

# Galactic Rosetta

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## **Galactic Rosetta**

"The process of planet building today is a race between planetary engineers striving to build bigger and better idiot-proof species, and the Universe trying to produce bigger and better idiots. So far, the Universe is winning."

—**Professor Eucharistos, Head of Planetary Development Sciences**

799,629.57 Arul Galactic Time

Galactic research vessel AeroStella circled planet P-5 having just left planet P-4 before its unpredicted demise. The FoodTek lab was closed for the daily twelve-hour Arulian break, so Xir, Zipnik and Georgi sat drinking an Arulian orange-colored tea mixed with an intoxicating neuro-relaxer juice called Liquid-Q. Xir was getting sloshed. He had trouble stabilizing his six-foot frame against a pole. He saw his flushed face, dishevelled blond hair, and blue, bloodshot eyes reflected in the port side space portal. He gave himself a meek, drunken nod.

Black-haired Zipnik's azure eyes stared out from a dark-skinned six-foot frame at the intoxicated Xir. On a nearby lounge chair sat Georgi, another six foot Arulian who was the standard brown-haired, emerald-green-eye model. Georgi's design had become the model-of-choice when a brain-wave virtual reality memory chip portrayed a six-foot, brown-haired hero as saving Arul from apathy.

All three were genetically engineered to have extremely high IQs. All three were designed by their mothers, who told them they were perfect. They weren't. No Arulian was. On Planet Arul laziness was built-in. Educational transfer devices (ETDs) made learning too quick and easy. Glitches in genetic codes were causing personality fluctuations. Though a few Arulian scientists were starting to notice, the genetic enhancement companies denied any problems. Of course that was thirty-five million

years before; after so much time, and so many light years, who knew if the companies—or even the planet—existed.

Xir sipped the Liquid-Q tea, then said: “Men, I’ve about had it with this Swivarian pig Captain sending us ‘round this blasted Universe, and I promise you, and I repeat, *I do promise you*—we’re gonna find a way to make our lives better.”

One of Xir’s genetic glitches was promising things. He was addicted to raising expectations.

Georgi looked at Xir. “Yeah, how we gonna do that *Blond Boy*?”

Xir hated being called ‘Blond Boy’. He put on a bandanna around his head and tried to look tough. The bandanna had a picture of an Arulian pyramid surrounded by flocking birds. This was the symbol of triangular energy and freedom. It was also a space pirate symbol. “Hey Georgi Boy, I’m the only one with balls enough to do somethin’ to make my life better. You’re a piece of squirming fish bait.”

Xir took a swig and fell to the floor. He flopped on his back then stabilized himself in a sitting position.

Zipnik examined Xir’s face. There was no cure for the red eye and face flushing effects of Liquid-Q. Some theorized that this was so the government would know who was intoxicated. Zipnik’s face was just as flushed. “You’re drinking too much Liquid-Q, you fool.” Zipnik’s defect was details. He didn’t understand this, and it caused problems. He tried to analyze the problem but got bogged down. To Zipnik analysis was akin to failure.

“I’m fine—*hiccup*...” Xir said. ”Excuse me...just a little pissed that we’re goin’ to do ‘nother blasted timeburn—*hiccup*...ah ...’scuse me again. These damn planets

keep blowin' up. We should listen to Hercules and stay put 'ere. We could be Gods! — *hiccup.*” He swallowed, trying to stop the hiccups.

Georgi looked through the cabin portal at the shining green-blue planet. “I think she’s a lucky planet. She’s colored like my eyes. I bet there’s a lot of adventure down here.”

“Your eyes look like shitty green mold...*hiccup,*” said Xir.

“You’re drinking too much,” said Georgi.

“Hey, hey...we’b been stuck on this blasted ship fer twenty five years... you can ne’ber drink too much...I say too *much errr...*in space.” Xir said, wobbling. “Screw da Captain, let’s sneaker down to P-4, errr...P-5 or whatever the flunk the name is... before...before...*ah...*before the next time burn—*hiccup...*and take ov’er da planet...that’s it!” Xir grasped a pole next to Georgi and Zipnik. Zipnik looked at the planet. Xir winked at Georgi.

Georgi and Xir had spoken earlier about the idea of sneaking off the ship but they weren’t sure if Zipnik would agree. They’d modified the Liquid-Q to act as a truth serum. They had planned to get Zipnik intoxicated using Xir as the lead. Xir was doing his job too well.

“It’s actually not a bad idea,” said Zipnik, sipping his drink.

“Zipnik, are you serious?” asked Georgi.

“Sure, if we do it together we can live like gods on the planet below.”

Georgi smiled. “Hell, if we beam down a few of the ARB kits we’d never need to do anything.”

“What’s an arbie?” asked Xir.

“ARB,” corrected Georgi.

“Artificial Asshole Robot Bitch,” Zipnik explained.

“Automatic Robotic Builder,” corrected Georgi. “Robots we used in Planetary Ops. They build themselves from scratch from local materials. They can build a whole city. It’d be like one big game.” Like all of his model, Georgi loved games. Some said this was another defect—at least, they’d said it before take-off thirty-five million years earlier.

“We can sneak out tomorrow before they start the 5K time burn,” said Georgi.

“Sounds a good to me...*hiccup...hiccup...who’s a gonna get the arbies sent out?*” asked Xir.

“I’ll set an automatic timer tonight,” said Zipnik. “Meet me at 55 time units after sunrise on P-5’s center desert at the L25J46 position—that sun worshipping colony, Egyptian or somethin’ like that...Hey, we’re outta Liquid-Q.”

“That’s a good thing,” said Georgi.

*Two Arul days later...*

Zipnik, Georgi and Xir took off their body tracking sensors and transported them back to the ship attached to a special electronic box. Sober, Xir used his brainpower to rig the sensors with a phony input device he’d designed the night before. The device would give body readings for all three men. Alexis, the main ship’s computer, would think they were all safely on board when the ship ran its 5K-time burn.

Georgi, Xir and Zipnik sat in the hot Egyptian desert under a reflective silver tent. They had clothes, a tent, a portable computer, a week’s worth of water and year’s worth

of Arulian freeze dried Snooky chips. Xir loved Snooky chips. Georgi and Zipnik found them nauseating. It was all in the genes.

Xir brought his Magnomover watch to keep himself amused and munched on Snooky chips. “Sure is hot out here,” said Xir moving a large boulder with his Magnomover watch. He arranged three large boulders into a triangle and popped open another bag of Snooky chips.

“Don’t you get tired of playing with that thing?” asked Zipnik. Zipnik and Georgi sat playing a three-dimensional board game. Georgi loved playing games.

“Naw, it’s kinda fun moving these rocks. I showed this to a few locals. A thousand of them bent down and bowed. They love this shit as much as they like Snooky chips.”

Georgi studied the board. Zipnik grabbed a military piece and moved it in threatening fashion. “When the ARB container arrives we’ll get our regular food. When the people here see what we can do to create a beautiful city this place is gonna be great. They are a beautiful race but still uncivilized.”

“You have to admit, the women look fine,” said Georgi.

“They do, but I can’t imagine living here without the sextronic.” Xir dropped another boulder. It rolled toward the three men until Xir caught it with the Magnomover watch force field.

Zipnik looked away from the board game and frowned. “You’d better be careful. It will take at least a month before there are enough ARBs to build a medical facility. We can’t afford to get hurt playing around.”

“I hear ya, sorry about that.”

Xir loved the Magnomover, a popular but dangerous device. It created a magnetic field under objects, which acted as a gravity shield. Without gravity and with a small reverse magnetic pulse, large heavy objects could be easily moved. Xir moved the boulder onto another pile. He pushed each rock to make sure they were solidly in place.

Xir looked at his watch, -10,002 P-5 time units. “Hey, the Galax-1 is scheduled to blast off in two minutes. You guys should stop playing that game. Put it on hold.”

“One sec,” said Zipnik scratching his head.

“When did you schedule the ARB container?” inquired Xir.

Zipnik sat studying a holographic strategy game called Gulp. He glanced at this watch. “I was a little Liquid Q’d at the time but I’m sure I set the transceiver for minus 10,001. I had to disconnect Alexis from the transport and do it manually since she’d override the invalid time stamp. We have another minute.”

“Great”, said Xir. “Do ya think they’ll see the transporter leave the dock before they jump to ALS?”

“Maybe, but it won’t matter. In the last two minutes they can’t reverse the ALS field generation for the Near Light Engines unless they blow up the ship. The ship will jump to the Almost Light Speed setting on time. Even if they cut the NLEs immediately, a thousand years will have passed.”

Xir knew the basic physics. Time for those travelling at Almost the Speed of Light, or ALS, passed at a different rate than it did for those at rest. It was an Ezium Fricus formula discovered many years before. Xir watched Georgi add some social intelligence boosters to one of his artificially created people on his Gulp Board.

“Why do you always add SOC boosters to your population?” asked Xir.

“It costs a lot in Gulp credits but it pays out in time. Newly-created populations are usually undereducated in the social sense. It’s often why they blow themselves up. More social stability means less internal wars. I can use those saved credits to build up my technology quicker, then start picking off the enemy.”

Zipnik shook his head. “That’s reverse psychology bullshit. He’s doing that to counterbalance some of my hidden technology developments that will exploit his people. It’s my hidden use of democratic propaganda that he’s worried about. He needs a smarter population—but it won’t work.”

“If Zipnik’s technology development was so hidden he wouldn’t be talking about it,” said Georgi smiling.

Xir did not really understand the Gulp game but had watched Georgi and Zipnik play for almost a year. Georgi was best, but Zipnik was second. Some of the ship’s other players had thought he was winning this game.

Xir looked at his watch. “Hey, it’s time. The transporter should materialize now.”

Georgi took about five seconds to finish updating his Gulp commander, stopped the game and then gave a puzzled look at Zipnik after looking at his watch.

“Wonder where the container is,” said Zipnik.

“Did you say you set the time for *minus* 10,001?” asked Georgi.

“Yeah, it’s a good time, ain’t it?”

“Did you put in an actual “minus” sign?” asked Xir.

“Yeah, why?”

“Doesn’t Herc set Alexis on a minus clock already since he uses our 10K drop off time as time zero?” added Georgi.

“Yeah, I don’t get your point.”

“It’s probably nothing but do you need the minus sign?” asked Georgi.

Xir gave Georgi and Zipnik a nervous look.

All three men looked at the scheduled transportation-landing site for the ARB container. Xir had made a big “X” and written “God’s Landing Site.” The container would include food, robots, technical manuals; everything needed to build a huge, powerful society—godly material. Seconds passed. The men fidgeted.

“Shit, if it doesn’t arrive we should head back to the ship,” said Xir.

“I second that,” said Georgi.

Zipnik opened up his Alexis terminal. “We can’t—we sent our body badges to the ship. There is no way to detect us. It will come. Probably some time delay because of the ALE fields.”

Zipnik knew that time was running out but he had an idea. “Gurp computer, do you have an Alexis module connector.”

“Yes,”

“Please patch me in.”

“Patched.”

“Alexis.”

“Hi Zipnik, you seem really relaxed. I’ve never seen your heart rate and pulse so steady, are you mediating?”

“No I’m not. Now listen, can you see if an ARB container number nine is set to transport?”

“Nothing set for now. We are doing a time burn in 18 seconds and counting, why

would we want—”

“Shut up. When is it scheduled to transport?”

“It’s set for 10,000.1 years. A minute after our next timeburn. Hmm...that’s strange, why did you set it manually?”

“Forget about that. How come it’s not shipping now. I put in minus 10,000.1, not plus.”

“The system calculates a minus time, thereby a minus times a minus is a plus, you learned that in your memory implants, didn’t you? I know you sometimes have trouble with details, I’ve told you before. Now why would you want to—”

“Shut up—how much time to the burn?”

“We are leaving in 2 seconds.”

“Send the ARB now!”

There was no response.

“Alexis, send the ARB now!”

“Alexis?”

“*Alexis??*”

The computer terminal speaker went to static. The ARB container did not appear.

Xir looked at Zipnik and Georgi: “Either of you guys want a Snooky chip?”

Captain Markus sat in his office looking at a front holographic image of Alexis. The computer holograph was an image of a lady in an Arul business suit, pleasing, but not sexy. Alexis did this on purpose. Alexis knew the Captain’s erotic brain-wave memory chips. This was her outfit. Occasionally she selected an erotic body type to tease

the Captain—but not now. They had important business to discuss.

“Okay, Alexis,” said the Captain. “Tell it to me straight, you don’t think my new beard works for the crew?” Markus pulled some of the growing hairs on the chin of his beard.

Alexis smiled. “The beard does not work *for me* but your charm does. Actually, I wanted to talk about two other situations.”

Markus smiled and rubbed his growing beard. “Good, I’ll keep the beard. What’s up?”

“I received a disturbing call from Zipnik before we did the timeburn.”

“What—I know he and his FoodTek buddies are complaining. Should I talk to them?”

“I don’t think in their current state they will want to talk.”

“Why not? I’m their Captain.”

“Because I believe they’re dead.”

“Hmm... What did they do, eat some of their new food designs?”

“No, they snuck off ship before we started the Near Light Engines.”

“How’d they get away with that?”

“They rigged their body sensors with phony inputs and beamed them up to the ship from a planet excursion. It appears that an ARB container loaded with robots and food was to be sent off the ship just before we jumped to near light. They probably planned to build a society during this time frame. I don’t think they wanted to wait through the timeburn.”

Markus understood. Some people wanted to give up and stick it out with a lower

level civilization but the ship's circle of power had disagreed.

“How come they didn't get the container?”

“Seems like one of the men forgot that we use minus time. They added a minus in the ARB delivery time, screwing up their intended time.”

Must have been Zipnik, thought Markus. He was never good with details. “Do you think they'll screw up the genetic work? If they do that we're screwed.” Markus knew that if that was true they should stop the timeburn, and see what unintended changes the three men made to the planet. *What could three men do without any technology?*

Alexis nodded her head. “That leads to the next situation.”

“What's that?”

“I automatically cut the Near Light Engines five minutes ago.”

“Why?”

“P-5 has some unintended signals.”

“What kind of signals?”

“Pyramidal structures were created to attract intelligent alien life. People in a level four society could view these markings from light years away, especially with the triangular energy fields created.”

*“Triangular energy fields? Are you telling me people down there already understand triangular energy?”*

“I'm not sure, but it looks like someone was trying to send a message.”

“Wonderful, how's the beacon doing?”

“It's another reason I stopped the engines. That beacon turned on five minutes

ago, and it's giving some strange readings.”

“We need to go down and check this out,” said Markus shaking his head. He knew the beacon would store millennia of data. This would help with adjusting the timeburns to make sure the planet developed correctly. If it went off, either the race was developed to the correct stage already or there were major problems. The only way was to figure that out was to get the Crystal beacon back on the AeroStella. “I’ll prepare a V2 scout ship,” said Alexis.

“Great. Please inform Joshua, we’ll leave ASAP.”

Markus looked at the timeburn clock on his wrist. One thousand two hundred and forty one years had passed on P-5. As he went to the V2 bay area, his sixth sense twitched, hot, like a fire. *Oh please, not another cooked planet.*

How could three men tough it out in a level two society? If they’d had an ARB the planet would surely show unexpected technological advances, but they hadn’t. How could they build a triangular energy device? Markus could’ve. Markus was a member of Swivarian FreeStar—a small secret society of a few hundred men who wore special pyramid-shaped rings. The society’s interests were eclectic. One was RevIntel—the ability to rebuild technology from scratch. FreeStar members could build a laser from raw materials. It might take fifty years, but they could do it. An Arul named Kikus had infiltrated them to write a book. In *Free to be Stupid as a FreeStar* Kikus wrote that RevIntel was “one of the stupidest and most pointless uses of one’s time”. Kikus dropped out of the FreeStar society when he found out the requirements just for passing that one test. It was one of three core tests in becoming a Gold FreeStar member. Markus was Third Degree Gold, the highest rank achievable. He had certain advantages over the

Aruls who'd become arrogant because of their technology.

Zipnik, Georgi and Xir sat under their silver reflective tent looking at the "X" next to "God's Landing Site." The desert wind covered the words with reddish orange sand. Each man looked at his watch. They knew the container would never arrive. A planet without technology was unthinkable. Xir stared into the distance.

"We're screwed," said Zipnik, "It's all my fault, I hate time settings."

Georgi couldn't help but rub salt in a wound: "Didn't you screw up a setting when we overshot a timeburn on P-2 awhile back?"

"Screw you Georgi, I didn't twist your arm to join this trip."

Xir still stared into the distance. "Guys, I think you should look at this."

Zipnik and Georgi looked up to see a hundred men walking toward the tent.

Xir spoke, as if to no one: "I promised a few of the men that we would have presents when the ARBs arrived."

"Why?" Georgi demanded.

"I wanted to build a relationship with the locals. I never thought the ARB container would get sent to the wrong place because we can't tell time." As Xir said it he wished like hell he could do something about his addiction to promises.

Zipnik looked as if he might punch somebody. "What are we gonna do?"

"I could give them the Magnomover," said Xir.

"Bad idea," said Zipnik. "We might need it to build something."

"Like what?" said Xir.

"A rock house, maybe."

A tanned man dressed in gold and feathers approached. A hundred similarly dressed men waited behind him. Xir, Zipnik and Georgi had local language modules. They knew they could speak in the local tongue, but use the Arul language between themselves.

The man approached Xir. “Sun God, are your brothers pleased? Have they brought the gifts you promised?”

Georgi spoke in Arul to Xir. “I think you can use this situation to say that the ‘brothers’ are not totally pleased. Buy us some time.”

Xir fidgeted, “*Ah...* the brothers are kinda busy right now. They wanted a sign of your affection.” Xir then gave a puzzled look toward Georgi.

The Featherman spoke, “We will please you, just tell us what to do?”

Xir scratched his head. “Ah... we’ll get back to you... in two days...ah, I promise.”

The Featherman slowly backed away and replied, “Dear Sun Gods, we wait for your generous request. But please understand time is important. Our people need something big.”

“*Big?*” inquired Xir.

“Yes, I’m here with our other elder leaders. They command hundreds of thousands of men. They need a big project, or prophecy has said times will be tough.”

Xir looked at the Georgi and shrugged his shoulders.

Zipnik said: “Ask him what he means by *tough?*”

“What do you mean by *tough?*” asked Xir.

The Featherman looked up to the sky. “Another Great War.”

“What?”

The Featherman looked at the men standing in the distance. “My people will go to war unless there is some big glorious project.”

“Well, I can promise you that your friend, er...your godly friend, Xir, can come up with something big.”

“Thank you, Sun God.” said the Featherman. “That would be nice because some of these men want to send the Sun Gods home to the Firestorm for forgiveness.”

Xir, Zipnik and Georgi all looked at each other and winced. Cultural concepts were not always accurately translated. The Featherman bowed and started to leave.

“How do you send a Sun God home to Firestorm?” Xir asked.

Zipnik and Georgi shook their heads, but it was too late.

“It is written in the Good Book—a three-day Fire Ceremony. We put you on two hundred logs, pour four hundred gallons of olive oil over you, and burn you, giving you back to the Sun. But first we must make an opening for the spirits to fly home.”

“What kind of opening?” asked Xir.

“We drill a hole in your head to allow Spirit passage. It’s the most beautiful way for Gods to go home.”

The Featherman bowed and left with the other leaders.

Xir wiped sweat off his brow. “Guys, this is one hell of a shit storm.”

“Firestorm,” corrected Georgi. “We need something to keep these guys happy.”

Zipnik shook his head. “I thought maybe we had holes in our heads, but they want to make sure of it.” He sighed, and lay down on his air-conditioned sleeping bag. “It’s hot and I need to think. I’m gonna rest. Let’s talk later.”

“Georgi, why don’t you come with me to the water hole with the trees. There’s some fruit there,” said Xir.

“Good idea,” Georgi agreed.

“Get me some fruit too,” added Zipnik, getting into his sleeping bag.

Georgi and Xir walked off, their heads covered in white cloth hats. The material was specially designed to stay cool even in the desert. As they walked Georgi said:

“We’ve got the most advanced technology in the world on our ship.”

“Our ship, which is thousands of years in the future.”

“True, but don’t we have that same technology burned into our memory implants.”

“Yeah, so what, we don’t have any ARBs?”

“In a sense, yes, but it’s all up here.” Georgi pointed at his brain.

“Well it may be up *there* but I remember reading one of the Kikus book series that said it would take an Arul fifty years just to build a computer from scratch.”

“*Fifty years?*”

“Yeah, and I’m pretty sure they said the most efficient way to build a new computer was to have an old one design it.”

Georgi dug back into his reading memories. “Yeah, I think I read *Free to be Stupid as a FreeStar*, and I think they spoke about that.”

Georgi saw the trouble: one built technology upon previous technology. Even small changes caused problems. He recalled a memory implant meltdown in a Physics lab at the University for Brain Wave Implant Studies. An EMF pulse erased all school data. The school had off-site backups for over five hundred years of data, but it didn’t help.

Data more than seventy years old was useless because no one had the hardware to read the crystal storage device. Designs for the backups were stored on the University system as a backup: they'd been wiped out. The data was there, but there was no system to read it. The protocols and formats had died with the people who wrote them.

“I read that book too Georgi. We're in big trouble, aren't we?”

“Well, let's put it this way: could you build a computer from scratch?”

“Like, assemble the parts?”

“No. I mean making computer chips out of this dirt.”

“No single person can do that,” Xir said.

“Ok. How many people, and how many years?”

“I don't know,” said Xir.

“Even a FreeStar who studies that shit, would need twenty-five years and two thousand people.”

“Are you a FreeStar?”

“No, I'm not.”

“Let's get some fruit, I don't feel well.”

While Georgi and Xir looked for food, Zipnik contemplated the intricacies of acquiring high level technology. Living without technology would be unbearable; no air conditioning, no holographic games, no food processor, no sonic toothbrush, and worst of all, no sextronic sex. Though a few P-5 Mirk ape women looked cute, the idea of real sex with the locals disgusted Zipnik. Some said that if an Arul man was stranded on a planet long enough without sextronic sex, he would revert to barbarism and have actual

physical sex. Only the Swivarians practiced physical sex. *Yuk*, thought Zipnik, *what an unclean way to reproduce.*

History modules told how the desire for sex wasted many natural resources on planet Arul. The genetic engineers had implanted a closer bond to the sexatronic device, making the Arul man more controllable. Arul women produced children through artificial insemination. Some had real sex as part of the marriage ceremony but the custom was said to be painful.

Zipnik recalled a piece he'd read on the topic in one of his education memory modules. It was by Professor ScnikerSnokerSnugglePuggle. The article said:

...for over 100 years the Sexatronic has satisfied the carnal desires of Arul men and women. No longer need we be involved in unhygienic sexual acts to procreate. No longer do we have to worry about disease. We once spent most of our resources in preparation for this barbaric act. Now this wealth can be saved. Many relationships failed. Arul man tried to have sex with as many women mates as possible. It was his genetic code. With the advent of the Sexatronic and genetic imprint sciences Arul man now focuses on scientific discovery and building a better home, while Arul woman can live a safe and worry-free lifestyle.

Sexatronic had other advantages: it allowed men and women to have sex with a machine that could imitate any type of person. The users chose body type and behavior. Arul men liked it from the start; it was like having a mistress. Married men soon chose Sexatronic sex over having sex with their wives. Some women preferred this. Many Arul men became unattractive after marriage, gaining weight and losing passion. With

Sextronic the men weren't really cheating, so the women didn't mind. Better to have him home with his robot than out screwing around. Many women got bored with the sex, no matter how varied, and learned to use the Sexatronic as a listening module. The makers responded with a psychiatric therapy module. Women built online relationships with the Sexatronic created personalities. Women preferred these personalities to their actual husbands. For a time the Sexatronic devices were integrated. People could log into a Sexatronic model that was an online person. They could have sex with that person via remote sensory equipment. Online men and women could modify their bodies to look more beautiful. This ended with the genetic creation of 'perfect people'. All Arulians were shaped to sexual ideals. By this time the Sexatronic provided more variety than real sex ever could. Without sexual competition the political powers created mandatory genetic enhancements to change the personality of the masses. Unknown to the masses most of the ruling class exempted themselves from the changes. Arul turned into a planet of mediocrity—there was just no 'drive'. Scientists speculated that sexual drive had pushed all Arul progress. But it was only speculation.

Only the Swivarians (who were among those who'd avoided this new genetic soup) kept their drive. They sent Captain Markus and Joshua out to create a New World.

But Zipnik did not know that story. Right now he had more pressing issues at hand. He needed a fast track to technology—to comfort, and most of all to the Sexatronic. He would build one, or die trying. He knew it might take forever.

Zipnik tried to focus. The current situation was hot. Zipnik looked up at the P-5 Sun. Even well past midday the P-5 Sun was hotter than hell. The reflective tent cover protected against the burning rays, but not against the bad feeling Zipnik had about losing

the ARBs on the AeroStella. *They could have even built a Sextronic!* Zipnik cut off that thought.

*Focus, focus,* thought Zipnik. He studied Kiya, his local mini-Alexis computer. The Kiya console was a small circular disk, recharged by sunlight, with a hundred-year life. It was all they had. Kiya created a small holographic image above the spinning top of the mini-Alexis terminal.

“Kiya, how long will it take for you to explain how to build an ARB from scratch?” asked Zipnik.

“Zipnik, my positioning sensors were shut off, where am I?”

Zipnik looked around them, then back at the machine. “We’re stuck in the desert on P-5 at location L25J46.”

Kiya turned on her positioning sensors. “Zipnik, I cannot connect with Alexis. Do you know why?”

“They did a timeburn.”

“My probability algorithms insist this was not an accident. Did you choose not to go with the ship?”

“You’re one smart lady, Kiya. Let’s not get into that. I’ve got more pressing shit. I gotta focus. Can you confirm some things for me?”

“Of course, Zipnik.” Kiya’s psychological algorithms told her Zipnik was in trouble.

“Good—Please confirm this for me. How long will it take us to build an ARB from scratch?”

“Do you mean from basic bio-neuro chip designs and then manufacturing?”

“No, I mean, if you need to build a manufacturing plant from scratch.”

“Well, you’d need to install Alexis level testing—”

“No! No! What I mean is if you don’t have anything, just the dirt, just this goddam planet and three bumbling fools! ....Sorry, I’m a little stressed. Let me rephrase this—how long will it take us to create an ARB from just dirt and sticks and stones? Got it? No Alexis system, no technological nothing—just dirt, sticks, stones, that kind of shit.”

Kiya wasn’t sure if this was a joke, game or a real question. “Dirt, sticks and stones? Hmm...No bio templates? No laser etching, no—”

“No nothing. Nothing— just this planet.”

“Hmmm...” said Kiya pausing. Kiya had as much power as any Arulian computer save the Alexis. Kiya checked, crosschecked then re-checked. She processed over 14,359,235,290,240,320 calculations, then used her neuromatic biologic processors to add in some random calculations for an evolutionary kick. She knew Zipnik would not like the answer.

“Hmmm.”

“What the hell is ‘hmm’?” asked Zipnik

“Zipnik, this one is a little tricky. Do you have basaltic rocks near by?”

“*Basaltic rocks?*”

“Or limonite, goethite, or better yet if we had some ferrite we could make steel. But first well need a smelting oven, something with high temperature. We can make some hammers to mold the metal and then—”

“Stop Kiya! *We need to build hammers to get ARBs built?*”

“Well, once you have hammers we can start making equipment to make wire, and metal lathes and so on.”

“How long to ARBs—if we get the basaltic whatever, and make hammers.”

“Assuming we get the metal works going, it will take the three of you working ten-hour days, four-hundred-and-fifty-two years...working as a team of course.”

Zipnik pulled at his long black hair.

Kiya continued, “Of course you three will be dead as Arulian rocks long before we finish the project, and I’ll shut down three hundred and fifty years before completion.” Kiya did a scan looking for minerals. “My sensors aren’t picking up any of the minerals needed nearby. That could pose a problem.”

*Problem?! cursed Zipnik to himself.* “Kiya, how come Arul went from metal working to ARBs in three hundred years?”

“They had thousands of people helping.”

An idea flashed in Zipnik’s head. “How many people would we need to optimize the metal works, wire-making and all that shit to get the ARBs built?”

“Two thousand two hundred forty two people. They wouldn’t all be needed at first, but as things got specialized we’d need to separate them into groups. That would speed things.”

“How much quicker?”

“Hmm... we could build them in twenty-two years.”

At least we’d have technology before I got too old to enjoy it, thought Zipnik. Maybe even a Sexatronic.

“I think we have the people,” said Zipnik.

“That’s great,” said Kiya, “but that still doesn’t solve our other problem.”

“And what’s that?”

“I don’t see any of materials needed. My sensors are limited to ten clicks and all I pick up are native fruits, oils, some sulfur and Georgi and Xir.”

“It’s a big planet, they gotta have these type of natural minerals.”

“I would think so too. Otherwise we could wait for a large meteorite.”

“What?”

“Meteorites are usually composed with all the metallic elements needed to create tools.”

“Kiya, if we have to wait for a meteorite, we’re in big trouble.”

“We’re in big trouble already.”

“Thanks for reminding me, Kiya.”

Georgi and Xir approached with a basket of fruit. Xir chewed on red fruit. “Make sure you save some for me,” Zipnik yelled.

Georgi gave a thumbs up. Xir threw a piece of fruit, which Zipnik caught.

“How does this taste?” asked Zipnik looking at the red fruit.

“It tastes great,” said Xir walking into the tent. “The locals call it a tomato.”

Zipnik took a bite. It was not really sweet, but juicy and delicious.

“Wow. I was worried that it would be sweet.”

“Naw, not this fruit. Very strange this planet. Most of the fruit is sweet, kinda ruins the flavor,” said Georgi.

“Well, I’m glad to have some fruit that’s not sweet.”

“Guess what I figured out?” said Zipnik chewing on the tomato.

“What?” asked Georgi logging at the Kiya terminal.

“I’ve found a way to solve two problems.”

“Okay, tell us.”

“Kiya says if we can find some basaltic metal or something...”

“Basaltic rocks,” corrected Kiya.

“Yeah, whatever, basaltic rocks—if we get some of those basaltic rocks we can then forge some metal and within twenty years we’ll have ARBs built, right Kiya.”

“Twenty-two years,” corrected Kiya.

“Twenty years... twenty-two years... close enough.”

Georgi suddenly understood Zipnik’s lack of focus on details.

Kiya spoke. “As I mentioned earlier, we need two thousand two hundred people, basaltic rocks or limonite, goethite—”

“—Right, right” said Zipnik cutting in. “We’ll use those feather people to do it, a *big* project to keep ‘em busy. Keep ‘em off firestorms. They can do the metal works.”

Georgi looked at Zipnik. “So by making metal we get ARBs?”

Zipnik looked puzzled. “Kiya, what do we do after we make the metal?”

“We make molds to make hammers in the blast furnace. Then we make metal containers. We’ll need a hotter furnace and carbon, and we’ll go from iron to steel. Once we have the metal works going we make wire. With wire, magnets, and water dams we make electricity. After that we will start—“

“Slow down,” said Georgi. “Kiya, do you mean two thousand people will take twenty-two years to build ARBs?”

“Two thousand two hundred forty two people,” corrected Kiya.

“This can be done in twenty-two years?”

“Yes, if we educate the people. I can do that. Some will need to start taking classes immediately. We will need programmers, physicists, engineers, doctors, biologists—”

“Kiya, could you please limit yourself to short sentences in the future?” asked Georgi.

“Yes,” replied Kiya.

“Now Kiya, who is going to teach these people?”

“I will,” answered Kiya.

“We’re going to teach them science, math, physics, all that shit?”

“Yes,” replied Kiya.

Georgi looked at his team. He knew the problem well. It was taught in Planetary Society building. Species typically neglect to write a plan to build technology from scratch on the assumption that they will always have technology to help them out. Georgi quietly thanked god for Kiya. She had the FreeStar plans in her memory banks.

“Fine, let’s get started. We’ve got twenty years,” said Zipnik

“Twenty-two,” corrected Kiya.

*What went wrong?* Captain Markus recalled the first planet, “P-1”. A meteorite popped it in half. Then P-2’s inhabitants decided to test a nuclear bomb on a planet chock full of uranium—it was one big explosion. P-3 looked good until a nearby gas giant flared up into a second sun, scorching all life within a hundred million miles. P-4’s genetically juiced up locals were allergic to intelligence. *And now we have a mutiny on P-*

*5! Creating technology has its problems.*

Markus stared into space—literally. The stars shone uselessly. Ice crystals formed on the shaded part of the AeroStella cabin portal near an outside robotic portal cleaning mechanism. Markus looked at the rainbow crystalline reflection and cursed to himself.

*Wish we could turn those crystals into a good old-fashioned snowstorm.*

Markus missed changeable weather. He missed having a planet to call home. Space travel was great, but planetary habitation was instinctive.

*Maybe we can change things.* Markus stared at ice crystals dreaming they'd turn into a snowstorm. *Maybe P-5 can survive a few time burns.* Markus popped up a screen of P-4 planetary records. "Damn," he whispered, watching the planet explode. "I get so frustrated."

He looked over to Joshua. "We cooked over five hundred million inhabitants on 4P."

Joshua grimaced. "Markus, we didn't *cook* that planet. Their people did that. They should have clearly seen their miscalculation with anti-matter containment. Let's just worry about the current situation on P-5."

"We enhanced those stupid people. I think we smartened 'em up too quick—it's so damn hard to tell how to do this shit—"

"I did the calculations for the IQ metrics with Hercules. There's no way to tell when a higher IQ will create a bunch of bumbling idiots. Calculations sometimes become chaotic. P-5 will be better. The numbers are cleaner."

"Yeah, assuming that those three morons didn't change the genetic plans by stepping in early."

Markus felt an inner twitch. No way to tell about the war factor. The Arulians had almost forgotten war. What was that proverb about the lessons of history? “So far we’ve got zero wins playing this God shit, and it never works the way you expect it, never. Too many damn variables. Get the V2 scout ready. Check the beacon. We need to see what Xir and his team screwed up.”

“Yes Captain.”

Markus shut up. Genetic manipulation (or “GM”) was a way of life on Arul. They’d figured out DNA sequencing three thousand years before. Arulians were built to spec. Markus’s colony was the only natural one left. It was supposed impossible for a natural to make StarShip Captain, but he did. Everyone had thought it was a fluke but Markus.

The idea of retiring from twenty-five years of research was soothing—but boy, what a way go. Screw around with unknown planets, cheat time, cheat the local animals, trick them into insanely creating technology as fast as they could—manipulate a world into looking like the world you left behind 25 years before. *And for what?*

When you took into consideration time dilation, the Arulian home world they’d left behind had aged over thirty five million years in their quarter century of “on ship time”. These were the effects of the NLE, or Near Light Engines. A great scientist had derived the relativistic equations during the Arulian Atom Wars. After that time science was banned. Arulian religion dictated that time was universal, and time differences were blasphemy. War was okay, blowing up nations was ok, but fooling with time was banned. When Professor Ezius discovered the Time Equations he was exiled to the Arul Mountains. He was the lucky one. An atom bomb blew up his home city the following

week. Disappearing in the mountains, he took on the aura of legend. He was never seen again.

Ezius's formulas proved true. His followers erected a statue of him at Mountain Majevis. Even religion gave time some leeway, admitting it was subject to "perception."

In his years away from the time of his home planet, Markus had learned more than he wanted about time. He wondered what Arul had become. He could, in theory, go home and see. Just point the AeroStella, turn on the anti-matter engines and gravity dampers, pick an NLE speed and burn time into the future. Time was water to a growing race. The problem was getting that race to rapidly grow technologically without destroying themselves—a task harder than anyone realized. If they could succeed then they could secretly retire on the planet and live like they did on planet Arul. Could this be done on P-5?

*Two weeks later (Xir, Zipnik and Georgi's relative time) in Egypt...*

Zipnik watched as workers moved two-ton rocks, creating a base for a pyramid. Xir supervised the locals, carefully using the Magnomover to move the large blocks.

Georgi and Xir watched from a sheltered tent. Xir smiled. "Great idea... big project. Keep the idiots busy while we create a beacon for someone out there to see us."

"I doubt anyone will come," said Georgi.

"Why be negative?"

"Even if someone home was still alive and could see the faster than light interdimensional triangular energy from P-5, and even if they understood it to be from us, we are thirty-five million light years away. We'll be dead by the time they get here."

“I kinda figured that, but these will send out a steady pulse of triangular energy... just in case. I won’t hold my breath. We’ll get the locals trained and build technology as fast as we can. Just be glad Kiya had the FreeStar educational modules in her memory banks.”

“Ok, I’m glad. I’m also letting locals do it on their own to save time. They’re getting to like Kiya. They keep asking her questions.”

“Did you tell Kiya to keep her mouth shut on our plans?”

“No, why, what’s the big deal?”

“If she explains everything to them, it could be trouble. We need to control these people.”

“I don’t think it’s a problem.”

In the distance Zipnik came running. He panted as he entered the tent.

“What’s the matter?” asked Georgi.

“The locals, they’re starting some firestorm ceremony,” exclaimed Zipnik.

Xir wiped sweat from his brow. “Holy shit, please don’t tell me they want to burn us?”

“No, no,” said Zipnik.

“Well that’s good,” said Georgi.

“Not really, they built this wooden rack and filled it with straw, then they made a pedestal and put Kiya on top. They are going to burn the computer.”

Georgi and Xir dropped their jaws. Xir spoke, “*Why would they do that?*”

A feather man, the local’s Elder, walked into the tent. “Because we don’t want to be slaves.”

*“You speak Arul?”* asked Georgi.

“I’ve learned your language. Kiya showed me how to put a metal string on my head and then showed me how to connect it to her, she gave me the power. Now I speak Arul.”

Georgi shook his head. “Why are you burning her?”

“She is what you call a ‘computer.’ She said you will use us as slaves to make a thing called technology. It will ruin our culture and religion. She said the only way to stop you was to shut her off. Firestorm is our custom, so we will send her home.”

In the distance a large fire flared.

“Stop! We need her, it’s important,” yelled Georgi. In the distance gallons of olive oil were poured onto the fire.

“I do have good news,” continued the Elder, “if you help us build a few more of those things called ‘pyramids’, we will allow you to live among us as elders.”

As Kiya burned she transmitted a signal to the beacon she knew was hidden on P-5. Her security measures would not allow her to let the men build technology before its time. Captain Markus had installed a failsafe module. She transmitted two warnings to the beacon before exploding.

*P-5... 1,241 years later...*

Markus and Joshua entered the largest of the three pyramids. The beacon was intact. Joshua connected it into an Alexis transmitter.

“She looks fine,” said Joshua.

“Yeah, well, doesn’t look like they did much damage here. The people are evolving, but no suicidal tendencies yet.”

Over the intercom Alexis said: “The connection is good, the beacon is fine.”

“What do we have?” asked Markus.

“Kiya self destructed by scaring the locals into burning her. She left us a warning. Xir, Zipnik and Georgi were trying to use her FreeStar plans to build a technological society. She predicted this would fail.”

“Why?” asked Markus.

“These people do not want to be slaves to technology. But she did give us a way to create a technological planet.”

“How is that?”

“Religion. With faiths come factions, with factions come wars. Wars will jump start technology, and soon these people will be its slave. It’s in their makeup.”

“That not logical,” said Joshua.

“Religion never is,” said Alexis.

“I find hard to believe—”

“You don’t have to worry about belief... or faith or any of that. Just make sure they do,” said Alexis.

“Okay,” said Joshua. “If it can make for an easy retirement...what do you think captain?”

“Sounds like a plan,” said Markus flashing a light on a wall.

“One last thing she said,” interrupted Alexis..

“What’s that,” asked Markus, eyeing the wall drawings.

“Don’t lose the FreeStar backups. The planet might resist.”

Markus knew the odds of a race learning the truth and becoming free were slimmer than getting to P-5 in time to save three Arulians.

“By the way Alexis, did your scans locate Xir and his team’s bodies?”

“Yes, they were buried in each of the three tombs. It must have been ceremonial.”

*Planet building. A tough science,* thought Markus. He looked at a drawing of people stabbing people. “Alexis, when the time comes, how do we shut off the religions and wars?”

“We must consider that during the next time burn. I’m sure we can do it.”

For a brief moment Markus remembered the proverb he’d been trying to recall: *Those who forget history are quickly reminded by a swift kick in the ass.* Then he stepped up out of the tomb and into the sunlight. Earth was calling.