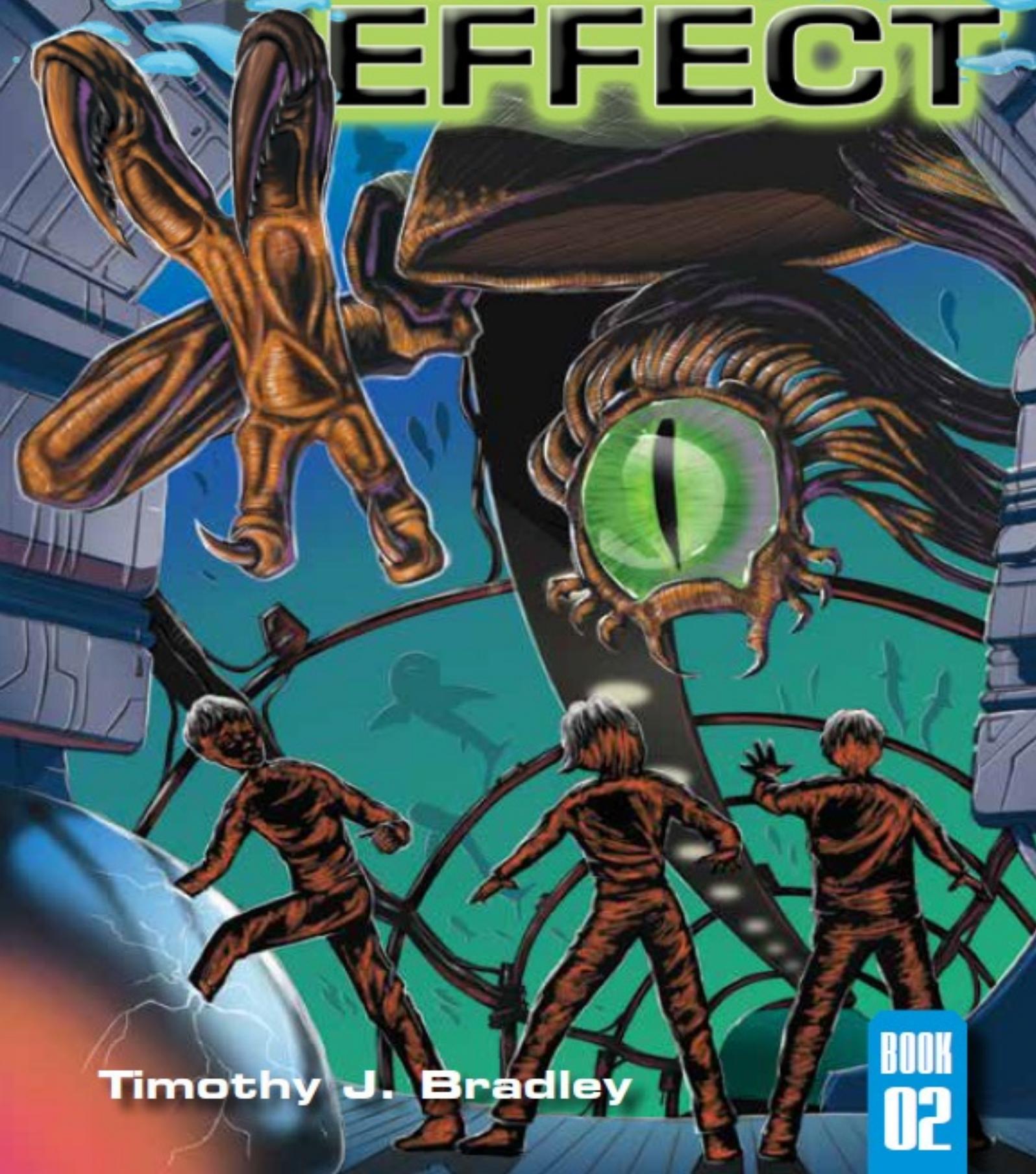




# RIPPLE EFFECT



Timothy J. Bradley

BOOK  
02

This is a work of fiction. Names, characters, places, and incidents are either products of the author's imagination or, if real, are used fictitiously.

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# CHAPTER 1



## Ten Years Later

“Why didn’t someone tell me this radiation suit would give me a wedgie?” Fourteen-year-old Sidney Jamison had tried to adjust the bright-orange protective suit every way he could, but he just couldn’t get comfortable. “Getting zapped by radiation can’t be any worse than this,” he complained. He could feel droplets of sweat beginning to form under the snug collar around his neck.

Hari Gupta, Sid’s roommate, whispered, “Maybe it would fit better if you didn’t have your pants pulled up around your chest.”

“Ha! Ha!” Sid grumbled. “Your suit is twelve sizes too big. You look like an idiot, just so you know.”

“I look like an idiot? *You’re* the idiot in this scenario, idiot,” Hari said.

“*Stultulo*,” Sid teased in Esperanto.

“*Tanga*,” Hari shot back in Filipino.

“*Idiootti*,” Sid retorted with a grin.

“*Murkha*,” Hari smirked. “That’s Hindi. Top that!”

“Wait, wait a second...” Sid said, racking his brain for another translation of the word *idiot*. “It’s not fair! You speak twice as many languages as I do, so you know twice as many insults.”

“Forget it. You lost,” Hari said. “Loser.”

“*Silencio!*” Penny Day interrupted just as Sid was opening his mouth to reply with *loser* in Japanese. Penny was the same age as her friends, but sometimes she thought Sidney and Hari acted like a couple of five-year-olds. She relied on her natural British accent to sound older and wiser when she

needed to keep them in check. “Can’t you two keep quiet for more than thirty seconds at a time? I’m trying to hear what—”

“Is there a problem, Ms. Day?” Dr. Paradyme asked sternly as he led the Introduction to Advanced Energy Theory class into a distant wing of the physics lab.

Penny, mortified, replied, “No, Dr. Paradyme. Sorry.”

Sid’s shoulders shook as he tried to keep his laughter silent. Penny elbowed him in the ribs as Dr. Paradyme continued. “Now, as I was saying... we are about to enter a secure area. This is where the model of the fusion reactor is stored. Everyone, please put your helmets on.”

Sid wrestled the heavy bubble-shaped helmet over his dark curls. The helmet’s transparent material blocked atomic radiation but let in light. Sidney could make out the tools in the lab, but the helmet made him feel top-heavy. *I guess I was wrong about this suit not getting any more uncomfortable*, he thought.

The students crowded in, eager to learn what this year’s Intro to Advanced Energy Theory class was going to cover.

After looking over the students in their suits, Dr. Paradyme’s voice came crisply over Sidney’s suitcom. “Very well, we can now proceed into the reactor area.” He pressed a button, and a heavy set of doors rumbled aside, revealing a high-arched roof supported by thick beams. The class of thirty students moved into the next room. Talos, the AI, rolled in behind them, stopping just inside the doors.

A single light was focused on a basketball-sized sphere hanging motionless about ten feet off the ground. The sphere’s surface was pierced with hundreds of holes. Javelinlike rods pointed at the sphere from all angles of the room, with thick cables wiring them to a small control console against the far wall.

“You’re looking at a working model of a fusion reactor. It was designed

right here on Goddard Island, nearly ten years ago. I played a part in its construction, as did Dr. Macron and some other young physicists.” Dr. Paradyme paused unexpectedly and looked at Sidney more seriously than usual as he noted that last part.

*What?* Sid thought. *I’m only thinking about wedgies—I didn’t actually say anything this time.*

“As you are all aware,” Dr. Paradyme continued, “our planet is running dangerously low on resources. Some metals can be replenished through off-planet operations, such as the automated mining factories out in the asteroid belt. Water exists out in space as well, and robot tugs can bring huge icebergs from the outer planets to Earth.

“However, the one resource that has eluded us has been energy. Past methods involving fossil fuels were costly and polluted the environment. Solar, wind, and hydroelectric power have been with us for some time, but they haven’t delivered the high level of power needed to sustain the world’s growing energy needs. From fire to fossil fuels and atomic fission, our need for more and more energy has ravaged our planet, destroying land and polluting the atmosphere. We can look to our neighbor Venus to see how this scenario might end.” He gestured toward the screen, which showed images of the Venusian surface: a blackened, burned, melted wasteland. “Our civilization is in desperate need of an abundant source of energy that won’t destroy our planet.”

Dr. Paradyme walked over to the control console on the wall. “Atomic power initially appeared useful. Early nuclear generators used atomic fission to generate energy. As you may know, *fission* occurs when large atoms are split and release a significant amount of energy. The process worked, but it wasn’t efficient enough. The one process that has promised abundant energy is *fusion*, the same process the sun uses to create enough energy to warm our planet from ninety-three million miles away. Instead of splitting large atoms, lighter atoms are fused together to create heavier atoms, releasing enormous amounts of energy in the process.

“The world’s first working fusion reactor is about to come online, and I’m pleased to announce our class has an exciting opportunity to take part in this momentous event. Students will be visiting the reactor in the underwater WAVElab just off the coast of Goddard Island, starting in two days’ time.”

The class buzzed with excitement.

“Small groups of Sci Hi students will live and work on WAVElab, helping the laboratory staff and observing the reactor as it is tested for the first time. This is an extraordinary opportunity and a weighty responsibility. You’ll be helping the WAVElab scientists determine the capabilities of the reactor, so let’s take a look how it all works,” Dr. Paradyme instructed. “Everyone, stand outside the red circle.” Sid stepped back. Once all the other students were clear, the professor switched on the reactor. The lighting in the room shifted to blue. “The particle projectors you see pointed at the central chamber are now firing a stream of hydrogen atoms at high speed. And this is where we get into one of the more amazing elements of this device—a micro black hole lies at the center of the sphere.”

Sidney grinned at Hari. They were standing less than two feet away from a black hole. How much more lethal could this class get?

“This is the first time a stable black hole has been created in the lab,” Dr. Paradyme continued. “While there is much we don’t understand about black holes, we do know that the gravity found at the center of them can be dangerously intense, destroying anything within its radius. After much trial and error, we’ve found a way to use the extreme gravitational pull of a miniature black hole to speed up hydrogen atoms. At the same time, strong magnetic fields keep the black hole from consuming those hydrogen atoms as they’re projected into the reactor.”

The particles were much too small to see, but Sidney couldn’t help trying to picture what was happening inside the reactor. He drifted away from the group to study one of the particle projectors. It was about ten feet long and segmented, narrowing to a fine nozzle that pointed at the floating sphere.

Sidney felt the familiar mental itch he got whenever he was curious. It was the itch that had gotten Sidney into Sci Hi, but it had also gotten him into a lot of trouble.

“When the hydrogen atoms collide,” Dr. Paradyme continued, “they fuse and become helium atoms. The act of fusing the atoms releases energy at a high rate. The energy is collected and beamed to a storage area, somewhat like a battery. I’ll bring up a simulation of the process that occurs inside the sphere.”

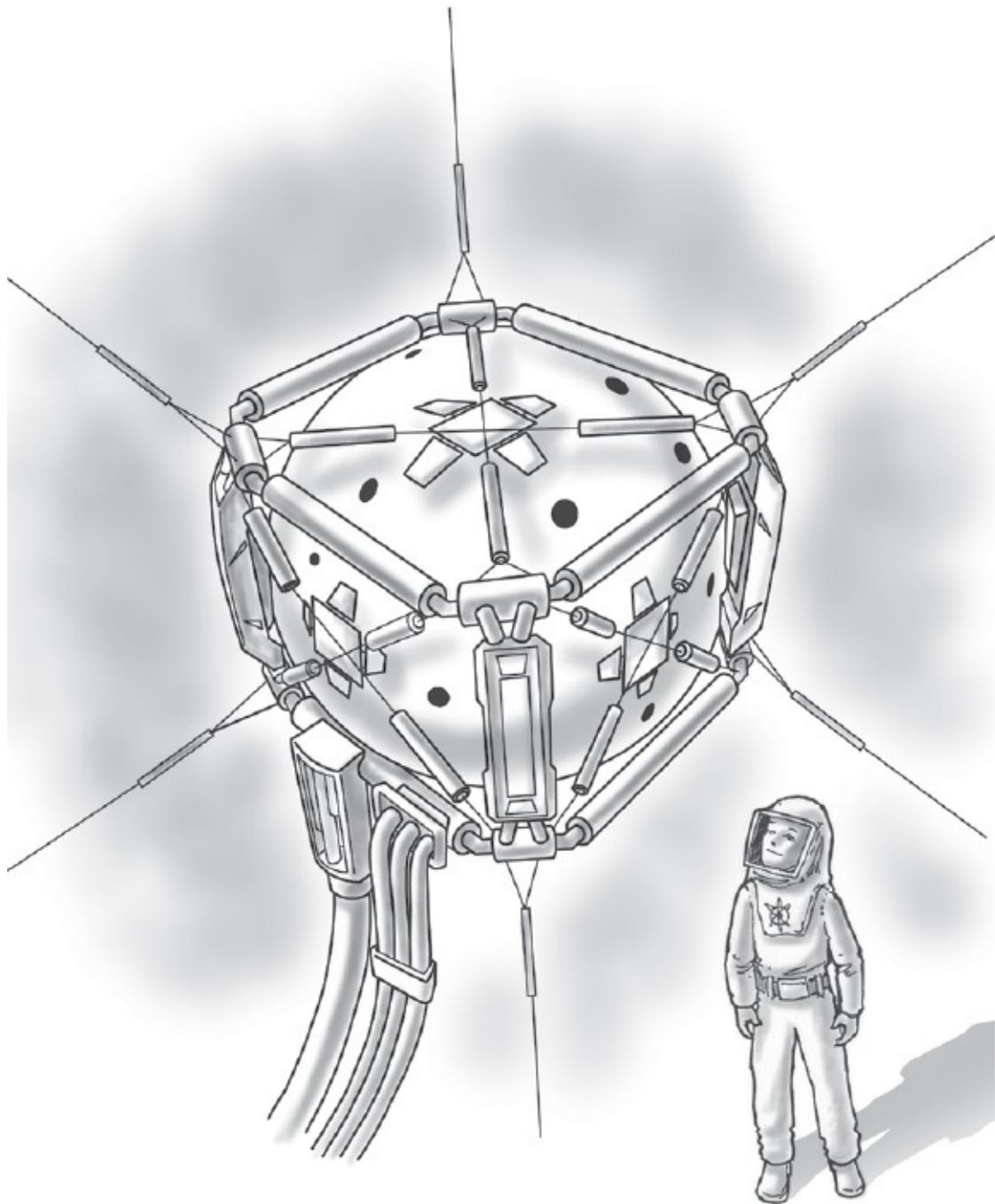
Sidney turned back to watch as Dr. Paradyme opened an image window and tossed it out toward the students. The window enlarged to the size of a movie screen. As particles collided, it showed what looked like fireworks erupting.

The students let out a collective “ooooh” as the sparks and particle trails flashed and glowed. The reactor was already producing tremendous levels of energy at the lowest setting, and it clearly had the potential for even more impressive results.

While everyone else in the room was watching the atomic light show, Sidney sidled away to study one of the shaft-like projectors up close, stepping over thick cables to reach it. He ran his hand over the smooth surface, where he encountered a small panel that popped open when he pressed on it. *Totally lethal*, Sidney thought.

Inside, a small touch screen displayed the stats of the projector. Sid studied the readout, which showed the temperature and the rate the particles were being fired at the black hole.

By now, Sid felt as if his brain were crawling around inside his skull as his curiosity reached full strength. He watched his hand move to the touch screen as if it weren’t connected to his body. *What would happen if this baby were cranked up to full power?*



A tiny voice in his mind noted, *This is NOT a good idea*, but in typical Sidney fashion, he ignored it.

Sidney moved the slider to the right to bring the projector to its maximum firing rate. He couldn't see any difference in the projector. But when he looked back at the image window, he saw a heavy stream of particles blasting the spherical chamber, and the particle collisions had increased to the point where the image window was filled with a flickering light. There were so many particles colliding, it looked like a snowstorm.

Wow, he thought, awed by the sight.

He glanced over at Dr. Paradyme, who had jerked in surprise when he realized that the particle collisions had increased dramatically.

Suddenly, the room went from a cool blue to an angry red. A mournful alarm sounded.

Dr. Paradyme snapped at Talos, “Get the students out now! The reaction sphere is destabilizing!”

*Uh oh*, Sid thought.

The particle projectors were busy making minute adjustments, trying to hold their focus as uneven streams of particles nudged the sphere out of its optimal position. The reactor sphere was starting to move out of alignment. The magnetic fields couldn’t hold it steady.

Talos’s voice boomed, “*All students, clear the room immediately. Avoid entering the red circle. Proceed to the exits at once.*”

Revolving lights around the huge double doors spun, illuminating the exit in sweeps of yellow light.

“*MOVE!*” Dr. Paradyme shouted when he saw the students standing frozen in shock.

Penny grabbed Hari and Sid and pushed them in the direction of the exit. “C’mon, you guys, get everyone moving!”

The three friends started shoving any students who were still standing into action.

When Dr. Paradyme tapped on the reactor’s control console, a computerized voice responded, “*Shutdown initiated. Fusion containment at sixty percent...sixty-five percent...seventy percent...*” The professor hurried across the room, making sure all the students were clear. As he left the reactor room, Talos shut the heavy doors.

Dr. Paradyme led the students through the staging area to the locker room

where the radiation suits were stored. He quickly removed his radiation suit, sat on a bench with his voxpod, and opened an image window, checking footage from the various cameras monitoring the reactor. He suddenly stopped flicking through the images, a frown forming on his face.

Sidney had been sneaking glances over at him as he removed his own radiation suit. He knew the whole thing must have been his fault. Goofing around with the particle projector had been a monumentally moronic thing to do. His only justification was that he had wanted to see what would happen if he did it. Well, he had found that out—the hard way.

Dr. Paradyme glared fiercely, sending a shiver through Sid's guts. The scientist crooked his finger at Sidney. His message was clear: *Come here.*

“What's going on?” Hari asked quietly as Sid shuffled past him.

“I'm an *idiotti*. You can have all my stuff after Dr. Paradyme kills me,” Sid muttered as Hari looked on, baffled.

Dr. Paradyme brought Sid into a small briefing room, and sat at a glass table. “All right, Sidney. Tell me why you thought it would be a good idea to touch a piece of scientific equipment you know nothing about while it was operating?” He brought up the video of Sidney opening the panel on the particle projector. “Whatever possessed you to do such a thing? Where was your judgment, your common sense, your brain? Didn't you even think about the possible danger you were putting not only yourself but your entire class in? Black holes are some of the deadliest objects in the universe. I've personally seen how destructive they can be. This island and everything on it could have been destroyed.” He paused to give Sidney a hard look. “Well, what do you have to say for yourself?”

“I'm...I'm really sorry, Dr. Paradyme,” Sid said miserably. “I guess I wasn't really thinking....”

Dr. Paradyme's large bushy gray eyebrows rose. “You *guess* you weren't thinking?”

Sid shook his head. “No, I’m positive I wasn’t thinking. I was watching the reactor, and I wondered what would happen if the particle stream was intensified. I wanted to know if that would increase the energy produced by the reactor. I just really wanted to find out, that’s all. It’s like my brain was on fire, and all I could think about was finding an answer. That kind of thing happens to me a lot, but I’ll try harder to stop it.”

Dr. Paradyme’s expression went from simmering anger to thoughtful. “Well, Sidney, I will tell you that my first thought is to expel you from Sci Hi immediately. That kind of foolishness can’t be tolerated when conducting scientific experiments with potentially dangerous materials. Carelessness can be deadly.”

Sid’s heart sank as Dr. Paradyme’s words settled over him like a blanket of doom. *No!* he thought, *I can’t go back to Bleaker High!* The idea was horrifying.

“However, I know you’ve shown great promise here,” Dr. Paradyme said, “so I am willing to give you one more chance. And honestly, your intense curiosity reminds me of someone I used to work with. He was a good friend, but he, more than anyone, understood the risks involved with this research.” He paused to consider Sidney. “I’ll keep this between us for now. I don’t think it has to be referred to Dr. Macron...*this* time. But you must learn to control your impulses.”

Sidney perked up. Was he hearing what he *thought* he was hearing?

“From now on, I’ll be keeping a close eye on your performance. If you step out of line again, I can assure you the consequences will be swift and severe. Consider this probation an opportunity to do some thinking about how you might best use your curiosity to further science rather than destroy its progress.” Dr. Paradyme folded his hands together. “That’s all, Sidney. You can go.”

Sid stood up. “Thanks, Dr. Paradyme...really. It won’t happen again.” He hurried out of the room before he could say something dumb and returned to

the locker room to pick up his voxpod and sweatshirt.

Hari and Penny were waiting for him.

“So?” Hari said. “What happened?”

“Is everything all right?” Penny asked.

Sid took a deep breath and nodded. “Yeah, he’s cutting me some major slack this time. If either of you see me start to do something stupid like that again, hit me, will you?”

“We didn’t actually see what happened,” Penny said. “All of a sudden, the lights turned red and we had to leave.”

As they walked back to their dorms in the Tesla building, Sid explained how he had tinkered with the reactor.

“Wow,” Penny said, bouncing a gravity ball for emphasis as she walked. “That was brilliant.”

Sidney could hear the sarcasm dripping from her voice. “Yeah, sometimes I can be kind of a moron.”

“A *ciemniak*,” Hari agreed. “That’s Polish, if you were wondering.”

“Hey, Jamison!” someone called out across the grassy courtyard between buildings.

It was Terence Mayfield, one of their classmates, looking perfectly groomed as always. His sandy blond hair and blue eyes made him look like he just came from surfing. Sidney didn’t know him too well, but he knew Terence was more famous for the expensive high-tech sneakers that could change their color and texture to match the rest of his outfit than he was for his deep thoughts. Sid was pretty sure he had never seen Terence ask a question in class. It wasn’t clear why he had been admitted to Sci Hi, but Sidney suspected it was related to the holographic dataflag Terence flashed over his head, showing off his bank-account balance every chance he could.

“Nice work on the reactor. You should get a job with the Alchemists! You

could destroy science single-handedly!” A couple of Terence’s buddies laughed as if they had just heard the funniest thing in the world.

Sid simmered. He racked his brain for a comeback, but all that came out was, “You—I—gah!” He never had been good at quick replies. In another hour or so, he knew the perfect retort would pop into his mind, too late to be useful.

Hari said in a low voice, “I think Terence’s brain contains a tiny black hole that prevents any actual thoughts from being produced.”

Penny laughed. “I think it’s just pure vacuum in there. Maybe there’s a little cosmic dust bouncing around in his head.” As they walked away, she asked Sidney, “You know what’s going on, right? Terence is just jealous of you. He’s one of those guys that likes when A leads to B every time. Pay some money and get something in return. Drop a ball and watch it land. Go to Sci Hi and get a good job. At least that’s how he thinks.

“You’re always making connections and coming up with new ideas to try (even if they aren’t always successful). That kind of thinking just rubs people like Terence the wrong way—at least that’s what it says in our floor-monitor psych guide. You make being a genius look easy. Terence has to think things through more. And really, he would rather buy the results or read about them in a book, not spend time testing some new idea.”

“Well, there’s not much I can do about that,” Sid mused.

“Just ignore him,” Penny advised. “Besides you’ve got plenty else to worry about with Dr. Paradyme.”

“I know, I know,” Sid said, “You guys don’t know the half of it.” As they walked to their next class, he had Hari and Penny laughing at stories of the different things he had dismantled when he was younger, including the trash disintegrator he had rigged to disintegrate the fence in his backyard. Their favorite part was hearing about the epic grounding that followed.

Shaking his head, Sidney resolved never to do anything like that again—

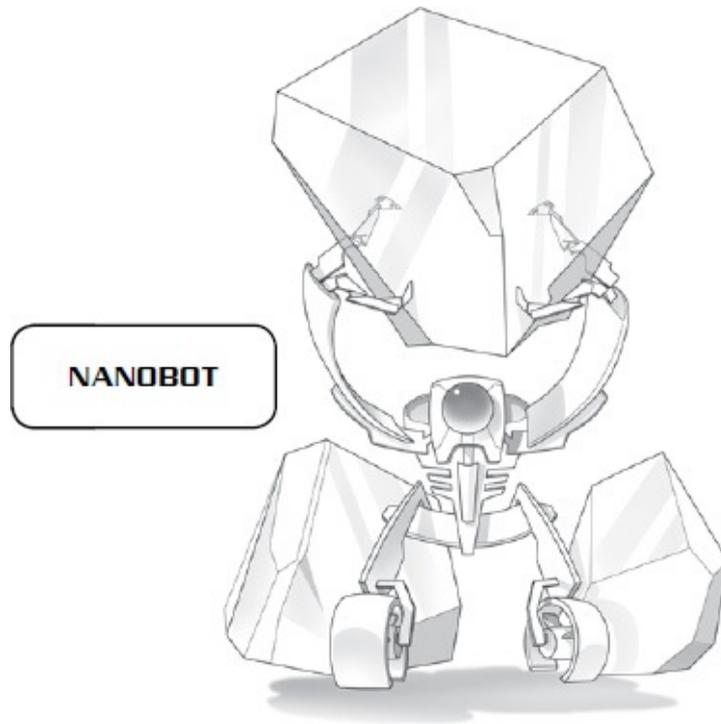
unless it was for something *really* interesting.

## CHAPTER 2



That afternoon, Penny was working on a microengineering project in one of the common rooms in the Tesla building. She was wearing VR goggles and gloves to control the movement of the nanobots on a small glass slide on the table in front of her. The minuscule machines were flat, short-legged figures that looked like miniature metal sumo wrestlers, but they were too small to see without a microscope. The goggles and gloves allowed Penny to maneuver the bots as they built a structure using molecules of salt. She was trying to construct a complex dome, layering the crystalline molecules just right, when suddenly a rhythmic thumping blurred her vision. The molecules collapsed in on each other, and the nanobots keeled over, unable to stand upright in the “earthquake” that had struck the table.

“Blast!” Penny cried, tearing off her goggles and removing her gloves. “Two and a half hours of work, pitched in the bin.” She could still hear and feel the rhythmic beat. Someone’s music was turned up way too loud, and as a Tesla floor monitor, she needed to put a stop to it. Noise in the dorm was fine within reason, but when it started to affect others’ work, it crossed a line. She marched the nanobots back into a container filled with several thousand other little machines and pocketed it. Then, she followed the sound through the dorm hallways to find a small group of students gathered outside the door of Sid and Hari’s room. They had their hands over their ears, blocking them from the music blasting from behind the door.



Penny rapped on the door. No response. She knocked again, louder. Nothing. When she pounded on the door again with her fist, this time adding a couple of kicks for emphasis, the door opened a crack.

Sidney peered out, his one visible eye taking in the crowd standing outside. “Oh. Hi, Penny. What’s up?”

“What’s *up*? You’re bursting the eardrums of everyone in the building! Plus, you just cost me a lot of time on my microengineering assignment. Now, open the door, and let’s talk about this.”

“Yeah, sure...come on in,” remarked Sid.

“All right, everyone, that’s enough,” Penny said waving away the crowd outside the door. With a little muttering, the other students went back to their own rooms.

Sighing, Sid opened the door a tiny bit more to allow Penny in.

Penny took one look around and started laughing. “What *happened* in here?” she shouted over the thumping music.

The room looked like a split-screen before-and-after view of the damage that might be caused by a tornado or an earthquake. There was a strip of

yellow-and-black striped tape running down the middle of the room, right up the walls and across the ceiling. On one side of the tape, it was neat and orderly, with everything in place. A 3-D poster listing the world's most unusual spiders and signed by Hari's favorite arachnologist, Dr. Hilesh Motwani, hung proudly on the wall—with one of the arachnids poking a hairy leg out of the frame. A perpetual image window counted down to the next intergalactic departure, showing how much more money Hari needed to save in order to join the crew (less money than Terence had in his entire bank account, but it would still probably take him another ten years). On that side of the room, Hari was sitting at the desk under his bunk with his back to Sidney and Penny, a summary of the latest black-hole research displayed on an image window in front of him. He didn't seem to notice what was going on.

The other side was a massive jumble of clothes, books, and tools that looked to be centered around Sid's desk. The stuff had exploded to cover almost every inch of floor space on that side of the room. Sid's bed was unmade, and there were stacks of clean and rumpled clothes thrown on top of it with an empty suitcase on top of all that. A small picture of Sidney's dad was peeking out from a pile of circuits and tools strewn across his desk. Sid was holding a multidriver, and Penny could see that the room's Housemate was partially disassembled. The folding manipulators were hanging down from the ceiling-mounted unit like arms from some massive stick insect. The grippers of each spindly arm held clothes, shoes, blankets, and a wastebasket that had been dumped onto the floor. A monstrous set of speakers rocked back and forth in the corner of the room.

"Can you please turn down the music?" Penny yelled, both amused and exasperated.

"What?" Sid screamed.

"TURN IT DOWN!" Penny cried.

When Sid gestured with his right hand, the music shut off. "Okay, okay,

no need to shout.”

“I don’t know how you can think with that much noise. Or Hari! Hari, how can you concentrate with that much noise? Hari?” Penny asked without getting a response. “Hari?” Penny tapped him on the shoulder.

The boy jumped in his chair, startled to see Penny. He touched a couple of small pyramid-shaped things at each end of his desk. “Hey, Penny. What are you doing here?”

“Are you kidding?” Penny asked. “The noise in here was shaking the whole building!”

“Oh. Well, I had to share a room with my brother Pradeep for years, and he liked to blast his music even louder than Sidney does. So I invented a noise-cancelling device that nullifies sound waves. I just switch it on when Sid starts playing that horrible goth-pop he listens to whenever one of his experiments fails.”

“Horrible?! You said you *liked* Echo Chamber!” Sid interjected.

“I was just being polite,” Hari said. “You’ve been miserable since your little reactor fiasco.”

“And what’s with the mess in here?” Penny asked, looking around the room. “Did your Housemate malfunction? It’s...it’s...insane in here.”

“I didn’t like the way our Housemate was arranging all my stuff. I’m just doing a little tinkering so it will store things the way I want them,” Sid retorted.

“On the floor,” Hari stated flatly.

“Just because you’re a neat freak doesn’t mean I have to be. I get some of my best ideas when I’m combing through everything!” Sid countered.

“Look, I’m one of the floor monitors, and I’ll have to report this,” Penny said. “You’re creating a huge disturbance. Not to mention messing around with Housemate—you can’t do that stuff just because you feel like it.”

“Penny, come on!” Sid pleaded. “I’m already in enough trouble with Dr. Paradyme! I’ll pick up everything and keep the volume down, okay?”

Penny relented. “All right, but you have to promise...”

Just then, a video call came through on the room’s image wall.

“Accept call,” Sid said, desperate to change the subject from his sloppy housekeeping. The view on the screen showed Sid’s mother. “Hi, Mom!” Sid said, relieved.

“Hi, sweetie! Good to see you! And I can see all is well there—at least your decorating skills haven’t improved,” Ms. Jamison said wryly. Sidney glanced over his shoulder and tried to block the image window from the chaos behind him. “I’ve got a surprise for you,” she continued. “Look who’s been here for a few days, visiting.”

A man with sandy hair leaned into the frame and grinned. “Hey, Squidney!”

“*Uncle Mitch!* What are you...I thought...I didn’t know you were back from Switzerland,” Sid cried. Mitchell was Sid’s father’s younger brother. After Sid’s dad died when Sidney was three, Mitch had come to visit Sid and his mom whenever his work as a physicist allowed. Sid always felt strange when he saw him; he loved hearing his stories about when he and Sid’s father, Robbie, had been kids, but seeing him was hard, too. With his angular face, straight brown hair, and brown eyes, Mitch actually looked a lot like his brother, so seeing his uncle was a constant reminder to Sidney that his dad was gone.

Sid had spent a lot of time with Mitch over the years and he loved to hear about his work. For the past year, his uncle had been doing work with the massive particle accelerator in Switzerland.

“I got some good news. My work wrapped up early, so I’m coming out your way a little ahead of schedule to help with the start-up of the fusion reactor at WAVElab. I’m flying out tonight, and I’ll be there at Goddard

Island tomorrow afternoon.”

“Are you going to help us with our Advanced Energy assignment?”

“Absolutely. Although, it might end up that you help me more than I help you. We’ve got a lot of work to do in the lab down there.”

“That is totally lethal! I can’t wait to see you. Hey, I don’t think you’ve met my friends yet...” Sid introduced Hari and Penny to Mitch.

“I hope you’re all packed and ready to go,” Mitch said. “I saw your names on the list. You’re all in the first group of students to live on the lab. Wait until you guys see the full-scale reactor. It’s going to blow your minds!”

“We’re all quite looking forward to it,” Penny enthused.

“Excellent!” Mitch grinned. “You guys can help me start that baby up. I can use the extra hands. It’s going to be a big job.”

As Mitch and his mom disconnected, Sid saw his own reflection in the dark screen. The big, goofy grin on his face caught him by surprise. It reminded him of the same smile his dad wore in the picture on his desk. He couldn’t wait to get started.



The next morning, Sidney was late getting to the auditorium where Dr. Macron, the headmistress of Sci Hi, was scheduled to give a presentation on WAVElab. Her gray hair was gathered into a tidy bun. Her green eyes were hidden by dataglasses that sparkled as the information she was to present flickered past her eyes. She was tall, thin, and slightly stooped as she stood at a podium, looking out at the students. Sidney spotted Hari and Penny sitting in the middle of a row down near the front of the auditorium. As he squeezed his way down the row, he accidentally stepped on someone’s feet. “Sorry about that...”

“Geez, Jamison. I should have known it was you,” Terence snapped. “You’re the only one whose feet are bigger than your brain.”

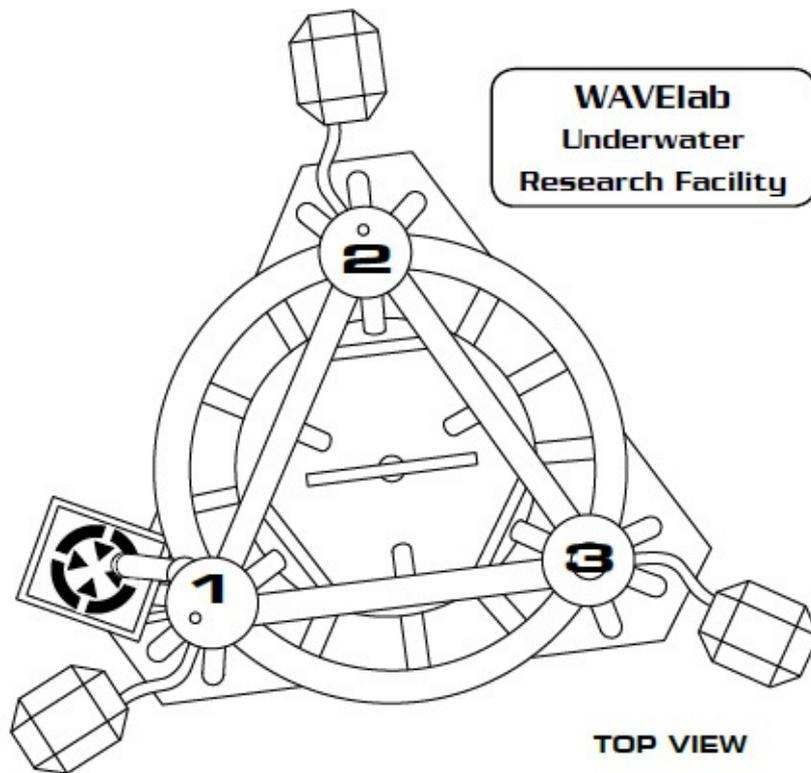
Sid was caught short searching for a comeback again. “Oh, yeah? Well... well...it is me!”

“*Sit down!*” someone hissed from the next row back.

Sid cringed as he stumbled to the seat Hari and Penny had saved for him. *That was about the stupidest thing I’ve ever said in my life*, he thought.

Dr. Macron started her presentation. “Welcome, everyone. We are excited to be working with the WAVElab staff during this important stage of their research. To be of assistance, you’ll need to know more about what’s being done there.

“First, let’s take a look at WAVElab itself.” A huge image window opened at the front of the auditorium, showing a diagram consisting of three tall cylinders joined by tubelike passageways. “WAVElab was originally built several years ago to conduct oceanic research around the world. It was built in modules so it can be disassembled and moved to a new location easily. Today, a wide range of researchers use it as a secure, controlled environment to conduct their experiments in. Cylinder 1 is dedicated to the living quarters. Cylinder 2 houses the aquarium and biology labs. Cylinder 3 is used by the physicists and other scientists working on board.”

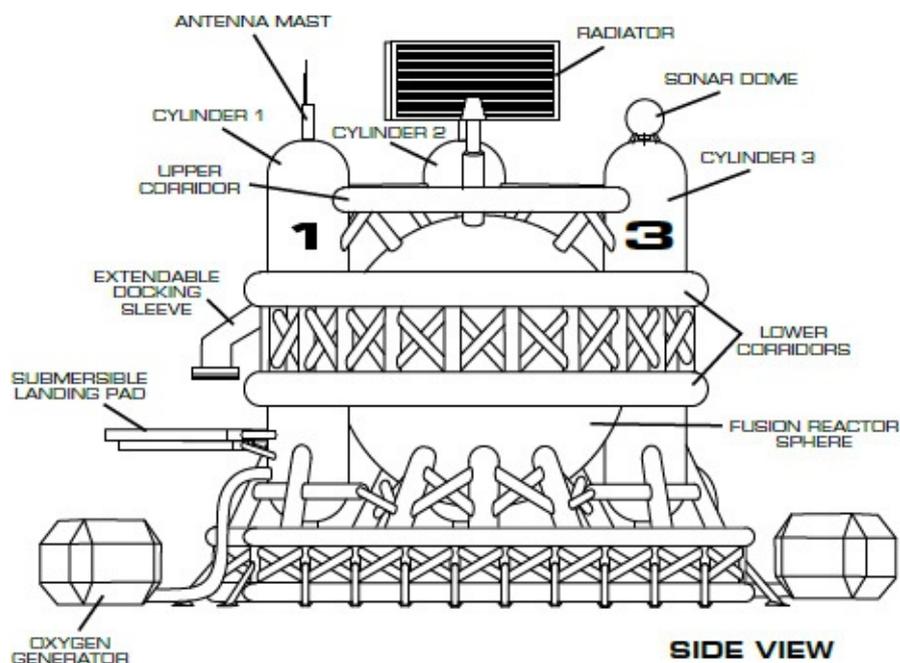


The diagram exploded apart to show the different modules making up the lab.

“You can see the area between the cylinders is open. That’s where the fusion reactor is,” Dr. Macron continued.

A large sphere appeared, filling the space. The sphere became transparent. Sidney recognized the series of particle projectors arrayed around the sphere, all focused on another much smaller sphere floating at the center.

“The faculty at Sci Hi has offered their expertise, and we’ve been proud to partner with such an elite group of researchers. The crewmembers on WAVElab are truly at the top of their fields. Dr. Paradyme, will you walk us through the reactor’s history?”



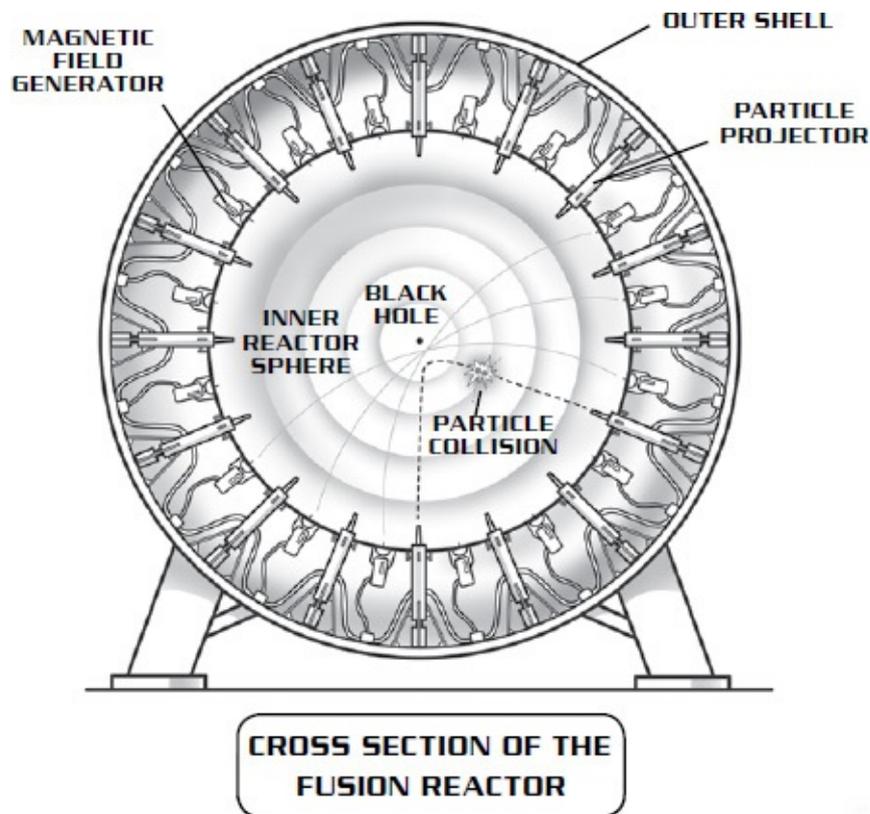
Dr. Paradyme walked across the stage as the students and staff applauded. Sidney sunk a little lower in his seat, hoping he wasn't visible. He was still stinging a bit from the scientist's warning.

"Fifteen years ago, several specialists from around the world came here to Goddard Island and developed a miniature reactor. Their model offered a proof of concept, and the results were compelling," Dr. Paradyme said. "Unfortunately, their work was not without problems." He glanced nervously at his notes. "There was an...accident," Dr. Paradyme said, searching for the right words. "A large explosion destroyed the reactor. Lives were lost, and many years of research were stalled." Dr. Paradyme paused to regain his composure. "Certain factions of society have objected to this research. They claim that the black hole in the reactor could consume the Earth and kill us all. Unfortunately, news organizations have been broadcasting these claims, lending legitimacy to these factions, despite the fact that their levels of expertise are not in any way equal to the scientists working on the reactor. These detractors have no evidence to support their objections and are hoping to infect the public with a fear of fusion power, even though it is completely unfounded, as we have taken every precaution possible. Dr. Macron and I have met privately with these news outlets and asked them to refrain from broadcasting such unsubstantiated views. So far, we haven't had much luck

attempting to convince them to relay factual information rather than emotionally based scare tactics.”

Sid exchanged a glance with Hari and Penny. What was Dr. Paradyme talking about?

“Despite these objections, over the past five years, a full-size working reactor was built with help from nations around the world. The reactor is an exciting addition to WAVElab, a location where the equipment will be secure and the team’s work can be conducted privately. The Sci Hi faculty and students will offer their expertise to the WAVElab crew as the reactor is ignited,” Dr. Paradyme said, glancing at Sidney, who was too busy getting excited at the prospect of living underwater to notice.



Sidney checked his voxpod for the group assignments. Thanks to his uncle, he already knew Hari and Penny would be joining him at WAVElab. But Sid’s mood crashed when he saw Terence was in the same group.

Sid tuned back in just in time to hear Dr. Paradyme say, “Keep in mind that the success of this project could very well solve humanity’s energy needs

for the next several centuries. Cheap, abundant, clean power will enable us to transform the Earth, and we may finally begin to explore distant areas of the cosmos. Humans will be able to take on new challenges and possibly find answers to questions we've been asking about the universe ever since the first early hominids looked out into the night sky.”

Sid's brain was itching again. Dr. Paradyme's speech had ignited something inside him that had been waiting for an outlet. Explore other planets? Other stars? Maybe even other galaxies? In a vast and wondrous universe, Sci Hi seemed to be the just the right place for Sidney. He knew his curiosity could get a little out of control sometimes, but he had to believe that his excitement was one more sign that he was headed in the right direction. He couldn't wait to get out there and discover things.

Even if Terence had to come along.

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