

## CHAPTER 1. IMPACT

**F**our thousand and seventy years ago in a distant part of the Milky Way galaxy, a pair of gravitationally-linked stars began their death spiral, rumbling into a super energetic state that culminated in a gamma-ray burst beamed at light speed into a then-barren region of the Milky Way. In the 21st Century A.D., the Earth was racing at half a million miles per hour towards a cataclysmic collision with the brief but devastating burst of raw energy from that ancient star explosion.

In the city of Papeete, the capital of French Polynesia on the island of Tahiti, children from the local yacht club were on the water with a bevy of single sail dinghies, eight-foot-long training boats with seven-foot sails. Each boat had room for just one child, so the tiny flotilla of snub-nosed boats was being shepherded by two sailing instructors in a motorboat, busily keeping the students corralled within their marked sailing practice area. There was a light breeze, ideal conditions for the Optimus training fleet, with enough force to propel the dinghies wherever the sailors commanded, but not strong enough to flip the boats over. The instructors' coaching could be clearly heard by the young sailors over the slapping of the waves gently jostling each boat.

It was 5:42 in the afternoon of November 23, but the sun was still high. The Milky Way galaxy lay unseen directly overhead the French Polynesian Windward Islands when a blast from a galactic neighbor, a binary star system in the constellation Sagittarius the Archer, descended like Sagittarius's arrow directly on top of the luckless Tahitians.

While the students were concentrating on wind and sail, the instructors in their bikini and boardshorts felt a burning sensation over all their exposed skin. Looking up, they saw a sky turning dark orange-brown, a sight never before recorded on Earth. The female guest instructor from California, with blond hair and blue eyes, felt her eyes stinging so severely she could not keep them open.

She shouted to her male counterpart, "I can't see!" As he turned away from the darkening sky to look at her, he saw the skin on her face, arms, and thighs were suddenly bright red.

"What the hell happened to you?"

He was Tahitian, and his bronze skin and dark eyes were not as affected as hers, but even at that, he noticed his own arms and legs were burning at the same moment he became aware of the screams coming from the children. They jumped into the water in an attempt to cool their burns. Only one of them, a nine-year-old boy, remained on his boat, convulsed in a seizure.

Panicked, the female instructor shouted, "What's happening to the children? I can't see them. Help them, Ari!"

At the moment of the gamma-ray impact over Tahiti, a small meteor was tracking northward along an atmosphere-grazing trajectory when it suddenly changed course to the northeast. In a matter of seconds, it covered 4000 miles of the open ocean while still in space, then dipped into the atmosphere over Baja California. It was witnessed as a massive fireball passing directly over Isla Lobos, heading in the direction of the United States. Within seconds it had passed over the Southwest corner of Texas and disappeared just across the New Mexico border.

Minutes later, the U.S. Geological Service, Albuquerque Seismological Station, observed seismic activity. Civilian seismic reporting stations in El Paso and Lubbock, Texas, and the Mescalero Reservation near Alamogordo, New Mexico also reported in, allowing Albuquerque to triangulate a seismic event occurring near Carlsbad, New Mexico, with an apparent intensity of 3.0 on the Richter Scale.

The two government geologists on duty that night in Albuquerque were literally scratching their heads as their computers processed the incoming data. Even though the event equated to only a minor earthquake, the Carlsbad area was considered to be at low risk for seismic activity. The two scientists were not yet aware of that evening's devastating gamma-ray event over the South Pacific. The effect of the gamma-rays had covered the entire surface of the Earth facing the binary stars at the moment of impact.

Gamma-ray Bursts are the most violent explosions in the Universe. The last time the Earth had been in the crosshairs of a GRB was on June 25, 2016, when a beam four times as wide as the moon and coming from a presumed black hole nine billion light-years away, found its way to the unsuspecting Earth. GRB 160625B emitted as much energy in forty seconds as our sun will in its entire lifetime. It came from the constellation Delphinus, the Dolphin, and lay in the northern sky not far from the now offending Sagittarius Constellation.

Ever since the discovery of GRBs, scientists had believed that such events only happen at cosmological distances, at distances too far away to harm anyone on Earth. However, the discovery that the *Apep* star system 8000 light-years away in the constellation Norma was a potential GRB progenitor, taught astronomers that the Earth does not necessarily have the safety of vast distances. Any gamma-ray beam coming from nine billion light years away will be too weak to harm anyone when it strikes the Earth. But star ranges of less than 10,000 light years are a totally different matter, as the Earth had just discovered in Tahiti.

The short distance that gamma-rays had to traverse through the atmosphere directly over Tahiti meant that some ultra-high energy gamma-rays made their way to the Earth's surface. Where radiation absorption did occur, ultraviolet radiation caused almost instantaneous burns to eyes and unprotected skin during the ten-second-long exposure.

Away from the Windward Islands, reaching towards Hawaii to the North and New Zealand to the south, the longer atmospheric path caused by the curvature of the Earth led to more atmospheric absorption of the gamma radiation. For those places, UV radiation was the primary cause of biological damage to people and crops.

Rampaging winds began spreading toxic nitrogen dioxide clouds around the planet, and within days, the earth was fully affected. As that dark cloud absorbed sunlight, the world experienced a cooling like that predicted from a nuclear winter, a cooling that could herald the advent of a mini-ice age.

An observatory near Sydney delivered the first report of the GRB. Then word came that more than half the satellites orbiting the planet had been lost. As a layer of apocalyptic nitrogen dioxide smog collected high in the atmosphere, Russia, China, and the United States began moving their elite and indispensable personnel into nuclear bunkers. Russian personnel started moving towards Mount Yamantau, a Washington D.C.-sized complex designed to protect hundreds of thousands of people for years at a time. They also started the transfer to the Mount Kosvinsky installation in the northern Ural Mountains, designed to harbor multitudes of military and government people for years, and perhaps decades.

China's ruling elite showed up at the Sanya Installation at Yulin Naval Base-Sanya, on Hainan Island, and other secretly fortified places not yet detected by American satellites.

Essential U.S. personnel were quickly shuttled to the Raven Rock Complex in Pennsylvania.

## CHAPTER 2. PHOBOS

Two years before the Gamma-ray burst struck Earth, Space Corp Tech Sergeant Clarice Williams could hear herself breathing inside her helmet as she stood alone on the surface of Phobos, mesmerized by the sight of Mars filling a third of her view. The red planet with its stark mountains, deep valleys, and sandy plains was visibly moving past as the former asteroid on which she rode sped along at almost 5000 miles per hour during its three times daily circuit of the planet. The Martian gravity had long ago captured the irregularly shaped rock that had been her home for the past year.

Mars had also captured the imagination of mankind. Yet, from Williams' vantage point, seemingly just a stone's throw from the dusty planet, she wondered if our vision had finally outstretched our wisdom.

As her eyes swept the planet looking for signs of life at the volcano Pavonis Mons, she understood how God might feel, looking mournfully upon the desiccated carcass of a planet colored red. She envisioned the redness coming from the dried blood of its people long ago destroyed by a planetary cataclysm.

She wished she could have seen Mars before it died. Seeing it now as a ghost of a planet brought no pleasure at all. She could never consider Mars her home, as much as the Space Corp wanted her there. She would be afraid that someday, somehow, her beloved Earth would suffer the same fate. And that, she could not bear to think about.

Williams' visit to the Mars side of Phobos was one of her monthly Bright Side rest and recreation visits. But this time, just as all the other times, she had eventually turned away from the planet, feeling overpowered by an inexplicable sense of loss. She returned to her Skimmer Scooter and headed towards her military post on the dark side.

The Phobos Skimmer Scooters were designed for one-person transport using a tracked mechanism but with a tail that swung down to bite into the asteroid surface whenever the scooter got light and tried to become airborne. This was a bit of a misnomer since there was no "air" on Phobos. With the very weak gravity of the tiny Martian moon, any vehicle "catching air" could find itself heading many meters away from the surface before landing again. Scooter landings were never graceful, so the grabbing-tail ensured the vehicle never got far from the moon's surface.

William's Space Corp monitoring outpost was on what Martian astronauts called the Dark Side of Phobos, but the Dark Side wasn't actually dark, at least, no more so than the Dark Side of Earth's moon. It merely faced away from Mars, just as the far side of Luna faces away from Earth.

Planetary scientists would say Phobos and the Earth's moons are tidally locked with their own planets, which means the far side of Phobos is a lousy place to view Mars, given that Phobos zips around the planet every eight hours. But it does make a great place to see the Cosmos.

The Cosmos is precisely what the U.S. Space Corp wanted to keep an eye on from its vantage spot on a distant moon, ever since learning there really were aliens out there. Even though Earth's ancient aquatic aliens were friendly, as revealed when they left Earth for good, the U.S. military could not afford to assume that other alien species would be as amicable.

So, on the dark side of Phobos, an observatory was built with top-secret sensor suites, staffed with uniformed military, all with top-secret clearances and an unassailable aptitude for keeping themselves busy and entertained while looking for mostly nothing at all for two years at a time.

Due to the interminable tedium of the Phobos deployments, the "Dark Side military" were given staggered once a month R&R opportunities to visit the near side to observe the Martian surface as Phobos swung around the red planet.

Due to the difference between the orbits of Earth and Mars, the two planets are only close every two years. Crew change-out missions were launched biannually to take advantage of that proximity, making each military deployment to Phobos a long haul.

With that in mind, each new crew first landed on the Mars side of the ex-asteroid, and once again upon departure, with monthly sojourns allowed. However, after a while, some crew members chose to give up their R&R time; there really wasn't much you could do on the Mars Side beside watch the red world go by above you. Once you had experienced a hundred or so overflights of the planet, you'd pretty much seen them all.

While Clarice was making her way back to the observation post, her crewmate and husband, Technical Sergeant Robert Williams, was waking up the pilot and only crewman of the incoming cargo ship.

"Good morning, Tobias. You got your morning wood on?"

"I can't believe you said that."

"Why not?"

"You should know it's never morning out here."

"According to universal time, it is 0600 hours, and we call that morning."

"You know, whoever let the Brits define universal time must be nuts. The universe is not a British colony."

"Good point, my friend. But I think 300 days in isolation has made you cranky."

"Not to worry. It's given me lots of time to think."

"What do you think about Tobias?"

"About how much I'm going to enjoy ripping you a new one when I get there."

"Like that'll ever happen. You forget, Clarice has my back."

"Am I supposed to be afraid of her?"

"You should be. I am."

"You crack me up, Bob."

"How'd you learn to talk like that? Ripping a new one?"

“From you, Bob.”

Williams laughed. “Yeah, you probably did, Tobias. My mom always said I was a bad influence.”

“I don’t mind, Bob.”

“Look, sorry to interrupt your wet dream, but I have to let you know we’ll be launching our probe in a few minutes, to check you over before you land.”

“Well, I’m nearing entry to Mars orbit, and all things look nominal from here. No sensor warnings, no spooky sounds. We’re A-okay.”

“You know the rules, Tobias. We have to make sure no Clingon probes are hitching a ride. Don’t want you to bring any parasites to our little moon.”

“I’ll try to give it a big smile. Which side do you think is my good side, Bob?”

“You handsome devil, you don’t have a bad side.”

After a brief pause in the conversation, Williams spoke up. “Hey, Tobias, are you smiling right now?”

“Yes, I am.”

“I thought so.”

A moment later Williams announced, “The probe just launched. You should have intercepted in about thirty minutes. Try to hold still while it’s checking you out.”

“I’ll try, but you do know I’m still traveling at twenty thousand kilometers per hour.”

“Not to worry. The probe just locked onto you. You’ll have company soon.”

“Finally,” Tobias said. “This is one hell of a long trip.”

“Hate to have you make the trip this far from Earth, but we really need your supplies, especially that oxygen. Plus, Clarice said she’s looking forward to having an intelligent conversationalist on board. I guess I’m not highbrow enough for her. I don’t think she digs my sense of humor.”

“You do take some getting used to Bob.”

“I hear that a lot.”

The relative closing speed of the probe and the cargo ship had been tremendous, so when the probe had closed about half the distance to the ship, it began decelerating, even when it passed the ship. Due to its feather-light weight, its ion drive allowed it to quickly accelerate in the opposite direction to come in behind the cargo ship.

As advertised, about thirty minutes after launch, the probe was circling the ship from all directions, looking intently for any signs of alien stowaway machines. The machines’ original name, *seekers*, belied their sometimes malevolent nature. Since that machine behavior had been detected five years before, the ever-reproducing *seekers* became known more appropriately as *Clingons*, reflecting how they liked to hitch a ride on the outer surface of spacecraft, supposedly searching for their long-gone alien masters, and as a not-so-vague reference to the Klingons of the old Star Trek franchise.

The outer airlock of the small Phobos Base activated, announcing Clarice’s return.

“It’s your lucky day, Tobias, you get to say hi to Clarice. She just got back from the Bright Side.”

The inner lock door opened and Clarice walked up to the monitors after stowing her helmet. In Earth gravity, the helmet would be cumbersome, but on this tiny moon, it had almost no weight at all.

“Welcome back Clarice,” Williams said. “Say hi to Tobias. He’s coming up on insertion, and we’re doing the final visual checkout.”

“Boy, are we glad to see you, Tobias,” Clarice said.

“Ah, you’re sweet, but I know you just want my oxygen.”

“Not true. I need someone cute to talk to.”

Tobias laughed. “Yes, your husband said as much.”

“We should be due for some repartee in fifteen minutes or so,” Clarice said. “We’re looking forward to it.”

“Me too, Cla— *What the—!*” The last two words were shouted.

At that same instant, the probe camera showed the white paint and the American flag on the cargo craft charring from intense heat, and the craft veering off course. A split second later the video link with the probe was lost, and a second after that, all telemetry from both the cargo craft and probe was gone.

“What the fuck just happened?” Williams yelled. But his instructions were clear and his motion a reflex of training. He reached for the destruct button.

“No!” Clarice screamed.

She was too late.

From the station, the optics trained on the incoming ship, now exploded by Williams’s destruct signal, showed a cloud of fragments approaching at up to twenty thousand feet per second, four times faster than the fastest bullet.

Clarice screamed, “Get suited up, now!”

His attention glued on the monitors, Bob shouted, “Incoming!”

In a thunderous crash, most of the laboratory was destroyed by the impact of a heat-exploded oxygen bottle and the charred titanium skull of the robot named Tobias.