

Saving Earth-2: The Third Body

Compact complete first draft

40 chapters

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Chapter 1: The Dark Point

22 years, 184 days until keyhole crossing

At 3:17 in the morning, Dr. Hana Sayegh noticed a black dot where no black dot should have been.

She leaned closer to her screen and forgot about the tea cooling beside her hand.

The night operations room of the Planetary Defense Directorate was almost empty. Blue light from the displays washed over rows of desks. Cooling fans hummed behind the walls. Outside the long eastern window, the Atacama Desert lay under a moonless sky. The land looked pale and lifeless, but the stars above it seemed close enough to touch.

Huge telescope dishes turned slowly in the dark. They moved without sound, collecting light that had traveled for years before reaching Earth.

Hana had worked in this room for eleven years. She knew every normal sound. She also knew that most strange discoveries were not discoveries at all. A bad sensor could create a new planet. A software error could invent a comet. A grain of dust on a lens could waste three weeks of work.

Her rule was simple: doubt the exciting answer first.

She was fifty-two, with short gray hair and a narrow face that made her look more severe than she felt. Younger scientists sometimes thought she disliked wonder. The truth was the opposite. Hana loved the universe too much to lie about it.

Across the room, Ludo Reyes was fighting sleep at the night operator's desk. He was twenty-six and had been on the job for six months. An empty packet of salted nuts lay beside his keyboard. He had promised Hana that he would stop eating over the equipment. He had made that promise while eating over the equipment.

Hana enlarged the image.

"Ludo."

He sat up at once. "I'm awake."

"I didn't ask."

"You were about to."

"Frame seventeen. Put it on the wall."

The main screen changed. Thousands of stars appeared against deep black. To most people, the image would have looked like white dust scattered across glass. Hana saw something else. Near the lower edge, one point of light was weaker than it should have been.

Ludo rubbed his eyes. "Which one?"

Hana marked it with a yellow circle.

He studied the spot. "That could be noise."

"Yes."

"Or a damaged pixel."

"Yes."

"You don't sound convinced."

"I am hoping you will convince me."

Ludo pulled up the raw telescope data. The image on the wall was a deep stack, made by combining many hours of observation. Stacking helped faint objects appear more clearly, but it could also combine small errors into one large mistake.

"Run it again," Hana said. "Start from the raw files. Use the independent system."

"That will take eleven minutes."

"Then we wait eleven minutes."

"Can I name it while we wait?"

"No."

"The Black Dot of Doom?"

"Especially not that."

Ludo smiled and began the new calculation.

Hana stood and walked to the window. The room was warm, but the desert beyond the glass looked cold enough to freeze time. A row of red lights blinked on the distant telescope towers.

There had been a time when she enjoyed waiting for results. As a student, every unfinished calculation had felt like a door that might open. Age had changed that. Now she understood that

some doors opened onto fires, floods, and evacuation maps.

Planetary defense was built around unlikely disasters. Most days, Hana measured objects that would pass millions of kilometers from Earth. She checked the numbers, filed the report, and went home. The public imagined her team saving the planet every week. In reality, their greatest success was proving that nothing needed to be done.

She wanted this to be another such night.

The computer chimed.

"New result," Ludo said.

Hana returned to her desk.

The black dot was still there.

More important, it had moved.

Only a tiny distance separated its positions in the images. A human eye could have missed it. The computer did not. Over sixty-one hours, the object had crossed the stars in a smooth line.

Noise did not move like that. Dust did not follow gravity.

Ludo stopped smiling. "It's real."

"Probably."

"Probably?"

"Confidence is not the same as proof. Search the old surveys."

He entered the request. The system began checking years of stored images from telescopes on Earth, the Moon, and three deep-space observatories.

"What do you think it is?" he asked.

"Something dark. Something far away."

"That is not very helpful."

"It is more helpful than a wrong answer."

The search returned four possible matches. Two were too weak to use. One was clearly a sensor error. The last showed the same dark object seven years earlier.

That old image changed everything. With two points separated by years, the computer could begin to estimate an orbit.

"Fit the widest honest path," Hana said.

Ludo hesitated. "We still don't know its mass."

"Use a range."

"We don't know its shape."

"Use a range."

"We hardly know anything."

Hana looked at him. "That is why the range will be wide."

The model appeared as a blue fan across the wall. Each line was one possible future. Most pointed back into empty space. Then the computer added the old image and narrowed the fan.

The possible paths became a long blue spear.

Ludo stared at the end of it.

"That crosses the E2 system," he said.

Hana felt her stomach tighten.

E2 was the short name for a planet orbiting another star. Eight years earlier, astronomers had found oxygen, oceans, and green seasonal changes there. The planet had one sun and a large moon. It had seemed important, but not unique. Earth had found many worlds that might support life.

Then, one month ago, a new telescope had shown lights on E2's night side.

They were not electric lights. The people there had no satellites and sent no radio signals into space. But fires appeared in patterns along rivers and coasts. Kilns burned near cities. Boats carried lamps across dark water. Roads glowed with small moving points after sunset.

Nature could make fire. It could not build a harbor.

The discovery was still secret. Governments wanted more proof before telling eight billion people that humanity was no longer alone. Only a small group inside the Directorate had access to the images.

Hana had seen them for the first time twenty-six days earlier.

One image had stayed with her. It showed a line of warm lights moving through a river city. Perhaps it was a festival. Perhaps it was a funeral. Hana did not know. She had watched the lights for an hour and wondered who was carrying them. She had imagined tired workers, excited children, old people standing in doorways, and someone hurrying home with bread.

She had never told anyone about that thought. Scientists were expected to separate evidence from imagination.

Now a dark object was moving toward those lights.

"Show E2's orbit," she said.

A white line appeared around the distant sun. A smaller line marked the path of E2's moon. The object's blue path passed near both.

It did not hit the planet.

Ludo released a breath. "It misses."

"A miss can still kill them."

He looked at her.

Hana enlarged the meeting point. "Gravity bends every path. Usually the change is tiny. But there are narrow places where a tiny change sends an object into a much more dangerous orbit. We call one of those places a gravitational keyhole."

She drew a small red circle where the lines came close.

"If the object passes here," she continued, "E2's moon pulls it one way, and it pulls the moon the other way. Think of two people running past each other while holding a rope. Neither one has to collide for both paths to change."

"How much could the moon move?"

"I don't know yet."

"Enough to matter?"

"Run the interaction model."

Ludo's hands moved across the controls. His earlier tiredness was gone.

The computer produced hundreds of possible futures. On the wall, E2 became a blue sphere surrounded by thin lines. Some lines showed a safe passage. Others showed the moon pulled into a wider orbit. In several models, ocean tides grew high enough to drown coastal cities. In another, the moon later struck the dark object and broke apart. A cloud of rock spread through the system. The worst models changed E2's orbit around its sun.

The images were clean and silent. That made them harder to watch.

No one screamed in a model. No child ran from rising water. A red line simply crossed a blue one, and a number changed from millions to billions.

Ludo leaned back. "How long do they have?"

Hana found the date.

She checked it again.

"Twenty-two years."

"That sounds like a long time."

"For a person, yes. For moving a body this large across another star system, no."

Ludo looked again at the future where the moon broke apart. "Do they know?"

"They may not even have telescopes strong enough to see it."

"So we warn them."

The answer came easily to him. Hana envied that.

Warning a world was not like calling a city before a storm. The people of E2 did not know Earth existed. They had never heard a human language. Their best technology appeared to be about a thousand years behind Earth's. Contact could save them, but it could also destroy governments, religions, and ways of life that had lasted for centuries.

Hana thought of the moving lights beside the river.

Then she thought of water covering them.

"First," she said, "we make sure we are right."

She pressed the emergency key on her console.

The room lights changed from blue to white.

The Directorate did not use alarms unless an impact was close. It used silent messages that reached the correct people wherever they were. Within seven minutes, scientists began entering the room. Dr. Menon arrived with his sweater inside out. Two orbit specialists joined by secure video. Security sealed the floor. Coffee appeared, though no one remembered ordering it.

At 3:46, Director Elena Alvarez walked in.

She was sixty-three, small, and calm in a way that made other people lower their voices. Her gray hair was untidy, and she had put on two different shoes. Hana had never seen her make a mistake in public. The shoes frightened her more than panic would have.

"Show me from the beginning," Alvarez said.

Hana did.

She explained the weak point of light, the second calculation, the old survey image, and the possible orbit. She used plain words. A crisis was not the time to prove that you knew long ones.

More telescope data arrived while she spoke. Each new result made the object's path clearer.

The system gave it a temporary name: Object E2-X1.

Names, Hana thought, made fear easier to carry.

Alvarez studied the threat map. "Can we destroy it?"

"No," Hana said. "And we should not try. Breaking it could send many large pieces through the system instead of one."

"Can we move it?"

"A little. That may be enough if we start early."

Hana changed the display. "First, we strike it with heavy unmanned ships. Each impact gives it a small push. Later, machines on its surface could throw mined rock into space. The rock goes one way, and the object moves slightly the other way. It is the same idea as a rocket."

Menon pointed at the numbers. "Surface machines would take years to build."

"Yes."

"Shipping an industrial base from Earth would take longer than we have."

"Yes."

"Then this plan does not work."

Hana brought up the night image of E2.

Fires glowed along the fork of a river. Another image showed furnaces in a mountain valley. A third showed ships entering a harbor.

"The industrial base does not all have to come from Earth," she said.

Menon frowned. "They do not have one."

"They have mines. They have metalworkers. They have builders. They have scholars. Most important, they have people who can learn."

"You are suggesting that we teach a pre-industrial world to build space equipment in twenty-two years."

"I am saying that the equipment has to be built in their system."

"That means contact."

"Yes."

Silence spread through the room.

No one there believed the people of E2 were less intelligent. Technology was not intelligence. Every machine on Earth rested on thousands of earlier discoveries, shared across generations. The people under those distant lights had begun from the same darkness. They had simply taken a different path and had less time.

Alvarez looked at the images for a long while.

"Put their world on the full wall," she said.

The room darkened.

E2 appeared above them, blue and white and green. Clouds turned over its oceans. Sunlight touched one edge while night covered the other. It looked so much like Earth that several people shifted in their seats.

The view moved closer to the dark side.

Thousands of small fires appeared.

Hana tried to imagine the lives below them. Markets opening at dawn. Farmers worrying about rain. Families arguing over money. Young people falling in love and believing their problems were the largest in the world. Kings planning wars. Healers sitting beside beds. Children learning the names of stars that could not warn them.

For those people, the sky was still a place of stories.

For Hana, it had become a clock.

Someone near the back said, "Could the lights be natural?"

It was a weak question, but no one laughed. Fear often asked for one last escape.

Hana enlarged the river city. Straight roads joined groups of buildings. Boats crossed the water. Furnace heat rose and fell with working hours.

"No," she said. "They are people."

Alvarez turned from the wall. "How certain is the danger?"

"Certain enough to begin preparing. Not certain enough to know the final method."

"And if we wait for complete certainty?"

"Then the small push we need becomes a larger push. Later, it may become impossible."

Alvarez nodded once. "First threat report in six hours. Contact options in twelve. Mission design in forty-eight. Keep this inside the highest security seal."

She faced Ludo. "Put up a countdown."

His fingers paused above the keyboard. "To the possible collision?"

"To the keyhole. That is the moment we must prevent."

The planet moved to one side of the wall. Large white numbers appeared beside it.

22 years, 184 days, 03 hours

Ludo stared at the clock. "What happens now?"

Alvarez looked toward the distant lights on E2.

"Now we ask people to give up part of their lives for a world that has never heard of us."

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Two thousand kilometers away, Captain Mira Anik woke to a hard vibration against her wrist.

For several seconds, she did not know why she was sleeping on the floor.

Then a small foot pressed against her shoulder.

Her five-year-old daughter, Elian, lay inside a blanket fort that covered half the living room. The fort had begun as a rainy-night project. By midnight, it had become a spaceship with a kitchen, a control room, and a special area for dragons. Mira had been ordered to sleep beside the entrance because every ship needed a captain.

A green toy dragon rested on her chest.

The wrist alert vibrated again.

Mira lifted the toy carefully and sat up. The apartment was dark except for the city lights beyond the windows. Her neck hurt. One of Elian's paper stars was stuck in her hair.

The message on her wrist display had no sound and only two words.

PRIORITY BLACK

Mira became fully awake.

She had seen that level of alert only twice. Once, a station carrying twelve thousand people had lost its main shield. The other time, a military navigation failure had nearly started a war.

She opened the secure details.

Report to Atacama Directorate. Immediate departure. Off-world civilizational threat. Mission command review.

Off-world.

Mira read the line again.

Her first feeling was relief. Earth was safe.

Her second feeling was shame.

If the threat was not aimed at her world, then it was aimed at someone else's.

Behind her, Jonas appeared in the hallway. Her husband was barefoot and half asleep, but one look at her face ended that.

"What happened?"

Mira held up her wrist.

He read the message. "Civilizational threat to whom?"

"It doesn't say."

His own wrist began to vibrate.

Jonas closed his eyes for a moment before looking at it. He designed systems used in planetary defense. If they were calling both of them, this was not a short meeting.

"They want me in Atacama too," he said.

Mira looked into the blanket fort.

Elian had one hand curled around a silver flashlight. Her dark hair covered her face. She had fallen asleep believing her parents were guarding the entrance to a make-believe spaceship.

"We should wake her," Jonas whispered.

Mira almost agreed.

Then she imagined trying to explain a Priority Black alert to a five-year-old when they did not understand it themselves. She imagined Elian hearing fear in their voices and carrying it all morning.

"Let her sleep," Mira said. "We'll call your mother on the way."

Jonas did not move. "What if this is not a one-day meeting?"

That was the question inside the question.

Mira looked at the words mission command review. She had spent her adult life entering dangerous places after other people had lost control of them. She knew how official language hid the size of a request. Review could mean advice. It could also mean that someone had already placed her name beside a mission no one else wanted.

"Then we tell her when we know the truth," she said.

Mira reached into the fort and pulled the blanket higher over Elian's shoulder. The child's hand opened, searching in her sleep. Mira offered one finger. Elian held it.

For a moment, Mira stayed there.

On her wrist, a new file arrived from Atacama. Its security warning filled the screen. Beneath it was a single image: a blue planet turning under white clouds. Small fires marked the night side.

The next image showed a dark object's path.

Then came the countdown.

22 years, 184 days

Mira looked from the distant planet to her sleeping daughter.

Twenty-two years from now, Elian would be twenty-seven.

The number no longer felt large.

It felt like a childhood.

Chapter 2: Someone's Children

22 years, 181 days until keyhole crossing

Three days after the dark object was found, Captain Mira Anik sat in a locked room beneath the Atacama Desert and listened to powerful people argue about whether another world had the right to be saved.

The conference chamber was smaller than she expected. A long black table filled most of it. There were no windows, no flags, and no cameras. The air smelled of coffee and the dry dust that entered every building in the desert, no matter how carefully the doors were sealed.

Twenty-two people sat around the table. Ministers, scientists, military officers, legal experts, and three members of Earth's Intervention Ethics Council had flown in under false travel records. More joined as life-sized images from secure rooms across the planet.

No one had gone home since the first alert.

Mira had slept for four hours in three days. She wore the gray service jacket she had last used during the Europa station evacuation. That crisis had given her eighteen minutes to choose which damaged section received the final rescue shuttle. Seven years later, she could still name every person left behind.

She knew what rooms like this did.

They took fear, divided it into numbers, and asked someone to sign at the bottom.

Jonas sat with the technical advisers against the back wall. He had changed shirts since their flight to Atacama, but he looked as tired as Mira felt. Before leaving home, he had made pancakes for Elian while they waited for his mother to arrive. The pancakes had burned. Elian had laughed and said he was not allowed to cook on the rescue ship.

During the flight, Mira and Jonas had talked about the alert, the object, and the mission technology. They had not talked about how long they might be gone.

Neither of them was ready to make that fear real by giving it words.

On the main wall, Earth-2 turned slowly beneath white clouds.

The briefing called it E2. Mira disliked the name. It sounded like a spare part stored in a warehouse. Nothing in the image looked like a spare. Oceans covered most of the planet. Green land curved around inland seas. A large moon moved above the bright edge of the atmosphere.

Then the image changed to the night side.

Small fires appeared along rivers, roads, and harbors. They were too faint to see without powerful instruments, but their patterns were clear. Cities. Furnaces. Ships. A whole world going about its life without knowing that Earth was watching.

Director Elena Alvarez stood at the head of the table.

"We have finished the first independent review," she said. "E2-X1 is real. Its projected path crosses the gravitational keyhole near Earth-2 and its moon. The exact damage is uncertain. The danger is not."

She touched the table. The planet moved aside, replaced by several possible futures.

In one, the dark object passed safely.

In another, it pulled the moon into a wider orbit. Red zones spread across coastlines as the tides rose.

In a third, the moon and the object struck each other years later. Debris filled the space around the planet.

The last model showed Earth-2's orbit changing slowly. Its seasons stretched. Ice spread across one half of the world while the other half grew hotter.

No model showed a simple ending.

"How certain?" Deputy Minister Varga asked.

Dr. Hana Sayegh answered from the far end of the table. "Certain enough to act. Not certain enough to know which outcome we must prevent."

Varga frowned. "That sounds convenient."

"It is inconvenient," Hana said. "The universe did not wait for us to have complete data."

Varga ran Earth's pre-contact policy office. Her job was to stop explorers, companies, armies, and religious groups from treating a newly discovered culture as an invitation. She had spent most of her career writing rules for a day everyone hoped would come. Now that day had arrived carrying a disaster behind it.

"We have a noninterference law," she said. "It forbids direct contact with a civilization that has not detected us."

Admiral Chen leaned forward. "The law was written to prevent exploitation. It was not written to make us watch a preventable catastrophe."

"Laws matter most when breaking them feels useful," Varga replied.

Commissioner Osei raised one hand before the argument could harden. He was the oldest person in the room, a historian and philosopher who had spent forty years studying interventions that began with help and ended with control.

"We should be careful with the word save," he said. "It makes the helper sound innocent."

Chen looked at the threat model. "Would you prefer abandon?"

"I would prefer honesty. If we arrive with aircraft, medicine, machines, and knowledge of the sky, we will change every balance of power on that planet. A ruler who welcomes us may defeat every ruler who does not. A priest may call us gods. A merchant may sell our tools. A frightened army may steal them. We could prevent one disaster and begin ten others."

The room became quiet.

Mira understood why Alvarez had invited him. Osei was not there to stop action. He was there to stop everyone from feeling pure while they acted.

Hana pointed toward the red coastlines. "And if we do nothing, those balances of power still end. They end under water."

"Yes," Osei said. "Doing nothing is also a choice. That does not make every kind of help wise."

Mira looked from one speaker to the other.

They were both right. That was the part no plan could remove.

Alvarez turned to her. "Captain Anik. What would a rescue require?"

Every face shifted toward Mira.

She opened the mission outline on her slate. Most of it was still guesses, but the basic problem was clear.

"We can launch unmanned impactors without contacting Earth-2," she said. "They would hit E2-X1 and push it a little. That gives us time and better data, but Hana's team does not believe impacts alone will be enough."

"Why not send larger ones?" Varga asked.

"Because every kilogram has to cross the distance from Earth. Larger ships need more fuel, more time, and more launches. At some point it becomes easier to build the later equipment inside the E2 system."

Mira changed the display. A simple drawing appeared: a machine fixed to the surface of the dark object, throwing a stream of rock into space.

"This is a mass driver," she said. "It uses magnetic force to throw mined rock in one direction. The object moves slightly in the other direction. If enough machines work for enough years, that small movement carries E2-X1 away from the keyhole."

"And Earth-2 has none of those machines," Varga said.

"They have none of the factories needed to build them," Mira replied. "No electrical grid. No modern engines. No launch system. We would need to help them create selected parts of an industrial society in less than two decades."

An uncomfortable murmur moved around the table.

"Selected parts?" Osei asked.

Jonas answered from the back wall. "Power, measurement standards, modern metalworking, machine tools, medicine, observatories, and heavy transport. Later, rockets and orbital construction."

Varga turned toward him. "Dr. Vale, Earth needed centuries to build those systems."

"Earth also spent centuries taking wrong turns," Jonas said. "They would not need to repeat all of them. We know how to design a generator, prevent an infection, and test a pressure vessel. The people on Earth-2 can learn the same principles we did."

"Can they learn them fast enough?"

"Some can. Not everyone, and not everywhere. We would build around mines, ports, universities, hospitals, and launch sites first. Most of the planet would remain as it is for years."

Osei studied him. "You describe an island of advanced power inside a pre-industrial world. Who controls that island?"

Jonas paused.

It was not a technical question, and engineering could not hide him from it.

"That decision cannot belong to Earth alone," he said.

"Then who receives electricity first? Which kingdom receives medicine? Which language does the translator learn? Which army guards the launch site? Every answer creates winners and losers."

"Yes."

"You understand that this rescue could become a conquest even if no one plans one?"

Jonas looked at the distant planet. "Yes."

"And you still support contact?"

He took a breath before answering.

Mira knew that pause. Jonas used it when he wanted the truth to be more important than sounding clever.

"If we stay silent," he said, "we are still making a decision for them. We are deciding that they should remain ignorant because their ignorance makes our conscience cleaner. I don't think that is respect."

Osei held his gaze. "No. It is not."

The answer surprised several people in the room.

Osei continued. "But respect also means accepting that they may refuse us."

Admiral Chen shook his head. "One ruler cannot be allowed to refuse survival for an entire planet."

"There will not be one ruler," Varga said. "There may be hundreds."

"Then we speak to hundreds."

"In languages we do not know, through customs we do not understand, while a clock runs down."

The argument spread around the table.

Some wanted to launch the impactors and delay contact until there was more data. Others said every lost year would make the final deflection harder. The medical team warned that a careless landing could introduce disease in both directions. Security officers worried that human technology would become weapons. Economists explained that building the rescue industry could destroy local trades and create a new class with access to Earth knowledge.

No one offered an easy answer because there was none.

Mira listened and wrote four words on her slate.

Consent under a deadline.

That was the true mission.

Moving E2-X1 would be difficult, but gravity followed rules. People did not. The rescue would ask strangers to trust visitors from the sky, rebuild parts of their world, and give up land and labor for a danger they could not yet see.

Trust could not be delivered in a cargo ship.

"Captain?" Alvarez said.

Mira realized the room had quieted again.

"What would you recommend?"

Mira looked at the four words.

"Launch the first impactors now," she said. "They do not require contact, and delay only reduces their value. At the same time, prepare a contact mission. No military landing. No claim of authority. We arrive with evidence, translators, medical barriers, and a plan they can question."

Chen frowned. "And if they say no?"

"Then we keep talking."

"Until the clock makes the choice for them?"

"Until we understand who said no and who never had the chance to answer."

Osei gave a small nod.

Mira continued. "We cannot promise that contact will leave their world unchanged. It won't. We can promise that survival is the goal, not control. Then we build rules that make that promise difficult to break."

Varga looked unconvinced, but she was listening now.

For the next two hours, the room turned Mira's recommendation into a decision the Council could vote on. Lawyers added limits. Scientists added conditions. The admiral demanded security authority, and Osei demanded local oversight. No one got everything they wanted.

That was the first sign the plan might be honest.

Near the end of the hearing, a junior analyst loaded the wrong image.

He was supposed to display a map of the largest city detected on Earth-2. Instead, a time-lapse began to play.

The image showed the same river city over several weeks. Its fires grew brighter on certain nights. Lines of light moved along the streets. Boats gathered on the dark water. Thousands of people appeared to carry lamps toward a central square.

The analyst reached for the controls. "Sorry. Wrong file."

"Leave it," Alvarez said.

The sequence played again.

No one knew what the gathering meant. It could have been a festival, a funeral, a market, or a prayer. The reason did not matter as much as the act itself. People had left their homes and carried light into the night together.

Mira thought of Elian's blanket fort. She pictured a child in that distant city asking to hold a lamp and a parent warning them not to drop it.

The planet on the wall stopped being a problem.

It became someone's home.

Someone's children were down there.

The Council approved two actions before sunrise: launch preparation for the first unmanned impactors, and full planning for a contact mission. The final mission vote would follow once the cost, crew, and contact rules were known.

It was not a promise to save Earth-2.

It was a promise to try.

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After the hearing, Alvarez led Mira onto the observation deck above the telescope array.

Dawn was spreading across the desert. The sky near the eastern ridge had turned pale gold. Below them, maintenance workers in orange suits moved between the dishes. They looked very small beside machines built to study distant worlds.

Cold air touched Mira's face. She had spent three days inside sealed rooms, and the open sky felt almost unreal.

Alvarez rested both hands on the rail. "The contact mission needs a commander."

Mira had expected the sentence. Hearing it still made something close inside her.

"No."

Alvarez did not look surprised. "You have not seen the final profile."

"I have seen enough. Interstellar transfer. First contact. Industrial development. Political negotiation. A deployment measured in years, with no safe date for family travel and no reliable return schedule."

"That is accurate."

"Then my answer is no."

For a moment, Alvarez said nothing.

Mira was grateful for that. A weaker leader would have begun selling the mission at once.

"Because of Elian," Alvarez said.

Mira turned toward her. "Because she is five. Because Jonas is already on your technical list. Because our daughter woke up yesterday with both parents gone and a grandmother trying to explain why. Because I have spent my career entering disasters other people created, and this disaster does not even belong to Earth."

"No," Alvarez said quietly. "It does not."

The answer made Mira angrier than an argument would have.

"Ask someone without a child."

"I considered that."

"And?"

"I need a commander who will remember that every engineering target on that world is also a home."

Mira looked away.

"That is manipulation."

"Yes."

"You admit it?"

"Pretending otherwise would be another form of it."

The first sunlight touched the largest telescope dish. Its white surface changed from gray to gold.

Alvarez continued. "You have evacuation command experience. You trained in first-contact law. Scientists trust you because you ask what their numbers leave out. Soldiers trust you because you do not waste their lives. Politicians dislike you just enough to believe you are independent."

"That is not a reason to take a mother from her child."

"No reason will make that clean."

Mira gripped the cold rail.

She wanted Alvarez to promise that the mission would last only a year. She wanted Jonas to be unnecessary. She wanted Earth-2 to be empty. She wanted to go back three days and sleep beside Elian's blanket fort without knowing that another child slept beneath a doomed moon.

Her wrist slate vibrated.

A home recording had been held by the Atacama security seal until the hearing ended. The time stamp showed that Elian had made it on the morning Mira and Jonas left.

Mira opened it.

Elian's face filled the screen. Her hair stood up on one side, and the blanket fort sagged behind her.

"Mom," she whispered at full speaking volume. "Dad says you went to space work, but I think he is lying because he made pancakes and they were bad. Come home before dinner. Also, I fixed the spaceship. It needs a dragon room."

The recording ended.

Mira watched it again.

Alvarez turned toward the desert and gave her the privacy of pretending not to hear.

Mira imagined going home that evening. Elian would run to the door. They would repair the blanket fort and argue about bedtime. Mira could refuse the mission, and for a while their life would

continue.

Someone else would take command.

Perhaps that person would be good. Perhaps they would understand the machines, the politics, and the danger. But Mira knew what fear did to rescue missions. It made speed feel more important than consent. It made force look efficient. It turned people into numbers because numbers were easier to move.

She looked at the frozen image of Elian.

Then she remembered the lamps beside the river on Earth-2.

If Earth were the world in danger, Mira would beg anyone who could help to come. She would not ask them to preserve every government or belief. She would ask them to remember that survival did not give them ownership.

"I will not order you," Alvarez said.

"You could."

"I could order Captain Anik to report. I cannot order Elian's mother to believe the order is right."

Mira gave a tired, bitter laugh. "Did you practice that?"

"No. I have simply made enough unforgivable requests."

They stood in silence while the desert warmed.

Mira closed Elian's recording and opened a blank mission page.

"If I accept," she said, "the mission does not belong to any nation on Earth. No flags on first contact. No resource claims. No military government."

"Agreed."

"Consent must be an operating rule, not a line in a speech. Local leaders and ordinary people must see the evidence. We do not choose one king and call that a planet."

"Agreed."

"Jonas reports through technical command, not through me. I will not be his captain and his wife inside the same decision chain."

Alvarez hesitated. "Difficult."

"Required."

"Agreed."

"Every crew member hears the family cost before selection. No posters about destiny. No promise of a quick return. We tell them this mission may take the best years of their lives."

"Agreed."

Mira looked down at her hand. The edge of the slate had pressed a red line into her palm.

"And if the later models show that Earth-2 cannot be saved?"

Alvarez met her eyes.

"Then you come home."

The words sounded kind.

That was why they were dangerous.

Both women knew that after first contact, there might be no clean point at which to stop. Once people on Earth-2 trusted them, leaving could become another way of killing them.

Mira looked up at the brightening sky. The stars had vanished in the sunlight, but they were still there. Somewhere beyond them, a blue planet turned beneath its moon. Its cities were waking. Its children knew nothing about Earth, or E2-X1, or the woman deciding whether to leave her daughter for them.

"Send me the full mission profile," Mira said.

Alvarez let out a slow breath.

Mira did not mistake it for relief.

She opened Elian's message one more time before returning to the locked room.

Chapter 3: The Promise Before Departure

21 years, 302 days until keyhole crossing

Elian decided the rescue ship needed a garden.

Not a hydroponic bay. Not a closed-loop oxygen meadow or an algae wall or any of the other things Jonas tried to explain while balancing three mission crates, two sealed medical cases, and a daughter who had inserted herself between the apartment door and the rest of his life. A garden. With dirt. With beetles. With one tree that grew fruit in space because otherwise, she said, what was the point of going?

"The point," Jonas said, "is to help people."

Elian considered that with the grave suspicion of a five-year-old who had learned adults often hid bad answers inside good ones. "People have trees."

"These people do."

"Then you can bring one from them."

"Quarantine," Jonas said automatically.

Mira looked up from the clothing roll she had packed and unpacked three times without improving it. "Jonas."

He closed his mouth.

Elian narrowed her eyes. "What's quarantine?"

"A grown-up word for making sure nobody gets sick," Mira said.

"Are the people sick?"

"We don't know."

"Are you sick?"

"No."

"Then why are you taking medicine boxes?"

Mira folded a uniform shirt along lines already pressed into it. There were forty-two hours until departure from the orbital transfer ring and sixteen until they left the apartment for the last medical

isolation sequence. She had commanded evacuations with less strain than it took to decide how much truth a child could survive.

Jonas sat on the floor because he had discovered during the last week that all important conversations with Elian went better at carpet height. "We're going very far away," he said. "Farther than any trip we've taken before."

"Farther than Luna?"

"Yes."

"Farther than Europa?"

"Much farther."

"Farther than Grandma?"

"Grandma lives in Nairobi."

"But she is very far when she doesn't answer."

Jonas looked at Mira. Mira looked at the half-packed case.

Elian filled silence whenever adults left it unattended. "Can I come later?"

There it was.

Mira had answered presidents, crash boards, hostage negotiators, and once a thirteen-year-old evacuation survivor who wanted to know why his brother's name was not on the shuttle manifest. She knew how to stand still under human need. She knew the discipline of not offering comfort that would rot into betrayal.

She still wanted, with an animal force that frightened her, to lie.

"Not soon," she said.

Elian's mouth changed. Not crying yet. Calculating whether the world had done something unfair enough to require it. "How long?"

Jonas reached for her hand. She allowed the contact but did not return it.

"A long time," he said.

"How long is long?"

Mira sat across from them. The city moved outside the windows in strips of afternoon light: delivery drones, rain on glass, maglev rails singing beyond the residential towers, people living in the careless way people lived when no countdown had been hung over them. She envied them with a bitterness she would have despised in anyone else.

"Years," she said.

Elian's face closed.

Jonas whispered her name.

"You said space work." Elian looked at him, betrayed first by the parent who had softened the truth.

"Space work is when you go away and come back after sleeps."

"I know."

"You lied."

"I was scared," Jonas said.

That startled her. It startled Mira too, though it should not have. Jonas had a gift for surrendering dignity before it could become distance.

Elian studied him. "Grown-ups aren't scared."

"All the time."

"Of what?"

He looked at the packed medical cases, the mission seal on the wall, the uniforms, the apartment already beginning to look like a place they had borrowed. "Of leaving you."

Elian pulled her hand away then, not because she wanted distance, but because hurt needed somewhere to go.

"Then don't."

The whole apartment seemed to wait with her.

Mira had rehearsed the explanation approved by family liaison, child psychology, mission ethics, and three people who had never met Elian but had opinions about age-appropriate honesty. She had practiced phrases: another planet, people in danger, special job, Grandma and Uncle Dev will stay, messages, always love you. Now all of it looked like paper armor.

"There is another world," Mira said.

Elian stared.

"A real one. With people. They don't have ships like ours. They don't know something bad is coming toward them."

"A monster?"

"A rock," Mira said, then corrected herself because the word was too small. "A dark world. A dead one. Moving through space."

"Like a planet?"

"Smaller. But dangerous."

"Tell it to stop."

Jonas made a sound that was almost a laugh and almost not.

"We are going to try," Mira said.

Elian absorbed this. Children did not disbelieve impossible things the way adults did. The universe was still new enough that another world and a dark moving rock could enter it without paperwork.

"Why you?" she asked.

Because I said yes when I should have said no.

Because if I refuse, someone else will go, and I will spend my life knowing I was better suited to bring them home.

Because Director Alvarez found the exact wound and pressed.

Because there are children holding lamps under another sun.

"Because I know how to help ships and people in danger," Mira said.

"Dad too?"

"Dad knows how to build the machines that might move the dark world."

Elian looked between them. The betrayal expanded. It was one thing for a mother to go. Another for the whole shape of home to pack itself into crates.

"Who keeps me?"

Mira flinched. There was no gentler word for it. Jonas saw and reached for her, but she shook him off without meaning to.

"Grandma. Uncle Dev. Auntie Laleh from downstairs. Your school stays the same. Your room stays here if you want it. We will send messages."

"Can I call?"

Jonas closed his eyes.

"Not like normal calls," Mira said. "We will be too far. But we can send videos. You can send videos back."

"Will you see my birthday?"

"Yes."

"On my birthday?"

"Maybe later."

"How much later?"

Neither of them answered quickly enough.

Elian stood. "I don't want a rescue ship."

She ran to her room and shut the door with the unsatisfying softness of modern safety hinges.

Jonas bowed his head.

Mira went to the door, then stopped with her hand raised. Command training had no useful doctrine for a child's closed bedroom. Breach? Wait? Negotiate? Surrender?

"Give her a minute," Jonas said.

"We have given her nothing but minutes."

He did not argue.

The wall chimed with an incoming mission packet.

Mira nearly ignored it. Then she saw the origin: Sayegh, personal priority.

She opened it on mute.

Hana's face appeared in a small window. Behind her, trajectory graphics moved in red and white. She looked as if she had not slept since discovery and considered sleep a superstition.

The transcript built beneath her image.

Refined E2-X1 mass estimate is worse. Albedo masked radius. We're revising upward. Impact-only phase no longer sufficient under conservative assumptions. We need local mass drivers earlier. Ten-year industrial milestone must move to year seven. Do not let architecture brief understate this.

Mira read it twice.

Jonas came to stand beside her. His face lost color by degrees.

"Year seven?" he said.

Mira unmuted. "Hana."

"Captain." Hana's voice came through clipped and thin. "I know you are in departure prep."

"Say it cleanly."

"The object's bigger than our first model. Not by an order of magnitude, but enough. Its surface is darker and rougher than assumed. The early impactors still matter. They just do not matter enough. We need surface operations, local manufacturing, launch infrastructure, and probably standoff devices. Earlier."

"How much earlier?"

"The first local heavy-lift chain needs to exist inside nine years. Mass-driver components by twelve. Sustained operations by fourteen if we want decent margin."

Jonas laughed once in disbelief. "They don't have electricity."

"I know."

"They don't have germ theory."

"I know."

"They may not have standardized screws."

"I know, Jonas."

Hana's use of his first name ended the list.

Mira looked toward Elian's closed door. "Does Alvarez have this?"

"In thirty seconds. I sent you first because if they bury it under morale language, I need you to object."

"Understood."

"And Captain?"

"Yes."

For the first time, Hana hesitated. "I am sorry."

The call ended.

Mira stood in the apartment with the bad news of another world in her hand and her own child behind a door ten steps away. The mission had already taken years from Elian. Now it reached backward and took the gentleness of farewell too. There would be no slow build, no careful cultural posture, no illusion that Earth could hover politely above Earth-2 until invited. The timeline had teeth.

Jonas read the packet again, as if numbers might become kinder under repetition.

"This changes the first-contact package," he said.

"It changes everything."

"No. Not everything." He touched the bedroom door with the backs of his fingers. "This part was already broken."

Mira hated him for being right.

After a while, the door opened one hand's width.

Elian's eye appeared in the gap. It was wet and furious.

"Are you still going?"

Mira knelt so quickly her knees hurt.

"Yes."

Jonas knelt beside her.

Elian opened the door wider. She held the dragon from her blanket fort, a green cloth thing with one wing repaired in Jonas's ugly stitching.

"Then I make a video," she said.

Mira could not speak.

Elian dragged her desk recorder into the living room and set it on the low table. She arranged herself on the couch with the dragon in her lap. Her face on the preview screen was solemn with the importance of testimony.

"Ready?" Jonas asked.

She nodded, then shook her head. "Wait."

She ran to Mira, climbed into her arms, and whispered into her ear with the fierce privacy of children.

"Promise you'll come back before I'm taller than Mom."

Mira held her so tightly Elian squirmed.

"I promise I will try."

Elian pulled back. "No. Promise."

Jonas looked away.

There were promises that guided people and promises that hunted them. Mira knew the difference. She knew it as clearly as she knew orbital mechanics did not care about love. She could not make herself explain that to a five-year-old holding a dragon.

"I promise," she said.

Elian nodded once, satisfied by the shape of the words if not the tremor inside them. She returned to the couch. Jonas started the recorder.

On the screen, their daughter lifted her chin.

"Hello, future Mom and Dad," she said. "This is Elian. I am five. I am mad at you. But I am sending Dragon because he is brave and you need to not be lonely. Also you have to come back before I am taller than Mom because Mom promised."

She held the dragon up to the lens, then lowered her voice as if speaking to a secret world inside the machine.

"People on the other planet," she said, "you can borrow them. But not forever."

The recording light blinked red.

Mira watched it as if it were already old.

Sixteen hours later, in the white corridor outside isolation, Elian refused to cry. That was worse. She stood between Grandma and Uncle Dev with her jaw set, clutching the repaired dragon she had changed her mind about sending because courage, she informed Jonas, was not the same as theft.

The mission crew passed through one by one, carrying sealed personal bags and the expression of people walking into a story that would consume the rest of their lives. Some looked at Elian and then away. Some smiled too brightly. Hana stopped at the far end of the corridor, saw the family, and turned her face toward a blank wall.

Jonas hugged Elian first. He whispered something that made her nod, then made her angry, then made her hug him back with both arms.

Mira waited because if she touched her daughter too soon she might not let go.

When the moment came, Elian smelled like sleep, soap, and the strawberry cereal she had demanded for breakfast because mission departure apparently suspended all nutritional law.

"Be good for Grandma," Mira said, and hated every parent who had ever used those useless words before leaving.

"Be good in space," Elian said.

"I will."

"And with the people."

"I will."

"And come back before."

Mira closed her eyes.

"Before you're taller than me."

Elian leaned back to check that the words had landed correctly.

Mira made herself smile.

"Before you're taller than me," she said.

The isolation door opened.

No alarm sounded. No music swelled. A technician with tired eyes waited beside the threshold and pretended not to watch the family end.

Mira released her daughter.

She walked through with Jonas at her side.

The door sealed behind them with a sound too soft for what it did.

Chapter 4: Oil Lamps Under Another Sun

20 years, 011 days until keyhole crossing

Earth-2 filled the forward glass like a memory no one aboard had earned.

Blue ocean. White weather. Brown continents under green veils. A moon scarred silver in the distance. For a foolish second, Mira's body accepted the lie of familiarity before training corrected it. The coastlines were wrong. The storms turned over different seas. The polar caps held unfamiliar shapes. The cloud shadows crossed nations whose names no one from Earth had a right to know yet.

Behind her, the command deck had gone silent.

Even Hana Sayegh stopped moving.

The rescue ship Argo had spent twenty-one months falling between stars inside a machine that made distance feel bureaucratic: injection burn, cruise rotation, systems watch, medical cycles, simulation, sleep, wake, message packet, grief, another burn. The human mind could not hold interstellar travel as an experience. It reduced the impossible to schedules and alarms. Then a planet appeared in the window and every abstraction failed at once.

Jonas stood at the engineering station with one hand braced against the console. He looked older than when they had left Earth. Not by much. Enough. There were new lines at the corners of his mouth from holding back things he did not want the crew to inherit.

"Approach velocity nominal," Flight Officer Rhee said.

Her voice steadied the room because someone had remembered to be professional.

"Thermal signature pass," Mira said.

The main display split into layers. Daylight vanished into instrument sight. Night rolled under them.

There they were.

Not cities in the Earth sense. Not grids. Not the electric lace of continents seen from orbit. Earth-2's night was mostly dark, a deep old dark that Earth had forgotten how to make. But along rivers and ports and mountain bowls, warmth gathered in deliberate clusters. Thousands of lamps. Kilns like coals. Forge districts. Beacon towers. Processions. Fishing fleets strung as faint amber beads along black coasts.

Oil, wood, charcoal, whale-fat analogues, plant resins, whatever local chemistry had taught them to burn.

Civilization whispering instead of shouting.

"My God," Rhee said.

Taren Pell, strapped into the cultural station, whispered, "Which one?"

No one laughed, but the comment released enough pressure for people to breathe again.

Mira watched the largest river basin rotate into view. The city from the time-lapse was there, its lamps concentrated around a forked waterway. The mission had named it RB-1 because scientists could be trusted to turn wonder into filing systems. Taren had forbidden anyone to use that aloud once contact began.

"Passive only," Mira said. "No active radar over population centers until we finish the contamination review."

Hana glanced at her. "At this distance?"

"At any distance."

Hana looked as if she might argue, then remembered Chapter One of Mira's command conditions and returned to her models.

The ship slipped across the terminator into dawn.

Earth-2's sun rose over a mountain chain like fire poured through teeth. Valleys sharpened. Rivers flashed. Agricultural terraces spread across hillsides in green and gold steps. Roads connected walled towns. Smoke rose from morning hearths in columns too small to be weather. In one coastal city, hundreds of triangular sails moved out through a breakwater, catching first light.

Jonas touched the glass with two fingers.

"Elian would say it needs a dragon room."

Mira kept her eyes forward. "She would."

Their last received packet from Earth was nine months old. Elian, six now by the calendar but five in the message, had lost a front tooth and refused to show them until the final three seconds, when she lunged at the camera and made a face. Mira had watched those three seconds twenty-seven times. She had not told Jonas the number. Jonas probably knew.

"High-resolution pass over observatory candidate," Taren said.

The display shifted to a dry plateau above the river civilization. A stepped stone complex sat on the ridge, aligned with horizon markers and shadow channels. Towers with lens housings. Courtyards engraved in geometric patterns. People in pale robes moved like chalk marks across the morning stone.

"Optical astronomy," Taren said. "Advanced. Look at the meridian slots. This is not astrology as decoration. They measure."

Hana leaned forward despite herself. "Can they see E2-X1?"

"Not yet," Taren said. "Not with naked eye. Maybe through their best lenses in a few years if they know where to look."

"They won't know where to look."

"No," Taren said. "They won't."

The room lost its fragile wonder.

Mira brought up the mission timeline. Twenty years until keyhole. Less than nine for the first local heavy-lift chain, if Hana's revised model held. They had arrived on schedule and still felt late.

"Begin language capture," she said.

Taren's team activated the passive listening net.

At first the ship caught only weather noise, electrical static from the planet's own moods, lightning murmurs, auroral hiss. Then the acoustic satellites dropped toward upper atmosphere and began collecting open-air sound from selected sites, narrow as needles, legal under a contact protocol written by people who had never been desperate.

Earth-2 spoke.

Not one language. Dozens in the first hour. Tonal river speech. Harsh mountain consonants. Coastal trade pidgins. Temple chants. Market calls. Children shouting over animals. Bells. Drums. A woman singing while grinding grain on a roof. A man cursing a broken cart axle with such elaborate rhythm that the translation AI tagged it as possible poetry.

The crew listened like thieves outside a family home.

Taren removed his headset.

"We have to name the ethical breach," he said.

"Noted," Mira said.

"Not just noted. Named. We are listening without consent."

"We are."

"And continuing."

"We are."

He looked at her across the deck, grief and accusation mixed. "The first compromise."

"No," Mira said. "Not the first."

That quieted him because everyone aboard knew the first compromise had been departure.

Hours later, as Argo passed over the night side again, the Suryan observatory saw them.

The observer's name was Leth Aru, third lens-keeper of the Western Meridian Tower, and he had been awake for thirty-one hours because the queen's calendar commission wanted the red comet's updated position before flood season rites. His left eye watered constantly from lens strain. His apprentice had fallen asleep against a stack of wax tablets. The tower smelled of lamp oil, cold stone, and the bitter tea scholars drank when youth failed them.

Leth was not looking for gods.

This mattered later, when priests accused him of arrogance and generals accused him of panic. He was not looking for omens, either, though the tower kept omen books because donors liked them and because even honest astronomers had to eat. He was measuring the red comet's drift against the old Meridian Table and composing, in the privacy of his tired mind, an insult against the dead men who had copied last century's numbers so badly.

Then a star crossed the lens.

Leth blinked.

Stars did not cross the lens. Clouds did. Birds did. High ash did. Once, during a winter fever, he had seen his dead mother cross the lens and wisely told no one. But this was a white point moving with clean purpose across a section of sky where no lamp, comet, or planet had permission to move.

He adjusted focus. The point sharpened.

Not fire. Not falling. Not a meteor.

It brightened, dimmed, vanished behind the edge shadow, and returned where calculation said it should not.

Leth's mouth went dry.

"Sira," he said.

The apprentice did not wake.

"Sira."

She snorted and jerked upright, leaving a smear of ink on her cheek. "I was copying."

"You were dreaming of copying. Bring the fast slate."

"Master?"

"Bring it."

He tracked the impossible point by hand, whispering angles while Sira scratched numbers with increasing panic. The moving star crossed the southern measure, passed above the broken tooth of Mount Avel, and disappeared into dawn glow.

Leth stood frozen with one hand on the lens wheel.

Sira looked from the slate to the sky. "What was it?"

A cautious scholar would have said artifact. A religious man might have said messenger. A courtier would have asked what answer was safest.

Leth was old enough to have lost patience with safety and young enough to still love truth more than his position.

"Something that climbs while falling," he said.

"That is impossible."

"Yes."

"Should I wake the tower master?"

Leth thought of the queen's commission, the flood rites, the argument between the temple college and the canal guild over calendar drift. He thought of the old story of the Black Shepherd, the dark

guide that returned beyond sight when kingdoms forgot humility. He had never believed it literally. Most astronomers did not, though they allowed priests to think otherwise for the peace of dinner tables.

Now an impossible star had crossed the queen's sky.

"Wake everyone," he said.

By noon, the Western Meridian Tower had confirmed the sighting with two smaller observatories. By dusk, a sealed rider carried Leth's slate copies down the ridge road toward the capital. By midnight, three temple colleges were arguing whether a star could be artificial without being divine. By the next dawn, Queen Aravel Nara-Suryan had ordered the lens records brought to her private study under guard.

Argo watched all of it through instruments no Suryan eye could see.

Taren mapped the courier routes with growing unease. "They are fast."

"Good," Hana said.

"Fast belief and fast fear use the same roads."

Mira stood behind them, arms folded. On the display, the rider descended through switchbacks lit by torch stations. A single human on a sweating animal carrying evidence that the universe had broken.

"Can we prevent panic?" Rhee asked.

Taren laughed softly. "Captain, we are panic."

Mira did not answer. She watched the courier until cloud covered the road.

In her private cabin, after the shift ended, she opened Elian's archived departure video. Not the latest packet. The old one. Elian at five, dragon in hand, face solemn with borrowed bravery.

"People on the other planet," the child said, "you can borrow them. But not forever."

Mira paused the video on her daughter's face.

Outside the hull, oil lamps moved under another sun. Inside, the mission clock counted down with mathematical indifference.

They had arrived.

Now they had to become real.

Chapter 5: The Queen Who Counted Wrong

20 years, 006 days until keyhole crossing

Queen-Savant Aravel Nara-Suryan trusted numbers because numbers did not flatter.

Courtiers flattered. Priests translated doubt into ceremony. Generals disguised fear as readiness. Merchants found profit in every prophecy and called it patriotism. Even scholars, who should have known better, trimmed their conclusions to fit the patience of the person holding the seal.

But a number, properly handled, had no manners.

This was why Aravel had Leth Aru brought to her before breakfast, before the canal petitioners, before the grain-price delegation, before High Matron Seska could arrive and wrap the impossible in incense.

The old lens-keeper stood in the private calculation room with red eyes, dust on his robe hem, and a wax-slate case chained to both wrists. His apprentice, Sira, hovered behind him like a guilty thought.

Aravel did not sit on the judgment chair. She stood at the map table beneath the brass armillary, hair still unpinned from sleep, sleeves rolled above the wrist. If the sky had broken, it could break before a working queen.

"Show me," she said.

Leth bowed once, not deeply enough for court and exactly deeply enough for truth. Aravel liked him immediately and distrusted that liking.

He opened the case. The first slates were angular tables: hour marks, lens angle, horizon reference, Mount Avel tooth, brightness estimate, correction for tower drift. Then came copies from two smaller observatories. Different hands. Different instruments. Same path.

Aravel read without speaking.

Behind her, the royal mathematician began making a small wounded sound through his nose.

"Master Jen," Aravel said, "if you are about to faint, do it away from the table."

He straightened. "Majesty, these figures cannot be true."

"That is why I asked to see them."

"A moving light above the fixed sphere is one thing. We have comets, wanderers, smoke stars. But this path is too clean, too swift, too near."

"Near?" Sira said before she remembered queens were not teachers. "Forgive me."

Aravel looked at her. "Answer your own question."

The apprentice swallowed. She was perhaps seventeen, with ink on one cheek and the hunted look of a mind that had seen a door open where there had been wall. "If it crossed that much sky in that much time, and if it was not burning downward, then it must have been... high, Majesty. Above the weather. Above any bird. But not as high as the true planets."

Master Jen said, "Impossible."

Leth said, "Yes."

Aravel lifted the second slate. "You keep using that word as if it settles anything."

The room went quiet.

Outside the high windows, the capital woke along the river. Bells marked the first canal gates. Vendors shouted from the breakfast bridges. Somewhere in the outer court, a delegation argued with guards in the same tones people used when they believed the world had not changed overnight.

Aravel moved the brass moon on the armillary and set the old tables beside Leth's slate.

Her father had taught her these tables.

King Nara had been a gentle ruler and a dangerous scholar, dangerous because he believed inherited knowledge deserved reverence but not obedience. On the night before fever took him, he had made Aravel promise to keep the Meridian corrections funded even if priests complained that precise eclipses left less room for divine interpretation.

"Truth is not an insult to the gods," he had whispered. "Only to lazy men."

Now his daughter stood with the tables he had loved and saw the crack in them.

She began to count.

Master Jen joined reluctantly. Leth joined with relief. Sira watched until Aravel pushed a blank slate toward her and said, "If you saw it, you count it."

They worked for three hours.

The moving light did not fit weather, comet, meteor, mirror, lens flaw, omen lantern, or any sanctioned category of the Suryan sky. It did fit a body moving beyond the air and below the moon, crossing with deliberate speed. Worse, when Aravel used the old high-planet correction to test the object's return in the next pass, her own numbers placed it near the western horizon after sunset.

"Tonight," she said.

Master Jen pressed both hands to his mouth.

Leth looked at her with the misery of a man vindicated.

High Matron Seska arrived at last, carrying the smell of rain incense and authority. She was old, heavy-shouldered, and too intelligent to be dismissed as merely devout. Aravel had known her since childhood. Seska had blessed her first slate, rebuked her first public proof, and held her when her father died.

She looked at the table once.

"How bad?" Seska asked.

"Unknown," Aravel said.

"That is usually bad."

"An object crossed the sky last night in a way our tables cannot explain. It may return tonight."

Seska's face did not change, but her fingers tightened around the prayer cord at her wrist. "Who knows?"

"This room. Two observatories. The courier chain."

"So half the city by sunset."

"Likely."

Master Jen said, "We should prepare a calming notice."

Aravel looked at him. "Do we know anything calm?"

He had no answer.

Seska stepped closer to the table. "Is it the Black Shepherd?"

The words seemed to dim the room.

Aravel had expected them. She still hated hearing them. Every child in Suryan knew the old Kharos story, though Suryans told it as foreign severity: when the Black Shepherd returned from the outer dark, kingdoms were weighed, proud cities drowned, and souls were gathered beneath a starless cloak. A death-guide. A test. A threat priests could use when ordinary guilt was not enough.

"No," Aravel said.

Seska studied her. "That was a fast answer."

"Because it is the answer we need."

"Need is not proof."

"Neither is fear."

Leth looked between them as if trying to decide which woman was more likely to have him executed. Sira wisely said nothing.

Aravel turned back to the slates. "Tonight we observe. Quietly if possible, honestly if not. If the object returns where the calculation says, then our tables are incomplete."

"Only the tables?" Seska asked.

Aravel heard the question under the question. If the heavens were not the fixed architecture of doctrine, then what else had been counted wrong? Crown? Temple? Calendar? Death?

Before she could answer, the signal bell at the private door rang three times: foreign intelligence, urgent.

General Kael Orun entered without waiting for permission. He was in field leathers rather than court armor, which meant the news had outrun protocol. He placed a sealed strip on the table.

"Kharos merchants in the lower city sent runners before dawn," he said. "Their embassy bought fresh horses and closed its shrine gates. One of my harbor watchers intercepted this from a paid scribe."

Aravel broke the seal.

The message was coded badly, meant for speed over elegance. Master Jen read it upside down and went pale.

Kael said, "They know we saw something."

Aravel's throat tightened. "Do they know what?"

"No. But someone in Kharos wants a report before we make one."

Seska whispered, "The Shepherd."

The signal bell rang again before Aravel could rebuke her.

This time no one entered. A small mirror beside the door flashed, relaying from the roof heliograph.

Master Jen read the pattern and froze.

"Speak," Aravel said.

He swallowed. "A new star has appeared above the western daylight. It is too bright for daylight."

Aravel walked to the window.

At first she saw only river haze and morning banners. Then the guard on the balcony pointed with a shaking hand.

There, against blue sky, hung a white point.

Not falling. Not burning. Waiting.

In the calculation room behind her, every person began speaking at once.

Aravel raised one hand and they stopped, because queens still had some uses after the sky learned new tricks.

The white point pulsed.

On the map table, the sealed strip from Kharos curled where wax had cracked. On the city bridges below, people were beginning to stop and look upward.

Aravel had counted wrong. Her father had counted wrong. Every book in the Meridian Library had counted wrong.

She felt terror then, clean and cold.

Under it, unexpectedly, came anger.

Not at the star.

At every voice that would try to make fear more useful than truth.

"Summon the full council," she said. "Close the harbor only to armed ships. No shrine bell rings without my order. Master Jen, bring the old sky tables and blank slates. Master Leth, you and your apprentice stay with me."

Kael asked, "And the object, Majesty?"

The white point pulsed again, twice.

Aravel watched it with the entire city holding its breath beneath her.

"If it wanted to kill us," she said, "it would not need to ask for an audience."

Chapter 6: You Call Our God A Rock

20 years, 004 days until keyhole crossing

The first voice from the sky spoke Suryan like a careful child.

Not badly. That would have been easier. Bad speech could be mocked, resisted, reduced to foreignness. This voice carried the tones correctly, placed honorifics where honorifics belonged, and shaped the river vowels with an accent no province owned. It was the voice of something that had learned from listening without being seen.

Aravel stood in the Hall of Flood Kings with seven hundred witnesses and felt the first political disaster arrive before the scientific one.

"Queen-Savant Aravel Nara-Suryan," the voice said from the bronze acoustic horns Earth had taught her engineers to assemble in a single frantic night, "we request peaceful audience. We come from another world. We carry warning. We carry no claim of rule."

The hall did not erupt at once. Shock had weight. It pressed people flat for a breath.

Then everyone moved.

Priests cried out. Guild masters shouted questions. One of the river dukes dropped to his knees. Soldiers lowered spears toward the empty air because instinct demanded a target. At the western doors, scribes began writing before understanding what they heard, because record came before sanity in any durable state.

High Matron Seska stood beside Aravel and did not kneel.

That saved lives.

General Kael barked an order, and the spear line locked into discipline instead of panic. Leth Aru clutched his slates as if numbers could shield him. Sira stared at the acoustic horns with a hunger that frightened Aravel more than fear would have.

Aravel lifted the silver staff of session. Its base struck the floor once.

The hall quieted by degrees.

"Name yourself," she said.

A short pause.

"I am Captain Mira Anik of the vessel Argo, from the planet Earth."

The translation rendered Earth as ground-world, then corrected itself through the horn with an apologetic click. Several scholars made warding signs at a machine that could amend its own speech.

"Where is your body?" Kael demanded.

"Above your world."

"Come down."

Aravel did not look at him. "General."

His jaw hardened, but he fell silent.

"Captain Mira Anik," Aravel said, testing the alien syllables, "why do you hide above us while asking peace?"

"Because arrival can harm. Disease. Fear. Misunderstanding. We are trying to reduce harm before physical contact."

The hall hated that. Aravel could feel it. No one liked hearing that fear was one of the things being managed, especially when it was true.

Seska stepped forward. "You learned our speech by listening."

Another pause.

"Yes."

"Without consent."

"Yes."

The single honest word struck harder than any excuse.

Seska turned to Aravel. "Remember that."

"I will," Aravel said.

From the east gallery, Ambassador Rhun of Kharos rose in black ceremonial mail. He had refused to surrender his sword at the door and now rested one hand on its wolf-bone hilt. "Majesty, this is sorcery or theater. No kingdom should answer a spy that admits spying."

The hall murmured approval. Kharos had few friends in Suryan, but fear made strange alliances.

The horn clicked again.

"We accept the charge," Mira said. "We listened because time is short and because we did not know how to ask permission before knowing language. That does not make it clean."

Aravel heard Seska breathe out through her nose.

Not forgiveness. Interest.

"You said warning," Aravel said.

The air in the hall changed. Even Rhun stopped moving.

"A dark body is returning through your system," Mira said. "Your oldest records may call it by sacred names. It is not sacred to us. It is a physical object. If its path is not altered, it will cross a region of gravity that endangers your moon, oceans, and future orbit."

The translation hesitated over gravity, offered falling-law, then relation-of-heavy-bodies. The scholars began whispering so fiercely the back of the hall sounded like rain.

Rhun laughed.

It was a strong laugh, well trained for contempt.

"There," he said. "You hear it. The demon names the Black Shepherd and calls him object."

The hall erupted.

This time Kael's soldiers had to push people apart. Suryan priests shouted down Kharos attendants. River dukes demanded clarification. A young guild master yelled that if a dark body were coming, why had the queen hidden it for two days, which was exactly the right political question and exactly the wrong moment.

Aravel struck the staff twice.

No one heard.

She looked up at the carved ceiling, where generations of artists had painted the sky as a perfect wheel around Suryan's sun. The old order looked down on its own funeral.

"Silence," she said.

Nothing.

Aravel handed the staff to Seska, walked to the nearest guard, drew his short sword, and struck the flat of it against the bronze gong beside the flood throne.

The sound broke the hall.

When the ringing faded, everyone looked at the queen holding a soldier's blade.

"The next person who speaks without leave will spend the night in the lower cisterns listening to eels," Aravel said.

That was not in any session protocol. It worked better than all of them.

She returned the sword.

"Captain Anik," she said, "you will not call what others worship merely physical in this hall again until you have earned the right to be rude."

Another pause. "Understood."

"Ambassador Rhun, you will not call a voice demon while using a foreign court's roof to shelter your embassy."

Rhun bowed with enough contempt to season a banquet. "Majesty."

"Now," Aravel said, "what proof do you offer?"

Mira's answer came quickly this time. "Prediction. We can tell you where our vessel will appear tonight, where your moon's shadow will fall next month, and where the dark body will become visible years from now. We can show a pattern you can test without trusting us."

Leth whispered, "Good."

Aravel glanced at him.

He flushed. "Forgive me, Majesty. But yes. Good."

Rhun's smile thinned. "A demon may predict its own tricks."

From the horn came a different voice, female, sharper, older in its impatience. "Then let us predict something we do not control."

Aravel leaned forward despite herself.

Mira said, "Dr. Sayegh."

"Your moon," the new voice said, "will graze the bright star above the western fish-hook constellation in thirty-one days, beginning just before second night bell in this city. Your current tables place the event after third bell. They are wrong because your lunar correction has accumulated error. Check it."

Master Jen made a choking sound.

Aravel turned. "Is that possible?"

His face had gone the color of old parchment. "I would need to calculate."

"Then calculate."

"Here?"

"Would you prefer the cisterns?"

He dropped to the floor with three assistants and began chalking on black tile.

For the first time, fear in the hall bent toward work.

That was when the western doors opened and a Kharos priest entered without permission.

He was tall, shaven-headed, wrapped in black wool despite the river heat. His forehead bore the ash mark of the High Augur's direct household. Every Kharos attendant went still.

Rhun looked irritated, then alarmed.

The priest did not bow to Aravel.

"The High Augur Senn speaks," he said.

Kael's soldiers moved, but Aravel raised a hand. Let the man condemn himself in front of witnesses.

The priest lifted a sealed tablet and broke it.

"The Black Shepherd is not stone. The Black Shepherd is not falling-law. The Black Shepherd is the guide of souls and the judge of kingdoms. Any voice that calls him dead matter is the mouth of the devourer. Any crown that grants such a voice welcome declares war on the order beneath heaven."

The hall was so silent Aravel heard the river bells outside.

Rhun closed his eyes. Too late, she thought. Even he had not wanted the message delivered this way.

The horn clicked.

Mira said, "Queen Aravel, we did not come to insult your dead."

The Kharos priest turned toward the sound. His face shone with triumph.

"Hear it," he said. "It admits it came for the dead."

Aravel felt the trap close. Not around truth. Around language. Around fear. Around every person in the hall who would leave with a sentence easier to repeat than an equation.

You call our god a rock.

That would travel faster than any proof.

She stepped down from the flood throne until she stood on the same floor as the priest.

"Return to High Augur Senn," she said, "and tell him Suryan has not bowed to Earth. Suryan has agreed to count."

"Counting cannot save a faithless kingdom."

"No," Aravel said. "But refusing to count can kill one."

The priest smiled. "Then count the days, Majesty."

He turned and left before Kael could decide whether arresting him would start the war today instead of tomorrow.

Above them, unseen beyond blue sky, the vessel from Earth waited. In the hall, Master Jen's chalk scratched faster and faster.

Aravel looked at the acoustic horn.

"Captain Anik," she said, "tonight you will show us where to look."

"Yes."

"And if your prediction fails?"

"Then you should distrust us."

"And if it succeeds?"

The pause this time was long enough that Aravel imagined the captain in her sky-vessel choosing between mercy and truth.

"Then we have less time than you want," Mira said.

Chapter 7: Proof In The Palace Court

19 years, 338 days until keyhole crossing

Thirty-one days was too long for a frightened kingdom and too short for a queen who needed time to become certain.

Aravel spent them under siege by explanations.

The temple college proposed that the sky voice was a trial of humility. The canal guild proposed it was a Kharos instrument designed to disrupt flood contracts. Master Jen, after three days of public denial and one night alone with the alien calculations, proposed that he had always suspected the lunar tables required reform. General Kael proposed building roof shields over critical streets in case Earth chose to drop fire.

High Matron Seska proposed tea.

"You cannot govern if your hands shake," she said.

"My hands do not shake."

Seska looked at the cup rattling softly against its saucer.

Aravel set it down.

The palace had changed shape around the waiting. Every courtyard held debate. Every balcony held someone watching the sky. Scribes copied Earth predictions until the city ran short of fine paper. Children played at being sky voices in alleyways, which terrified their grandparents and delighted the children. Kharos merchants left in guarded caravans. Suryan merchants bought their abandoned storehouses at improper speed.

Above all of it, Argo remained visible at appointed intervals: a moving white point that rose, crossed, and vanished exactly when Captain Anik said it would.

But predicting one's own vessel was not enough.

Tonight the moon would graze the bright star above the western fish-hook constellation. Suryan's old tables said after third bell. Earth said just before second.

The entire capital waited to see which universe it lived in.

Aravel held the proof in the palace court because hiding it would have made truth look guilty. A hundred witnesses stood inside the open-roofed judgment square: priests, guild masters, generals,

river dukes, mathematicians, foreign envoys who had not fled, and thirty common citizens chosen by lottery because Seska argued, correctly, that a sky that threatened everyone had no patience for noble-only evidence.

At the center of the square stood an Earth device assembled under Suryan supervision: a flat black screen on a bronze frame, powered by a sealed cell no local craft could yet reproduce. Beside it, in deliberate balance, stood Leth Aru's largest portable lens and three Suryan water clocks.

No one would be allowed to say the aliens had done a trick with only alien tools.

The acoustic horn clicked.

"Queen Aravel," Mira said, "we are ready."

Aravel looked at the witnesses. "So are we."

Dr. Sayegh spoke next. Her Suryan had improved, which made her rudeness more efficient.

"The star will disappear behind the moon's dark edge at the mark we gave. It will return after the interval already written in your public record. The old Meridian Table places both events later. The difference is not religious. It is accumulated error."

Master Jen flinched.

Seska murmured, "She has a gift for making correct things sound like insults."

Aravel nearly smiled. "You should meet her."

"I think I just have."

The first bell passed.

The moon lowered toward the fish-hook constellation. It was a clear night, river-humid but cloudless, the kind of night poets would have ruined with comparisons if they had not been too busy being afraid. Aravel stood at the primary lens and watched the bright star wait beside the moon's dark limb.

Second bell approached.

The court held its breath.

Nothing happened.

A ripple moved through the witnesses.

Rhun's replacement from Kharos, a silent woman with soldier's scars, allowed herself the smallest smile.

Aravel kept watching.

The water clock bead dropped.

The star vanished.

For one impossible moment the court did not react. Then sound broke over the stones. Scholars shouted. Citizens cried out. Someone began praying. Someone else began laughing in a way that suggested laughter and terror had come from the same root in the body.

"Record," Aravel said.

The scribes were already writing.

Master Jen sank to his knees, not in worship, but because his legs had become unreliable.

The Earth screen showed the same event from Argo's instruments, but no one looked at it. That mattered. The proof had happened in Suryan glass, under Suryan clocks, before Suryan witnesses.

The star returned at the predicted interval.

Not perfectly. There was a breath of difference between Earth model and Suryan clock, later traced to a tiny pressure fault in the palace water line. Hana sounded almost pleased when she found it. The correction made the proof stronger, not weaker.

When the witnesses quieted, Aravel stood before them without the flood crown.

"Our tables were wrong," she said.

Master Jen looked as if she had struck him.

"Not worthless. Wrong. There is honor in a table that carried us far enough to learn its own limit."

Seska closed her eyes briefly, accepting the sentence as a gift to the old world.

Aravel continued. "The sky voice made a claim. We tested it. The test held. That does not make Earth our master. It does not make every word from above true. It means we will test the next claim."

The Kharos envoy spoke at last. "And if the next claim is that your gods are dust?"

Aravel turned. "Then I will ask for evidence of dust."

Several priests gasped. Seska did not.

From the horn came Mira's voice, softer than public address required. "Majesty, we request permission to present the full danger model to your private council."

Every eye moved to Aravel.

This was the hinge. She felt it. To agree was not to believe everything, but it was to enter the road Earth had opened. To refuse after proof would be to choose pride over fear, and fear over duty.

She thought of the old tables. Of her father. Of Leth's tired eyes. Of a city full of children playing sky voice in alleys. Of Kharos already turning language into weapon.

"Granted," she said.

The word seemed too small for the door it opened.

Later, in the private war room beneath the palace, Earth showed them the death of their world.

Not as prophecy. As branching lines. A dark object moving through a field of gravity. The moon's orbit stretching. Tides climbing beyond old flood marks. Coastlines eaten. Crops drowned with salt. Cities evacuated too late. Another branch showed the moon struck by fragments after a later pass. Another showed the planet surviving in body while civilization collapsed under seasons that no calendar could predict.

No screaming. No fire thrown from heaven by angry gods. Just mechanics.

That made it worse.

Kael stood through the entire presentation with his hands behind his back. At the end he said, "Can your people stop it?"

Mira answered from the horn. "Not without yours."

Seska asked, "Can our people stop it?"

Hana answered. "Not without ours."

Aravel looked at the projected dark path. "Then no one can pretend rescue is charity."

"No," Mira said. "It is dependence. Mutual, if we do this honestly."

Kael gave a humorless laugh. "And if we do it dishonestly?"

No one answered.

The door opened and Sira entered with a sealed message. She bowed too quickly. "Majesty. Harbor intelligence. Kharos closed its embassy at sunset. Their ships burned their own ledgers before leaving."

Kael swore.

Aravel broke the seal.

The message was brief: Kharos riders had crossed every mountain road by relay, carrying black banners and temple tablets. The Dominion had summoned its high houses to Vaelor's capital.

At the bottom, in a different hand, a Suryan agent had added one line.

They are calling it the Shepherd's War.

Seska's face hardened.

Aravel looked at the dark model above the table.

"No," she said.

Kael misheard. "Majesty?"

"They do not get to name the future first."

She turned to the horn.

"Captain Anik, Doctor Sayegh, prepare your full instruction. We will test every claim we can test, but we will not wait for Kharos to turn proof into poison."

"What are you announcing?" Mira asked.

Aravel looked at the Suryan council, at the old world, at the broken sky.

"That Suryan will learn."

Chapter 8: The Black Shepherd's Decree

19 years, 330 days until keyhole crossing

The Dominion of Kharos received the sky with closed gates.

From orbit, the capital looked like a black knot in the mountain plateau: walls within walls, iron roofs, dry canals, temple towers cut into the ridgeline like blades. No river softened it. No open harbor invited strangers. Roads entered through fortress mouths and left under watch fires. Even at night, its heat signature seemed disciplined.

Taren Pell watched the city on Argo's cultural display and tried not to hate it before understanding it.

"That is a choice," Hana said.

"Everything people build is a choice," Taren replied.

"I mean the gates."

"So do I."

Mira stood behind them, reading the latest Suryan report. Aravel had announced cooperation in the language of proof, not surrender. It was politically elegant and operationally insufficient. The Suryans were ready to listen. They were not ready for vaccines, factories, mines, launch corridors, or the thousand daily humiliations of being taught by outsiders who could move lights in the sky.

Kharos was ready for something else.

The first black banners appeared within hours of the moon-star proof. By the third day, every major road shrine in Dominion territory had received copies of the decree. By the eighth, Argo's listening net had captured enough public recitations to assemble the full text.

Taren did not want to translate it.

He did anyway.

The decree filled the command display in three columns: Kharos liturgical language, machine Suryan, working Earth English.

The Black Shepherd's Decree, issued by High Augur Senn under the seal of Emperor Vaelor Khar, Guardian of the Meridian and Sword of the Dead.

Mira read silently until her jaw tightened.

Taren summarized because summaries were sometimes mercy. "Earth is named as the Devourer Beyond Air. Suryan is accused of opening its roof to a corpse-star. Any Kharos citizen who repeats Earth predictions without priestly refutation commits soul-treason. Any mine, forge, or road offered to sky demons is forfeit. Any foreign device crossing Dominion borders is to be broken and buried in salt."

"Salt?" Rhee asked.

"Purification. Also economic symbolism. Kharos controls highland salt caravans."

Hana pointed at the lower column. "Read that part."

Taren already had. He read it again because avoiding it would not help.

"Better to die as ourselves than live as servants of Earth."

The command deck went quiet.

Jonas, who had been working at the systems wall, turned. "That will spread."

"It already has," Taren said.

Hana made an impatient sound. "It is absurd. If they die, there is no ourselves left."

"Absurd ideas do not move people," Taren said. "Recognizable fears do."

Mira looked at him. "Explain."

He wanted to refuse because explanation in a command room too often became strategy, and strategy too often became permission. But he was on the mission because translation without courage was decoration.

"They hear us saying: abandon your calendar, your dead, your ruler, your temples, your mines, your children, your language, your idea of the sky. Let strangers who listened secretly tell you what is real. Let your enemies in Suryan become modern first. Trust that Earth will leave when the danger passes." Taren touched the decree text. "Senn is lying about physics. He may not be lying about what they fear."

Hana folded her arms. "So we let them block rescue because they have feelings?"

"No," Taren said. "We stop calling the obstacle stupidity. It is identity under threat."

Mira closed the report. "Both can kill."

Down on Earth-2, in the Suryan capital, Aravel faced the decree in a hall that still smelled of fresh ink.

Copies had been nailed to three embassy gates, slipped into market shrines, and thrown from a passing Kharos skiff before harbor guards could seize the crew. By dawn, people were arguing over lines they had not yet read themselves.

General Kael wanted arrests. Seska wanted counter-sermons. Master Jen wanted clarification papers, which no one but Master Jen believed would survive contact with a mob.

Aravel wanted sleep.

Instead she stood before the first public assembly since the moon-star proof, with the Earth acoustic horn on one side and the old flood throne on the other, and tried to hold two worlds apart long enough for both to live.

"Kharos says Earth makes us servants," shouted a textile guild speaker. "Do they?"

Good, Aravel thought. Begin with the wound.

"Earth has asked for no oath," she said.

"Yet."

"Correct. Yet. So we will bind the path before us with law."

Kael glanced at her sharply. This was new.

Aravel lifted a written charter. "No Earth instruction becomes Suryan law until ratified by crown, council, and public witness. No Suryan child is compelled into Earth schools by force. No temple is closed for teaching doctrine unless it calls for violence against the rescue works. No mine or guild is transferred to Earth ownership. No Earth weapon may be deployed on Suryan soil without Suryan command consent."

The hall murmured, some relieved, some disappointed that fear had not been allowed to remain simple.

The horn clicked.

Mira's voice entered carefully. "Earth accepts these terms as operating principles."

Kael leaned toward Aravel. "Operating principles are not law."

The horn clicked again.

"Earth accepts these terms as law where Suryan jurisdiction applies," Mira corrected.

Aravel looked at Kael.

He grunted, which from him was close to applause.

High Matron Seska stepped forward with her own scroll. "The temple college will issue a companion declaration. The sky may be studied without abandoning reverence. A table corrected is not a god insulted. No priest may name calculation a sin."

That caused more disturbance than the Earth charter.

Aravel loved her for it.

Then the western doors opened.

For one sick instant Aravel expected another Kharos priest.

Instead a boy entered under guard, no more than ten, dirty from travel, clutching a broken brass astrolabe. Leth Aru hurried behind him, breathless.

"Majesty," Leth called, forgetting every rank between street and throne. "Forgive the interruption. The child came from the lower observatory quarter. He says he has measured the white star."

"Many have," Kael snapped.

The boy shook his head. He looked terrified but not deterred. "Not the white star, Lord General. The dark one."

The hall lost sound.

Aravel descended the throne steps. "Your name?"

"Ilyon Mer."

"You saw darkness?"

He nodded and held out the broken astrolabe. "Not saw. Counted where it should be missing. Master Leth's public numbers, the Earth voice numbers, the old Shepherd story dates. They make a place. I watched that place through smoked glass when the sky was still blue. There is a bite where no bite should be."

Master Jen whispered, "That is not possible with a street lens."

Leth said, with the peculiar joy of a teacher witnessing trouble, "His lens is poor. His method is not."

Aravel crouched so the boy did not have to address her upward.

"Why bring this here?"

Ilyon swallowed. "Because if Kharos says it is a god and Earth says it is a stone, someone should look."

The sentence moved through the hall more powerfully than any decree.

Aravel took the broken astrolabe.

From the horn, Hana's voice came through before Mira could stop her. "Who is that child?"

Aravel looked at the acoustic horn, then at Ilyon.

"Someone learning faster than all of us," she said.

That evening, Emperor Vaelor appeared before the Ash Meridian Temple in Kharos, where black banners cracked in mountain wind and ten thousand people filled the stone terraces below. Argo could not see his face clearly. The Suryan agents could not hear every word. But the Dominion repeated the speech by torch relay until Taren had enough to translate.

Vaelor did not rave.

That made it worse.

He spoke of ancestors. Of foreign humiliation. Of Suryan ambition dressed in alien light. Of mines stolen not by armies, but by need. Of children raised to mock their grandparents because a sky voice had taught them a new table. He spoke the slogan softly, and the crowd answered like prayer.

Better to die as ourselves.

Better to die as ourselves.

Better to die as ourselves.

Mira watched the relay transcript in her cabin after shift. Jonas stood in the doorway, too tired to come in and too worried to leave.

"They will block the corridors," he said.

"Yes."

"And the copper."

"Yes."

"And the ice."

Mira closed the transcript. "Not tonight."

"Soon."

She opened Elian's latest queued packet and did not play it. Not with Vaelor's crowd still in her ears.

"We came to move a body," she said.

Jonas sat beside her.

"We knew there would be politics."

"Politics is a vote margin and a funding delay. This is a world deciding whether survival is betrayal."

He took her hand.

Below them, Suryan's capital burned with lamps, arguments, fear, and the first illegal study circles where children copied Earth star maps by candlelight. Beyond the mountains, Kharos shut its gates and sharpened a faith into a border.

Between them, invisible in daylight and growing closer every hour, the Wanderer kept its course.

Chapter 9: The First Needle

18 years, 249 days until keyhole crossing

The first child to accept Earth medicine did not cry until everyone praised his courage.

Before that, Ilyon Mer sat on the clinic bench with his sleeve rolled to the shoulder, chin lifted, eyes fixed on the glass needle as if it were a rival proof. The needle was smaller than he expected. That offended him. The panic in the square had promised something more dramatic.

Around him, Suryan citizens crowded behind rope lines: mothers with babies wrapped in river cloth, old men pretending to be present for politics rather than fear, guild apprentices daring each other to step forward, priests from Seska's college murmuring blessings they had rewritten twice to avoid declaring germs either demons or gods.

At the center stood Dr. Laleh Moradi from Earth in a sealed pale suit, High Matron Seska in temple blue, and Queen Aravel without crown or jewelry. Aravel had insisted on standing beside the vaccination table because nothing calmed a city like shared risk and nothing endangered a ruler like failing publicly at it.

"It will sting," Laleh said through the translator bead.

Ilyon looked at the bead instead of the needle. "How does the stone speak before your mouth finishes?"

"Later," Aravel said.

"Everything interesting is later."

Laleh smiled despite herself. "Ready?"

Ilyon nodded.

The needle entered. He blinked. The crowd inhaled as one animal.

"That is all?" he asked.

The crowd laughed, which was exactly what Aravel had hoped and exactly what Kharos agents would hate.

Then applause started. Ilyon's face collapsed into outrage and tears.

"I was brave before," he shouted. "Now everyone is looking."

The laughter grew. Even Kael smiled.

For one hour, hope behaved like logistics. Names were recorded. Arms were cleaned. Needles entered skin. Earth doctors taught Suryan healers how to prepare sterile tables, how to mark doses, how to watch for fever. Seska blessed the work as a covenant of breath: not foreign magic, not surrender, but care for bodies made under the same sky.

Then a girl named Tavi died in the west queue.

She was eight, red-haired, loud enough that half the clinic had noticed her complaining that Ilyon got to be first only because queens liked clever boys. She collapsed before receiving the needle. By the time Laleh reached her, Tavi's mouth had foamed black and her pulse had become a thread.

"Poison," someone screamed.

The word did more damage than the death.

Mira watched from the orbital relay as the square buckled. The medical feed fractured into motion: rope lines snapping, soldiers pushing outward, mothers clutching children, Earth doctors sealing their suits, Suryan healers shouting for space. Aravel shoved through the guards to reach the dead girl, and for one terrible second Mira thought the crowd would tear its own queen apart for standing too near Earth medicine.

"Get me audio to Kael," Mira said.

"Channel open," Rhee answered.

"General, lock the clinic. No one leaves with food, cups, cloth, or water skins. This may be staged."

Kael did not ask how she knew. "Done."

Taren leaned over the cultural feed. "Careful with staged. If that word reaches the crowd, it sounds like you are accusing the family."

"Then give me better language."

"Say cause unknown. Preserve evidence."

Mira repeated it.

In the square, Aravel knelt beside Tavi's mother. Not above her. Beside. The woman struck the queen across the face.

The soldiers moved. Aravel raised one hand and stopped them.

"Find why," the mother said.

Her voice carried through every listening device Earth had hidden and every ear in the square.

"Not whose speech is clever. Not whose god is insulted. Find why."

Aravel bowed her head. "I will."

It took six hours.

Earth medicine found a plant alkaloid in Tavi's water cup, one used in Kharos funeral rites and rare in Suryan markets. Suryan healers confirmed the symptoms from old poison scrolls. Kael's guards found a shrine token under the public cistern grate. None of it mattered enough. The rumor had already run faster than evidence.

By sunset, three neighborhoods had smashed vaccination tables.

By midnight, black-painted words appeared on a clinic wall:

Earth saves with needles. Earth kills with cups.

Aravel read the report in the palace infirmary while Laleh cleaned blood from her own sleeve. The queen's cheek was bruised where Tavi's mother had struck her.

"Will the vaccine kill anyone?" Aravel asked.

Laleh did not soften the answer. "Maybe. Rare reactions exist. Fever. Allergy. Mistakes if storage fails. But not like this."

"So we must teach them that Earth medicine can save, Earth medicine can fail, and Kharos poison can lie."

"Yes."

"That is too many truths for a grieving square."

Laleh looked exhausted. "Most true things are."

Aravel went to the window. Outside, the capital burned extra lamps, as if light could keep suspicion from entering houses. Across the river, one clinic still operated. The line there had grown longer after the riot, not shorter. Parents stood under guard with children in their arms, frightened but waiting.

Seska entered without knocking. She carried Tavi's mother's cup wrapped in blue cloth.

"I will speak at dawn," she said.

"To say what?"

"That a poisoned child does not become a reason to leave every child unprotected."

Aravel touched her bruised cheek. "They may strike you too."

Seska looked at the cup. "Then I will be in honest company."

Above the city, Argo adjusted its orbit for the next supply drop. Mira stood alone on the command deck, watching the clinic feeds until Jonas came and set a cup of coffee by her hand.

"You could not have prevented the poisoning," he said.

"No."

"That was not agreement."

Mira closed the feed. "I know."

On Earth, Elian would be seven now. The latest packet had not arrived. Somewhere in transit, a child who did not know Tavi existed was losing teeth, learning songs, deciding which parent to be angry at first.

Below, Ilyon returned to the clinic line.

The camera caught him rolling up his other sleeve.

Laleh told him one dose was enough.

"Not for me," he said. "For them."

He turned to the waiting children and lifted his bandaged arm.

"It stings less than being stupid," he announced.

The line laughed again, weaker this time, but real.

Mira let the sound play once before saving it to the mission archive.

Chapter 10: Standards Of Fire And Steel

17 years, 113 days until keyhole crossing

Suryan's first modern factory failed because every screw was honest.

That was Jonas Vale's official explanation, which no one found comforting.

The foundry hall had once been a cavalry warehouse beside the old south wall. Now its roof carried Earth ventilation fans, its stone floor held chalk grids, and its stalls had been replaced by lathes, furnaces, measuring benches, and a shrine to Saint Olun of Useful Hands that the workers refused to remove. Jonas had approved the shrine. It kept people from treating the machines as the only holy things in the room.

On the primary assembly table lay twelve pump housings, all made by the best guild metalworkers in the capital.

No two matched.

Guildmaster Varo crossed his arms. He had forearms like bridge cables and the expression of a man restraining himself from throwing an alien through a wall. "Each is sound."

"Each is beautiful," Jonas said.

"Then why do your Earth gauges insult them?"

"Because beautiful is not interchangeable."

The translator rendered interchangeable as able-to-change-places-without-argument. Varo glared at it.

Jonas picked up two screws. "These were made by Master Pellun and Master Iset."

"Excellent craftsmen."

"Yes. Pellun's thread is slightly deeper. Iset's pitch is slightly wider."

"Because they are not dead men copying dead hands. They have judgment."

"And if one of Iset's screws has to replace one of Pellun's on a mass driver sitting on The Wanderer, with no master craftsman nearby?"

The hall quieted.

It always came back to The Wanderer. That was the lever Earth used when persuasion failed. Jonas hated how well it worked.

Varo took the screws. For the first time, he did not look offended. He looked betrayed by a lifetime of excellence that had not prepared him for parts that could survive their makers.

"You want us to make worse work," he said.

"I want you to make repeatable work."

"Repeatable feels worse."

"At first."

From the gallery, Sira said, "Numbers without personality."

Jonas pointed at her. "Exactly."

Varo scowled. "Who invited the lens girl?"

"The queen," Sira said with dangerous cheer.

Queen Aravel watched from the upper rail, flanked by Kael and two ministers buried in production tablets. She had learned not to interrupt technical humiliation. Better to let the guilds suffer it in public and survive.

Across the hall, Ilyon Mer was supposed to be sorting gauge blocks by size. Instead he was building a tiny gallows for defective screws.

"Ilyon," Jonas said.

"It is educational."

"It is ominous."

"So is bad threading."

Several workers laughed. Varo did not, but the corner of his mouth moved.

By afternoon, the foundry had its first standards wall: rods, threads, weights, measures, tolerances, sample pieces sealed behind glass. Suryan scribes copied not only the numbers but the reason for each number. That was Aravel's order. A rule without a reason became priestcraft, and Suryan had enough priestcraft.

That evening, the lights came on.

Only in the foundry, only for three minutes, powered by a wheezing generator and a coil assembly that had nearly killed two apprentices during testing. But when the filament lamps glowed under the old cavalry beams, the workers stopped as if dawn had been lowered indoors by rope.

Varo removed his cap.

Jonas did not speak. For once he knew enough to let wonder have the floor.

Then the east transformer blew.

The lights died. Someone screamed. The shrine candle remained burning, smug and traditional.

Ilyon said, "The saint wins first round."

This time Varo laughed.

The theft happened during the repair.

No one saw the Kharos agent enter because everyone was looking at smoke. Later, Kael's guards reconstructed the path from boot grit, a cut screen, and a missing apprentice badge. The agent ignored the visible machines and took three things from Jonas's locked teaching case: a copper winding diagram, a magnet alloy chart, and a simple radio circuit drawn for next month's lesson.

Not weapons. Foundations.

Kael brought the report to Aravel after midnight.

"We caught the badge seller," he said. "Not the agent."

Aravel read the missing list twice. "Why these?"

Jonas, summoned from the foundry with soot still on one cheek, answered before Kael could.

"Because someone in Kharos understands the sequence."

"Explain."

"Copper grids lead to motors. Motors lead to pumps, tools, rail, factories. Magnet alloys lead to generators and guidance systems. Radio leads to coordination without couriers. They did not steal a machine. They stole the beginning of several."

Kael's jaw tightened. "Then they are not only rejecting modernization."

"No," Jonas said. "They are deciding whether to control it."

Aravel walked to the balcony.

The city below was half dark. A few experimental electric lamps shone in the foundry quarter like captured stars. Beyond them, most homes still held oil flames. Ox carts crossed under new power lines. Monks from Seska's college carried sealed batteries in padded reliquary boxes because that was the only transport ritual people trusted not to drop them.

Beautiful, Aravel thought. Grotesque. Necessary.

"If Kharos builds from stolen plans," Kael said, "they may field weapons before we field factories."

"Then we secure the schools," Aravel said.

"And the foundries."

"And the roads."

"And the people who know how to read Earth diagrams."

There it was. The new shape of power. Not land alone. Not bloodline. Not temple authority. Knowledge itself had become something armies would guard and spies would steal.

Jonas looked miserable. "We can slow the curriculum."

Aravel turned sharply. "No."

"Majesty, if the sequence is being stolen..."

"Then it matters. We do not answer theft by keeping ourselves ignorant."

Kael nodded once. "Good."

Jonas rubbed his eyes. "I was hoping one of you would be less terrifying."

Aravel almost smiled.

Then the first radio prototype in the corner, still cracked from the transformer surge, emitted a burst of static.

Everyone turned.

A voice came through, broken by distance and bad tuning. Not Earth. Not Suryan.

Kharos liturgical cadence.

Taren's translation arrived ten seconds later on Aravel's slate:

Fire stolen from demons may burn the thief clean.

The room seemed colder.

Kael reached for the radio as if he could throttle a signal.

Jonas stared at the ugly little box, at the stolen future speaking back through it.

"They built a transmitter," he said.

Aravel looked out over the city where the foundry lamps had gone dark and the oil lamps still endured.

"Then tomorrow," she said, "we build ten."

Chapter 11: The Language Of Orbit

16 years, 041 days until keyhole crossing

Taren Pell discovered that Suryan children understood orbit better than ministers.

Ministers wanted orbit to have jurisdiction. They asked whether the moon trespassed through the sun's domain, whether Earth owned the path of Argo, whether The Wanderer could be banished by treaty if it had entered unlawfully. Children accepted immediately that falling could miss forever. They had thrown stones. They had watched river eddies curve leaves around posts. They had spun festival cups on strings until clay water splashed their cousins.

So Taren taught the first orbital mechanics class in a drained fountain full of children.

This was not in the education plan.

The education plan involved selected scholars, controlled terminology, and a curriculum approved by the crown, temple, guilds, and Earth mission pedagogy council. The education plan did not involve Ilyon Mer stealing a crate of chalk balls and announcing to forty market children that the sky could be learned before lunch.

By the time Taren arrived, Ilyon had placed one child on the fountain's central plinth as the sun, another with a blue sash as Earth-2, and a very serious girl with a bucket as the moon.

"The bucket is because tides," Ilyon explained.

"Of course," Taren said.

Sira sat on the fountain rim taking notes she would later deny taking.

The children cheered when Taren agreed to continue the lesson instead of arresting anyone for educational theft.

He drew circles first, then crossed them out.

"The sky does not use perfect circles because poets got there first," he said.

The children laughed. Three passing priests did not.

He drew ellipses, then gravity wells, then a slingshot path around a chalk sun. The translation bead struggled with momentum, tried body-stubbornness, then settled on carried motion. Suryan language had old words for duty, inheritance, current, and thrown force. Taren borrowed all of them.

"A thing in orbit is always falling," he said, rolling a chalk ball around the fountain's inner wall. "But it moves sideways fast enough that the ground bends away beneath it."

The serious girl with the bucket frowned. "So the moon is failing to hit us?"

"Beautifully."

Ilyon whispered, "I told you."

Taren made him repeat the simplified keyhole problem. He expected enthusiasm. He did not expect accuracy.

Ilyon laid stones along the fountain tiles: sun, Earth-2, moon, Wanderer, danger gate. He showed how a small change far away became a large miss later. He used string for path memory and a chipped cup to mark uncertainty. Then he moved the Wanderer stone through the narrow gate and showed how it returned in worse paths.

The children went quiet.

That was the trouble with teaching. Sooner or later, comprehension arrived.

"Can we push it?" the bucket girl asked.

"Yes," Taren said.

"Hard?"

"Not hard if early."

"Are we early?"

Taren looked at Ilyon, who looked back with no childish mercy.

"We are not late yet," Taren said.

It became a phrase in Suryan within a week.

Not late yet.

Workers painted it above foundry doors. Students scratched it into slate covers. Kael hated it because slogans made soldiers careless, until he heard a wounded bridge engineer repeat it while refusing evacuation from a flood-damaged power site.

Aravel summoned Taren to the palace after the phrase reached the council.

"Did you invent it?" she asked.

"Accidentally."

"Most dangerous inventions are."

She stood beside a table covered in curriculum drafts. Old Suryan calendar mathematics had been placed beside Earth orbital diagrams. Seska's temple scholars had added ethical notes in blue ink. Guild representatives had added cost objections in red. Kael had written security risk beside almost everything.

Aravel tapped Ilyon's fountain diagram. "Can this be taught widely?"

"Yes."

"Should it?"

Taren hesitated. "That is not the same question."

"I noticed."

He walked to the window. The capital had changed since first contact. Towers carried antenna wires. Clinic banners marked vaccinated districts. The first rail bed cut through old pasture outside the south wall. Smoke from the foundry quarter made the sunsets ugly. Progress had a smell, and it was not clean.

"If you teach everyone the danger," he said, "you teach everyone fear. If you teach only officials, Kharos will say you hide doom in noble rooms."

"So fear either way."

"Yes."

"Then I prefer fear with arithmetic."

Taren bowed. "Majesty."

That night Argo transmitted a training simulation designed for scholars.

Ilyon broke it in forty minutes.

He did not mean to. The simulation asked students to adjust impactor timing to miss the keyhole. Ilyon added three imaginary mass drivers on The Wanderer's surface and used them in pulses instead

of steady thrust. The model flagged the solution as invalid because the interface had not yet introduced surface operations.

Ilyon assumed the model was wrong and rewrote the input labels.

At 02:13 ship time, Hana stormed onto the command deck in sleeping clothes, holding a slate.

"Who gave the child access to the extended sandbox?"

Rhee blinked awake. "Which child?"

"The annoying correct one."

Mira arrived two minutes later. "What happened?"

Hana projected the solution. "He used pulsed ejecta timing to compensate for tumble uncertainty. It is crude. It ignores power losses. It assumes impossible mining rates. But the instinct is good."

Jonas leaned over the display. "He found mass drivers before we taught mass drivers."

"He found throwing rocks," Hana said. "Do not romanticize it."

Mira looked at the solution path. Small pushes. Accumulated consequence. A child's stones becoming planetary defense.

"Can we use it?"

"Not directly. But it changes how we teach the next module. They already understand thrown mass culturally. Siege engines, quarry ramps, flood gates. We start there."

Taren, summoned and still buttoning his jacket wrong, smiled. "The language of orbit is not ours."

Hana looked at him. "What?"

"Nothing."

Below, in the lower observatory dormitory, Ilyon slept facedown beside a slate covered in forbidden paths. Sira found him at dawn, read the model, and covered him with a blanket before taking the slate to Aravel.

The queen read it before morning court.

In the margin, Ilyon had written a question in childish block script:

If the Wanderer is falling, what is it trying to miss?

Aravel stared at the line for a long time.

Then she sent for Taren, Hana, and every teacher who still believed children should wait their turn to learn the end of the world.

Chapter 12: Towers On Castle Walls

15 years, 002 days until keyhole crossing

The first radar dish on Earth-2 rose from the north castle wall like a metal flower grown in bad soil.

It turned slowly above murder holes, arrow scars, and stone saints whose faces had been worn smooth by six centuries of rain. Below it, masons argued with electrical apprentices. Monks carried signal relays in padded boxes. Kael's officers paced the ramparts, pretending not to duck when the dish swung over them.

Aravel watched from the old siege platform while Jonas explained why everyone had to stop calling it the listening bowl.

"But it listens," Kael said.

"By shouting first."

"Then it is a rude listening bowl."

"Radar," Jonas said.

The translator offered sky-echo.

Kael pointed at the bead. "Sky-echo is better."

Jonas surrendered. "Fine. But write radar in the manuals."

Suryan had become a nation of doubled words. Radar and sky-echo. Vaccine and breath-shield. Generator and captive lightning. Orbit and falling-miss. Some Earth terms stuck because precision demanded them. Others failed because no one loved a word enough to carry it home.

Five years had passed since Argo's arrival. The capital had wires now, not everywhere, not safely, not without fires, theft, and weekly theological pamphlets about whether electricity preferred sinners. Rail reached the south mines. The foundry district ran two night shifts. Three hospitals used sterile procedure well enough that Earth doctors had begun trusting local surgeons with operations that would have horrified them a decade earlier.

And still the countryside beyond the capital could look unchanged: oxen in wet fields, children chasing geese, old women drying herbs beneath painted household gods.

That unevenness troubled Aravel more than any machine failure.

Modernization did not arrive like dawn. It arrived like floodwater through cracked doors, deep in one room and absent in another, lifting some lives while rotting the foundations of others.

"Majesty," Jonas said.

She looked up.

"First pulse."

The castle wall settled into silence. Even the masons stopped complaining.

Jonas signaled the control crew. Ilyon, now fifteen and all elbows, stood at the secondary board with Sira supervising closely enough to stop him from improving anything during the test. He had grown taller than half the adult engineers and more impatient than all of them combined.

"Power stable," Ilyon said.

Sira checked his gauge. "For once."

"Pulse ready," called the operator.

Jonas looked to Aravel.

She nodded.

The radar dish transmitted.

Nothing visible happened.

That disappointed everyone except the people who understood it.

On the display, a thin line crawled outward, struck the upper atmosphere, scattered from weather, and returned as data. The first Earth-2-built radar pulse had gone into the sky and come back with proof of clouds.

The wall erupted.

Kael looked betrayed. "Clouds?"

"Clouds today," Jonas said. "Satellites tomorrow. Incoming debris later. The point is that it works."

Hana's voice came from the relay. "Aim higher."

Jonas muttered, "Good morning to you too."

They aimed higher.

The second pulse found Argo, exactly where it had permission to be. The return appeared on the display as a clean mark. Suryan engineers cheered so loudly a flock of birds lifted from the outer fields.

Aravel felt the cheer pass through the stone under her boots.

Then the third pulse found something no one had expected to see that day.

Not clearly. Not enough for measurement. A shallow absence first, then a return too weak to trust. The display flagged it and lost it. Ilyon leaned so close Sira grabbed the back of his collar.

"There," he said.

Hana's voice sharpened. "Freeze buffer."

The wall quieted.

Jonas froze the data. A smudge sat near the edge of noise, moving against the background in the direction Hana's models had predicted for the outer dark.

Aravel knew before anyone named it.

The Wanderer had become barely visible to their machines.

"Confirm with optical," Hana said.

"Already turning," Sira answered.

Across the city, temple observatories redirected lenses. New Earth mirrors and old Suryan mounts moved together. The data came back uneven, corrupted by atmosphere and panic, but by evening the Western Meridian Tower had a dark point fixed against a known star field.

Leth Aru, older now and half blind in one eye, sent the note in his own hand:

It is where Earth said it would be. It is darker than fear.

By nightfall, the capital knew.

Aravel had planned the announcement. She had drafts: sober, direct, jointly signed by crown and temple, including three tested facts and no metaphors. The city did not wait for drafts. Word spilled from the observatories, through foundries, into markets, onto ferries, across clinic lines, into schools, and down alleys where children stopped playing sky voice and looked upward instead.

The Wanderer could not be seen by naked eye yet.

That did not matter.

People saw it in each other.

The first procession formed outside Seska's main temple. Not a riot. Not exactly prayer. Thousands of citizens carried lamps to the river and set them afloat, one for each year since the Black Shepherd was said to have last returned. The old myth had entered Suryan despite every careful lecture. Fear liked old containers.

Aravel joined the procession without guards visible.

Seska walked beside her.

"This may make it worse," Aravel said.

"Everything may make it worse."

"Is that your spiritual counsel?"

"Tonight, yes."

They stood on the river steps as lamps drifted across black water. On rooftops, new antennae blinked. On the castle wall, the radar dish turned again and again, a patient metal flower asking the dark to answer.

At the edge of the crowd, Tavi's mother appeared.

Aravel had not seen her since the vaccination poisoning. The woman had aged a decade in five years. She held a lamp in one hand and a child's worn scarf in the other.

The crowd parted without being asked.

The woman approached Aravel and held out the lamp.

"For my daughter," she said.

Aravel took it.

"And for the children who lived because I brought the younger ones back for the needle."

Aravel's throat closed.

Together, they set the lamp on the river.

Above, the Wanderer remained invisible to human eyes and present in every calculation.

In Kharos, the same data arrived differently.

A Dominion observatory hidden in the Ash Meridian confirmed the dark point before dawn. High Augur Senn read the report alone. The figures matched Earth prediction within tolerances his own scholars could not dismiss.

He burned the first copy.

Then he ordered ten corrected copies prepared for Emperor Vaelor, each with the conclusion changed from "Earth prediction confirmed" to "Shepherd sign intensifies."

Senn stood over the brazier until the honest numbers became ash.

"Let Suryan worship machines," he said to no one. "We will keep the dead."

But his hand shook as he sealed the lie.

Chapter 13: Better To Die As Ourselves

14 years, 211 days until keyhole crossing

Emperor Vaelor Khar did not fear Earth because it was powerful.

Power was familiar. Kharos understood power the way miners understood stone: by weight, fracture, and the sound it made before collapse. The Dominion had survived famine kings, plague banners, Suryan river wars, and three succession nights in which brothers had taught brothers the practical limits of blood.

No, Vaelor feared Earth because it made obedience look like learning.

That was the first line of his speech to the High Houses, though the scribes softened it before public copying. He gave the original in the Ash Meridian Hall beneath the black roof where the dead emperors' masks watched from niches cut into volcanic stone. The houses stood ranked by mine, army, salt road, and shrine. Their banners hung motionless in the dry air.

High Augur Senn stood to Vaelor's right, hands folded inside wool sleeves, face arranged into certainty.

Vaelor envied him that.

"Suryan calls it rescue," Vaelor said. "They teach their children new names for the heavens and call the old names errors. They place lamps in wires and call darkness backward. They let unseen listeners turn their speech into tools. And when we object, they ask why we hate survival."

The chamber murmured.

"I do not hate survival," Vaelor said. "I hate the bargain they hide inside it."

He lifted one of the stolen Suryan teaching sheets. It showed an orbit lesson for children. Stones, arrows, falling paths, a little drawing of The Wanderer as a dark circle. In the margin, some Suryan child had written not late yet.

Vaelor held it up.

"Here is the bargain. Your children will learn this before they learn your grandfather's prayer. Your smiths will measure to Earth numbers before they remember why a blade has a name. Your mines will serve machines whose commands come from sky voices. Your dead will become metaphors. Your gods will become weather."

He let the silence gather.

"And at the end, if the dark passes and we still breathe, Earth will congratulate itself for saving people who no longer know how to stand without permission."

This time the murmur became approval.

Vaelor looked across the high families and saw what he needed: fear with dignity. Fear alone made mobs. Dignity made armies.

"So we will learn what must be learned," he said, and the room sharpened in surprise. "We will not remain ignorant because Suryan thinks knowledge belongs to traitors. But we will learn inside Kharos law, under Kharos hands, for Kharos survival. We will take tools from demons and baptize them in obedience."

Senn's head turned a fraction.

Good, Vaelor thought. Let even the Augur wonder.

"The slogan is not death," Vaelor said. "It is memory. Better to die as ourselves than live as servants of Earth. But better still to live as ourselves, with every stolen fire chained to our own hearth."

The High Houses struck their spear butts on stone.

Below the hall, beneath six locked doors, Senn kept the star tables.

He went there after the speech, carrying the latest report from the Ash Observatory. The chamber was narrow, windowless, and cold. Three Kharos astronomer-priests knelt beside black slates. None looked at him directly.

"Again," Senn said.

Priest Engineer Liora Vask touched chalk to slate. She was young for her rank, with hair cut short in mining style and eyes that had never learned court softness.

"Using Dominion observations only," she said, "the dark body's path remains within Earth and Suryan error margins. The moon interaction is plausible. The tide predictions align with our old flood layers if the ancient Shepherd cycle is treated as physical return."

"Do not use their words."

Liora paused. "Which words, High Augur?"

"Physical."

"What word should describe a thing that has mass, path, and measurable darkness?"

The two older priests stopped breathing.

Senn looked at her. "Dangerous words suit dangerous mouths."

Liora bowed, but only enough. "Then I will say this: our own tables show the same danger."

There it was. The sentence Senn had burned once and buried twice.

He dismissed the others. Liora remained because he had not dismissed her, and because she was either brave or foolish enough to know it.

"If this leaves the chamber," he said, "Kharos fractures."

"If it does not, Kharos dies badly."

"All death is bad to the living."

"Not according to our sermons."

Senn almost struck her. The impulse passed, leaving shame behind it.

He walked to the oldest wall carving. The Black Shepherd stood there without face, cloak full of small souls, one hand extended toward a line of kings. As a child, Senn had found comfort in that facelessness. Death did not leer. Death guided.

"I have served the Shepherd since before you were born," he said.

"Then serve by telling the truth about where he walks."

"Truth without order becomes a weapon in enemy hands."

Liora gathered the slates. "Then we are already at war over who may count."

Long after she left, Senn opened the sealed copy intended for Vaelor.

The honest conclusion waited at the bottom.

Dominion observations confirm the returning body is real and dangerous. Earth calculations are substantially correct.

Senn took up the correction knife.

For a full minute he did not move.

Then he scraped away substantially correct and wrote:

Earth calculations imitate sacred cycles for corrupting purpose.

The lie looked elegant in his hand.

That was the worst part.

Chapter 14: A City Learns Electricity

13 years, 176 days until keyhole crossing

Suryan's capital lit at second bell.

Not all of it. Not even most. The first civic grid covered the palace quarter, the south foundries, two hospitals, the river pump station, and the three streets between them where the wires had been tested, cursed, repaired, blessed, and insured at rates that made merchants rediscover prayer.

Still, when Aravel gave the signal and the lamps rose together, the city forgot to breathe.

White light filled streets that had known only flame. It flattened shadows under bridge arches. It made wet stone shine. It caught in the eyes of children and old people and thieves and priests. It revealed cracked plaster, dirty hems, exhausted workers, and the astonished face of Guildmaster Varo, who had spent two years building parts for the grid while insisting it would never work.

Then the cheering began.

From Argo, Mira watched the city bloom on the nightside map. It was not bright by Earth standards. Against the vast dark of the continent, Suryan's new grid was a small cluster of disciplined sparks.

But she had seen the first oil-lamp images. She knew what those sparks had cost.

Jonas stood beside her, eyes wet.

"Don't say it," he warned.

"Say what?"

"That it is beautiful."

"It is."

"It is also dangerously overloaded, socially destabilizing, and three transformer houses away from an embarrassing fire."

"Still beautiful."

He gave up. "Yes."

Below, Aravel rode through the lit quarter in an open carriage because Kael had lost the argument about assassination risk. Seska sat beside her. The High Matron's face looked carved from stern approval.

"You are enjoying this," Aravel said.

"I am enjoying watching people discover that light can be practical without being holy."

"That is a theological position."

"Everything is, if argued loudly enough."

The carriage passed the first hospital. Nurses stood in the bright entry with sterilized tools gleaming on trays. A child recovering from lung fever waved a bandaged hand from an upper window. Across the street, a group of monks stared at their own shadows under the new lamps, then began arguing about whether electric light cast morally different darkness.

For two hours, the city loved the future.

Then the outer villages arrived with stones.

They came from the northern road, farmers mostly, with carts, banners, and three priests from a breakaway shrine that Seska had failed to bring back under college discipline. They did not attack at first. They stood outside the lit district and shouted that the capital had stolen the night, that cows had gone dry under the wires, that children near transformer houses dreamed in Earth language, that the lamps drew souls upward like moths.

Kael's guards formed a line.

Aravel stepped out of the carriage before anyone could stop her.

"Majesty," Kael hissed through the relay bead, "do not walk toward the mob."

"It is not a mob until we make it one."

"That is poetic idiocy."

"Then keep up."

She crossed from electric light into torchlight. The difference was physical. In the lit district, faces were sharp, almost cruelly visible. Beyond it, flame made everyone older and more forgiving. Aravel understood, in that step, why people could love darkness. It let the world remain familiar.

An old farmer spat at her feet.

"My grandson says our village is backward because we still use lamps."

Aravel answered the wound instead of the spit. "He should not have said that."

The man faltered.

"But the wires did not teach him contempt," she said. "People did. We will correct both."

A woman raised a dead chicken by its feet. "This died after the grid test."

Kael muttered, "So did my patience."

Aravel ignored him. "Then Laleh's team and your village healers will examine it."

"Earth healers?"

"And yours. Together."

"You always say together."

"Because alone is how we die."

That sentence held for almost ten seconds.

Then a stone flew from the back and struck a lamp post. Glass burst. The crowd surged. Guards raised shields. Someone screamed that Earth had fired. In the confusion, three transformer sheds went dark, not from overload but from cut lines.

Sabotage inside the riot.

By dawn, the capital had light in patches and anger everywhere.

Aravel sat in the grid control house with soot on her cuffs while Jonas traced the cut lines on a board. "The outer protest was real," he said. "The cuts were planned."

"Kharos?"

"Or Suryan allies who learned from Kharos."

That was worse.

Seska entered with the breakaway priests under guard. One wept. One looked proud. One looked too frightened to be anything but a messenger.

"Who paid you?" Aravel asked.

The frightened one said, "No payment. A dream."

Kael snorted.

The priest shook his head violently. "A radio dream. A voice from the Shepherd's side. It told us where the lines fed the false dawn."

Jonas closed his eyes.

Kharos had built more than one transmitter.

That evening, after repairs, Aravel ordered the grid lit again.

Not brighter. Not longer. Exactly as planned.

"If we retreat from light because fear learns to throw stones," she told the city through the new public horns, "then fear will govern the switches."

The lamps rose.

This time the cheers were smaller.

They mattered more.

Chapter 15: The First Local Satellite

12 years, 028 days until keyhole crossing

The rocket was ugly, local, and loved.

Earth engineers could have built a cleaner one in orbit and dropped it into Suryan history like a polished miracle. Jonas had argued against that until the mission board hated the sound of his voice. The first satellite launch had to be made of Suryan metal, Suryan labor, Suryan mistakes, and Earth knowledge only where needed. Otherwise the sky would remain something given, not reached.

So the vehicle on the equatorial pad leaned slightly in crosswind, wore three colors of heat shielding, and carried hand-marked inspection seals from guilds that had once fought over screw pitch.

Its name, painted in Suryan and Earth block letters, was Lamp One.

Ilyon hated the name.

"It sounds small," he said from the control bunker.

Sira checked the telemetry board. "It is small."

"It is the first."

"First things are often small. Babies. Sparks. Errors."

"I liked you better when you only corrected my math."

"No, you didn't."

Across the bunker, Aravel listened to their argument because it kept her from listening to her pulse. She was older now, though mirrors had become unkind about when exactly that happened. The queen who had first seen Argo's daylight point would not have understood the launch bunker: concrete, cables, oxygen alarms, local engineers in pressure masks, Earth advisors speaking three languages at once, Kael's soldiers watching the sky for artillery that should not exist but might.

Mira's voice came from orbit. "Weather remains within limit."

Hana added, "Barely."

"Barely is a kind of within," Ilyon said.

"Do not make me dislike you during countdown," Hana said.

He beamed.

The final minute began.

On public screens across Suryan, citizens watched the pad. In villages, people gathered around battery projectors. In temples, Seska's priests read the covenant of the corrected sky. In Kharos, possession of the broadcast was punishable, which ensured half the Dominion tried to hear it.

At ten seconds, Aravel realized she was holding her breath and chose not to stop.

At zero, Lamp One climbed.

It rose on a column of fire so bright the desert seemed to bend away. The bunker shook. Someone shouted pressure numbers. Someone else began praying with admirable technical specificity. The rocket cleared the tower, tilted, corrected, and pushed through the high air toward a sky that had once belonged only to gods, birds, and mathematics.

Stage separation worked.

The second burn worked.

For nine terrible seconds, telemetry vanished.

Then Lamp One spoke from orbit.

The bunker became noise. Sira hugged Ilyon so hard he yelped. Jonas sat down on the floor, laughing like a man released from a sentence. Aravel covered her face because queens were allowed one private second if they made it look like prayer.

The first image arrived four hours later.

It showed Earth-2 curved beneath cloud.

Not a map. Not a doctrine. Not a painted wheel. A world.

The room went silent in a different way than before. Even Hana said nothing.

Ilyon stepped toward the screen.

"That is us?" he asked.

Taren, watching from Argo, answered softly, "Yes."

"All of us?"

"As much as one picture can hold."

The second image showed the Suryan coastline. The third showed the Kharos mountains.

Kael leaned forward. "Magnify."

"General," Aravel warned.

"Majesty, that is not normal movement."

The image sharpened. Along the equatorial corridor north of the sacred valley, dark lines crossed the highland roads. Too many carts, too regular. Heat signatures clustered near old fortresses. Not a trade caravan. Not pilgrimage.

Armies.

Kharos armies moving toward the launch geography Suryan would need within the decade.

The celebration thinned into calculation.

Mira spoke first. "We need confirmation before conclusions."

Hana was already pulling orbital passes. "Confirmation in ninety minutes."

Aravel looked at Lamp One's first image of the whole planet, still glowing on the central screen. It should have been a moment untouched by war. But perhaps no such moments existed anymore. Every achievement became a new way to see danger.

Ilyon stood rigid.

"We reached the sky," he said. "And the first thing we see is them blocking it."

Sira put a hand on his shoulder. "No. The first thing we saw was home."

He looked back at the blue curve.

Aravel forced herself to do the same.

Home, then danger. The order mattered.

By night, confirmation came. Kharos had begun fortifying the equatorial corridor. Vaelor called it defensive sanctification. Kael called it preparation to choke the future.

Aravel did not name it publicly that night.

Instead, she stood before the cameras and held up Lamp One's image of Earth-2.

"Today," she said, "a child of this world looked back upon its mother."

Across Suryan, people wept.

In Kharos, hidden listeners wept too, though many would deny it until death.

Then Aravel lowered the image.

"And a mother must now defend every road by which her children may live."

Chapter 16: Elia At Thirteen

11 years, 092 days until keyhole crossing

Elia was thirteen years old and furious in high definition.

The packet arrived during Mira's fourth consecutive crisis shift, which meant she should have archived it for rest hours. Instead she played it in her cabin while still wearing command boots and a jacket stained with hydraulic fluid from a launch-crane inspection no captain should have needed to attend.

Her daughter appeared taller, sharper, all elbows and accusation. The repaired green dragon sat on the desk behind her, one wing newly patched in black cloth.

"Hi," Elia said. "I am supposed to say I understand because my civics tutor says what you are doing is historically significant. I told him historically significant people can still be bad parents."

Mira closed her eyes.

The video continued.

"Grandma says I should not send messages when angry, but if I wait until I am not angry, you will get only weather reports. So here is the report: I am taller than the kitchen mark from last year. I won the regional flight sim. Dad, your old lab sent me a birthday model and it broke in two hours because the stabilizer design was stupid. Mom, I watched your Suryan speech in class. Everyone looked at me like I was part of it. I am not part of it. I am the person you left."

Mira stopped the playback.

For a long moment the cabin held only ventilation hum.

Then she restarted it because cowardice did not improve with delay.

"I know there are children there," Elia said. "Everyone says that when they want me to feel selfish. But I am someone's child too. That should have counted."

The packet ended without goodbye.

Mira sat very still.

Eleven years had changed the mission, the planet below, and the shape of her own face in the mirror. Elia's messages had changed too: songs, schoolwork, jokes, silence, cautious forgiveness, new anger. But this one found the promise under everything and pulled.

Before I'm taller than Mom.

Mira opened the return channel.

The first words she recorded were: "You are right."

She deleted them.

The second were: "I am sorry."

She deleted those too.

Apology across years could become another form of asking the abandoned person to comfort the one who left.

The emergency tone saved her from the third attempt.

Hana's voice cut through the cabin. "Command to navigation. Now."

Mira was moving before the sentence finished.

The navigation deck displayed Lamp One, Lamp Two, and the newer survey mirrors in layered projection. Hana stood barefoot, which meant she had forgotten shoes rather than chosen urgency for drama. Jonas was already there, hair wet from a shower abandoned halfway through.

"Corridor update," Hana said.

The equatorial highland corridor glowed red. Kharos fortifications had expanded around three ridge lines, two valleys, and the only plateau within feasible heavy-launch parameters that did not require impossible fuel penalties.

"We knew they were fortifying," Mira said.

"Not like this."

Hana shifted the projection. Beneath the visible forts lay geological overlays: copper, iron, rare-earth veins, transport gradients, wind patterns, seismic stability, equatorial rotation advantage.

"If we lose that corridor, we can still launch from Suryan coast," Jonas said.

"Light payloads," Hana said. "Not mass-driver assemblies at required cadence. Not reactor shielding. Not the polar transfer stages. The margin collapses."

Mira read the new model.

There were many ways for a room to become quiet. This was the one where everyone saw math remove a future.

"How long until the corridor becomes unrecoverable?" she asked.

Kael's voice came through from Suryan command, older and harder than the general who had once called radar a rude listening bowl. "Militarily? It may already be."

Aravel joined the link a moment later. She wore no crown, only a work coat over palace clothes. "Politically, we have avoided naming the obvious."

"Name it," Mira said.

The queen looked at the red corridor. "Kharos is not merely rejecting rescue. It is occupying the roads by which rescue must happen."

Jonas whispered, "War."

No one corrected him.

Mira felt Elian's message like a bruise under her ribs. I am someone's child too.

If she requested return now, no one would call it desertion. Not officially. Not after eleven years of command. Earth could send another captain, perhaps. The mission would limp, not end. Elian would be fourteen or fifteen by the time Mira reached home, depending on transfer geometry. Taller, certainly. Angry, certainly. Alive.

Below, hundreds of millions of children slept under a sky whose escape routes were being fortified by men who called obstruction faith.

Mira heard herself say, "Prepare intervention options."

Jonas looked at her.

She did not look back.

Aravel's face on the display tightened. "Captain, Earth troops on Earth-2 soil would prove every Kharos sermon true."

"I know."

"Then do not make the easy mistake."

"I said options. Not invasion."

Hana pointed to the model. "Diplomacy, trade, sanctions, sabotage prevention, refugee corridors, covert support to Kharos dissenters, and, if all else fails, force. We need the corridor within five years."

"Five years," Jonas repeated.

Five years was Elian approaching adulthood. Five years was the difference between a launch chain and a memorial archive. Five years was not enough for anyone to remain clean.

Mira returned to her cabin after the meeting and recorded a message with no uniform jacket, no mission seal in frame, and no attempt to look less tired than she was.

"Elian," she said, "you are right. You were always someone's child too. I counted you. I count you every day. That does not make the count fair."

She stopped, but did not delete it.

"I cannot ask you to forgive a choice that is still hurting you. I will not explain it as if explanation repairs absence. I can only tell you the truth: I am trying to come home, and I am still here because leaving now would help me more than it would help the people depending on us."

Her voice almost broke. She let the almost remain.

"You should have mattered enough to keep me. You did matter enough to make staying cost what it should."

She sent it before command courage failed.

Then she opened the corridor model again.

The red lines waited.

Chapter 17: The Copper Ultimatum

9 years, 318 days until keyhole crossing

The ultimatum was written in three languages and buried in none of them.

Suryan needed copper, rare-earth ores, and mountain transport rights. Kharos controlled the richest veins within reach of the equatorial corridor. Earth could supply seed equipment and orbital parts, but not the tonnage required for grid expansion, heavy motors, mass-driver coils, reactor shielding, rail lines, and launch systems at the pace Hana's models demanded.

So Aravel sent envoys.

She sent no soldiers with them. That was Kael's first objection.

"A request guarded by spears becomes a threat," she said.

"A request without spears becomes a hostage caravan," Kael replied.

She sent Seska's blessing, Varo's mining terms, Jonas's material schedules, Taren's cultural notes, and a personal letter to Vaelor that did not mention surrender once. That was Taren's advice. Speak of shared survival before shared machinery.

The envoys crossed the western pass under white banners and the old road law.

For six days, nothing came back.

On the seventh, Kharos returned the banners.

They were wrapped around the envoys' bodies.

Not all of them. Only the three who had spoken in the first negotiation session: Minister Evara, a river-law scholar; Yul Menn, a mine engineer; and Brother Hal, one of Seska's younger priests who had argued that the Black Shepherd, if real, could not desire planetary suicide.

Their tongues had been cut out.

The accompanying tablet was cleaner than the act.

Servants of demons may not speak in the Dominion. Kharos keeps its earth, its dead, and its future.

Aravel read it once.

Kael stood across the war table, waiting for fury.

She gave him something worse.

"How much copper do we have stockpiled?"

He hesitated. "Majesty."

"How much?"

"Enough for twenty-eight months at present build rate. Twelve if we accelerate the launch grid."

"Rare-earth substitutes?"

Jonas answered from the Earth relay. "Partial. Inefficient. We lose motor performance, guidance stability, and time."

Hana's voice followed. "Time is the material we have least."

Aravel placed the tablet beside the envoys' death report. "Then this was not only murder."

Kael said, "No."

"It was strategy."

No one contradicted her.

That night, Suryan burned funeral lamps along the river. Tavi's mother stood with Brother Hal's family. Guildmaster Varo shut every foundry for one hour and made the workers read the names aloud before restarting the furnaces. Seska did not preach forgiveness. She preached witness.

Mira watched from Argo as the capital's heat signature dimmed, then brightened again when the factories returned to work.

"They expect us to respond," Jonas said.

"Kharos?"

"Everyone."

Mira looked at the corridor model. The red Kharos fortifications had thickened into a chain.

Aravel requested a private channel after midnight.

The queen looked older than the day before. Grief did that when anger had no permitted outlet.

"Captain," she said, "Earth's official position?"

"The mission condemns the executions and supports Suryan's right to secure survival-critical resources through lawful means."

Aravel's mouth tightened. "That was written by someone safe."

"Yes."

"Your position?"

Mira answered carefully because friendship, if this was friendship, did not erase sovereignty. "If they block the materials, they are choosing for everyone. That cannot stand."

"Can you help us take the mines?"

There it was.

Mira thought of every protocol, every warning, every promise that Earth weapons would not lead Suryan politics.

"I can help you understand what taking them costs," she said.

Aravel closed her eyes.

"Not enough," the queen whispered.

Mira could not tell whether she meant the answer or the world.

Chapter 18: Refugees From The Sacred Valley

9 years, 041 days until keyhole crossing

The first refugees from the Shepherd's Valley arrived without shadows.

That was how the border guards described them later. Not because the refugees had no bodies, but because they reached the Suryan line at noon after crossing white salt flats so bright that every shadow seemed burned away. Forty-three people staggered under torn black prayer cloths. Twelve were children. Six carried mining burns. One carried a map sealed inside a wound.

Her name was Liora Vask.

Kael distrusted her immediately, which was not unusual. Aravel listened to her immediately, which was.

They met in the quarantine fort at West Glass, where Earth medical tents stood beside Suryan cavalry stables and nobody felt comfortable enough to lie well. Liora sat at a steel table with one arm bandaged from wrist to shoulder. Her Kharos temple marks had been cut from her collar with a knife.

"I was engineer-priest of the Ash Observatory," she said.

Taren translated, then stopped. "She used the past tense deliberately."

"I know," Aravel said.

Liora looked at the queen. "High Augur Senn altered the star tables. Emperor Vaelor knows the danger is real. They are not preparing only denial. They are preparing control."

Kael leaned forward. "Convenient."

"Truth often is, when late."

He almost smiled despite himself.

Liora touched her bandaged arm. "The map is beneath the dressing. I had no other way to keep it."

Laleh removed the layers with care that made several Suryan officers look away. Beneath the bandage, stitched to Liora's skin with black thread, was a thin treated membrane marked in mineral ink: tunnels, old roads, hidden water, ore lifts, shrine gates, and the central valley floor where Kharos had begun moving forced labor.

Jonas, on relay, stopped breathing when he saw the contour lines.

"That valley," he said. "Hana."

"I see it," Hana answered.

The Shepherd's Valley lay where three ridges shielded wind, bedrock held stable, and rotation advantage made heavy launch feasible. Earth models had marked it as the best site for the planetary defense array. Suryan surveys had confirmed it. Kharos scripture had made it sacred.

Now Kharos was filling it with prisoners, false shrines, and artillery emplacements.

Aravel studied the map. "Why come?"

Liora's face hardened. "Because Vaelor will let us build enough machines to survive under him and call that salvation. Because Senn will call every corpse obedience. Because I counted, and the numbers did not kneel."

Kael said, "Or because you are bait."

"Yes."

Everyone paused.

Liora met his stare. "I may be. I know what I carried. I know what they may have let me carry. Use the map as if poison hides in the ink."

That honesty disturbed him more than denial would have.

The refugees brought other things: testimony of forced labor in copper mines; lists of Kharos engineers taken from temples and locked into state workshops; rumors of a secret transmitter network hidden in funeral towers; children who had been taught that Suryan ate souls and then given Suryan soup by exhausted border nurses.

One child asked Aravel whether Earth people had faces.

Aravel crouched. "Yes."

"Then why do they steal them in drawings?"

Taren closed his eyes. Propaganda traveled most efficiently through nightmares.

The refugee crisis became public before the council finished verifying the map. Suryan families opened granaries. Guilds offered work. Rural districts that had rioted against electricity sent blankets

because fear of wires did not prevent pity for children.

Kharos called the refugees valley filth and demanded their return.

Aravel refused.

Three nights later, an explosion destroyed the West Glass water purifier. Fourteen refugees died, including two children who had asked to see an Earth face.

Liora survived because Kael had moved her to a separate cell for interrogation.

He came to her at dawn.

"You said the map might be bait."

"Was it?"

"Maybe. Or maybe they would rather kill their own than let them choose."

Liora looked past him toward the smoke. "Those are not different empires, General."

Kael stood in silence.

When he returned to Aravel, he placed Liora's map on the war table.

"Majesty," he said, "we can no longer treat the valley as a future problem."

Aravel looked at the burned edge where Liora's blood had stained the membrane.

"No," she said. "Now it has names."

Chapter 19: Diplomacy Under The Black Moon

8 years, 006 days until keyhole crossing

The Wanderer was visible to the naked eye for the first time on the night Aravel met Vaelor.

Not as a planet. Not yet. A flaw in the sky, a small absence near the western stars, easier to see by looking aside than directly. Suryan astronomers warned the public not to stare. Kharos priests ordered citizens to look only after prayer. Children everywhere looked whenever adults said not to.

The negotiation took place on neutral ground at the Salt Bridge, an ancient trading span between river territory and mountain road. No banners flew. No Earth machines were allowed within sight. Mira attended by audio only, and even that nearly ended the meeting before it began.

Vaelor arrived in black riding armor with Senn beside him. Aravel wore plain blue and brought Seska, Kael, Taren, and Liora, whose presence made the Kharos delegation go cold.

"You shelter a desecrated oath-breaker," Senn said.

Liora bowed. "High Augur. Your lies remain beautifully copied."

Kael coughed once. It might have been approval.

Aravel stepped between them. "We came to discuss passage, mines, and the valley."

Vaelor looked past her at the faint dark point in the sky. "No. We came to discuss surrender."

"Yours?"

"Earth's."

The terms were simple. Earth would leave the system after transferring no further technology. Suryan would dismantle launch sites, surrender foreign devices on Kharos borders, and submit all sky teaching to a joint temple review. In exchange, Kharos would reopen trade, release certain prisoners, and permit limited copper under Dominion supervision.

Taren did not need translation to know the meeting had entered theater.

Aravel listened to the full list.

Then she said, "And The Wanderer?"

Vaelor's face did not move. "The Shepherd comes as judgment. We meet judgment as ourselves."

Mira's voice came softly through the hidden relay bead in Aravel's collar. "Ask him where his transmitters are made."

Aravel did not repeat it. Not yet.

"You are building machines," she said. "You steal diagrams, train engineers, confirm star tables, and call it purity because the work happens behind temple doors."

Senn's eyes flicked toward Liora.

Vaelor smiled. "If a thief enters my house with fire, I may take the torch before driving him out."

"And if the house is burning?"

"Then I decide who holds water inside it."

For one dangerous moment, Aravel understood him.

That made her angrier.

"You would let half the planet die rather than admit Suryan learned first."

"I would let no child grow up believing survival requires kneeling to alien voices."

"No child grows up on a dead world."

"No child grows whole in a conquered one."

The Salt Bridge wind moved between them, carrying mineral dust and the smell of old trade fires. Above, the Black Moon watched without theology.

Seska spoke. "Vaelor, if the Shepherd is sacred, why do your own tables hide him?"

Senn answered, "Faith is not a public arithmetic lesson."

"No," Seska said. "It is apparently a locked room with edited slates."

The Kharos guards shifted.

Kael's hand moved near his sword.

Aravel raised one finger and held both armies still by the thread of it.

Vaelor stepped closer. "Queen of rivers, hear the last peace I will offer. Send Earth away. Break your launch roads. Marry your science to our temples and we will guide this world through what comes."

"Guide it where?"

"Through obedience."

Aravel's answer was quiet. "Then no."

Senn closed his eyes as if disappointed by a student.

Vaelor mounted his horse.

"When the valley closes," he said, "remember that you chose strangers over your own kind."

Aravel looked up at the dark flaw in the sky.

"No," she said. "I chose the kind that wants to live."

The Kharos party rode out before moonrise.

By dawn, their armies had crossed the old valley boundary.

Chapter 20: The First Modern Battle

7 years, 284 days until keyhole crossing

General Kael Orun won the Battle of Three Ridges in six hours and lost something he could not name before sunset.

The old Kael would have taken the ridges in three days with cavalry feints, night climbing, shield lines, and siege patience. The new Kael took them with drone eyes, radio silence, rail-fed artillery, smoke chemistry, and infantry who advanced behind armored tractors built in a factory that had once been a horse market.

It worked.

That was the problem.

At dawn, Kharos held the western ridge forts overlooking the approach to the Shepherd's Valley. By second bell, Suryan sappers had cut the lower wire traps using Earth-made ceramic shears. By third, Kael's command post received live images from Lamp Two and six small battlefield drones assembled by students who had never held swords. By fourth, artillery opened exactly where Kharos supply tunnels met the old shrine road.

By noon, the ridge forts surrendered or burned.

Kael stood in the captured command tower while wounded men from both armies screamed below and tried to feel victorious.

Mira's voice came through the secure channel. "General. Report."

"Three ridges held. Losses lower than projected. Kharos retreating toward inner valley gates."

"Civilian status?"

"Evacuations incomplete. We found forced labor quarters under the east fort."

A pause.

"How many?"

"Still counting."

He looked down at his hands. They were steady. He hated that.

The battle had made his army efficient. Soldiers who once looked enemies in the face now killed coordinates. Young officers trusted drone images more than scouts. Artillery crews cheered when distant explosions matched predicted arcs, then went quiet when prisoners arrived with burns the predictions had not described.

War had always been ugly. Modern war made ugliness scalable.

Aravel arrived by evening against every security recommendation. She walked through the field hospital first, not the captured tower. Kael found her beside a Kharos boy no older than sixteen whose leg had been removed by Suryan shelling.

"He was carrying a radio trigger," Kael said.

"He is carrying pain now."

"Majesty, if you came to make me gentle, choose another day."

She looked at him then. "I came to see what my order did."

That silenced him.

In the tower, the tactical screens still glowed. Earth overlays marked next objectives. Suryan officers spoke in clipped radio codes borrowed from Mira's crew. A captured Kharos map showed the valley gates, copper lifts, and shrine batteries in red ink.

Aravel studied it.

"Can we reach the valley floor?"

"Yes," Kael said. "At cost."

"Everything is at cost."

"This cost changes the people paying it."

She understood him too quickly. "Our soldiers."

"And me."

Outside, a group of Suryan infantry laughed around a captured Kharos transmitter, replaying enemy panic until Kael ordered it silenced. One soldier complained that it was only a joke.

Kael nearly struck him.

Instead he took the transmitter and smashed it against the tower wall.

The room froze.

"We are here because Kharos forgot those were people," he said. "Do not make victory into their lesson."

No one spoke after that.

That night, Jonas arrived with the first engineering survey team under heavy guard. He moved through the captured ridge like a man walking inside the consequence of his own diagrams. The armored tractors, field radios, drone chargers, shell casings, mobile surgical lights, all of it traced back to lessons Earth had helped teach.

"We did not build these for this," he said to Mira over a private link.

Mira's face on the tablet looked as tired as he felt. "No."

"But we built them."

"Yes."

Below the ridge, the Shepherd's Valley lay dark except for Kharos shrine fires and the colder gleam of new artillery. Above it, The Wanderer hung visible now as a black coin against the star field.

Kael joined Jonas at the overlook.

"Can the valley still hold the array?"

Jonas checked the survey readings, though they both knew the answer.

"Yes."

"Then today mattered."

"I know."

"Do you?"

Jonas looked at the field hospital tents. "I know it in numbers."

Kael nodded toward the tents. "Learn it there too."

By morning, the victory report reached Suryan: Three Ridges taken, casualties limited, valley approach opened.

The city rang bells.

Kael heard them through the relay and could not bear the sound.

Chapter 21: The Saboteur's Equation

6 years, 119 days until keyhole crossing

The reactor shield works died at 03:12, when every honest person in the valley was too tired to be suspicious.

It began as a pressure fault in the boron-cement line. That was what the first alarm said, and because the line had failed twice that month, the night crew believed it. They opened the service bay. The second alarm sealed the wrong doors. The third turned the coolant pumps inward.

By the time Jonas reached the remote console, the shield mold was already glowing.

"Kill main feed," he said.

The Suryan operator's hands flew over switches. "No response."

"Manual breaker."

"Crew inside."

On the security feed, three workers ran through steam toward the breaker alcove. One fell. One turned back for him. The third reached the panel and vanished in white light.

The explosion did not look large from Argo. A brief flower on the valley map. A white thermal bloom, then black. In the morning, it was a crater full of wet ash and twisted rebar.

The shield works had taken two years to build.

Hana recalculated for nineteen hours without speaking to anyone except in numbers. When she finally entered command, her face told Mira before the projection did.

"Say it," Mira said.

"We can rebuild," Hana answered. "But not with the old margin."

The model opened. For years the rescue had lived inside a narrow green band called survivable. Kinetic impactors had helped. Mass-driver schedule had been brutal but possible. The valley capture had recovered six months. Now the green band thinned, flickered, and became yellow.

Uncertain.

Jonas stared at the word as if it were an accusation.

"Sabotage path?" Mira asked.

Kael appeared on the link from the valley, soot still streaked across one cheek. "Embedded code in the Suryan pump controller. Written from stolen Earth teaching libraries and Kharos syntax habits. Whoever did it understood both systems."

Liora stood behind him, pale. "That narrows the list."

Kael did not look at her. "Yes."

Aravel joined from the field hospital. "How many dead?"

"Eighty-three confirmed," Kael said. "Likely more under the west wall."

No one filled the silence.

The saboteur had not only destroyed a works. They had solved an equation: what single facility, struck at what hour, could move a planetary model from hope to doubt?

Hana closed the projection. "We need acceleration in every downstream stage. Ice extraction. Shield rebuild. Launch cadence. Surface landing prep. And we need to assume there is another saboteur."

Mira looked at the yellow band.

Uncertain was not failure. That was the cruelty of it. Failure gave permission to mourn. Uncertain demanded more work.

"Then we work," she said.

Chapter 22: The Child Astronaut

5 years, 304 days until keyhole crossing

Ilyon Mer objected to being called the child astronaut on the grounds that he was nineteen and had survived three engineering boards, two centrifuge blackouts, and Sira's teaching style.

"Also," he said, while technicians sealed his suit collar, "I am taller than Doctor Sayegh."

Hana, listening from orbit, said, "Many forms of fungus are taller than me. It does not make them adults."

Ilyon grinned until the helmet locked and fear finally found him.

The launch was not ceremonial. The shield works had been rebuilt in half the projected time by people who looked older after every shift. The polar campaign was beginning. The Wanderer grew nightly. But when Ilyon climbed into the Suryan-built crew capsule, every school in the League stopped lessons and watched.

Aravel stood in the control room with Sira, who had refused to cry by becoming intolerably precise.

"Pulse steady," Sira said.

"He is terrified," Aravel said.

"Good. He is not stupid."

The rocket rose clean.

Ilyon entered orbit above the world that had once been a flat collection of maps and loyalties. He saw the river capital, the Kharos mountains, storm systems over black ocean, the scar of Three Ridges, and the night line where villages still burned oil lamps beside electric towns.

For three minutes he said nothing.

Then he whispered, "There are no borders from here."

Taren, on the relay, answered, "There are. You are just high enough to see how small they are."

The capsule passed over the northern polar routes on its second orbit.

Ilyon's wonder ended.

The cameras showed black smoke lines across the ice roads. Kharos convoys, marked as pilgrim caravans in public reports, were burning supply caches and retreating from captured extraction camps. Polar ice, the hydrogen and deuterium feedstock for the final array, was going up in steam and ash.

Ilyon pressed both gloved hands against the window.

"They are burning water," he said.

No one corrected the child astronaut.

Below, the ice war began before the official order reached the front.

Chapter 23: The Ice War

4 years, 211 days until keyhole crossing

The polar ice did not look like a battlefield until men began dying for it.

It looked like silence. Blue-white plains, wind-scoured ridges, auroras trembling green above extraction rigs, convoys crawling between flags drilled into frozen ground. Then Kharos rockets struck the first deuterium plant, and silence became steam.

Suryan fought badly at first. River soldiers did not know polar weather. Machines froze. Batteries cracked. Boots failed. Kael learned to hate snow with strategic focus.

Earth could have ended the campaign quickly from orbit.

Mira refused.

"No orbital strikes," she said for the ninth time in council.

Hana slammed her hand on the table. "Then accept lower yield for the final array."

"No orbital strikes."

"They are burning the fuel."

"And if Earth burns Kharos from the sky, Vaelor wins every argument he ever made."

Aravel looked exhausted enough to be made of paper. "We take the plants on the ground."

They did. Inch by frozen inch.

Jonas arrived at the northern staging base to inspect the surviving isotope separators and found the manual failover requirement hidden in plain mathematics. The fusion-standoff array could be automated if the Wanderer's tumble stayed inside the expected range. It would not. Someone might have to ride the final alignment close enough to die.

He stared at the calculation until the tent walls blurred.

Sira found him there.

"Is it bad?"

"It is a backup case."

"Earth people use that phrase when the truth is ugly."

Jonas folded the page. "Then yes."

Outside, Suryan soldiers cheered as the final polar plant came under coalition control. They had won the ice.

Jonas watched aurora light ripple over the camp and said nothing about what the ice had bought.

Chapter 24: The Valley Of The Shepherd

3 years, 192 days until keyhole crossing

Suryan entered the Shepherd's Valley under a sky full of ash.

Kharos had spent the retreat burning what it could not hold: dormitories, ore lifts, rail sheds, forced-labor records, even the old cypress grove where pilgrims had tied mourning cords for four hundred years. The valley floor smoked beneath the cliffs. Shrine bells rang from hidden speakers on battery loops, tolling for a god the soldiers could no longer see through soot.

Aravel walked in after the engineers, not before. She had learned the difference between courage and vanity.

Liora knelt at the valley's central stone and touched her forehead to it.

Kael watched her. "Prayer?"

"Apology."

The first survey teams confirmed the bitter miracle: the bedrock was intact. The launch plane could be graded. The array anchors would hold. The valley was wounded, not useless.

Then Senn's final order arrived on every Kharos frequency.

His voice was calm.

"Let no machine root in the Shepherd's palm. If the valley must be saved by desecration, let it instead be returned whole to the dead."

The demolition charges were already under the east cliff.

Liora recognized the old mining pattern before the sensors did. "Evacuate the lower floor."

Kael shouted orders. Drones dove. Jonas's engineers cut three trigger lines. Suryan sappers found six charges and missed the seventh.

The cliff broke at dusk.

Stone roared down the valley wall, burying the planned east anchor field and two refugee grave rows. Dust turned noon into night. When it cleared, the valley remained, but the geometry had changed.

Hana ran the new survey from orbit.

"Still usable," she said.

Nobody cheered.

"How much delay?" Aravel asked.

"Months."

"How many?"

Hana did not answer quickly enough.

Aravel looked across the valley, where machines waited beside shrines and soldiers dug for bodies under sacred stone.

"Then we begin tonight."

Chapter 25: Victory With Ashes In It

2 years, 301 days until keyhole crossing

Suryan secured the launch geography on a morning when no one had strength left to celebrate.

The last Kharos batteries above Mereth surrendered after three days without water. The northern rail spur was intact. The western bedrock shelf was clear. The equatorial corridor, scarred but open, could now carry heavy boosters, mass-driver assemblies, reactor shields, and all the ugly miracles that had once been lines in an Earth plan.

Hana called it strategically decisive.

Aravel walked through the civilian camp below the valley and could not make the words fit.

The camp held people displaced by both armies: Kharos families whose homes had been turned into fortifications, Suryan laborers moved for security, freed prisoners too weak to travel, children who had learned to distinguish artillery by sound. Victory smelled of boiled grain, antiseptic, latrines, burned insulation, and smoke from funeral pits.

Tavi's mother worked at a water station.

Aravel nearly missed her. The woman had become part of the rescue machine in the quiet way ordinary people did: not forgiven, not healed, simply useful.

"Majesty," she said.

"You should rest."

"So should queens."

Neither did.

At dusk, Hana delivered the updated mass-driver construction window.

The room was full of people with ash on their clothes. Jonas had not slept in thirty hours. Liora's brother sat in the corner because he knew the old Mereth tunnels better than any living person. Kael stood with one arm bandaged from shrapnel he refused to discuss.

Hana projected the timeline.

The original window appeared in pale green.

The current window appeared in yellow, then red.

"We won the ground," she said. "We did not win back the years. Shield works loss, polar attrition, transport damage, and Mereth demolition have consumed most of the original safety margin."

Jonas leaned on the table. "Can the mass drivers still matter?"

"Yes. They are essential."

"But?"

"They cannot finish the deflection alone under conservative assumptions."

No one spoke.

"The final standoff array is now mandatory," Hana said. "Not emergency reserve. Mandatory."

Mira, on relay from Argo, closed her eyes for one second.

Aravel looked at the map of Mereth, at the refugee lists, at the launch route paid for in bodies.

"Then victory bought us a harder ending," she said.

Hana did not correct her.

Outside, workers raised the first permanent gantry over the sacred valley while funeral smoke climbed behind it.

Project Last Orbit moved forward through ash.

Chapter 26: Landing On The Wanderer

1 year, 211 days until keyhole crossing

The Wanderer had no horizon that loved life.

It filled the lander windows in black ridges, gray dust, metallic glints, and cliffs that seemed carved by impacts older than language. No blue. No weather. No green lie of welcome. Only a dead body's long memory of violence.

Mira commanded the landing from Argo's forward station while Ilyon, Liora, two Earth pilots, and three Suryan engineers rode the first descent module toward Object E2-X1.

"Call it The Wanderer on open channel," Taren reminded her quietly. "Not object."

"I know."

The lander touched down in a spray of dust that moved too slowly and too far.

For five seconds, every signal held.

Then the left anchor failed.

The module tipped six degrees downslope. Not fatal. Not stable. Ilyon's breath came sharp over the channel.

Liora spoke first from inside the lander. "Surface crust is layered. Top regolith over voided slag. Your anchor bit into a lie."

"Can you secure?" Mira asked.

"Yes," Ilyon said too quickly.

Liora said, "Maybe."

Jonas, at engineering, smiled despite terror. "Trust Liora."

The crew worked for three hours to stabilize the module. The first step onto The Wanderer happened late, awkwardly, without the speech Earth had prepared and Suryan had translated into three ceremonial registers.

Ilyon emerged first because he was smallest and least valuable by mass, as he put it.

"Do not say that again," Aravel said from Earth-2 relay.

His boot touched the black surface.

The first child of Earth-2 to stand on the thing that would kill his world looked around and said, "It is uglier than I hoped."

The line went public by accident.

People loved him for it.

The machines followed: drill crawlers, anchor frames, solar-dark power units, survey masts, and the first mass-driver rails packed in sections like ribs. Every movement took longer than planned. Dust infiltrated seals. Static crawled over suits. The surface flexed under loads that models had treated as rigid.

By the second day, Hana's surface map was full of red corrections.

"This body is not one rock," she said. "It is rubble pretending to be a world."

Liora looked over the data from the lander. "No. A mine collapse pretending to be a mountain."

"Meaning?"

"You do not push it from where it looks strong. You push where the weakness carries force around the voids."

Hana stared at her.

"Can you map that?"

Liora looked out at the dead black ridges.

"With enough drills, yes."

The first mass-driver site moved four kilometers before construction began.

The countdown did not move with it.

Chapter 27: Stone Thrown Against Doom

1 year, 039 days until keyhole crossing

The first mass driver fired a stone the size of a cottage into the dark.

It was not dramatic enough.

No thunder reached Earth-2. No visible shove moved The Wanderer under the feet of the suited crews. On the control plots, the ejecta stream appeared as a bright line. The velocity change registered in decimals so small that politicians would have called them insults if Hana had allowed politicians near the first reading.

But the line changed.

For eight minutes, everyone in the Mereth control hall believed again.

Then the second firing underperformed.

The third underperformed worse.

By the eighth, no one was cheering.

Hana stood before the thrust model as if hatred could improve it. "We are losing momentum through internal deformation."

Jonas translated for the Suryan ministers. "The body flexes. Some of the push goes into settling the rubble instead of changing the path."

"Can we fire harder?" Kael asked.

"If you want to bury the machines," Liora said from The Wanderer.

She had been on surface rotation too long. Everyone knew it. No one had a replacement who understood the crust maps as well.

Ilyon guided the next shot manually, adjusting ejecta timing across three drivers. Better. Still low.

The updated projection arrived before dawn.

Mass drivers alone would not clear the keyhole.

They never had, after the damage and delays, but now the evidence was not theoretical. It was written in stone leaving a dead world too slowly.

Aravel held the public briefing herself.

"The machines work," she told Earth-2. "They do not work enough alone. That is not failure. It is knowledge purchased early enough to act."

It was a good sentence.

It did not prevent panic.

In Kharos, Vaelor's remaining loyalists broadcast that the Shepherd swallowed the machines' strength. In Suryan, exhausted workers asked why each success revealed another insufficiency. On Earth, delayed commentators debated whether Project Last Orbit had become a sunk-cost tragedy, as if cost could be separated from the children below.

Mira sent no reply.

She watched The Wanderer trajectory update across the wall.

The path bent.

Not enough.

Still, it bent.

"Again," she said.

On the surface, Ilyon heard the order and grinned like a man too tired for despair.

"Loading stone."

Chapter 28: Liora's Betrayal

240 days until keyhole crossing

Liora betrayed Kharos for the second time by understanding it too well.

The mass-driver failures had a pattern Earth software almost missed. Not random underperformance. Not merely rubble deformation. A rhythm: every seventh ejecta run lost more momentum, as if the surface beneath the primary rail opened a hidden throat and swallowed force.

Liora saw it in the old mining maps.

"This is not natural voiding," she said.

Hana looked up slowly. "What is it?"

"A prepared collapse lattice. Kharos used them under sacred mines. If invaders took the works, priests could trigger subsidence and bury the tunnels."

Jonas went cold. "On The Wanderer?"

"Not built here. Mirrored here."

She expanded the surface scans. The pattern matched Kharos temple geometry too closely to be accident. Someone had used her people's mining doctrine to choose sabotage points in the mass-driver site plan.

Kael said, "We vetted every crew."

Liora looked at him. "You vetted names. Did you vet grief?"

The saboteurs were not many. Three Kharos loyalists embedded as surface riggers, one Suryan convert radicalized after the shield works, and a Mereth prisoner who believed helping the machines would make the sacred valley's occupation permanent. They had not planted bombs. Bombs were crude and easier to detect. They had placed charges to weaken specific regolith bridges and make the machines waste their thrust into collapses.

When security closed in, the loyalists ran toward Driver Three.

Ilyon was there.

He saw the first man trigger his suit beacon in a pattern that was not distress. Liora screamed over the channel before anyone else understood.

"He is calling collapse!"

Ilyon tackled him in low gravity.

The charge went anyway.

Driver Three dropped two meters, twisted, and tore its rail spine. Dust swallowed both men. For ninety seconds, no one had Ilyon's signal.

Mira did not breathe through any of them.

Then Sira found him on a backup suit ping, alive under debris, leg broken, voice full of static and fury.

"Tell Hana," he said, "Driver Three is rude but not dead."

Liora led the rescue crawl. She found the Kharos loyalist dead beside Ilyon, one gloved hand still closed around a prayer token.

Later, in Mereth control, Kael accused her of withholding knowledge.

She did not defend herself.

"I did not think my old world had reached this far," she said.

"That is not an answer."

"No. It is the failure."

Aravel intervened before Kael could cut deeper. "Can you rebuild the site plan?"

Liora looked at the damaged driver, the hidden void maps, the trajectory curve.

"Yes."

"Will it be enough?"

Hana answered from the other side of the room. "No. But it gives the final standoff array a target it can still save."

That was what victory had become: enough damage prevented to leave room for a lethal miracle.

On The Wanderer, Ilyon recorded a message from the medical bunk.

"I am fine," he lied to all of Earth-2. "The machine is less fine. We are fixing both."

The public loved him again.

Liora watched the recording and wondered whether every world survived by forgiving useful liars.

Chapter 29: The Day The Sky Changed Tides

121 days until keyhole crossing

The sea entered Suryan's oldest market at noon.

It did not roar. That frightened people more. It climbed the harbor steps with patient authority, lifted fish baskets, drowned spice stalls, and turned streets into canals that had never asked to be canals. By second bell, the tide stood higher than any flood mark since the old kings.

The Wanderer was still far away.

That was the lesson everyone understood and no one wanted.

Across Earth-2, coastlines misbehaved. Wells tasted brackish. Aurora shimmered over latitudes that had never seen it. Migratory birds spiraled inland and refused the sky. In Kharos villages, mothers took children to shrine courtyards and asked why the Shepherd punished the faithful before judgment.

Vaelor's remaining broadcasts blamed Suryan machines.

For the first time, the answer did not hold.

A Kharos miner named Orrek broke curfew and transmitted a question on a stolen radio: "If Earth caused the tides, why did our hidden tables predict them?"

By dawn, the recording had crossed the Dominion.

Senn ordered it burned. Radios made poor kindling.

In Suryan, Aravel stood knee-deep in market water beside Tavi's mother, who laughed once at the absurdity of selling river fish from a street that had become river.

"Are we too late?" the woman asked.

Aravel looked up. The Wanderer hung visible in daylight now, a bruise near the sun.

"Not yet," she said.

She hated the old slogan in that moment and needed it anyway.

On The Wanderer, the iron scar drivers reached the required thrust for the first time.

Hana watched the curve cross the line and did not smile.

"Now hold it," she said.

Chapter 30: Graduation Packet

74 days until keyhole crossing

Elian graduated under a sky Mira had not seen in twenty years.

The packet opened with a crowd, blue Earth daylight, and a young woman in a flight academy sash pretending not to search the audience for parents who were light-years away. Elian was twenty-one. Taller than Mira. Of course she was.

"I was going to send nothing," Elian said later in the private segment. "That seemed fair. Then Grandma said fairness is a small god and I should choose a better one."

Mira laughed and cried once, badly, then kept watching.

Elian had become sharp, capable, still wounded. She spoke of rescue flight school, of hating the mission less on some days, of understanding statistics without forgiving them. She held up the green dragon, now patched so many times it looked like a map.

"I am not saying I forgive you," she said. "I am saying I know more now. Those are different."

The packet ended with her looking directly into the recorder.

"Come home if you can."

Mira replayed that line until Jonas took the slate gently from her hand.

Then Hana summoned them.

The final model waited in the command room. The mass drivers had done more than anyone had dared hope after the iron scar relocation. The impactors had landed. The valley array was ready. The polar fuel was loaded.

The Wanderer still grazed the keyhole.

Not through the center. Not doom certain. But close enough that the uncertainty cone touched catastrophe.

"We need the fusion-standoff burn," Hana said.

Jonas looked at the alignment model and saw the manual failover case no one had discussed aloud.

Mira saw him see it.

Neither spoke.

Below, Earth-2 prepared for the final seventy-four days.

Chapter 31: Project Last Orbit

60 days until keyhole crossing

Project Last Orbit became official only after everyone had already given it everything.

The name appeared on a joint declaration signed in Suryan, Earth Standard, and the reformed Kharos script Liora insisted on using. It named the plan plainly: kinetic impactors complete, surface mass drivers active, fusion-standoff array armed for final correction. It did not say miracle. It did not say salvation.

Aravel read it from the valley floor while machines towered behind her.

"We do not destroy The Wanderer," she said. "We move it. A little. Early enough that a little becomes life."

Across Earth-2, people listened from lit cities, oil-lamp villages, refugee camps, former Kharos shrine towns, polar stations, and ships pulled above strange tides.

Jonas stood inside the final alignment simulator and watched the tumble model refuse automation for the ninety-third time.

The flaw was not one flaw. It was surface jets, loose regolith, anchor flex, thermal bloom, and the ugly fact that the final standoff devices had to fire in a sequence that changed as the body responded. A machine could do it if the machine trusted bad data. Jonas did not.

Mira entered quietly.

"You found the manual case."

"I found it years ago."

"I know."

He looked at her then. "Then we stop pretending."

Neither said who would stay. That would have made the future too small too soon.

On the valley broadcast, Ilyon explained momentum to children using a stone, a bowl, and a grin tired enough to belong to an older man. In Kharos, Orrek the miner rebroadcast Aravel's declaration over illegal radios. In the funeral towers, Senn listened.

For the first time, he did not know which side the dead were on.

Chapter 32: The Shepherd Falls Silent

48 days until keyhole crossing

High Augur Senn fell because Liora kept copies.

Not one copy. Dozens. Hidden in mining prayers, encoded into shaft-angle tables, scratched inside the covers of hymnals smuggled out with refugees. When Orrek's radio circle broadcast the honest Kharos star tables, the Dominion heard its own priests confirm Earth.

The first silence lasted one hour.

Then Kharos broke open.

Shrine towns refused Senn's messengers. Engineer-priests turned over observatory locks. Mothers brought sons down from militia posts. Vaelor tried to speak from the Ash Meridian Temple, but the crowd shouted a question he had taught them to fear.

"Did you know?"

He had.

Senn did not flee. He climbed the funeral tower and looked toward The Wanderer, now a black wound in daylight. When soldiers came, he handed them the original table and said, "Tell them I preserved order."

No one thanked him.

Vaelor did flee.

With the remaining hardline houses, he launched one final strike on the valley fleet: stolen guidance cores, Kharos rockets, saboteur codes hidden in captured transmitters. Not enough to win. Enough to wound.

Mira watched the attack unfold across the screens.

"Target?"

Hana answered, "Launch fleet. Burn timing nodes. He is not trying to rule after this."

"Then what?"

Liora, on the valley channel, said, "To make sure no one else survives being right."

The first rockets rose from the mountains.

Chapter 33: The Last War Morning

30 days until keyhole crossing

Aravel ended the war with amnesty and proof.

She stood before the captured Kharos transmitters while rockets still burned on the horizon and offered every soldier one choice: defend Vaelor's last strike and be treated as combatants, or stand down and receive the full star tables, medical care, and a place in the final work.

Kael called it reckless.

Liora called it the only order Kharos ears might still hear.

It worked unevenly, which meant it worked in the real world. Three mountain batteries surrendered. Two fired and were destroyed. One Kharos captain turned his guns on Vaelor's launch team after hearing his own sister's voice from a refugee camp.

By sunset, the valley fleet remained damaged but alive.

The final mission launched at dawn.

Not one ship. A train of ships, tankers, alignment drones, standoff carriers, repair pods, and evacuation craft lifting from the valley that had once forbidden wheels on sacred days. Suryan children watched beside Kharos children. Seska blessed the engines. Liora whispered an old Shepherd prayer and changed the last line.

Guide the living away from death.

Mira commanded from the lead vessel, Last Orbit Actual. Jonas sat at final systems. Ilyon flew one of the surface evacuation craft. Hana stayed in Argo control because someone had to keep the universe honest.

As the fleet climbed, Earth-2 filled every window.

Thirty days remained.

Chapter 34: The Burn Fleet

12 days until keyhole crossing

The burn fleet reached The Wanderer in pieces.

A tanker arrived late. Two alignment drones failed after regolith impact. One surface habitat vented and was saved by a Kharos mechanic who had once painted demon signs on Suryan clinic walls. The mass drivers kept firing until their rails glowed and bent.

Mira slept ninety minutes in three days.

Jonas slept less and lied about it worse.

The sabotage code woke inside guidance node Seven during the final array rehearsal. It was old Kharos architecture buried under three layers of captured firmware. Not enough to seize the fleet. Enough to turn one standoff carrier six degrees off alignment.

Six degrees was murder.

"Isolate Seven," Mira ordered.

"Trying," Jonas said.

The node fought back with the patience of a dead programmer. It spread corrupted timing into two adjacent drones before Sira, working from valley control, cut the relay by physically smashing a transmitter rack with a wrench.

"Elegant," Hana said.

Sira panted into the channel. "It was the local tool available."

They saved the carriers.

They lost the rehearsal window.

The next chance would be real.

Mira looked at the countdown.

Twelve days.

Chapter 35: Thirty-Six Hours

36 hours until keyhole crossing

Automatic alignment failed with thirty-six hours left.

No explosion. No dramatic siren. A column on Hana's display moved from green to red, and the room understood that years of redundancy had met the one failure it could not route around.

The Wanderer's tumble had shifted after a mass-driver rail collapse. The final standoff devices could still fire. They could still move the body. But the sequence had to be adjusted continuously from a control position too near the thermal and radiation bloom for survival.

Jonas opened the manual case.

Mira did not ask what it was. They had been married too long for that kind of theater.

"How many can remain?" she asked.

"Two," Jonas said. "One to fly alignment. One to manage firing logic."

"Can it be remote?"

"Not with the data delay and corrupted node network."

Hana's voice broke for the first time anyone could remember. "I am still looking."

"Keep looking," Mira said.

Evacuation math filled the ship. Crew transfers. Surface teams recalled. Ilyon ordered off The Wanderer and argued until Mira used command voice. Liora refused to leave until Kael, from the valley, told her Kharos needed witnesses more than martyrs.

At hour thirty-four, Hana stopped looking.

No one said goodbye yet.

Goodbye would make the decision real before the work required it.

Chapter 36: Someone's Daughter Too

29 hours until keyhole crossing

Elian's last packet arrived in the evacuation window.

Mira almost did not open it. Jonas did. He set it between them in the manual control bay while alarms blinked around the edges of the screen.

Elian was older than the graduation message. Tired. Wearing a rescue pilot jacket. Behind her, Earth rain touched a window.

"I know you may not get this before the end," she said. "I used to hate them for taking you from me. Then I hated you for letting them. Some days I still do."

Mira covered her mouth.

"But I flew a flood rescue last month. A girl on a roof asked why I came for strangers. I started to say because it was my job. Then I heard myself and got angry because I sounded like you."

Elian smiled without much humor.

"You didn't leave me for a planet. You went because every child there was someone's daughter too. Come home if you can. And if you can't... let them see the sunrise."

The packet ended.

For a while, the alarms were the only voices.

Mira sent the evacuation order.

All remaining crew off Last Orbit Actual except herself and Jonas. No volunteers. No substitutions. No debate.

Ilyon tried anyway. Aravel tried from the valley. Hana tried with mathematics that had no mercy left in it.

Mira listened to all of them.

Then she said, "This is my command."

Jonas took her hand under the console where no camera could see.

The last evacuation craft detached.

Chapter 37: Manual Alignment

4 hours until keyhole crossing

Manual alignment was not heroic while it happened.

It was lists. Angles. Heat loads. Jonas calling out timing corrections in a voice so calm Mira wanted to scream at him. Mira feathering thrusters against a body large enough to turn their ship into a brief chemical fact. Hana counting from Argo. Sira and Ilyon silent on the line because someone had ordered them to be silent and for once they obeyed.

The first standoff device misfired.

It detonated late and shallow, vaporizing less surface material than planned. The thrust vector wobbled. The keyhole probability jumped.

Hana said something in Arabic that the translator wisely ignored.

Jonas recalculated by hand and machine together. "We can recover."

"How?"

"Move closer."

Mira looked at the thermal map. Closer meant shields would fail before the sequence ended.

She moved closer.

On Earth-2, people watched the sky without broadcasts because broadcasts had become too slow for hope. Aravel stood in the valley. Kael stood beside former Kharos officers. Seska held Tavi's mother's hand. Liora whispered the corrected prayer.

The second device armed.

Jonas said, "Now."

Mira fired.

The Wanderer's surface bloomed white.

Chapter 38: The Videos

18 minutes until keyhole crossing

The shields failed after the fifth burn.

Heat crawled through the hull in warnings, then alarms, then facts. Jonas locked the final firing sequence and opened Elian's archive because neither of them wanted the last sound to be a siren.

Elian at five, angry with a dragon.

Elian at seven, missing a front tooth.

Elian at thirteen, saying she was the person they left.

Elian at seventeen, refusing to send birthday greetings and sending them anyway in the file name.

Elian graduating.

Elian in rain, saying let them see the sunrise.

Mira held Jonas's hand so hard their gloves creaked.

"We should have had more time," he said.

"Everyone should."

The sixth burn fired.

Outside, The Wanderer answered with a plume of vaporized stone, a rocket exhaust made from the body that had been coming to kill a world.

The trajectory line moved.

Not enough.

Jonas armed the final device.

The archive looped back to five-year-old Elian.

"People on the other planet," the child said, "you can borrow them. But not forever."

Mira laughed then, because grief had finally become too large for any other shape.

"Ready?" Jonas asked.

"No."

They fired anyway.

Chapter 39: Last Orbit

Keyhole crossing

The final burn moved The Wanderer by less than the width of a city.

Across ordinary distance, that would have been nothing. Across years of falling, gravity, and accumulated consequence, it was everything.

Hana watched the probability cone peel away from the keyhole.

For one second she did not trust it. Then the independent models agreed. Then the Suryan observatories agreed. Then the Kharos tables, open now and read by anyone with courage, agreed.

The Wanderer would miss.

Hana sat down on the floor of Argo and sobbed with both hands over her face.

Last Orbit Actual transmitted once after the final burn. No video. Too much radiation. Audio only, broken by static.

Mira's voice: "Archive to Elian. Mission complete."

Jonas, faintly: "Tell her the tree idea was good."

Then nothing.

On Earth-2, the tide gauges stopped climbing.

In the valley, Aravel bowed her head. Kael removed his command gloves. Ilyon screamed into a helmet because no one had given him a better language. Liora stood facing the dark sky and told the dead of Kharos that the Shepherd had been moved.

The black body crossed the invisible place where doom had waited.

It missed.

Chapter 40: The Sunrise That Should Not Exist

1 day after keyhole crossing

The sun rose over Earth-2 on a morning that had been mathematically unlikely for twenty-two years.

People watched from flooded markets, factory roofs, refugee camps, polar rigs, mountain shrines, hospital windows, and the scarred floor of Shepherd's Valley. No single prayer held them. Some thanked gods. Some thanked machines. Some thanked names of people they had never met. Some simply watched light arrive and did not ask it to explain itself.

Aravel stood where the first anchor tower had been raised.

"Now what?" Ilyon asked.

He looked older than twenty-four.

"Now we build a world that deserved saving," she said.

"Did we?"

Aravel looked at the valley graves, the launch towers, the Suryan and Kharos workers already arguing over repair priorities.

"Not always."

On Earth, Elian received the archive months later.

She watched her parents die in fragments and messages: command logs, thermal warnings, the last audio, her own childhood looping in their final minutes. She paused on Jonas's last line about the tree idea and cried until there was nothing dignified left in her.

Then she opened Mira's final private file.

Her mother looked exhausted, frightened, and certain.

"Elian," Mira said, "I wanted to come home. That never stopped being true. I am sorry wanting was not enough. If you can, live in a way that makes our choice smaller than your life."

The file ended.

Elian sat with the patched dragon in her lap until dawn.

Weeks later, she accepted assignment to the Rescue Survey Corps. Not because forgiveness had arrived like sunrise. It had not. Because somewhere, someday, another world might be seen in time.

On Earth-2, the first post-crisis school term opened with a new lesson.

Children learned the old myth of the Black Shepherd, the Earth equations, the Suryan corrections, the Kharos lies, the names of the dead, and the simplest truth of Project Last Orbit:

They had not destroyed the dark.

They had changed its path.