



By Eli Hatton

PART 1:
Home Sweet Black Hole

Chapter 1 (Teaser)

Alan Barrera couldn't wait until the end of the day. The Galactic Research Agency was unveiling its new space telescope, The Hawking Maxima. It was going to be able to take the highest definition photos that were previously limited to personal cameras, and have the longest view of any telescope in the galaxy since the Hubble XVI was released four years ago in 52887. Alan and his best friend, Eric Mendez, were on their way home from a nebula in the outer rim of the Milky Way. They were cataloging how fast this nebula could make stars for their science class project.

"I am stoked for Hawking Maxima, Eric", Alan said

"Me too! Just think about what we will find when we can zoom in on the edge of the observable universe!" Replied Eric

Eric and Alan, along with their science group, were traveling in an Alcubierre 5X spaceship, which was of course equipped with a negative matter warp drive. Alan and Eric were in the cockpit, mesmerized by the stunning view of a neutron star. They were surrounded by computer screens and a large curved window at the front of the spaceship. The walls and ceilings were modern in nature, perfectly white with little yellow accents and the occasional light grey climate control interface.

"Hold on," said their group's supervisor, Mr. Stack, who was also piloting the ship, "We are entering warp speed"

Alan was quickly snapped out of his trance and pulled Eric along with him as they made their way to the main cabin and buckled themselves into their seats.

"Here we go!", Mr. Stack exclaimed

Looking out of his small window, Alan watched as a bubble of negative-mass matter formed around the ship, and with a *Crack!* The universe behind them went dark as they sped towards home at one and a half times the speed of light.

Alan and his peers, along with 2 billion other people, lived on a giant ring-shaped space station that rotates around the black hole at the center of the Milky Way, Sagittarius A*. This space station, along with the smaller, spherical space stations that also orbit the black hole but at a further distance, is the center of all civilization in the galaxy.

As they exited their warp space bubble, the science group could see other teams docking around them as their ship drifted towards an oval-shaped port with lots of metal hooks and bars and flashing lights. Alan thought it looked like the mouth of *Shark*, the ancient beast he had learned about in his joint history-biology classes. Their ship had reached the edge of the ring, and with a loud CLANK, their spaceship was connected to the space station. Mr Stack directed everybody off of the ship (everyone had to duck to get through the small, round door), and the students emerged into a long hallway with a light grey floor and white metal walls. There were bright lights attached to the seam of the ceiling and the wall, and they curved off into the

distance, seemingly going on forever. The hallway was crowded with students from all kinds of classes, on their way to lunch.

“Let’s go back to class and check in with the other groups before lunch, okay?”, Mr. Stack said.

This caused a few groans from the group, but everyone obediently followed their supervisor back to the astrophysics classroom. Alan went to The Tyson School for Advanced Science Students, and he loved physics, specifically physics about space, or astrophysics. Alan was thankful every day for living on the Sagittarius Space Station because he could learn about and experience black holes by looking out his window. Eric also went to the Tyson School, and he was more interested in neuroscience. Alan and Eric were both at the top of their respective favorite classes, although they performed quite well in nearly every other class, too. The group had arrived back at the astrophysics classroom. Mr. Stack was a geology teacher; he and the other chaperones went back to their classrooms, and the students filed into class.

“Thanks, class,” said their teacher, Professor Mallory, “We will discuss our field trip next week. Go get some lunch.”

“Alan, could you stay back for a little?”

“Okay. Save me a spot at lunch, Eric!” Alan called

“Will do,” said Eric.

Alan walked over to Professor Mallory’s desk, which was black and covered in stars, galaxies, nebulae, pulsars, and everything in between.

“What is it, Professor Mallory?”

“You are a very gifted physicist, Alan.”

“Thank you, but I’m not *that* good,” Alan said humbly.

“Yes you are,” replied Professor Mallory, “And you know it. I have been telling a few of my friends about you, and guess who wants to meet you?”

“Who?” asked Alan.

“James Hansen!” announced Professor Mallory.

James Hansen worked as the president of the Galactic Research Agency. He was one of the most skilled, galaxy renowned astrophysicists alive. It is rumored that James Hansen descends from the great Stephen Hawking himself!

“No way,” Alan said, “No Way”

“Oh yes, my friend, this is quite true,” Said professor Mallory with a smile, “He expects you in the school library immediately after the telescope unveiling. Study room number four”

“Wow,” Alan said, “Wow, wow, wow, I can’t believe this is happening!”

“It must be very exciting”, said Professor Mallory.

“Thank you SO MUCH!” Alan exclaimed.

“It’s my pleasure,” replied Professor Mallory, “You have a bright future ahead of you, Alan, and I want to help make that future come about in any way I can. Are you going to the telescope unveiling?”

“Of course I am,” Alan said, “I would never miss something like that”

“Good. I will see you at the unveiling, then. You may go to lunch. Have a good day, Alan.”

“You too, Professor Mallory, and thanks again for everything,” said Alan.

“No problem! Now go eat. You look hungry” Professor Mallory cried as Alan walked out the door.

As soon as nobody was looking, Alan jumped for joy, put his backpack in his locker, and sprinted to the lunchroom to tell his friends the good news.

Chapter 2

Alan was just finishing telling his friends about how he would meet with James Hansen when he realized he hadn't been eating his lunch. He took a bite of his meatball sandwich as Eric and their other friend Cenolo gaped at him. Cenolo was a Rangarian. Humans and Rangarians, another intelligent race, had found each other about 52,000 years ago, and were generally peaceful. In fact, the Sagittarius space station was made in collaboration between Rangarians and Humans. Rangarians were semi-translucent purple beings, slightly smaller than Humans. They are invertebrates and have no bones, so they are blob-like and move by expanding and contracting the lower areas of their bodies in an inchworm-like way. They also have huge shells that look similar to a trilobite's, and they sense through electromagnetic waves, and not light waves. Because of this, they have no need for eyes.

Alan was extremely hungry, so he kept digging into his sandwich as Eric and Cenolo argued over whether they were allowed to come with Alan to see James Hansen, and if so, who would get to go.

"I'm pretty sure Professor Mallory wanted it to be a one on one meeting," Alan said, looking up from his meal.

This was met with a collective sigh of disappointment.

"It's okay," said Alan, "I will tell you all about it, and Dr. Hansen might even allow you guys to come with me another time."

"I guess", replied Cenolo (He was speaking Nelantic, his native language, but every spoken language in the galaxy was translated into a language that the hearer knows by an implant in their brain. This implant is inserted into everybody in the galaxy on their third birthday).

The bell that signifies the end of lunch rang, and Alan and his friends split up and went to their respective classes. The rest of the school day was quite mundane; Alan liked history, math, and English, but nothing particularly interesting happened in his classes that day, and by the time the bell rang he was practically shaking in anticipation for the Telescope Unveiling.

Alan ran out of school to meet Eric at the usual spot: outside Raymond's, their favorite restaurant. Of course, there was no time to eat, but they always met at Raymond's.

Alan and Eric were at the Miranda Intergalactic Theater and had taken their seats, waiting for the telescope to be unveiled. Alan saw Professor Mallory sitting down nearby and waved. Professor Mallory nodded in acknowledgment and smiled. The various conversations in the auditorium quieted and eventually stopped as the lights dimmed. A few seconds later, James Hansen took the stage. He was a medium-sized, skinny man who looked to be about 30

years old. He had a small goatee and a barely noticeable mustache. His hair was light brown, and he had light blue eyes, just like Alan's. He was wearing Black khaki pants with a grey blazer and a green tie. The stage lights glinted off of his dark skin as he greeted the crowd with a loud

"Hello, fellow learners!"

He proceeded to introduce several of his colleagues as the people who were instrumental in the making of the Hawking Maxima. Most of the presenters sat down on large fluffy chairs, but James Hansen decided to stand up while he gave his speech.

"First of all, I would like to thank everyone for coming here this afternoon. Your support is worth more to us than you will ever know," Dr. Hansen said.

The crowd cheered and then was quiet again as the speech continued:

"As you may know, this project has been in the making for 5 entire years. And boy are we proud of what we have accomplished. Not only have we used the latest and greatest technologies in this telescope, but thanks to my amazing team that I have here on stage-- as well as everyone else who contributed to Hawking Maxima, we have been able to pioneer our very own tech. And we are confident it is going to be the best telescope the galaxy has ever seen. Many groundbreaking discoveries will be aided by Hawking Maxima in years to come and I can't wait! So here is Andrew DeMelano to talk about exactly what our telescope will be capable of. Andrew, take it away!"

James Hansen sat down in one of the chairs as a tall man with a large shaved head stood up.

"Hello! Who is super excited and can't wait for this telescope to be revealed?"

Cheers erupted from the audience.

"Great, Me too," Andrew said "So I will make this as quick as possible. The Hawking Maxima will be 5 times faster and more durable than the Hubble XVI, and it will be capable of zooming in up to 10 times closer to objects and seeing 3 times further. We have partnered with Nikon to give Hawking Maxima the image quality of their best cameras, and, for the first time in history, this telescope can record 32K video footage. That's right. Not only will we be able to take beautiful images of the deepest parts of our observable universe, but we will be able to capture it in action with high-resolution video. No more grainy, slow, 5 second clips. With this technology, we will be able to learn much, much more about the cosmos. Bang!" Andrew said these facts in a fast, loud, comical voice as if he were a sports announcer. "Thank You!"

The audience erupted with both applause and laughter, and news reporters could be seen excitedly clicking away at their tablets.

James Hansen was standing again.

"So, who's ready to see this telescope?" James asked, and as the audience cheered, three large screens turned on behind the presenters, and together they all displayed a live video feed of a large, round capsule floating in space with HWKG_MXMA printed in bold on the side.

"Here we go!" he exclaimed excitedly.

James Hansen, the other presenters, and the entire audience together counted down together as numbers appeared on the screen in front of the capsule.

**“TEN,
NINE,
EIGHT,
SEVEN,
SIX,
FIVE,
FOUR,
THREE,
TWO,
ONE,”**

And with a BANG, the capsule broke in half and floated away, revealing the Hawking Maxima and prompting a large round of applause.

The telescope was white and long, thick in the middle and thin on the ends, with rings of blue lighting and solar panels running along each side. The part of the telescope that actually looks at the universe was inside, and it protruded out of each end of the casing. These regions were shiny, black, and covered in mirrors. Just by looking at it, you could tell that the Hawking Maxima was the best telescope the galaxy had ever seen.

“Amazing, right?” said Dr. Hansen, “I will now turn it over to Alicia Zheng to take this telescope for a spin and show you what it can do. Alicia, let’s do this!”

James sat down as one of the presenters, apparently Alicia, stood up.

“Thanks, James!” Alicia Zheng said as she pulled out a tablet, “Some of the furthest away things in the observable universe are quasars, black holes with galaxies forming around them from the early universe. One of the furthest quasars from us is 45.4 billion lightyears away. Let’s take a look at it.”

She pressed a button on her tablet and the screens behind her changed to an image of what looked like a blue, cloudy, spiraling galaxy, except that the black hole at the center appeared much larger and more powerful than most, and the galaxy was ravenously eating up matter from every direction, creating a beautiful vortex of blues, purples, and little wisps of red and green.

The crowd replied to this image with stunned silence, eventually clapping in amazement

“Thank you,” Said Alicia, “Now, remember how Andrew said that the Hawking Maxima could record video? Well, my friends, you’re in for a treat. Last week, we used this telescope to record a supernova. Check it out”

The screens changed again to a gigantic red star with black spots moving around the surface. Suddenly, the star expanded rapidly-- and then collapsed and exploded. Matter of all shapes, sizes, and colors flew out at astounding speeds, and it went on for nearly a minute. By

the end of the supernova, a brand new nebula had formed, with a bright blue pulsing neutron star at the center.

The audience was amazed again, and the applause even louder.

“Back to you, James,” Alicia said.

“Ladies, and Gentlemen, the Hawking Maxima!” James Hansen shouted. And with that, the presentation was over. As much as Alan wanted to chat with his friends about the Hawking Maxima, he knew he couldn’t be late to see James Hansen. He quickly said goodbye and ran back to school.

Alan was about to enter the library when he stopped short. He took a deep breath and slowly walked into study room number four where he could see his hero, James Hansen, sitting... nervously? James was shifting around in his seat with a worried expression. He was even sweating.

“Hello, Dr. Hansen, I am Alan. Is... is everything okay?”

“Hi, Mr. Barrera. I would love to get to know you and talk about physics, but we don’t have much time.”

James Hansen looked over his shoulder, which concerned Alan.

“Dr. Han--”

“No time to explain,” James interjected, “What I’m about to tell you is very important.”

There was a slight clink of metal in the corner of the room.

James cursed. “RUN. GET AS FAR AWAY AS YOU CAN. NOW. GO. I shouldn’t have brought you he--”

But it was too late. Alan saw a flash of silver, and the next second, James was on the ground. A shiny, long, sharp metallic object had skewered him through the chest, and had taken a lung out with it, making it look like a ripped plastic bag. There was blood everywhere, with internals slugging out of the open hole. James did not scream. Instead, with blood sputtering out of his mouth, he choked as he whispered one sentence:

“A stingray never sleeps”

And the next second, Alan saw the life leave James’ eyes as they rolled back in his head. Alan screamed.