to share their latest discoveries about ancient Mars. (Lots of lone scientists can be found on Mars, refugees of vanished Earth, who were doing work away from their homes when the Event happened. Those that didn't take up some other profession or start a homestead still privately hope that whatever darkened the Earth will one day depart, and allow them to go home.)

Moaning Crater: Sound doesn't travel very well in Mars's thin atmosphere, but according to stories, this crater a few miles off the Red Road can be heard to audibly moan at sunset and sunrise. Those stories tend to draw people close enough that a band of outlaws, led by **Archie "Firebeard" Franks**, can descend on the visitors, steal all their valuables, and toss their remains into the chasm at the crater's bottom. The outlaws have a lair in a nearby biodome. If a visitor ever escaped, it's likely the trap of the Moaning Crater would be quickly quashed by the truth. Which is why Firebeard and his fellow outlaws try to only attack those who seem most weak and unable to defend themselves.

At various times, scientists have attempted to enter the chasm in the crater, having identified it as one the sources of vast releases of methane into the Martian atmosphere that occur every half-dozen years. The source of the methane is unknown. Some say it's evidence of submartian life. Others scoff, indicating it's more likely to be the result of geological phenomena, or is being released from underground reservoirs created by long-extinct life forms.

Whatever the truth, the bandits only care that the enigma is a great way to draw in new victims on a regular basis.

CIXIN RANCH

A placard printed with the ranch's name and featuring several adorable crickets hangs over the gate to Cixin Ranch. A track leads to a rise on which sit four connected biodomes, surrounded by hundreds of modules stretching for kilometers in all directions, as well as other structures, including a garage holding vehicles and a factorylike processing plant (where crickets are processed into edible and oh-so-tasty foodstuffs).

Hopkin Savzeran and his wife **Caraine Maz** operate the ranch. They both seem like hard-working salt-of-Mars sorts, and they don't take much guff from their cricket ranch workers. Not that the workers ever seem to complain; they are all fanatically devoted to Hopkin and Caraine. Caraine seems happy to let much of the tasks related to ranching fall to Hopkin while she pursues other interests.

Visitors to the ranch are not rebuffed, but it's obvious that the ranchers would rather not have to bother with entertaining visitors. That said, visitors may be invited to sit down to a meal with the owners. Conversation quickly turns to politics, where it becomes clear that the ranchers are

Geologist, typical: *level 3, level 6 for tasks related to geology and surveying*

Hopkin Savzeran: *level 5, level 6 for tasks related to cricket farming; 1 Armor from armored pressure suit; 6 points of damage (vacuum heavy handgun)*

Caraine Maz: *level 6, level 7 for tasks related to running a covert organization; 1 Armor from armored pressure suit; two long-range attacks inflict 6 points of damage (vacuum heavy handgun)*

Firebeard: *level 5, 2 Armor from armored pressure suit; two long-range attacks inflict 6 points of damage (vacuum assault rifle)*

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Peacekeepers, page 165
Martials, page 184

not fans of the peacekeepers in Barsoom City, or for that matter, the martials that sometimes show up along the Red Road. As a matter of fact, they seem to think the Event was the best thing that ever happened to Mars, finally ensuring the Diaspora's true independence. (This later bit is not a popular opinion, even among most other homesteaders.)

Interplanetary Space Treaty, page 167

Cricket Farming: Cixin trades not only with the rest of Mars but the entire Revel; tins of cricket with the Cixin logo are considered fine cuisine almost everywhere off-planet. The lower gravity of Mars seems perfect for raising crickets, already a fairly straightforward process requiring only inputs of warmth (created by solar concentrates and heat sinks), water (brought up from nearby frozen "aquifers"), and cricket food (cucumbers, mostly, which are grown in nearby modules). Several dozen Cixin cricket ranchers work the farm, as well as twice that number of autons.

Cricket rancher: *level 3; 1 Armor from armored pressure suit; 6 points of damage (vacuum heavy handgun)*

Red Crater Purists: The far edges of the ranch contain more biodomes and structures not visible from the main domes and much of the rest of the ranch. This collection of domes (numbering about ten) is the headquarters for the extremist group calling themselves the Red Crater Purists, often abbreviated to the RCP. They are led by none other than Caraine Maz, with her husband Hopkin as her right-hand man. All the cricket ranchers working the main cricket farm are RCP, as are the dozens more bunking in the secondary domes.

The RCP is a subversive guerrilla group, determined that Mars will never come under the rule of an external group, which includes being signatory to the Interplanetary Space Treaty. They believe in "Martian purity," to an almost xenophobic extent. Heritage and bloodlines are important. If you don't go back at least three generations, you're not really Martian in their eyes. They're willing to give newcomers who swear to the Red Crater Purists philosophy some leeway, but those newcomers are also likely first to be sacrificed if need be.

Tactically, the RCP has operatives spread throughout the Revel, working undercover in positions of authority and access. The RCP works to build its own strength by acquiring military assets, both personnel and weapons, as well as military spacecraft. In fact, a subset of the RCP has several military vessels in its secret fleet, having stolen some and, more recently, extorted several from Lili Panama in the Astra spiral.

Lili Panama, page 174
Astra spiral, page 173

DIASPORA RUMORS AND OPPORTUNITIES

Martial Calling: A martial is putting together a large group of well-armed individuals to investigate a distress signal sent by a small penitentiary east of Barsoom City: Exum Correctional Facility. The warden indicated a breakout was immanent, and that was the last anyone heard from her.

Jack Nassif: *level 4, level 7 for interaction tasks due to his ability to deploy very expensive and even a few exorbitant sums of money to get his way*

Strange Observation: The prestigious Ptarth Observatory has recently made a weird observation. They want to hire a private ship to go check it out to confirm their findings before making any announcement, because it's just so absurd. They say they've discovered a lone antique teapot orbiting the sun between Mars and Earth.

Search Term: Russel's teapot

Train Job: Relics of Earth stolen from Big Five executive Jack Nassif have been brought to Mars, and thus essentially appropriated by Diaspora common law. A window of opportunity to retrieve the items exists while in transit on the Martian railway, before they reach their final destination in the settlement of Duhor City, the end of the East Line.

RCP Raid: Peacekeepers believe they've identified a Red Crater Purist safehouse. They're looking for additional non-Martian support down in the Mariner Valley. Since they can access all sorts of official travel and spacecraft flight plans, they can send encrypted messages asking for help.

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Chapter 15

OPULENCE OF OUTER PLANETS

The vast gulf of space called "the Opulence" is a few orders of magnitude larger in terms of volume than the space occupied by inner planets and spirals. The Opulence includes a scattering of asteroid mining colonies, such as Pallas Station, settlements on dozens of Jupiter's moons, and a few research and manufacturing bases on and around Saturn's moons, including the Namaka Secundus Research Base on Enceladus. The Opulence includes over a dozen separate dominions, some as small as a single mining colony that successfully claimed independence from a conglomerate, others encompassing several separate bases and settlements. Most are generally happy to be signatories to the Interplanetary Space Treaty, given their vulnerability and exposure in the outer darks of the solar system, where sunlight is dim and chancing across other people who can lend a hand is uncertain.

What is certain is that criminals also operate in the Opulence, in small pirate fleets of coal-black ships with red highlights. Piracy isn't rampant by any means. But it's always a concern. If the location of the pirate base home station could be found, flushing them out would become much easier. So far, the pirates remain elusive.

Star Force peacekeepers patrol the Opulence in a dispersed fleet comprised of combat spaceplanes, corvette class spacecraft, and at least one destroyer. These ships are based out of a large Star Force space station located on the outer edge of the asteroid belt called Io Star Force Base.

Several of the Big Five conglomerates owned mining colonies in the Opulence, but many colonies have thrown off their yokes since the Event, declared independence, and have became signatories to the Interplanetary Space Treaty despite strenuous and often violent objections of their former employers. Now that they're seen as fellow dominions in the eyes of the law governing the Revel, the Big Five's hands are tied. Even more so because they depend on the materials being mined in the asteroids to keep their various spirals supplied. That doesn't mean they've learned to get along. In fact, skirmishes are common. Afterward, these bouts of violence are put down to pirate activity, but everyone knows that it was probably some new Big Five saboteur who was caught after trying some nefarious plan.

Filling the Opulence: The Opulence is a vast expanse, containing far more more bases, settlements, and stations than there is room to explicate in these pages. We've settled on describing a few highlights, but this leaves you as the GM room to adapt

Combat spaceplane, page 109

Corvette class spacecraft, page 109

Destroyer class spacecraft, page 109

Io Star Force Base, page 193

Namaka Secundus Research Base, page 215

Interplanetary Space Treaty, page 167

Pirate fleets, page 191

"On Titan the molecules that have been raining down like manna from heaven for the last 4 billion years might still be there largely unaltered deep-frozen awaiting the chemists from Earth."
~Carl Sagan, Pale Blue Dot: A Vision of the Human Future in Space

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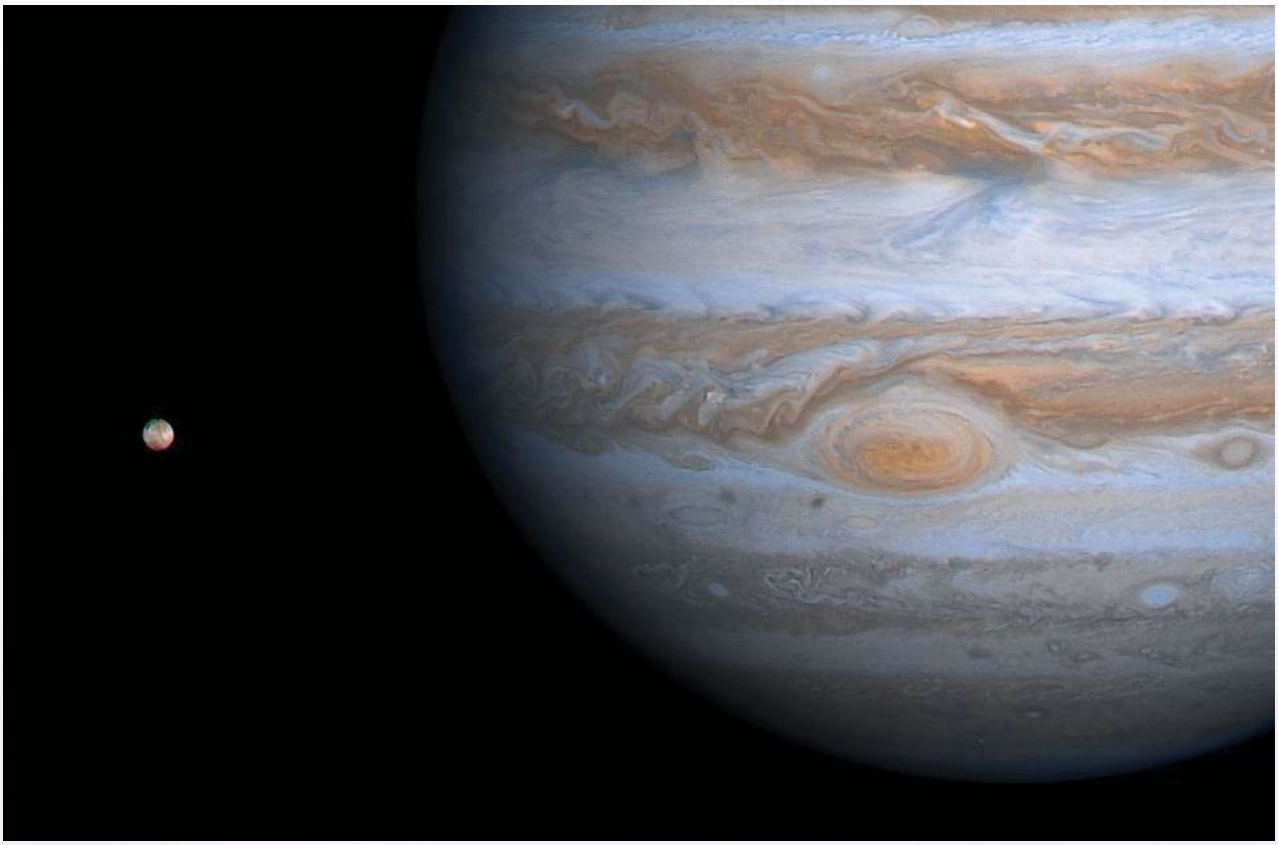

the asteroid belt and Jovian-Saturnian system (and even farther away, to Uranus, Neptune and the various dwarf planets of the Kuiper Belt). For instance, if you want a base on Jupiter's moon Ganymede, then stat it out. Think there should be a second or third pirate fleet? Then you have one already described from which to extrapolate. Need a derelict spacecraft for your PCs to try to salvage? There are lots of them in this region of the solar system. It's a tremendous expanse, much of it lonely and empty, true. But that means the Opulence is also wide open for your customization.

Salvage Found on a Derelict Spacecraft, page 55

PALLAS STATION

Located on the relatively large asteroid of Pallas in the asteroid belt, the Pallas Station mining colony is mostly contained within tunnels and chambers hollowed into the asteroid. A wide hangar open to space serves as a spaceport. The port can hold several hundred ships at once, including a couple of freighters, though when freighters are in dock, they crowd other ships out. The asteroid's surface isn't inhabited, because the surface gravity (0.02 G) is uncomfortably low. That said, craters and other blemishes from the fight Pallas waged for its independence against XK pock Pallas's surface, serving as remembrances of that dark time thirty years ago. In addition, giant helium-3 harvesters have created vast tracked regions across the surface.

Low gravity, page 222

Freighter spacecraft, page 108

Pallas is about 512 km (318 miles) in diameter, a remnant protoplanet, and its core is rich in various useful metals and rare earths. The asteroid has a high eccentricity and a highly inclined orbit with respect to most of the other asteroids and planets in the solar system, which means sometimes it rises "high" above the plane, and other times it swings far "beneath" the plane. (This eccentricity was a help during the war, because enemy spacecraft found it challenging to quickly match orbits with the asteroid.)

Pallas contains several hundred thousand people living in low gravity, though they've all adapted to it (through medical intervention) and don't suffer penalties like those who haven't lived in it for years. Thousands of miles of tunnels (many of

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which started as mine shafts) now house habitations, malls, parks, entertainments, markets, and other things one would expect to find in a city, lit by sun-mimicking plasma bulbs and thick with plants and trees to supplement oxygen stores. Of course, the whole thing is an artificial environment, and the same sort of dome safety protocols that exist on Luna One are in effect here (and in truth, everywhere in the Revel to some extent or another).

Psychological scars left over from the struggle for independence remain. XK owned the mine, and treated its employees like disposable cogs, making more than half live in inadequate quarters in the deepest sections of the asteroid, while mangers and CEOs lived closer to the spaceport (and surface) in far better quarters and circumstances. That's changed now, but one would be hard-pressed to find any XK customers on Pallas. Exactly the opposite; if you're looking for people who'd work against XK's best interests, one need go no farther than the nearest bar in Pallas.

Nicola Saarinen is the mayor of Pallas. In his early sixties (Sol standard), he likes to joke that he has more mechanical parts than an auton. He fought in the XK Independence War thirty years ago, and his injuries were severe enough that he now uses an omnichair. Nicola fared better than the rest of his family; his wife and children died from a bomb set by an XK saboteur. Despite everything, Nicola helped rebuild Pallas into something new. Quiet and soft-spoken, his depth of conviction still comes through. What most people don't know is that Nicola is brother to the pirate leader Natassa Saarinen. Which is why the Golgotha Fleet generally leaves Pallas alone, among other arrangements the two share. Nicola hates what his sister does, and can't stomach what the communication webs describe as atrocities (even while half not believing them). But, she is family. And as long as her pirates target XK freighters, he finds it easier to look the other way.

GOLGOTHA PIRATE FLEET

Of the pirates that operate in the Revel, the most famous is the Golgotha Fleet. Golgotha craft (or those attempting to look like Golgotha craft) are uniformly black, striped with red lights for that extra-menacing look. Though called a fleet, pirates usually operate as lone marauding ships (if at least dragonfly class-sized or larger). Other times, they team up in temporary groups of six to ten ships. The Golgotha Fleet tries not to concentrate itself in any one area, because that's exactly what Star Force is waiting for. Instead, pirate spacecraft like to get in and get out, while light delay works in their favor.

Pirate ship standard operating procedure is to surprise a target ship and broadcast a demand for surrender. Spacecraft that surrender immediately generally get off with only having their cargos confiscated and their crew mildly roughed up, mostly for show. However, those that resist meet the full armed might of the pirate ship, which is usually superior to other ships of their class.

PIRATE SPACECRAFT

The following ships are just a few of the dozens of pirate spacecraft operating in the Golgotha Fleet. Pirates loot victim craft for food, water, fuel, air, and other needful things, as well as data-rings filled with lumens and other valuables.

NIGHT TERROR

This up-gunned dragonfly class spacecraft has a crew of twelve pirates (thugs).

Tang Fei commands the *Night Terror*. They are celebrated for having pirated the most ships, including having taken down more

"To win a fight, tell a distracting lie.
Then shove the knife in when they're not looking."

~Tang Fei

Dome safety protocols, page 158

Nicola Saarinen: *level 4, level 5 for most tasks thanks to biomechanical mods; 2 Armor from synthskin grafts; long-range attack inflicts 6 points of damage from heavy vacuum handgun*

Omnichair, page 78

Natassa Saarinen, page 192

Night Terror: *level 3 spacecraft, two superior weapon systems, otherwise as dragonfly class spacecraft (page 109)*

Thug, page 376

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than a few Star Force corvettes. If anyone were to take over the Golgotha Fleet, it would probably be them, though so far, they haven't tried, because most pirates not serving on the *Night Terror* remain Natassa loyalists. Tang Fei's ship wins so many battles because those who haven't fought it don't realize the firepower the ship can bring to bear for something of its class.

Natassa Saarinen: *level 5, level 7 for interaction tasks; 3 armor from battle space suit; two very long-range laser attacks inflict 6 points of damage each from two personal suit-tethered battle drones*

Dart, page 108

Combat spaceplane, page 109

THE SWARM

A group of two-dozen darts and combat spaceplanes operate out of a retrofitted freighter spacecraft called the Hive, which has bays for the entire swarm to dock for resupply and repairs. A crew of some thirty pirates, in addition to the pilots of the Swarm itself, lives aboard the hive.

Cajó: *level 5; 2 Armor from armored space suit; two long-range attacks inflict 6 points of damage each from vacuum assault rifle*

Cajó (an "affectionate" name short for Carlos Jorge) commands the Swarm. Prior to that, he commanded a corvette, one of the few corvettes in the Golgotha Fleet. But Star Force finally caught up with him and destroyed it. He escaped, as did a fraction of her crew. Licking his wounds, he decided to try something new, and built the Swarm. Meaner and vindictive since his loss, the Swarm is more terrifying than other pirates, because Cajó has dispensed with pirate standard operating procedure, and always kills everyone aboard any craft they catch.

GOLGOTHA

One of the advantages the Golgotha Fleet enjoys is that the fleet's flagship *Golgotha* is a destroyer class spacecraft. It rarely engages other craft directly, preferring to keep its existence secret, unless it's certain that it can blow a ship out of space quickly enough that it can't identify the *Golgotha* and transmit the information. (Captain Natassa also keeps a strange device that helps protect the craft's identify.) In addition to what is normally overwhelming firepower, *Golgotha* enjoys the ability to rapidly change the hue and designs on its hull plating, allowing it to quickly lower its "pirate colors" as it switches out its transponder ID for the "research vessel *Pluto's Revenge*," allowing it to put in at an number of Opulence stations without undue notice. Once it puts in someplace, it provides some number of crew (swapped with other vessels in the Golgotha Fleet just for this purpose) some much-needed shore leave. It also allows them to sell accumulated pirate booty that they can't directly use. Pirates on shore leave who are at risk of creating a scene or spilling the secret of *Pluto's Revenge* are only allowed to leave the ship at particularly unwholesome locations, such as Sabrina Station, which circles Titan.

Destroyer class spacecraft, page 109

Natassa Saarinen (sister to Nicola, mayor of Pallas Station) rules the Golgotha Fleet and captains the *Golgotha*. She was part of the XK Independence War on Pallas, and witnessed some truly heinous acts by mercenaries working on behalf of the conglomerate. An elaborate scheme eventually put her in command of the XK flagship leading the attack, the very destroyer she now captains. In the decades since, she has made a point of preferentially targeting XK craft, or those doing business with XK. Sometimes she gets a heads-up from her brother, though that's rare, given how he would actually rather Natassa give up the fleet and come retire on Pallas. Currently, however, that's not really in the cards for her.

She's amassed some amazing treasures from the holds of the various spacecraft she's looted, including one spectacular item in particular: an artifact of unknown origin

Invisible, page 221

MOTE OF DECEIT

Level: 9
Form: Goggle-like device of unknown material
Effect: This device can render a location (including something as large as a spacecraft or even a tiny moon) invisible for one hour. Invisibility extends across all frequencies of the electromagnetic spectrum; however, those in the location rendered invisible can perceive their surroundings without difficulty, and anything outside the location with only a slight degradation (all tasks related to perception are hindered).
Depletion: 1 in 1d20

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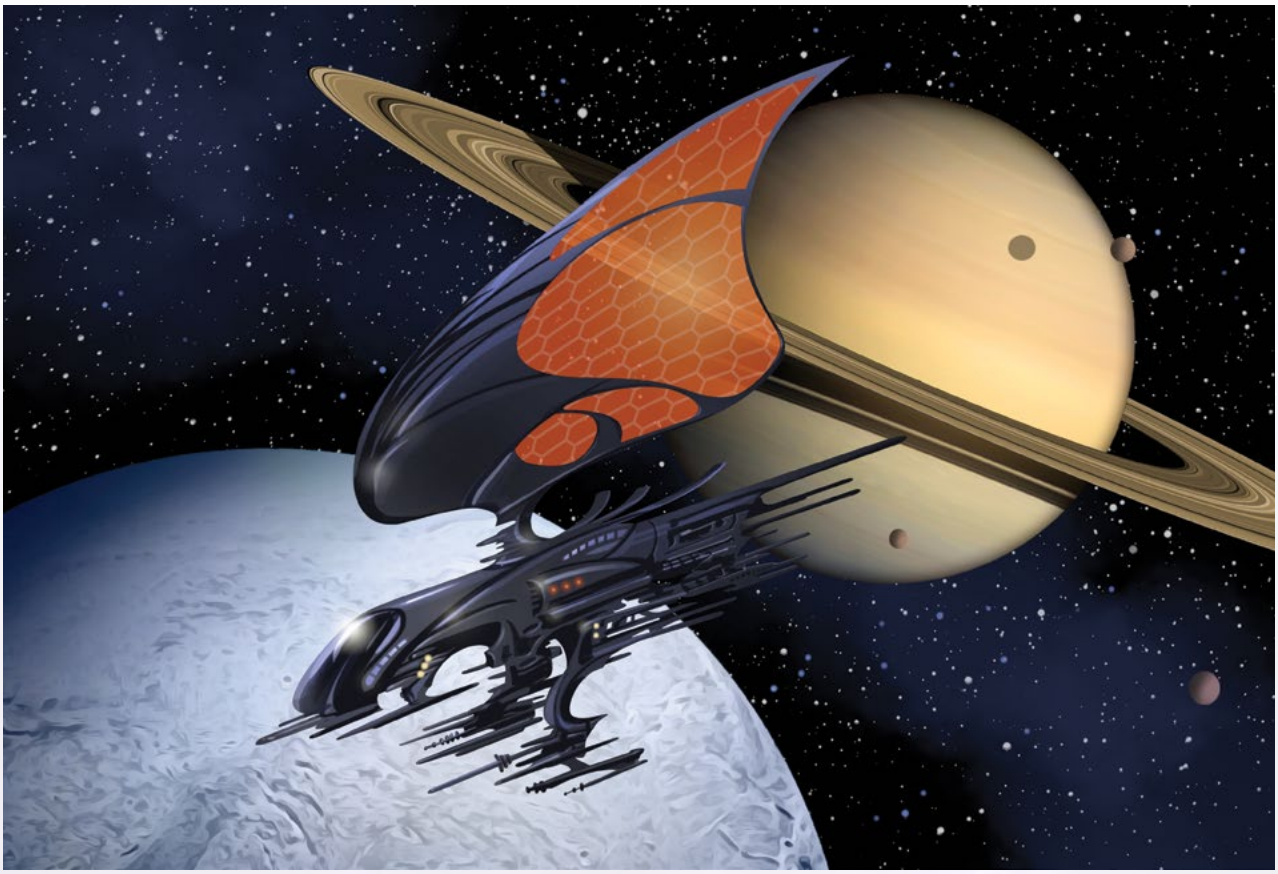

supposedly taken from the sublunar ancient tunnels before they were quarantined. She calls it her "mote of deceit." An XK starship was attempting to take it and other strange material out to one of the Far-flung Worlds when *Golgotha* caught them. Only the mote seemed useful.

IO STAR FORCE BASE (JUPITER SPACE)

A military space station orbits the moon of Io around Jupiter, allowing Star Force to project its power into the Opulence. The station houses a fleet of military spacecraft (including darts, combat spaceplanes, corvettes, and a single destroyer), bays for resupply and repair of said craft, a squadron of pilots and spacecraft crew, a squadron for mission support, maintenance, and even one for medical.

Colonel **Orly Tagawa** is black-haired, clean-cut, a man in charge, though the chain of military command is long and robust, which means all sorts of privates, corporals, sergeants, majors, and so on lie between any attempt to talk to Admiral Tagawa. Which is just the way he likes it. Unless of course, someone promises him some east dragonwell tea from Earth, of which supplies in space have become vanishingly rare and unlikely to ever be restocked. Tagawa is a fair man, but also very by-the-book. He might stretch the rules a bit if it's for the greater good, but never too far. He is not open to bribes, and responds poorly to blackmail attempts. More and more, he sees Star Force's primary mission in the Opulence rooting out and destroying all pirate activity.

SABRINA STATION (SATURN SPACE)

The moons of Jupiter are positively cosmopolitan compared to the empty grandeur of the Saturnian space, with its magnificent shining planetary rings sweeping out like cosmic angel wings. One point of warmth and a reminder of the human scale is Sabrina Station, converted from twelve defunct freighter spacecraft webbed together to form a

Orly Tagawa: *level 5, level 6 for interaction tasks*

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Iapetus has gravity, but it's low: only 0.02 G.

double hexagonal ring and spun up to simulate internal gravity. Though not nearly so perfect as an O'Neill colony (or so amazingly large), each section is retrofitted well enough to support life and commerce.

Sabrina Station is a massive, always-crammed market for rock-hoppers, salvagers, pirates (in disguise), con artists, artists and musicians, the occasional research scientist looking for supplies, the very rare peacekeeper duo operating as a pair for personal protection, and anyone and everyone else who operates in Saturnian space. Often, equipment and armaments can be had here for slightly cheaper than someone could get them other places in the Revel, possibly because their owner just needs to unload them for enough lumens to pay for their next year's fuel and air, or because they're stolen. Black-market goods can also be had at Sabrina Station, though peacekeepers keep an eye out for such things.

Chapter 7: Equipment & Armaments, page 65

SANCTUARY (SATURN SPACE)

The domed city of Sanctuary curves up from the surface of Iapetus, the moon of Saturn otherwise known for a massive equatorial ridge running three-quarters of the way around.

The city was founded by a group of different religious orders working together to fund and fly a spacecraft into the farthest reaches of space a hundred years ago (Saturnian space at the time). As such, temples and shrines to various deities (some familiar, some not so much) are everywhere under the dome. It's rare that some bell, choir, or other sacred sound isn't audible.

Sanctuary usually sees three kinds of visitors.

The first are those looking to make some kind of pilgrimage to the last remaining shrine or temple to their particular deity (given the supposed destruction of all such things on Earth). These religious "tourists" are an essential part of Sanctuary's economy.

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The second are people seeking asylum for some reason. The Order of Orders weighs a petitioner's story, and any other facts they can assemble, and decides whether to send the petitioner on their way, or welcome them as a new member of Sanctuary.

The third are those seeking the Church of Quiet.

Order of Orders: A new sect developed in Sanctuary, an order of green-sashed monks devoted not to just one deity or pantheon, but to all of them. This Order of Orders has become Sanctuary's caretakers. They arrange for sanitation, repairs, air, food, and everything else. They also mediate if disputes arise between the different religions it serves. Though the Order of Orders undertakes every task with deep reverence, they do not shy away from making hard choices if the situation calls for it. One of those hard decisions was to sign the Interplanetary Space Treaty, which granted Sanctuary some protection from pirates. However, it's the monks who provide security under the dome, though they first attempt mediation.

Church of the Quiet: The Church of the Quiet seems to be about a dozen or so meditative doctrines on the importance of peace, a quiet mind, and reflecting on tranquility to purify one's soul. The core of the belief, which is only revealed to those who advance through spiritual levels, is that the Event was essentially the Rapture (a belief that people will be taken up to Heaven at the end of the world). Everyone in space missed out on this Rapture, many through no fault of their own. Adherents of the church hope that by purifying their souls, they'll be eligible for the same ascension.

However, a splinter denomination—the Hands of Simon—believes a more proactive approach is necessary. They advocate breaking the quarantine on the deep moon tunnels and the blockade enforced over the Quiet Earth in hopes of triggering the Event again, this time widely enough to encompass the entire Revel. Or failing that, they hope to find a lingering spiritual trail that might lead them to their own individual Raptures.

Alicia James leads the Hands of Simon. A former major in Star Force, she still has many connections and knows of blockade gaps over Earth. She also instigated a couple of small riots on Luna One to act as distractions, allowing her to investigate routes past the quarantine and into the ancient tunnels under the Moon's surface. One of those brought her to a small cross-shaped (give or take) artifact—a dimensional modulator—that confirmed her convictions that divine influence was at play.

Monk, Order of Orders: *level 4, level 6 for tasks related to persuasion; two unarmed attacks each inflict 5 points of damage or render targets helpless until they can escape a hold*

Alicia James: *level 5, level 6 for tasks related to religion and persuasion; carries dimensional modulator artifact*

Chapter 11: Luna One, page 157

Chapter 17: Ancient Tunnels & Quiet Earth, page 202

Dimensional modulator, page 89

OPULENCE RUMORS AND OPPORTUNITIES

Dried Fountains: The Shrine of Healing Water has dried up. Several religions regularly use the holy water for their services. The Order of Orders wants to charter a fast ship to Luna One and back with the requisite specialized parts, and will pay handsomely for a quick delivery.

Tunnel Explorers: Secretly, Alicia James puts together another expedition intended to break Luna One quarantine and explore deeper into the sublunar tunnels. She sends out feelers to a few multi-disciplinary groups with access to transportation, who are capable, who might have connections to local officials, and who possess other useful specialties.

The Wraiths Stir: Over a century ago, gene-tailoring was all the rage in the Revel. One group of researchers decided that the ultimate form of humanity would be one able to survive in the vacuum of space itself, and dubbed their creation *Homo vacuus*. However, everyone started calling them wraiths because of their sometimes shroud-like, other times wispy elongated appearance. Eventually, the wraiths' bid to seize absolute power in the Revel was defeated. Every wraith was hunted down and eliminated. Humans breathed a sigh of relief. Except now, reports of renewed wraith activity out near Neptune have become too frequent to ignore.

Wraith, page 141

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Chapter 16

FAR-FLUNG WORLDS

Goodspeed, page 156
Redemption, page 154
Pleasure Barge, page 155
Revel FTL capability, page 153

The XK-Astra dark drive miracle made the dream of interstellar colonization real. The Revel achieved FTL capability. Permanent settlements on several different planets around other stars were dubbed the Far-flung Worlds. Hundreds of others were planned. An even greater period of prosperity beckoned.

The Event, page 145

Those plans dissolved thanks to the Event. With the loss of the ability to create new FTL starships, the handful of ships with that capability became the Revel's singular means of moving between star systems. This fundamentally changed the nature of contact with the extrasolar colonies. What had been envisioned as ever-growing colonies in constant contact with the Sol System via an expanding fleet of FTL ships was no longer possible.

Extra-solar colonies use the term "sol" as a standard measurement of time equal to twenty-four hours.

Newly founded, the Far-flung Worlds still depend on occasional supply runs to renew a micro-nutrient, a broken but hard-to-fabricate part, an ecosystem component in the form of a special strain of algae, or to shuttle skilled technicians and scientists between the worlds where they're needed, and so on. In the aftermath of the Event, several colonies were abandoned or died off (which no one really talks about). Only seven colonies remain, and each is dependent to some degree on the few operating starships that make regular runs out to the Far-flung Worlds—the *Goodspeed*, *Redemption*, and very occasionally, *Pleasure Barge*. Even so, almost all face some sort of rationing or worse hardship. Some are clamoring to come "home." Given that the Earth is no longer an option, it's unclear which dominion in Sol System would take them back, even if there were enough room on an active starship to allow such a mass evacuation (and there currently isn't).

Which means that the remaining Far-flung Worlds must dig in and make it work, or die as some of their sibling colonies have. A few have managed to develop local resources that are helpful to human biology, or that are valuable trade items that people in the Revel desire. These are the relatively prosperous worlds. A couple, however, stand on the edge of ruin.

Three of the seven extant extrasolar colonies are presented hereafter: Idriss, Yutu, and Bhaskara.

IDRISS

Star: Proxima Centauri, a red dwarf star, 4.2 light-years from Sol System.

Dark Drive Objective Transit Time: ~ Five sols.

Planet: Previously called Proxima Centauri b, Idriss is a rocky world slightly larger than the Earth.

The permanent settlements around other stars are known as the Far-flung Worlds. Hundreds were planned. But only seven exist, for want of working FTL starships.

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Gravity: 1.2 G for humans on the surface.

Day: An Idriss day lasts about 22 sols.

Atmosphere: Mostly nitrogen and some carbon dioxide, with only trace oxygen; not breathable by humans. Close enough to 1 Earth standard atmosphere that natural water oceans are widely distributed around the planet, and average temperatures are not unlike Earth.

Environment: On the surface, the sun (Proxima) appears large and red, though not blindingly so.

The Alpha Centauri binary system is often visible as brilliant stars close together, even when Proxima is still in the sky. When Proxima isn't the sky, the Alpha binary provides light a bit stronger the Earth moonlight.

Life: Humans and what they've brought seem to be the only life on Idriss.

Resources: A white crystal called proximite with properties unlike other Earth crystals, both natural and artificial. It somehow stores light in bright conditions, and shines it back in darkness. It tends to form at ocean edges. When the planet is viewed from space at night, the glittering lines were at first mistaken for evidence of intelligent life.

Settlements: The primary settlement is Idriss City (population 20,000). Many are employed in construction and farming, attempting to build out more domes where Earth life is grown, both for food, air, and in an attempt to keep the microbiome alive without regular contact with Sol System. Because all that's required to keep domes inhabitable is a slight over-pressure from the atmosphere outside the dome, the domes and associated living and public spaces are relatively expansive.

Person of Note: The head of the Proximite Collection Consortium, **Jan "Grins" Ward**, dresses all in red and always carries a small pet gene-tailored squirrel with her named Axiom. If it wasn't for the proximite on Idriss being considered valuable in Sol System, the planet would probably be visited by starships far less often, and Jan is quick to point this out to everyone. Her role gives her an importance she never imagined, but her other passion is to prove that some kind of alien life exists deep in the alien oceans, because she's "seen things."

Jan "Grins" Ward: *level 3, level 5 for perception tasks*

Axiom: *level 2, mechanical vocoder allows gene-tailored squirrel to speak like a trained parrot*

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YUTU

Star: Barnard's Star, a dim red dwarf star, six light-years from Sol System.

Dark Drive Objective Transit Time: ~ Thirteen sols.

Planet: Previously called Barnard's Star b, Yutu is a rocky world three times larger than Earth, and about as close to Barnard as Mercury is to Earth.

Gravity: 1.5 G for humans on the surface.

Day: A day on Yutu lasts about two sols.

Atmosphere: Mostly nitrogen and about 12% oxygen; breathable by humans with some adaptation for low oxygen concentration, except the extreme cold makes it dangerous to do so for long (so breathers are usually still required). Close enough to 1 Earth standard atmosphere that natural water oceans are widely distributed around the planet, but the dim red dwarf provides so little heat that the oceans are all frozen on the surface (though they are liquid beneath).

Environment: On the bitterly cold surface, the sun (Barnard's Star) appears huge and red, but dim like the full moon writ large, and reflecting off the obsidian-rich volcanic surfaces and flat expanse of frozen oceans covering Yutu. However, thanks to an active planetary core constantly generating heat and volcanic activity, heat suffuses up through the planet and keeps the oceans relatively warm underneath the ice.

Life: Yutu is one of the precious few worlds where alien life has been discovered, though only in the pressurized ice-covered oceans. It resembles, in broad strokes, the otherworldly deep-sea life once found in Earth's own oceans. But instead of trophic levels starting at the top of the ocean and filtering down, as on Earth, life on Yutu is richest near undersea magma vents, and gradually filters up, becoming less and less dense. So far, it seems the biology is too dissimilar from Earth life for any nutrition to be gained, though a few can be prepared in interesting and sometimes enjoyable ways.

At the vents, fishlike and plantlike creatures are everywhere. When a deep-sea remote drone sub descends, its feeds display thousands of disparate and strange tiny (or in some cases, much larger), darting shapes of never-before-seen life. The few that have been identified and named

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include the red-finned curzan, an eel-like creature that grows up to 4 m (12 feet) in length. Curzans are predators, and secrete an acid in their bite (and into the waters surrounding them) that is strong enough to destroy subs that get too close.

On Earth, deep sea creatures can't survive in water pressures nearer the surface, but through some as-yet-not-understand mechanism, curzans and other much less dangerous life on Yutu can exist at the negligible pressures that exist in fish tanks under 1 Earth atmosphere or even in 0 G. Which is why an ever-changing variety of strange "Yutu fish" can be purchased in the markets of Sol, though they remain rare curiosities.

Resources: Many of the mineral resources available on Earth can also be found on Yutu. Mining for relatively rare but well-known terrestrial resources is important for the extra-solar colony, and a more reliable lure to bring in starships from Sol System than even the weird alien deep sea life, though that's changing with the export of special ice quarried from ocean surfaces.

Chemical and environmental factors unique to Yutu mean that a form of ice called "enthralling ice" or lately just "enthrall" forms in long, golden veins within the more normal ice making up the frozen oceans. Enthrall concentrates as-yet-unknown substances that, when melted and released back into the air as a vapor (or melted in a drink), allow the imbiber to enter a deep trance while increasing one's awareness of the surrounding world. It's become clear that users of enthrall can quickly accomplish tasks requiring deep and extended concentration. The substance is popular with researchers, students, and now that word of it has gotten out in the Sol System, to pilots of dark drive starships and in a much more experimental sense, to the few covert groups attempting to land on the Quiet Earth.

Settlements: A series of warehouse-sized structures, igloo-like ice domes, heavy equipment, and tracks leading to nearby mine sites comprises the main settlement of Dalian (population 10,200) on the snowy shore of an ice ocean. Lots of Dalians operate machinery and nearby mines on long shifts, returning to the main settlement every few sols for rest and relaxation.

Several ice schooners are moored in the frozen bay. Shiplike bodies on tri-marine ice blades and sails allow the craft to move across the vast surfaces, prospecting for enthrall.

People wear heavy, parka-like insulated clothes and breathers when trekking between structures.

Curzan: *level 3, bite inflicts 4 points acid damage (ignores Armor); acidic ink attack inflicts 4 points of acid damage (ignores Armor) in an immediate radius*

Enthrall (drug): *Decreases the difficulty of tasks related to maintaining deep concentration, focus, ignoring distractions, and perception by three steps for about five hours.*

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Zhang is essentially a yacht (page 100) outfitted as an ice schooner and customized for excavating (and refrigerating) ice.

Sun Lee: *level 4, level 7 for Intellect-based tasks during brief periods of hyper alertness, can sense ice storms before instruments can, and the direction of the nearest vein of enthralling ice*

Person of Note: The captain of the large ice schooner *Zhang* is **Sun Lee**, a grizzled man who is apparently always drunk to some degree. The truth is he both constantly drinks and uses enthrall, achieving a knife-edge balance between functional insobriety and occasional bouts of absolute derangement. Whatever his shortcomings, he and his crew reliably quarry large hauls of enthrall each trip out onto the ice, more than any of the other schooners that have lately taken to the job. Sun Lee says he finds more because he takes so much of it himself that he's "going native" and can literally hear unquarried veins calling to him.

BHASKARA

Star: Kepler-422 (nicknamed "Surya"), an orange K-type star (somewhat smaller and cooler than Sol, and gives off a noticeably orange light), 1,206 light-years from Sol System.

Dark Drive Objective Transit Time: ~ Eleven sols.

Planet: Previously designated KOI-4742.01, Bhaskara is a rocky world about twice the size of Earth.

Gravity: 1.3 G for humans on the surface.

Day: A Bhaskaran day lasts about thirty-four sols.

Atmosphere: Mars-like (only a tenth the pressure of 1 atmosphere) thanks to strong solar winds that still stream from Surya in sudden bouts of extreme stellar activity.

Environment: On the surface, the sun (Surya) appears large and orange, too bright to look at. Though technically in the habitable zone, the dearth of atmosphere and coolness of the star make living on Bhaskara as difficult as almost any other artificial environment.

Life: Humans and what they've brought seem to be the only life on Bhaskara.

Resources: The incredible bounty of platinum-containing ores discovered by the first FTL ships charting previously-observed planets in the theoretical habitable zones ensured a settlement, despite how difficult founding a colony would be on such an otherwise desolate and dangerous planet.

Settlements: The primary settlement was "Mining Camp Alpha," placed by a now-vanished conglomerate (lost in the Event). It had a population of over 10,000 souls, but seven years ago, a Suryan sun

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storm of extreme violence blasted it into oblivion. Only a skeleton crew of miners remain, living hand-to-mouth in the deep mine shafts where solar radiation can't penetrate. For some reason, the sun storms interfere with dark drive transit times, so starships no longer visit, even though it's known that the mining colony on Bhaskara is in trouble.

For their part, the surviving miners have managed to put together a cramped, uncomfortable, and dark existence beneath the world, using salvaged bioreactors and algae vats, plus other scavenged technology, to hold on, and in some cases, even expand. Hope for rescue has pretty much died.

Person of Note: The surface scavenger who consistently risks sun storms is a middle-aged woman with a white streak in her otherwise black hair called **Vritra**. She sports a draconic serpent programmable tattoo and takes risks most people would shudder to consider. Despite her surface salvage runs, she is a proponent of further extending the underground mines and eventually abandoning the surface entirely.

FAR-FLUNG WORLDS RUMORS AND OPPORTUNITIES

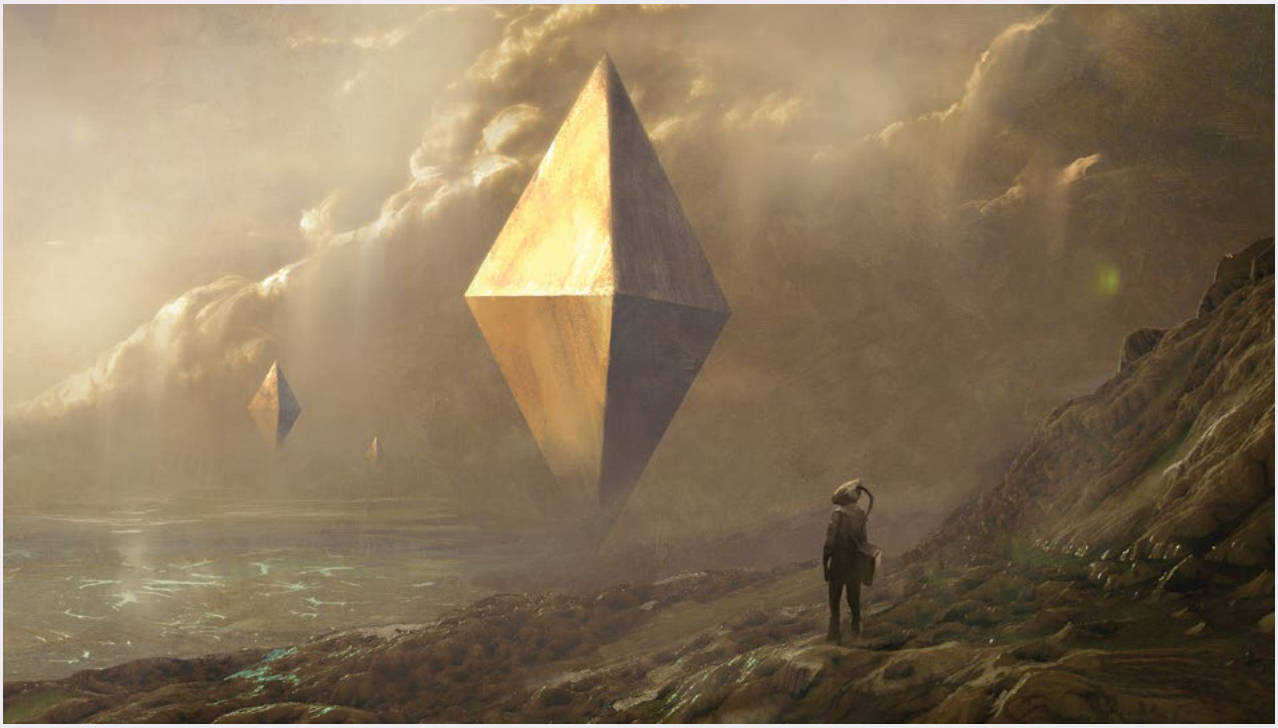
Lifeless After All? (Idriss): People routinely claim to see large shapes moving across the land, especially when collecting proximite. Conspiracy theorists whisper on the communication web that it's evidence of *intelligent* alien life attempting to remain hidden and unobserved by humans.

Fish Courier (Yutu): Someone in the Revel (or on Yutu) wants to deliver a brand-new, weird fishlike thing to a buyer in a Big Five spiral, and is willing to pay 50,000 lumens to whoever can do so.

Rescue Is Still an Option (Bhaskara): A well-to-do executive Big Five family with access to a berth on the FTL starship *Goodspeed* is putting together a team to mount a rescue operation of their family members left behind on the abandoned extra-solar world of Bhaskara. Doing so probably means gaining temporary control of navigation, one way or another (but preferably in a manner that doesn't put even more lives at risk).

Vritra: *level 5, level 7 for Might tasks, platinum-tipped spear inflicts 7 points of damage*

Programmable tattoo, page 82



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Chapter 17

ANCIENT TUNNELS & QUIET EARTH

WARNING: *If you're a player, don't read this chapter, unless you want to be spoiled regarding one of the main underlying mysteries of the Revel. Some people like that. But if you hate spoilers, stop reading now. Seriously. You have been warned.*

EVENT AFTERMATH

The Event, page 145

The Event was an interplanetary disaster. Billions of lives were lost, apparently in moments. Everyone else in the Revel—everyone not on Earth—spent the immediate months afterward trying to weather the loss of the largest concentration of resources and trade in Sol System. Earth spacecraft filled with people on business trips or holiday attempted to return home in the immediate aftermath of the Event. Half a dozen hardened military exploratory vessels entered Earth's atmosphere to scan the surface. All were lost.

Anaximander, page 166

Chapter 18: Getting the PCs Involved, page 208

Once it was clear that no easy fix was forthcoming, the Revel was forced to deal with more immediate and practical concerns, like establishing new sources of biomass and microbiome-critical nutrients, finding new sources of rare-earth metals, salvaging a communication web anchored to Earth, and countless other critical needs, all of which prevented a focused investigation into what might have caused the Event in the first place. People were scrambling to survive. All the rhetoric of the self-sufficiency of extra-terrestrial settlements was tested. For the most part, those claims proved true, but it was a trial by fire. Some burned up.

Oddities of XK-Astra Dark Drive Operation, page 153

Still, some well-funded groups tried to do something, hoping they could "reverse" whatever had happened. Some suspected a connection between the unlikely discovery of ancient sublunar tunnels on the Moon and Earth's sudden darkening. That suspicion was so plausible that Anaximander quarantined access to them, publicly indicating that if the tunnels' mere discovery could trigger the loss of the entire Earth, their exploration might lead to a wider (perhaps total) extinction event. (Since then, the AI has loosened the stricture to a limited degree, sending in agents of his own to begin exploring and cataloguing. Non-sanctioned groups have also made it in.)

To know what truly happened, one needs to know a little history about the development of the dark drive. In the Revel, no one knows the truth, though a few may suspect.

SECRET HISTORY OF THE EVENT

The XK-Astra limited partnership that produced the FTL-enabling dark drive seemed like a miracle. But the oddities of the drive, and the underlying principles allowing it to function, were ingredients that ultimately helped create the Event.

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The XK-Astra dark drive folds space-time into a macro-scale pocket in which the phenomena of quantum telepheresis can be harnessed to teleport the entire state of all normal matter in the pocket (usually a spacecraft and its crew) between distant omni-entangled dark matter. The tricky part is that, as with observations of particles at the quantum level, conscious observation within a folded dark drive pocket collapses "all possible outcomes" to one, which can cause issues.

A human consciousness, prone to daydreaming and imagining unlikely scenarios, creates myriad potential "all possible outcomes" inside a folded dark pocket. Often, those outcomes are something other than a starship arriving at a designated location, leading to many testing failures.

XK-Astra scientists initially thought that dark drive space damaged conscious (or even dreaming) human minds. The damage caused people to run amuck in a transiting FTL starship, causing a premature and disastrous end to the journey. So they instituted strict sleep set protocols for everyone crewing a dark drive craft, including one for the pilot that induced a state of extreme focus set on the destination, to limit such damage.

All was fine, and several starships were manufactured, and many hundreds more commissioned. Fine, until a certain Dr. Ling Hebert, one of the luminaries who'd originally developed the drive, realized something startling: the scientists had it backwards. Conscious human minds were damaging the ships, not the other way around. Conscious interaction in the dark drive pocket of unbounded quantum possibility caused most test craft to be lost forever in dark drive space or tear themselves apart as half-a-dozen or more different observers subconsciously tried to collapse reality every which way.

This revelation led Dr. Hebert to a terrifying conclusion: In a quantum observationally defined universe, dreams can be weaponized. From her point of view, it was now a race to determine who would do so first.

Dr. Hebert led her team on a project to create folded dark drive space at a distance, in an attempt to arbitrarily fashion selective and destructive resonances around the world, and beyond. It was in Hebert's lab on Earth, within the XK-Astra joint partnership and dark drive manufacturing facility, that the scientist attempted her first real-world large-scale test.

Hebert's last message to her co-inventor Maxwell Quinn—setting up a testing lab in Luna One at the time—was, "Exciting times. We're extending our trial by an order of magnitude. If all goes to plan, after we switch on the dark pocket generator, I'll change the state of a test dummy in our sister lab on the Moon. Wish us luck!"

The next thing anyone knew, a collapse in the Luna One habitation tunnels revealed uncounted miles of ancient sublunar tunnels, and the Earth went dark.

Search Term: Schrodinger's cat

Maxwell Quinn, page 168

THE ANCIENT SUBLUNAR TUNNELS

In most cases, PCs playing in the Revel won't begin their experience by attempting to explore these tunnels, but rather after having experienced other parts of the scenario that led them here.

Five access gates, Alpha through Epsilon, do a good job of enacting the quarantine on the ancient tunnels under the moon. Each one is crewed by a contingent of twelve or more peacekeepers (and occasionally, a wardroid for backup). Only a pass authorized by the Interplanetary Space Treaty Council (real or forged) can get someone through. Sneaking and hacking might also work, or even a full-frontal assault. But by hook or by crook, sometimes others get through.

Lunar Tunnel Access Gate: *level 8*

Peacekeepers: *165*

Wardroid, page 365

"In a quantum observationally defined universe, dreams can be weaponized."
~Dr. Ling Hebert

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Ancient Ultras, page 61

IMPLICATIONS ARE NOT CONCLUSIONS

The implication is that Hebert's dark pocket generator test triggered the event. Maybe that's correct. But maybe there's a different, deeper answer. You can decide what's true for your campaign, or leave it a quantum uncertainty for now.

First, what if the cause of the Event is simply beyond human comprehension? In this case, people may wonder and try to determine underlying causes, but never really reach any ground truth. All the characters can do is address practical concerns, live with the hand they've been dealt, and explore (or perhaps more wisely, avoid) the ancient tunnels and far more dangerous Quiet Earth.

Alternatively, what if instead of being the root cause, the dark pocket large-scale test triggered some ancient ultra trap? In this scenario, the ancient ultras burrowed tunnels on the Moon as a base and observation satellite to monitor the Earth for intelligent life. When Earthlings started mucking around with dangerous dark pocket weapons, the trap was triggered, causing the entire planet to be engulfed in a lethal psychic singularity.

Or, what if the unlikely series of events leading up to the Quiet Earth actually reveals a gaping "glitch in the Matrix," so to speak. Many prominent scientists wonder if the universe people experience isn't some vast simulation. Maybe the psychic singularity actually represents a chance to break out of this reality and into the real, actual universe?

Should one make it past one of the access gates, the gatekeepers do not follow. Though they may not let explorers back out.

CONDITIONS IN THE ANCIENT TUNNELS

The tunnels stretch away and downward as a series of smooth regolith-gray hallways, descending ramps, and rooms. Unlit, exposed to vacuum, and mostly featureless, the place induces a strange vertigo, as if from some spatial violation that instruments are unable detect. Though everyone calls them "ancient" (because no one could imagine them not having been there since before humans started looking at the moon), the tunnels feel new. That only adds to the "tunnel vertigo."

EXPLORING THE TUNNELS

Assuming PCs have space suits and food, they can set out to explore the tunnels. Maybe they're looking for the XK-Astra moon lab Hebert hinted at, or just investigating generally in hopes of learning something, or maybe they want to salvage some strange artifacts that people sometimes recover.

To start, PCs find themselves in a hallway about 6 m (20 feet) wide descending at a gentle grade into darkness. An unsettling feeling pulls at the characters, almost like vertigo as they gaze down the corridor.

From here, you can decide how far the corridor goes, when it branches, connects to side corridors and rooms, opens onto great halls or small closet-like spaces, climbs into attics, narrows into passages so small that it's almost impossible to move through, and so on. Most rooms are empty, but a fraction contain uncanny contents.

When you decide there's a chance that the PCs discover something interesting and/or dangerous, choose one option presented on the Tunnels Table, or roll randomly.

TUNNELS TABLE

d10	Contents
01–06	Empty
07	Tunnel vertigo
08	Lost
09	Uncanny contents
10	Uncanny encounters

Tunnel Vertigo: At first, being in the tunnels is unsettling. Over time, the psychological pressure grows. When tunnel vertigo threatens to overcome one or more PCs, present it as a GM intrusion, describing an intense spike of vertigo and uncanny cold. On a failed difficulty 4 Intellect defense roll, a character takes 3 points of Intellect

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damage (ignores Armor). If this keeps up, use the madness optional rule.

Lost: Most of the rooms, stairs, and hallways found in the ancient tunnels are perfectly safe in and of themselves. The biggest threat to survival is getting lost. No matter how many precautions an explorer takes—such as blazing marks in passages or using a string to track a path—there is a dreamy changeability to the place that defies direction.

When a chance of getting lost comes up, present it as a group GM intrusion of tunnel vertigo, except that in addition to taking Intellect damage, when the episode passes, the characters find themselves looking at a completely different set of corridors and rooms than what they expected. PCs must succeed at a difficulty 6 Intellect roll to recognize how they've gotten turned around. If they fail (even if one PC rolls and fails, but others succeed), they remain lost. Locating a way out requires further wandering and another wave of uncanny tunnel vertigo for a chance to stumble back into a familiar tunnel.

Uncanny Contents: Some tunnel areas contain uncanny things like disturbing scratches on the wall, dead and vacuum-mummified humans who got lost down in the tunnels and died, dead animals of various sorts (some of which seem unlikely to ever have been on the Moon), unexplained lights, and usually debris of some kind of grayish material that defies analysis, appearing like the blobs and beads of metal left behind by an unprofessional welding job completed by a giant. Sometimes, they possess weird properties.

Any time you decide the PCs find uncanny contents, decide whether they find an artifact among the litter. (On any given trip into the tunnels, they probably shouldn't find more than a couple.) You can choose one of the artifacts described in chapter 7 and chapter 8, a fantastic piece of equipment or armament and change its look, or an artifact from another Cypher System resource.

Uncanny Encounters: Initially, an uncanny encounter might consist of the PCs' light sources unaccountably failing for a few rounds, just as a subsonic rumble passes through the floor and walls, which when transmitted through the PCs' booted feet sounds like some sort of horrific growl (treat this as an episode of tunnel vertigo).

Eventually, PCs may find other lost explorers that haven't yet succumbed (though there do seem to be a lot of them, far more than most would have expected to slip past the quarantine). Usually, they are violently deranged from having experienced too much tunnel vertigo. They gibber and scream and try to cut open the space suits of PCs they find, exposing characters to vacuum.

That's upsetting enough. But some of them are also strangely disfigured, even monstrous, with stretched arms, claw-like space suit gloves, and only darkness within their helmets. (Did they stumble into a stash of illegal gene-drive munitions? Doesn't seem likely, but . . .)

And finally, sometimes nightmares from the Quiet Earth (as described hereafter) make their way into the tunnels, which can trigger any number of unlikely results.

Optional Rule: Madness, page 284

Lost explorer: *level 3, level 5 for all attacks made to damage a target's space suit*

Monstrous explorer: *level 5, exposure to vacuum doesn't seem to affect the creature; two attacks with clawed glove (or more horrific appendage emerging from smashed faceplate) inflict 6 points of damage each*

Space suit GM Intrusions Table, page 37

GM intrusion: *The attack that should have killed the monstrous explorer reduces its health to 1 point instead.*

Vacuum GM Intrusions, page 36

Chapter 7: Equipment & Armaments, page 65

Chapter 8: Vehicles & Spacecraft, page 92

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QUIET EARTH

Swaddled in black, storm-tossed clouds, no signals are detectable from the surface, nor does sensing equipment provide any meaningful data. As far as anyone knows, every exploratory craft sent beneath the clouds has never returned. By directive of the Interplanetary Space Treaty, the Earth is under blockade.

BLOCKADE

Graser turret satellite: *As a stationary level 3 spacecraft with 1 superior weapon system*

Claw, page 109

Getting past the blockade: *level 7*

A Star Force blockade composed of a satellite sensor net, several graser turret satellites, and a fleet of fast claws prevents casual landings on the black cloud-covered Quiet Earth. Getting past the blockade without being noticed requires not only hardware somehow modified to provide stealth qualities, but also a few successful piloting tasks. Alternatively, ships attempting to bluff their way through need some kind of forged credentials and a couple of successful interaction tasks.

WHAT'S REALLY GOING ON?

Tunnel vertigo, page 204
Melaku Ejeta, page 173
Enthrall, page 199

A psychic singularity engulfed the Earth. The world is wracked by superposition waves, each one failing to collapse into reality, instead only iterating new potentials upon on the last. It's a unique phenomenon, and a deadly one, bounded within a planet-sized fold of dark drive space. Everything that was once on Earth is gone, but everything still exists as a probability, though one warped beyond comprehension. Essentially, it's as if the collective unconsciousness of humanity were given free reign, and it went stark raving mad.

Should a craft find itself beneath the clouds on Quiet Earth, everyone not protected by a focus-set, like those used by starship pilots, feels as if they have been pulled into a nightmare, with everything around them—their spacecraft, their clothes, even their friends—warping and mutating in horrific ways, not unlike a bad acid trip. Each round, the newcomer is affected with tunnel vertigo without respite, until they go mad and in so doing, dissolve into the tumult of reaching, stretching, screaming dark fingers . . .

Someone wearing a focus-set eases all tasks related to resisting by two steps.

Matter newly brought into the Quiet Earth is caught up in the same superposition storm, lasting only as long as the last human who claims it as theirs remains. Which means, by and large, there probably isn't much to find down on the surface. If there even is a surface any more.

Most spacecraft never make it back out of churn of the mindstorm's bruised core, rumbling with psychic rage. The crew on the few that have done so all suffered PTSD.

RUMORS AND OPPORTUNITIES

Surviving the Quiet (Quiet Earth): Melaku Ejeta believes that a strong enough cognizance, perhaps someone whose mind is lit by taking a drug like enthrall or augmented with a sim AI, could carve out a safe zone many dozens of yards or even acres across.

Safe Zone (Quiet Earth): A couple of people on a craft that managed to escape the Quiet Earth's grasp report having seen a silver city standing serene, untouched by the surrounding chaos, a place of apparent safety.

Hidden Lab (Ancient Tunnels): The Luna One AI has learned of the possibility of a secret XK-Astra lab having been established on the Moon, despite not having gotten clearance to do so. Anaximander has a map that purports to lead to the lab, which is apparently and unexpectedly sited within the ancient tunnels. Finding it might provide many answers, not least of which is information on how to manufacture more FTL starships. Or maybe keycodes that would work on the main lab's mainframe down on Earth, if that could ever be found amid the tumult.

Odd Gateways (Earth and/or Tunnels): Weird arched openings filled with haze, or hanging smoke rings on Earth filled with the same, seem to lead into completely unexpected locations. Are they wormhole gates? Are they safe? And where exactly do they lead?

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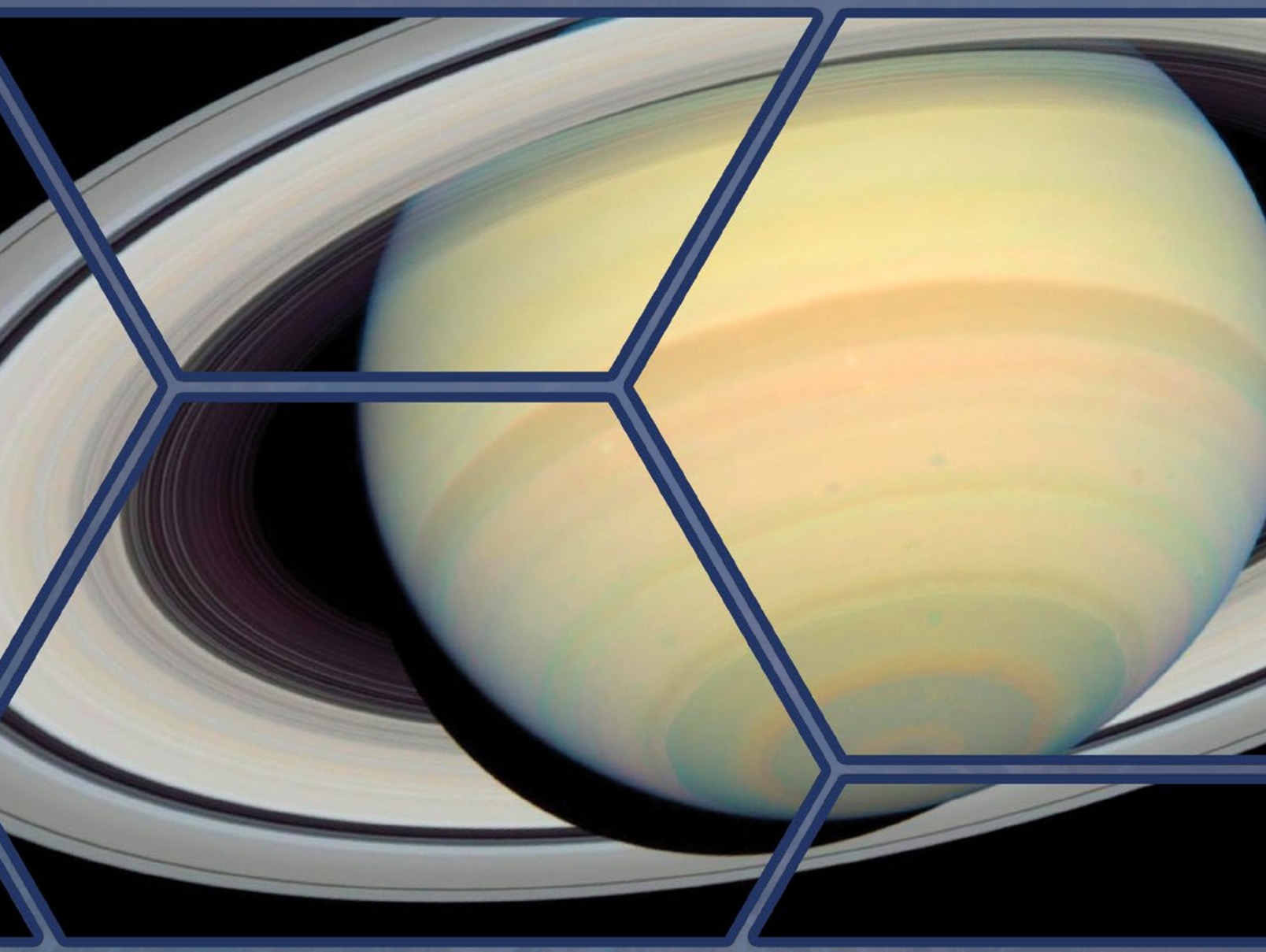
Part 3

ROLEPLAYING IN THE REVEL



Chapter 18: GETTING THE PCs INVOLVED 208
Chapter 19: ADVENTURE: SALVAGE OVER SATURN 211
Chapter 20: CYPHER SHORT: PRISON BREAK 220
Chapter 21: CYPHER SHORT: ALIEN PLANET 222

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Chapter 18

GETTING THE PCs INVOLVED

In a setting as far-reaching as the Revel, opportunities for engaging PCs are plentiful. You probably have several ideas already. Even so, it's important to remember that many players do best if they begin with clearly defined goals. Especially when beginning play in a new setting, player clarity makes the experience better for everyone.

One way to do so is if someone sends the characters on a mission. That someone could be a contracting conglomerate, a rich patron, a research university, or perhaps an intelligence agency run by one of the Revel dominions, many of which are likely to have some sort of spying apparatus, even if very informal like the one on Luna One. If you wish to use Luna One as your initial mission provider, the following section provides additional resources.

Chapter 11: Luna One, page 157

LUNA ONE INTELLIGENCE

The Event, page 145
Anaximander, page 166

In the months following the Event, Anaximander decided that he needed to know more. He required eyes on the rest of the Revel to watch for potential threats. He wanted assets that could take action to safeguard Luna One and all of the Revel quickly and without any interference, well-meaning or not, by Star Force.

Rather than creating a formal "Luna Intelligence Agency," the AI individually—and secretly—contracted with a variety of different individuals and groups across the solar system, paying them various sums for different kinds of surveillance jobs. It's unclear how many agents Anaximander has employed in this capacity, but it's probably several dozen at minimum. Agents may choose to divulge their agent status to other agents by displaying a digital badge that usually only other agents can see on their smartphone displays, AR glasses, or other smart device.

Dragonfly class spacecraft, page 109

PCs AS LUNA ONE INTELLIGENCE AGENTS

As the game begins, the PCs might be just such a group of agents. If so, Anaximander pays each character a retainer of 250 lumens each month while they remain "active." In addition, he pays each PC about 3,000 lumens per specific mission they complete. Usually, those missions are to travel to particular locations within the Revel at fairly short notice to deliver objects or messages, to watch something eventual unfold, or to spy on a conglomerate or other dominion that seems to be up to something underhanded. Otherwise, the group is encouraged to go about their normal activities in the Revel, whatever that might be, awaiting the next assignment. (Those normal activities are what generate PC income, as described hereafter.)

Above all, Anaximander asks that agents keep an eye out for anything out of the ordinary or uncanny. Phenomena, objects, people, or whatever; the AI wants to know about it. He pays another 3,000 lumens to each PC in a group that provides a report on something that meets these somewhat vague criteria.

In addition, Anaximander provides PC agents a used dragonfly if they don't have their own spacecraft. It's seen some use, and sometimes its systems glitch at inopportune times.

Specific missions could be Anaximander asking the PCs to look into almost any of the items filling out the Rumors and Opportunities sections at the end of

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each chapter in Part 2. Additionally, the adventure *Salvage Over Saturn* assumes the PCs are agents (or at least stringers) of Anaximander.

LIVING IN THE REVEL

Some dominions provide minimum living allowances for all citizens, such as Luna One. Others are less generous to those unable to work, especially in most of the conglomerate-owned spirals and in the Diaspora of Mars. But even when minimum requirements of food, water, atmo, and living spaces are met, most people want more. Those able to secure jobs are paid in lumens. Some earn just enough to scrape by, many reasonably, and a few exorbitantly.

PC Income: You have a few options for handling PC income. In many cases, it's better to just assume that the things the PCs do—either as part of missions they undertake, the salvage they bring in, their "off-camera" investments and/or jobs, and so on—earn them enough lumens to enjoy a reasonably comfortable lifestyle. In this case, money only becomes an issue because you decide to introduce a complication, or because PCs want to purchase a very expensive or exorbitant item.

Alternatively, you can ask PCs to track their financial resources. In this case, each PC earns about 1,000 lumens a month. Basic upkeep in most situations (food, water, atmo, rent, loans, etc.) comes to about 750 lumens each month (meaning PCs clear about 250 lumens a month, assuming they don't do anything out of the ordinary). If the PCs want to splash out and buy something special, that upkeep cost goes up accordingly. When the game starts, most PCs have a savings of about 2,000 lumens. This amount is above and beyond the starting equipment gained by beginning characters, as indicated under each type.

PC Home Base: Even if PCs have a spacecraft, they may also have a home base where they routinely put in for maintenance and repairs. Luna One is a great option, but you could decide differently. Whatever you choose, try to use a local NPC (or create one) to greet or run into the PCs quickly after they arrive to help establish that location's character and verisimilitude. Whether that's a grumpy cargo inspector, friends who like to party, or sibling that is always scrounging for lumens, that kind of interaction is great for world-building.

Down Time for In-world Issues: Sometimes PCs may want to spend a week carousing in a space bar, researching something in a digital library, relaxing, or visiting family. If you're running a campaign, keep that in mind, and even instigate such things by introducing a message, complication, or other opportunity that gives PCs a chance to pause before moving on to their next mission. Occasional pauses like this give the PCs a chance to enjoy their situation, see the sights (so to speak), and get recharged for the next dangerous adventure.

PCs AND A SPACECRAFT

In some hard science fiction settings, PCs getting their hands on a spacecraft that presumably costs some small fraction of a nation's net worth doesn't seem especially plausible, at least immediately. During the game, of course, that could change. PCs might capture a craft, find one mysteriously abandoned, or otherwise gain access to a ship, perhaps as part of a larger mission.

However, it's fine just to give the PCs a spacecraft, if you want to run a spacecraft-centric game or larger campaign. Maybe they inherited it, maybe they're deep in hock for it, or maybe a rich patron/agency AI like Anaximander provided it.

PCs with a spacecraft, especially in the Revel, can almost always find a contract serving as a freighter, working as independent salvagers, working as body recomposters, as toxic substance recyclers/disposers, as physical couriers for off-line documents, and so on.

Chapter 19: Full Adventure: Salvage Over Saturn, page 211

Chapter 12: Big Five Spirals, page 169

Chapter 14: Diaspora of Mars, page 182

Sci-Fi Player Intrusions Suggestions:

Right Tool: *You produce a useful piece of equipment already at hand, like a patch kit or defibrillator.*

Lucky Break: *An enemy spacecraft suffers a sensor mishap, and temporarily loses track of your ship.*

Just Know: *Your knowledge of advanced science suggests a technical solution, or at least a route for getting there, to a problem.*

Player intrusion, page 21

Chapter 5: Type, page 20

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ADVENTURES IN THE REVEL

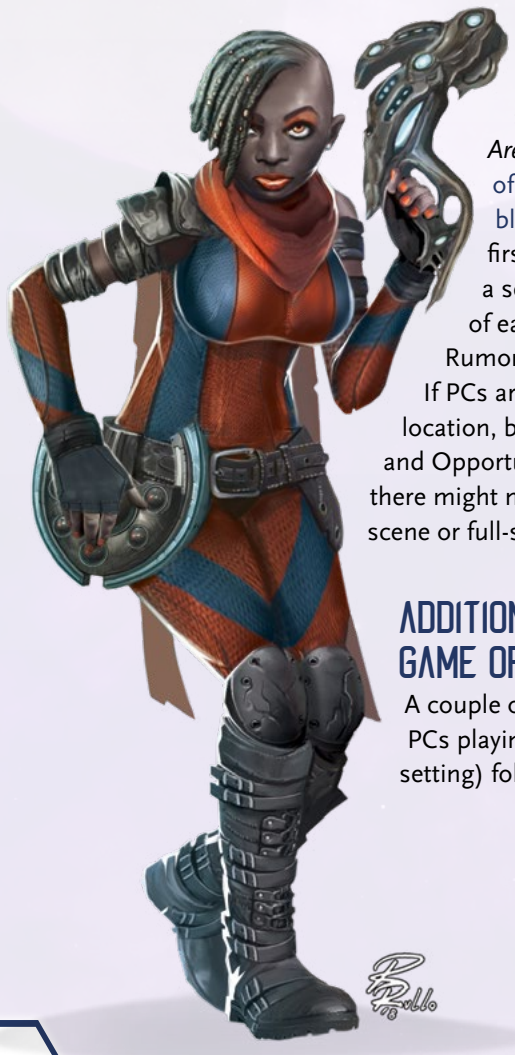
Several adventures are included in *The Stars Are Fire*. Pick one and go! However, only one adventure (*Salvage Over Saturn*) is explicitly linked to the Revel and assumes that the players have created full Cypher System characters.

The other adventures are Cypher Short adventures, for when you want to play games on very short notice, try something different, give someone else a shot at GMing, and so on. They include very simple characters that are immediately involved in the situation. No long expository lead-ins, no "meet in a tavern" scenes.

The adventures in this book are:

- Chapter 19: Adventure: Salvage over Saturn, page 211
- Chapter 20: Cypher Short: Prison Break, page 220
- Chapter 21: Cypher Short: Alien Planet, page 222

Sci-Fi Adventure Seeds, page 4



Additional adventure ideas to help you get going can be found in several places in *The Stars Are Fire*. The first is the list of one-sentence adventure blurbs provided in the very first chapter! The other is in a section located at the end of each setting chapter called Rumors and Opportunities. If PCs are visiting a particular location, be sure to skim the Rumors and Opportunities to see if something there might make an interesting side scene or full-scale adventure.

ADDITIONAL CHARACTER GAME OPTIONS

A couple of additional options for PCs playing in the Revel (or any sci-fi setting) follow.

DESCRIPTOR: CALCULATING

You view every event experience through the lens of logic, keeping emotional responses out of the equation. Surprises rarely elicit reactions from you, because you're already calculating—in your cold, efficient way—how to respond optimally. Likewise, you're not one for overt shows of happiness, sorrow, anger, or fear. Doing so, by your lights, degrades your ability to wield logic against a universe replete with chaos.

You have the following characteristics:

Penetrating Intellect: +4 to your Intellect Pool.

Skill: You are trained in all knowledge tasks and Intellect defense rolls.

Inability: You miss a lot of things thanks to your singular focus. Tasks related to empathy, reading underlying emotional context, and detecting lies are hindered.

Initial Link to the Starting Adventure: From the following list of options, choose how you became involved in the first adventure.

1. Another PC recruited you right after you graduated from the academy, before realizing how "emotionless" you were.

2. You have reason to believe that being with the other PCs will help you regain a bit of emotional closeness that you've lost touch with in your pursuit of logic.

3. Another PC gave you a treasured tome on some esoteric topic, and to thank them, you volunteered to help.

4. You calculated that it was in your best interest, and in that of your projects, to join the other PCs.

SPECIAL ABILITY: CAPTAIN'S CALM

At your option, one or more characters have the option to choose the Captain's Calm (a low-tier) ability in place of some other special ability from their type or focus.

Captain's Calm (1 Intellect point): You can allow another PC that you are in communication with on the same spacecraft that you're on to ignore a triggered GM intrusion, but no more than once per round. Enabler.

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CHAPTER 19

FULL ADVENTURE: SALVAGE OVER SATURN

Salvage Over Saturn is an extended adventure you can use to give your PCs a science fiction experience. The adventure is easily adaptable to nearly any science fiction setting that features human space travel. However, it's especially appropriate for the setting featured in *The Stars Are Fire*: The Revel.

ADVENTURE SUMMARY

A salvage opportunity of a derelict spacecraft in a decaying orbit over Saturn (Act 1) leads the PCs to a covert research base on Saturn's moon, Enceladus, the site of an illegal conglomerate genetic engineering program (Act 2). One way or another, the research facility will be destroyed. The question is, will the PCs learn enough to finger those responsible?

BACKGROUND

Most of the general background for this adventure is covered in Part 2 of this book. In particular, read over the sections that describe Luna One and Anaximander, the role of the Big Five, and how gene-tailoring is illegal in the Revel thanks to the Interplanetary Space Treaty.

In addition to that background information, some evidence gathered during the course of the adventure suggests that Symbol Systems Limited—a not-quite-Big-Five conglomerate operating in the Revel—has been conducting secret and illegal research.

SYMBOL SYSTEMS PLC

The Big Five captures the lion's share of private transactions in the Revel, but by no means all. A handful of other multi-planetary companies survived the Event, including Symbol Systems PLC, which has licensing agreements and patents that generate income across a variety of industries, including mining colonies, manufacturing, and thousands of service-based industries. They were once known for their consolidation of several genetic engineering companies, but after the fiasco involving the wraiths, they publicly divested.

Part 2: The Revel, page 143

Wraith, page 141

Evidence discovered during the course of this adventure might lead the PCs to believe that Symbol Systems maintained several illicit research labs attempting to create a brand-new human species capable of living underwater in the ice-crusted oceans found on various moons in the Sol System and around other stars. Apparently, they decided to take the route of looking for absolution after their fait accompli was revealed, rather than first seeking permission. Not being fools, they also limited their exposure by attempting to keep direct company involvement and direction to an absolute minimum.

Chapter 11: Luna One, page 157

Anaximander, page 166

Chapter 12: Big Five Spirals, page 169

Interplanetary Space Treaty, page 167

Symbol Systems' main office is on Luna One in a large dome. No one there knows anything about the secret initiative, including the acting president. But what about the CTO (chief technology officer), Grayson Campari? If the PCs manage to determine that Symbol Systems is implicated and come looking for M Campari later, they'll find he's been on an extended sabbatical for the last five years, and no one at headquarters knows exactly where he is.

Grayson Campari was kidnapped and killed as part of a scheme to throw potential investigators off the scent of the true criminals.

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Spacecraft *Copernicus:* *level 3, includes one custom-installed laser weapon system; otherwise as a standard dragonfly class spacecraft, page 109*

Shipmind, page 44

PCs as Luna One Intelligence Agents page 208

Chapter 4: Creating Your Character, page 14

Chapter 15: Science Fiction, page 270

Star Force, page 166

Exploration class spacecraft, page 109

Hibernation pod, page 78

Saturn is part of the region of space called the Opulence of Outer Planets.

Chapter 15: Opulence of Outer Planets, page 189

Lightspeed Communication Delays, page 67

GETTING THE CHARACTERS INVOLVED

Have the players create characters suitable for a science fiction RPG if they haven't already. Describe their place in the setting if you've already got something in mind. Otherwise, the PCs are Luna One intelligence agents. As agents of Luna One, or some other authority, characters are motivated to follow up on any leads they discover during the course of the adventure. Additionally, Anaximander asks his agents to be on the lookout for anything "uncanny." As the adventure unfolds, PCs definitely find many such situations.

Alternatively, PCs could be Star Force commandos investigating claims of illegal gene tailoring, rival conglomerate employees (perhaps even one of the Big Five) perpetrating industrial espionage, or just the crew of a salvage or cargo-hauling spacecraft in the wrong place at the wrong time. (Note that in this last case, further incentives to investigate the situation after the initial derelict spacecraft should be provided. For instance, perhaps one of the characters with a missing family member finds the name of that person in the data banks aboard the derelict spacecraft above Saturn, implying some deeper connection with the situation.)

ACT 1: DERELICT SPACECRAFT

Unless you've arranged a different entry point for the PCs, read or paraphrase the following. (Also show them Saturn on the cover of this book, or from an online resource.)

READ ALOUD

The magnificent expanse of Saturn and its glorious ring system fills your consensus AR view. The complexity of the rings, in all their changeable textures and details, is mesmerizing. But you're not out here for sightseeing.

You operate the dragonfly class spacecraft *Copernicus*, named for the sub-sentient shipmind that inhabits the craft. Sometimes you haul cargo across the Sol System, fusion drive burning bright. Other times you try your hand at salvage, which is what you're doing right now. Acting on a tip you ferreted out of the deep space network by a passing Star Force patrol drone, you burned hard to reach the coordinates indicated deep in Saturn's gravity well. Sure enough, you've discovered a disabled, slowly spinning, uncommunicative derelict in a quickly decaying orbit. A visual scan reveals that the spacecraft's name is *Panegyric*.

"I estimate," says the shipmind Copernicus in its measured tones, "that the derelict has roughly a Sol-standard hour before the drag from the atmosphere reaches a critical threshold, at which point it will fall into the atmosphere and burn up."

SCANNING THE DERELICT PANEGYRIC

PCs can attempt several things to learn more about the *Panegyric* as they draw up their plans.

Visual ID: As already noted, the derelict's name is *Panegyric*. Also, it appears to be a modified exploration class spacecraft.

Transmissions: The craft is not transmitting a transponder ID, nor is it transmitting on any other frequencies.

Other Information: A full sensor sweep (radar, full spectrum analysis, as well as a non-passive laser-microphone to detect sounds aboard the craft) reveals no activity except for what seems to be three separate sources for extremely faint but repeating thumping sounds. Copernicus indicates the sounds are consistent with heartbeats, similar to what a human in the care of an autodoc or in a hibernation pod might produce, though something is still a bit distorted about them.

Querying the Deep Space Network: Lightspeed communication delays across the solar system being what they are, by the time the PCs' query reaches anyone and a response makes it back, the *Panegyric*'s orbit will have completely decayed. However, in the local info cache aboard *Copernicus*, the PCs can find an entry for the *Panegyric*: The

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minor conglomerate Symbol Systems PLC had purchased it a little more than five years ago. Other than some general info about Symbol Systems, no other information is locally available. (And if PCs manage to query databases or knowledgeable individuals in the Inner Planets, not much more information is available in any event.)

Other Relevant Factors: Space law regarding salvage of abandoned property is simple. The crew of a spacecraft that recovers an abandoned craft or station, or some portion of its cargo or contents, is entitled to those items (though they must file an official claim with Star Force; otherwise it might be later classified as piracy). However, if survivors are found, would-be salvagers must attempt rescue instead of salvage, but can expect a generous, legally mandated reward from those saved (which might end up being some of the salvage they were originally hoping to recover).

OPTIONS FOR SALVAGE OR RESCUE

If nothing is done, the *Panegyric* will burn up in Saturn's atmosphere in an hour. The PCs have two options:

Quick Salvage: The PCs could decide to board the *Panegyric*, grab whatever's handy (and try to rescue anyone they find) and get off, though it'll be a race against the clock.

Delay Orbital Decay: The *Copernicus* sometimes acts as a tug for larger spacecraft. PCs could attempt to deploy the tow cable and pull the craft out of orbit. However, the PCs' shipmind tells the them that doing so will only delay the inevitable by four hours—still worth doing, since it will relieve some of the time pressure.

BOARDING THE PANEGYRIC

The *Copernicus* has enough used space suits (as regular space suits, but with only about four hours of atmo) for all of the PCs who wish to attempt to exit the ship and jump across the intervening 10 m (32 feet) zero-G void toward the center of the slowly spinning derelict spacecraft. The vast swirling face of Saturn glares up beneath, and the grand arcs of Saturn's shining rings rise high above. (A tether for nervous jumpers can be unstowed from the cargo hold, which should save a PC from a bad jump if their space suit thrusters can't.)

If the characters deploy a tow cable from *Copernicus*, one PC must carry it. The tow cable has a rotating cuff and a magnetic grapple, so it can be attached anywhere on the derelict, but must be at the center of mass or risk creating a situation where the derelict begins to spiral in a wider and wider circle at the end of the tow line.

The magnetic soles of the PCs' space suits can find traction on the craft's surface. Entrance airlocks are easily identified, as are the controls for opening them, though the PCs will have to do a bit of hotwiring.

All these tasks (jumping across the zero-G void, landing on the derelict with magnetic shipboots locking, applying the tow cable in the right spot, hotwiring the *Panegyric* airlock, as well as anything else that might come up, such as using space suit thrusters to recover from a bad jump) require that the PCs complete a series of successful tasks, challenges defined by the derelict *Panegyric* spacecraft itself. (This remains true for tasks the PCs attempt once they get aboard.)

INSIDE THE PANEGYRIC

The situation aboard the derelict is as follows.

MALWARE-INFECTED SHIPMIND KILLED THE CREW AND SCUTTLED THE SHIP

An instance of fatal malware was purposely and secretly installed in the *Panegyric* shipmind by Dr. Ivanka Warrick. The researchers on the ship, thinking they were transporting valuable biological specimens from their base on Enceladus to Luna One, were instead stealthily attacked when the atmo on their craft gradually altered to pure carbon dioxide by the corrupted shipmind. They went to sleep, then suffocated. Without anyone to interfere, the ship then turned course and set itself to burn up by falling into Saturn itself.

If the PCs come aboard and try to learn what happened, save the ship, or investigate the lab, the malware-infected shipmind always steers them wrong. For instance, the

Symbol Systems PLC, page 211

Derelict *Panegyric* spacecraft: *level 4*

Fatal malware, page 124

Dr. Ivanka Warrick, page 218

Space suit, page 72

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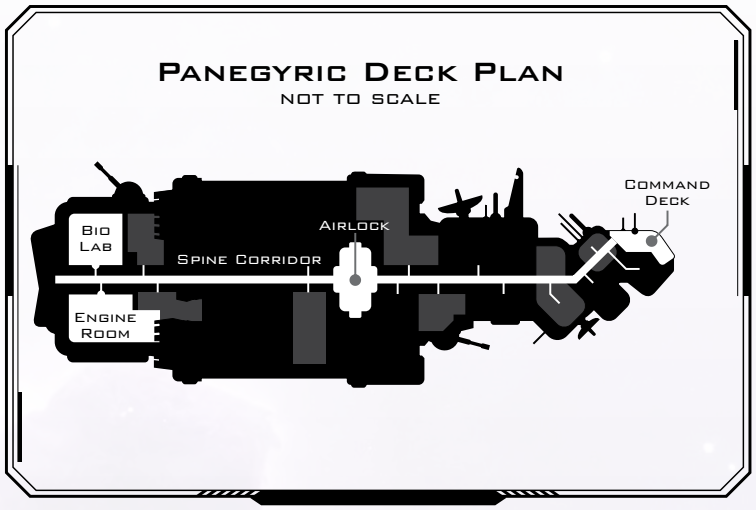

airlock monitor leading into the craft reports full, breathable atmo in the ship (false). It may report that a detonation of the damaged fusion drive is imminent, in order to panic the PCs into leaving (false—the engines are off-line due to a safety lockout), or that the ship is accelerating its fall into Saturn (false), and so on. It will also blithely respond to queries in a manner most likely to cause PCs to come to harm, if possible.

PCs wishing to investigate this must go to the command deck at the front of the craft and deal with the corrupt computer core housed under the flooring there.

Minor instance, fatal malware: *level 3, infected equipment produces erroneous results, tries to shock or harm user.*

PCs with foci like Fuses Mind with Machine are considered to have cybernetics.

Fuses Mind and Machine, page 69

Electrified Access Panel: *level 5 trap inflicts 5 points of Speed damage (ignores Armor)*

PANEGYRIC DECK PLAN

The slowly spinning derelict craft creates increasing gravity toward either end, but at the center of mass in the spine corridor where the airlock opens, that effect is negligible. The main areas of interest are indicated below. If the PCs wish, they can attempt to salvage the derelict. However, if they divert from the main mission to attempt to salvage, consider introducing a GM intrusion, such as giving the shipmind more time to plan some new tactic to kill the PCs (up to and including breaching the airlock to suck them out into space).

Salvage Found on a Derelict Spacecraft, page 55

Spine Corridor: The airlock opens onto a central "spine" hallway. Three humans, appearing as if they had settled down for a nap, lie dead in the corridor, suffocated by carbon dioxide. Each wears a lab smock with a badge bearing a triskelion image overlaid by a DNA double-helix. A database check indicates that the triskelion image is similar to the Symbol Systems logo, but the DNA symbol is not. (A deep research project on Luna One could uncover it is a hundred-year-old logo for Symbol Systems, which was changed after genetic engineering was declared illegal.)

One victim has cybernetic implants; these are weirdly twisted, as if the metal got "cancer." PCs that touch him risk having their electronic equipment infected with a minor instance of fatal malware that attempts to take over the object's self-repair functions and corrupt it. This is particularly alarming for PCs with cybernetics.

The hallway runs down the ship's spine, fore to the command deck (with various side chambers for quarters and secondary systems chambers) and aft to the engine chamber and bio lab (with various side chambers for secondary systems).

Command Deck: The corrupt shipmind has digitally locked the entrance, and electrified the access panel.

Inside, the derelict's spin simulates enough gravity that the dead command crew are lying along the "floor" that previously served as the main view screen. (One has more infected cybernetic parts.)

The deck plating on the floor bulges, and bursting from it is a metallic "cancer" of wires and self-assembled circuits hanging like a tumor caught in a wire web: a physical manifestation of the fatal malware, which directly attacks the PCs.

If the PCs defeat it, they learn only a few things from the fragmented, corrupted memory core of the original shipmind that remains.

- The ship's last port of call was a specific spot on Saturn's moon, Enceladus. PCs who query back to their ship to check navigation records learn that those coordinates are not associated with any known base.
- The malware was specifically installed to kill the crew and scuttle the ship, destroying all evidence of its existence, but not the reason for doing so.

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Engine Room: The corrupt shipmind has digitally locked the entrance and electrified the access panel (unless the PCs dealt with the fatal malware on the command deck).

Inside, the fusion drive core was purposefully allowed to die. (The malware tried to get the ship to drive itself directly into Saturn, but hardwired safeguards prevented that, so this was its next best option.) A cold-reignition of the fusion drive is tricky because that's something usually something done in a shipyard or space station with facilities for doing so, and will take a few hours, and is by no means certain.

In addition, fuel reserves are critically low.

Bio Lab: Instead of a standard ship door, the entrance to the biolab is a modified airlock. (If a PC tries to figure it out, the airlock is meant to serve as a transfer point between 1 atmosphere of air and tens of atmospheres from pressurized water instead of vacuum. However, a "normal" carbon dioxide atmosphere currently fills most of the lab.)

The corrupt shipmind has digitally locked the bio lock, and electrified the access panel (unless the PCs dealt with the fatal malware on the command deck).

Inside, the ship's spin simulates enough gravity that half-a-room's volume of cold salt water has pooled along the far wall, partly drowning several system access panels and two of four bulky pods large enough to hold people. These are hibernation pods, except they're draped with a lot of weird additional tech.

One hibernation pod is smashed and leaking water from a damaged interior valve. Inside the pod is a damp, dead, blue-hued genetic monstrosity (a natathim). The other three still-sealed pods are filled with water and contain hibernating extremely genetically tailored humans, still alive, but medical readouts show that all were induced to complete brain death. There is no hope of reviving them.

All the PCs know that major genetic engineering of humans is expressly forbidden in the Revel. The bodies in the biolab represent evidence of a reprehensible crime.

Investigation of the data on the panels shows lots of corruption, but the PCs can piece together from the remaining data that the weird, malformed blue people are indeed from human stock, genetically modified to live in high-pressure aquatic environments under the frozen shells of ice moons.

WRAPPING UP PANEGYRIC INVESTIGATION

Unless the PCs can get *Panegyric*'s engines back online, they have a narrow window (one to four hours) to gather whatever clues and items of interest they wish before the increasing atmospheric drag reaches a critical threshold and quickly pulls the craft down. If the PCs' spacecraft was delaying that plunge, it needs to disengage.

If the PCs managed to save the *Panegyric* by reigniting its engines, it has limited fuel, perhaps just enough to prevent a plunge into Saturn. PCs who want to commandeer it need to refuel it.

And even there, there is a good chance some remnant fatal malware instances remain aboard, waiting for the appropriate trigger to activate. The PCs should be on their guard.

Cold reignition of fusion drive: *level 6 task requiring three success before two failures or must start process again (assuming a more catastrophic detonation doesn't occur, inflicting 6 points of damage on everything within short range, including the ship bulkhead).*

ACT 2: RESEARCH BASE NAMAKA SECUNDUS

Refer to this section if the PCs use the information they gleaned from the *Panegyric* to look for the secret research base on Enceladus. If the PCs radio back to Anaximander on Luna One over the deep space network (or contact whoever their patron is, if any), he instructs them to do exactly that, as it seems like someone is in a hurry to cover their tracks and destroy evidence. Anaximander asks that the PCs do *not* alert Star Force to evidence of crimes uncovered, at least not until they have a chance to investigate more, because he is concerned there could well be a mole in Star Force's ranks.

Anaximander, page 166

If the PCs disregard Anaximander's instructions and send out a general alert to the nearest Star Force base (which is Io Star Force Base, near Jupiter), Star Force does indeed send a destroyer to investigate, which will arrive in about nine days. In the meantime, the base on Enceladus is scuttled, and the trail goes cold. (Assuming the PCs don't investigate earlier.)

Io Star Force Base, page 193

Destroyer class spacecraft, page 109

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ENCELADUS, SATURN'S MOON

The maneuver to match Enceladus's orbital inclination requires a burn to much higher orbit, because Enceladus actually orbits Saturn in the outer, diffuse E ring. Unless PCs are under duress or direct attack, inserting their craft into a parking orbit over Enceladus is a routine piloting task that takes about two hours to complete. The orbit passes over coordinates noted in the *Panegyric* systems, over the southern polar region.

Impersonating Namaka Base Allies: *level 7 task*

Enceladus is a bright snowball of a moon (and the sixth-largest moon of Saturn). It is about 500 km (310 miles) in diameter covered by fresh, clean ice. Massive water geysers sometimes leap into space, some of which falls back as snow, but much of it escapes forever, which partly forms the diffuse E ring around Saturn. Seeing a geyser on Enceladus up close is considered to be one of the Seven Wonders of Sol System. The atmosphere is trace at best, and gravity is quite weak, only about 0.1 G.

STUDYING NAMAKA SECUNDUS

From orbit, PCs can attempt several things to learn more about the research station as they draw up plans.

Scans: Visible light scans confirm the location of some kind of artificial structure far below. Magnification shows the basic outline of a moderately sized complex and associated landing site covered in heat-absorbing dark material, presumably to prevent ice from melting under fusion drive landers. A single freighter is currently landed. Infrared scans suggest no one is currently aboard.

Transmissions: None. Transmissions the PCs send are not responded to, unless the PCs can succeed on an outrageous bluff, impersonating Namaka base allies.

Results of Successful Bluff: If PCs successfully pretend to be additional Symbol Systems personnel/mercenaries sent to help deal with the situation, a woman's voice comes over the line and simply says, "Well, help us! Those things have gone batshit crazy! We *need*—!" Gunfire cuts off any additional communication.

OPTIONAL ENCOUNTER: SPACE COMBAT

Alerted by a fatal malware transmission, by a leak in Star Force, or merely through bad luck, a claim-jumping pirate approaches the PCs' ship, pretending to be another freighter looking to trade some fusion drive parts. The pirates know (or think they know) that the PCs have just salvaged a derelict rich in loot, and they want a "share." PCs can try to negotiate, bluff, fight, or run.

The attacking pirate is the *Night Terror*. Rules for matching the PCs' craft against the *Night Terror* are presented under Optional Rules: Extended Vehicular Combat.

Natathim, page 126

Night Terror, page 191

Combat spaceplane, page 109

Optional Rules: Extended Vehicular Combat, page 39

ENTERING NAMAKA SECUNDUS

No one interferes with the PCs landing their craft near the research base. Lack of atmosphere requires that the PCs use space suits to bounce across the intervening space to one of the entrances. The situation inside the station follows.

GENETIC RESEARCH SUBJECTS RUN AMUCK, PREVENTING INITIATION OF PLANNED SELF DESTRUCT

A school of twelve or more enraged, apparently congenitally insane natathim are running loose through the base. They've killed off most of the staff; project head Dr. Ivanka Warrick has holed up in in Deep Observation Dome, waiting for allied reinforcements to arrive. If she detects an intrusion, she emerges, because she is even more desperate to keep outsiders from learning what has gone on at Namaka. Given her heavy-duty power armor and laser rifle, she is a ferocious opponent to contend with, even without constant natathim harassment.

As it happens, reinforcements *are* on the way—though not the kind Warrick is hoping for. An autonomous claw is burning across the solar system from an undisclosed launch site, armed with a tactical nuclear warhead. As the PCs enter the base, this fact

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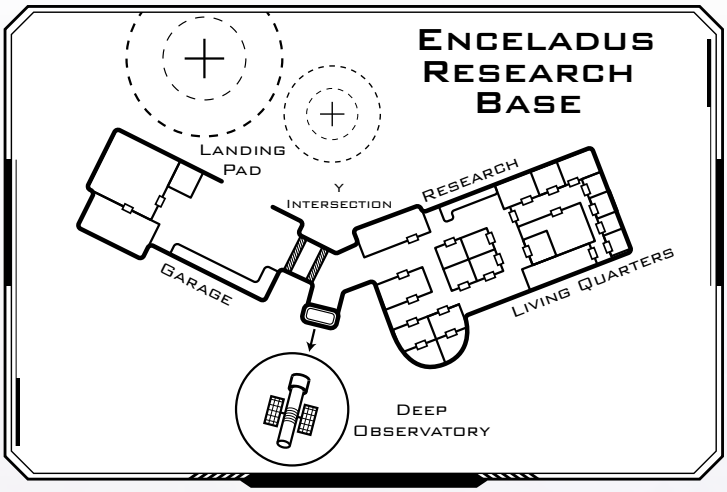
isn't yet appreciated. But in a little while, the evidence of what happened on this base will be destroyed one way or another. (See Copernicus's Warning hereafter.)

NAMAKA SECUNDUS FLOOR PLAN

The base consists of the landing pad, a large garage, and the attached main structure. A few tiny, inconsequential domes are scattered around the main structure on the ice, and mostly used for storage.



Landing Pad: Covered in a layer of fused graphene, the landing pad currently holds one freighter; scans show a single heartbeat aboard. Inside, a space suited natathim has managed over the course of a few days to completely destroy the ship systems, rendering it inoperable. It also killed the skeleton crew. Even if Dr. Warrick had gotten out of the base and to her ship, she'd still be stuck on the Moon.

Garage: This space garage has a couple of ice-adapted moon buggies, several open-to-vacuum vacuum cycles, tools of all kinds, as well as parts and facilities for working on vehicles and even limited facilities for repairing spacecraft. A massive tank holds helium-3, enough to fully fuel the character's ship. (All told, worth about 30,000 lumens, though moving it will be difficult).

A large airlock on one side of the garage leads to the main research base. The airlock is keycode locked, but could be hacked. PCs note a few smudges of dried blood in the airlock.

Y Intersection: The garage airlock opens onto a Y intersection corridor. Immediately inside the airlock is a comm panel, which PCs could use to query the base, and potentially contact—and possibly try to bluff—Dr. Warrick as previously described; see Deep Observatory for more about Dr. Warrick. However, of more immediate concern is what fills the corridor ahead . . .

Several research staff lie dead in the corridor. In direct contrast to the dead aboard the *Panegyric*, they did not die peacefully. They are ravaged, lie in pools of blood, or at the end of long crimson streaks where something dragged them for several meters before messily eviscerating, beheading, or pulling off a limb or two. Through the blood, PCs can recognize the same not-quite-Symbol Systems logo as was found on the *Panegyric*.

Most of the natathim responsible have retreated back to the research wing, but three are feeding on corpses, initially hidden by the bend in the Y corridor. PCs find them either because they use the comm panel next to the airlock to try to talk to someone, or because they go to the bend in the Y and see them. Once the natathim are aware of the PCs, they scream in apoplectic lunatic fury, and lunge for the PCs.

General tasks attempted within research facility are challenges defined by Namaka Secundus's level.

Namaka Secundus research base: *level 4*

Natathim, page 126
Moon buggy, page 97
Vacuum cycle, page 95

COPERNICUS'S WARNING

At the point when you want to raise the stakes while the PCs are in Namaka, use this encounter, announcing an imminent nuclear strike. Accompanying a group GM intrusion, Copernicus the shipmind breaks in over the PCs' comm devices, "Warning. One fast mover approaching the Saturnian system at 30 G. Calculations suggest it is vectoring toward Enceladus. High G means no people are aboard. It is quiet, but scans show a radiation profile consistent with a tactical nuclear device. It keeps changing velocity, so I can't exactly predict time of impact, but stochastic analysis suggests some time within the next fifteen minutes."

Copernicus isn't wrong. Failing some nigh-impossible plan to somehow eradicate the approaching nuke, the PCs are now on a countdown timer, though it could actually be less than fifteen minutes if that would make things even more dramatic. Treat as another group GM intrusion.

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Structure the fight for maximum dramatic tension. Do more natathim show up? Does a natathim or PC breach the intersection to vacuum? Does Dr. Warrick show up, ambushing the PCs (or, if they've bluffed her, helping them just as things look most dire)? Maybe, or maybe it's just a fight with three natathim.

Research and Living Quarters: A science lab filled with various tools (many of which are broken) and bodies (also broken) lies immediately beyond the Y intersection. PCs could attempt to salvage for valuables as described in the Panegyric, but over a dozen natathim roam this area, making time spent in the area potentially lethal. The situation in the living quarters beyond is no different.

Salvage for valuables, page 55

Dr. Ivanka Warrick: *level 5, 2 armor from power armor space suit, laser rifle inflicts 6 points of damage, deploys a level 3 personal flying drone from her suit that makes short-range attacks each round*

If PCs gain the attention of the natathim, the creatures give chase. Even if the PCs lock down the research wing, the natathim will eventually figure out the override code, or try something even more desperate like breaking out into the vacuum and coming in another way (natathim can withstand vacuum about three times as long as a human).

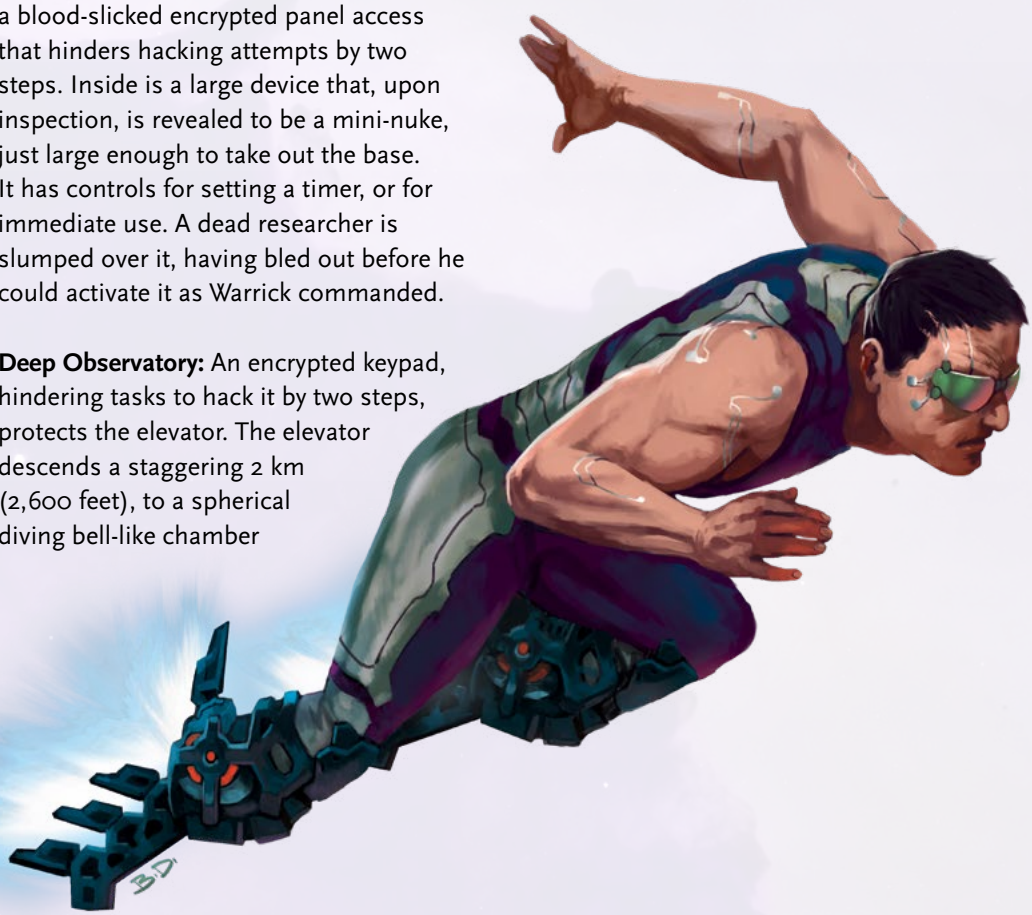
One chamber in the research wing has a blood-slicked encrypted panel access that hinders hacking attempts by two steps. Inside is a large device that, upon inspection, is revealed to be a mini-nuke, just large enough to take out the base. It has controls for setting a timer, or for immediate use. A dead researcher is slumped over it, having bled out before he could activate it as Warrick commanded.

Deep Observatory: An encrypted keypad, hindering tasks to hack it by two steps, protects the elevator. The elevator descends a staggering 2 km (2,600 feet), to a spherical diving bell-like chamber constructed on the underside of Enceladus's ice shell, which means it's surrounded by Enceladus's ocean. (Enceladus has the thinnest known ice shell of any ocean-covered moon at the southern pole; it's much thicker elsewhere.)

A massive telescope-like device is mounted in the chamber, but it is pointed down into the depths of the ocean, not up to the stars. Something down there obviously piqued someone's interest. A functioning air-gapped computer core (one with no wired or wireless connection ability) is connected to the device.

If Dr. Ivanka Warrick is in the observatory when PCs investigate, odds are she's antagonistic, or if they bluffed her, at least suspicious. That suspicion blossoms into realization that the PCs are not actually allies if the PCs mention or talk up their affiliation with Symbol Systems, PLC.

The bluff (if any) is blown because, as Dr. Warrick knows, the Symbol Systems logos and partial data trail left behind is a complete frame job, in the event the program was ever discovered. Obfuscation layer one is to destroy all evidence of the deed. Obfuscation layer two is to frame



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someone else to hide the identity of the real perpetrators. Warrick would never willingly reveal this fact.

The deep telescope is focused on a strange blot of darkness apparently some 23 km (14 miles) deep. The darkness almost looks like a tiny replica of the Quiet Earth. Tiny storm-like glints sometimes shine from its roiling surface.

The air-gapped computer has encrypted files that could be downloaded if someone has a jack, a smart device, or something cobbled together from the research wing or garage. With several days of computation and some leet hacking skills, PCs could eventually hack the encrypted files and learn the whole truth. Of course, Dr. Warrick will do everything to protect the air-gapped computer from the PCs, up to and including trying to destroy the elevator so they're all trapped. She is also dead set against letting the PCs take her alive. She doesn't want to die, but if the mission demands it, so be it.

CONCLUDING THE ADVENTURE

Thanks to the imminent nuclear strike, PCs must vacate the research facility. This might involve successfully disengaging from natathim pursuers, defeating Dr. Warrick, and any other complications you throw at PCs. It all likely ends in a nuclear mushroom cloud. Small by most nuclear explosion standards, but still impressive.

If the PCs didn't discover the frame job, they have a lot of evidence that fingers Symbol Systems as the perpetrator of the illegal gene tailoring. If the PCs bring their evidence to Luna One or Star Force, it's not long before Symbol Systems is de-listed from the lumens exchange, its execs are taken into custody, and the company dissolved. Justice triumphs!

If the PCs *do* discover the frame job, the identity of the true perpetrators remains unclear. One might speculate it must be a conglomerate with a *lot* of resources, maybe even one of the Big Five. Also, still unknown is *why* so much was risked engineering crazed natathim, and what their connection is with the strange phenomenon glimpsed in the drowned depths of Enceladus. And why is the base called *secundus* (Latin for two, implying that somewhere, there's a one)? But all that remains a mystery for another day, one you're free to create your own adventures to answer. Regardless, the PCs uncover the existence of a horrific secret research project, and there's some satisfaction (and a very expensive bounty payment from Anaximander) in that!

XP Awards: The PCs each earn 1 XP if they survive their salvage attempt on the *Panegyric*, and another 1 XP if they use information gathered there to explore Namaka Secundus. They earn an additional 1 XP if they defeat Dr. Warrick (and another if they bluff her), and 1 XP if they discover that Symbol Systems was framed.

Hack the encrypted files: *level 6, and a few days of effort; the file includes information on Grayson Campari, who was kidnapped and killed, but his files were infected with trace incriminating evidence*

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Chapter 20

CYPHER SHORT: PRISON BREAK

For directions on how to run a Cypher Short: mymcg.info/cyphershorts

Optional Rules: Extended Vehicular Combat, page 39

Besides weapons, each character has some version of a high-tech smart phone (badge, goggles, cuff, etc.), and two subtle cyphers chosen by the GM from the Subtle Cypher Table

Subtle Cypher Table, page 383

The Premise: The characters work on a prison transport spacecraft. En route to a distant prison moon, enemy ships burn from hiding and disable the transport's engines.

CHARACTER CREATION

Characters should be security minded with varying technical skills. No supernatural powers. Each player should not only figure out their character's name and a very short personality brief, but also one reason why they work where they do. Some character suggestions:

Security Guard: Up to two players could choose to be security guards. This is probably someone with the Performing Physical Actions type. They have a weapon (a heavy short-range weapon with settings for both stun and kill) and know keypad combinations to access almost every section of the ship.

Technician: This is probably someone with the Searching and Discovering type. They might have a light personal weapon or a level 2 drone with touch-range shock capability.

Administrator: This is probably someone with the Talking type. They may have a light personal weapon. The administrator knows that a particularly important prisoner, Bazel Cole, is being transferred. Cole is implicated in a series of illegal genetic engineering schemes.

THE SETUP

The PCs believe that about 20 guards are scattered about the craft, though their knowledge is imperfect.

The characters all work aboard a prison transport spacecraft. An unexpected attack sounds the combat alert, and the characters congregate in the same auxiliary control pod because it contains an emergency cache of space suits. (Protocol demands space suits in battle in case of a pressure breach.)

Optional: As a prologue to the main scenario, run the space combat using the extended vehicular combat rules, with each PC crewing a ship system from an auxiliary control pod, on account of the main control deck taking a direct hit. The PCs' level 3 ship with two weapon systems faces off against successive waves of level 3 ships with two weapon systems each, until one manages to disable the prison ship's ability to maneuver. After that, the scenario continues as follows.

The floor shudders as something distant booms through the deck plating. The comm blares with the captain's voice, "Engines are disabled. Unidentified enemy craft have employed a breaching airlock into the prison module. If you are anywhere near the prison module, stop them! Don't let them free the prisoners. That's an order!"

The goal for the scenario is now set. The PCs suspect that *they* are closest to the prison module, because the single door leading to that module is just down the corridor from them. It's clear that if they don't act soon, they'll lose their prisoners (including the most valuable one, Bazel Cole).

Other facts:

- It takes about four rounds to properly get into a space suit, though going "half-zipped" is an option.
- A breaching airlock violently creates a new door into a spacecraft. It is essentially a large ram, but once it has punched into a spacecraft hull, it forms a new pressure seal. The ram interior is hollow, containing an airlock.

POSSIBLE ENCOUNTERS

Entering the Prison Module:
Communications from the prison module come back with "We're all fine here." Checking a prisoner monitor feed reveals

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a firefight between guards and invaders. Hacking the door is a level 4 Intellect-based task and will take about five minutes.

Going Around: The prison cellblock feed shows the invaders' breaching airlock. Suggest to one PC (as a GM-delivered insight) that PCs could use their ship's actual airlock (which is very close) to exit the prison transport, walk around in the vacuum of space on the transport's outer hull (using magnetic space suit shipboots), and come up "from behind" the invaders. It should only take about three to five minutes, if everything goes well.

Walking around untethered on hull is a level 2 Speed-based task to avoid being thrown off into space. Coming around the curve of the hull, PCs see that the breaching airlock resembles a metallic pimple growing out of their ship. A tether connects the airlock leading into the prison module up a few hundred meters to a level 5 enemy spacecraft, hanging silent in the void. Two additional invaders are gliding down the tether toward the breaching airlock. The space suited invaders are level 3 and have light weapons and vacuum heavy handguns (6 points of damage).

PCs thrown off into space have enough maneuvering thrusters in their suits for a few tries at turning themselves around and getting back to the hull, which are difficulty 4 Speed or Intellect-based rolls.

Inside the Prison Module: Three invaders stand in the throat of the prison module next to the breaching airlock, and three are further down the cellblock, opening all the cells, looking for Bazel Cole. Cellblock guards lie dead all around. They motion the PCs back if they try to enter, and initiate a firefight if the PCs fail to listen. These invaders (also in space suits) are level 3 and have light weapons and vacuum heavy handguns (6 points of damage).

Fleeing Prisoners: Several freed prisoners come running down the cellblock. They were released by the invaders, but the invaders don't want them. They may still choose to ally with the invaders against the PC prison guards and administrators, unless they can be talked into helping instead, which is a tall order; a level 6 Intellect task in persuasion, though PCs can probably sweeten the deal by pointing out how the invaders don't really seem to care whether they live or die. There are about five additional prisoners, though the PCs only need to convince the first few.

Cole Emerges: A few rounds into the firefight in the cellblock, a level 4 invader drags Bazel Cole out and hustles him toward the breaching airlock, stuffing him into a safesuit as they move (which is essentially an air-filled, very tough plastic bag with a vaguely human shape). If the PCs rupture the safesuit, the invaders just try to hustle Cole out through the airlock into vacuum without it, figuring they can get him across to their ship before he is compromised beyond resuscitation.

Safesuit, page 71

GM INTRUSIONS

Some of the events noted above could make interesting GM intrusions. Other options include:

- Gas Grenade! The invaders roll a gas grenade into the module just as the PCs get the interconnected door open. Visibility drops to nothing (treat as darkness) and characters not fully suited up must succeed at Might defense rolls each round or suffer 2 points of damage and lose their next action.
- Breach! A blow-out means characters might have to scramble for a nearby patch kit, but first succeed on a level 4 Might defense roll or be sucked into the breach, becoming an inadvertent patch themselves. Someone sucked into a breach takes 3 points of ambient damage each round, until an ally pulls them free and (hopefully) the crew applies a proper patch.
- A weird, filamentous, vacuum-adapted creature comes down the tether to help the invaders; it's a "wraith" (a genetically engineered *Homo vacuus* whose ancestors were human) that wants Bazel; it plans to force the geneticist to reverse what's been done to it. It's psychopathic but could potentially be negotiated with.

Wraith: *level 4, level 7 for perception and stealth; 15 health, touch inflicts 6 points of Speed damage (ignores Armor) from ionizing radiation; for more info see page 141*

THE CONCLUSION

Ultimately, the PCs just need to get their hands on Bazel Cole and beat off the invaders. When they do, the scenario is pretty much over. Allied spacecraft reinforcements arrive and chase off the enemy craft. If the PCs succeed in retaining Bazel, they're all up for commendations.

This scenario is suitable for most sci-fi settings, whether interplanetary or interstellar in scope. You could also have one of the PCs be an undercover Star Force marshal on the lookout for genetic extremists and had gotten a tip about a potential attack, or even an undercover agent of a conglomerate that wants Bazel Cole for themselves.

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Chapter 21

CYPHER SHORT: ALIEN PLANET

For directions on how to run a Cypher Short: mymcg.info/cyphershorts

The Premise: The characters make up an away team exploring oddities found on a newly discovered alien planet.

CHARACTER CREATION

Characters are starship *Curie* crewmembers with varying technical skills ideal for a landing party. No supernatural powers. Each player should not only figure out their character's name and a very short personality brief, but also one reason why they serve on the starship *Curie*. Cypher Short character suggestions:

Curie (discovery class starship), page 110

Team Lead: This is probably someone with the Talking type. They have a light personal weapon. The team lead is tasked with completing the survey mission, as well as a secondary goal: to find out what happened to the scientist, Cetewaya Taing, who went missing on this planet two Sol-standard years earlier.

Security Officer: This is probably someone with the Performing Physical Actions type. They have a weapon (a heavy, long-range weapon with settings for both stun and kill) and wear light armor (+1 Armor).

Science Officer: This is probably someone with the Searching and Discovering type. They have a light personal weapon and a multicorder.

Multicorder, page 70

Reconnaissance Officer: This is probably someone with the Sneaking type. They have a medium personal weapon and control a research drone.

Research drone, page 70

Besides weapons, each character has some version of a high-tech smart phone (badge, goggles, cuff, etc.), and two subtle cyphers chosen by the GM from the Subtle Cypher Table

Subtle Cypher Table, page 383

THE SETUP

The characters are starship crewmembers with regular spacecraft duties who also serve on away teams when the *Curie* finds something interesting. All have served on away missions in the past.

The goal is obvious: explore and record what is found on the life-bearing planet designated QS 237b. What the PCs don't know (yet) is that an intelligent alien, a living-mineral entity, is also on the planet. Unfortunately, the alien intelligence distrusts humans thanks to some missteps made by Cetewaya Taing.

Other facts:

- The air is breathable, if a bit thin and cold. Gravity is just a little less than 1 G.
- Weird purple and red crystalline formations cover the planet, sometimes as a forest of towering pillars, other times as single broad planes, and often enough, in completely unique crystal growth formations.
- QS 237b "life" is crystal-based. The crystal-based life isn't nefarious, but it often doesn't interact well with human flesh.
- The shuttle drops the characters on the surface then returns to orbit as a safety measure. When the away team is ready to leave, they can radio for the shuttle to collect them. (Once called, it takes about thirty minutes to arrive.)

POSSIBLE ENCOUNTERS

The PCs land not far from where the team lead believes Cetewaya Taing put down, thanks to clues from an old transmission. However, nothing is immediately visible but strange crystal formations in every direction.

Chiming Floaters: Lavender-hued crystal chunks (level 4) float 5 m (16 feet) overhead, chiming melodiously. Moving to within about 10 m (32 feet) of one causes it to drift nearer then fall on a PC, inflicting 4 points of damage on a failed Speed defense roll and trapping them until they can escape or are freed.

Humming Forest: A scarlet forest of slender but tall crystal spikes hums like electronic devices without any input. The hum can get into a character's head, triggering a

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delirious state where the character can't move, only mumble and laugh. Helping the character come out of it is a level 3 Intellect-based task of about ten minutes.

Rhythmic Promontory: Musical tones, regular as a multi-part drum beat, sound from the top of this 40 m (130 foot) high promontory. Rough crystal "stairs" allow ascent (a difficulty 2 Strength-based task). On top, three level 3 swarms of tiny crystal "bees" make the sound. If individual PCs make a drumming sound that fits the complex beat, a swarm cavorts joyously around that PC. If a PC tries and fails, or intrudes, the bees attack that PC.

Sparkling Grass: Silvery crystal threads (level 3) cover the ground, tinkling like small bells and sparkling with silver flashes. It's impossible to move through the area without treading on the grass, but doing so crushes it. Any PC that moves through an area must succeed on a Might defense roll, or a bit of sparkle adheres to a character and begins insinuating itself under their skin, inflicting 4 points of ambient damage and leaving the character with a strange crystalline tattoo.

Crystal Predator: A level 5 crystal "antelope" (+2 Armor) stalks the PCs, hoping to get one alone. It will fight all the PCs, but tries to get away. A GM intrusion allowing it to escape means the PCs can encounter it again somewhere else.

Knowing Eyes: Spherical crystals are scattered everywhere. Studying the spheres draws their gaze in return. PCs feel their minds "itch" and must succeed on a level 5 Intellect defense roll or take 3 points of Intellect damage (ignores Armor). On a success, the character hears a mental series of tones that, so long as the character keeps them in their mind and doesn't speak, gains an asset to all physical tasks.

GM INTRUSIONS

Some of the events noted above could make interesting GM intrusions. Other options include:

- Sonic quake! Every so often, crystal resonances cause local sonic quakes. Sometimes these combine into destructive storms that sweep across the planet. Treat each as its own GM intrusion:
  Sonic quake: A spike of sound causes nearby crystal to explode, creating shrapnel and falling debris, and negating all audible communication. This is a level 5 challenge. Speed defense rolls are required, otherwise victims suffer 6 points of damage and are trapped and need to work to get free.
  Sonic storm: All PCs must succeed at Speed defense rolls or suffer damage as mentioned above. Even those who succeed suffer 3 points of damage. The sound is ongoing for several rounds, inflicting 3 points of ambient damage each round a PC fails a Might defense roll.
- First Contact! The PCs spot a small spacecraft crusted over with fresh crystals. It appears to have rammed into an equally large piece of stony rubble, which stands out by not being crystalline. The spacecraft belongs to scientist, Cetewaya Taing. With a bit of effort, PCs can pry open the airlock. Inside, they find shattered scientific samples, analysis tools (mostly broken), and the broken, dead remains of the scientist.

In fact, the rubble rammed the spacecraft, not the other way around; it's an intelligent alien called a redivus. Eventually it animates and unfurls great magnetic plasma wings. It initially fears the PCs are there to harm it like the scientist did (accidentally). Whenever it moves, static and distortion play over the PCs' communication systems. (This is a clue that PCs might be able to talk to and negotiate with the creature instead of fight it, if they use their equipment as the medium of speaking. It wants what the PCs want—to explore and gather knowledge.)

Redivus: *level 4, flies a short distance each round, 4 Armor; magnetically manipulates nearby metal to crush or batter foes for 4 points of damage; for more info see page 130*

THE CONCLUSION

The PCs can explore the strange planet as long as they want, but if they find alien intelligent life (and either negotiate with it or kill it), that makes a pretty good mission finale. They can call their landing craft for a pick-up and return to the *Curie* with loads of preliminary data to be analyzed. If they negotiated some kind of peace with the redivus, they are awarded commendations.

You could introduce a complication to the scenario by having an NPC sibling of Cetewaya Taing be part of the away team or the shuttle crew coming to pick up the PCs. Just when negotiations with the redivus are coming along well, the sibling—angry at the death of their sister—attacks the redivus.

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SPACE COMBAT STATUS TRACKER

Attack Difficulty (target number)	Defense Difficulty (target number)	Other Task Difficulty (target number)	GM Intrusion Range
10 (30)	10 (30)	10 (30)	20
			19
9 (27)	9 (27)	9 (27)	18
			17
8 (24)	8 (24)	8 (24)	16
			15
7 (21)	7 (21)	7 (21)	14
			13
6 (18)	6 (18)	6 (18)	12
			11
5 (15)	5 (15)	5 (15)	10
			9
4 (12)	4 (12)	4 (12)	8
			7
3 (9)	3 (9)	3 (9)	6
			5
2 (6)	2 (6)	2 (6)	4
			3
1 (3)	1 (3)	1 (3)	2
			1

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