

The Ares Project

A novel by Leah B. Makuch

Friday, 30 September 2005: 2 Years 7 Days to Ares III Launch

"How many mechanics does it take to get to Mars?"

"Old joke, Dwight." Dorothy Cooper ran a gloved hand over the habitation module's shiny outer surface, tracing the curvature. "And it was never even funny."

"Three," he continued, oblivious to her comments. "One to verify systems functions, one to re-verify systems functions, and one to survive the crash." Dwight Abrams grinned, lowering the welder's mask back over his face.

Dorothy circled what would soon be the completed habitation module. Over the next few months this hab would be finished, furnished, and made ready to house the pioneers of the next great space exploration. They had just begun construction the previous month, right after the launch of Ares I, the rocket that had sent the first Earth Return Vehicle to Mars. This hab was just like the one that would be part of the *Beagle*, the craft that would carry her and three other crew members to the surface of Mars. This one would be used for training in the next two years.

She had found out recently that she would be mission commander for the first manned mission to Mars. In fact, it was right before the first ERV had been launched. The truth had sunk in over the last few weeks, little by little, as she worked with the other mechanics designing the hab and spent time with the other members of the crew: Elliott Ormsby, Sam Lessing, and Lily Baker. In February, the Earth Return Vehicle would land on Mars and begin converting Martian air into propellant, and her involvement would deepen. The next two years would be a time of simulations, team-building activities, and mission organization. They hadn't yet finalized the itinerary for the journey.

"When you're done sightseeing, these circuit boards could use your keen eye."

Dwight's British accent didn't hide his sarcasm as he kicked the bench behind Dorothy and broke her concentration. She followed him over to the circuit boards.

"You nervous?" he asked after a few minutes of her silent working.

She shrugged, not looking up. "A little. It's just not something I ever saw myself doing."

"Well, they picked you because you're qualified for everything." He began to pack up the circuit board for storage. "A regular jack-of-all-trades."

Dorothy pulled off her gloves and tossed them on the workbench, running her hand through her hair. She didn't say anything else, but her brow furrowed.

"Dor, love, you've got to stop this. You know you're the right person for the job." He shouldered his bag. "Now stop being all down-in-the-dumps. It's almost time to go home. Come join me for a drink."

She smiled. "Some other time, Dwight. I want to spend some more time looking over the hab."

The habitation module stood approximately five meters high and eight meters in diameter and squatted like a huge drum on its supports. She circled it once and ascended the open ramp.

The first floor was built entirely for storage. Her boots echoed loudly in the open space as she walked over to the airlock and ascended the ladder to the residence floor. She stepped out into what would be the kitchen, although it was at that point little more than a small area of floor marked off by masking tape for reference. She could picture it: the appliances would all be to her right, lined up against the wall. The kitchen directly abutted

the living area, which would serve as galley, lounge, and library. She could imagine a few pieces of furniture: a couch, a table, a big bookcase.

As she walked counter-clockwise around the airlock, she passed into the laboratory from the living room. Lily and Elliott, the geologist and biochemist (respectively), would spend the most time there of anyone in the crew. The laboratory doubled as the control room, however, from which they could communicate with Mission Control back on Earth.

After the lab came the four staterooms. They were hardly staterooms, actually; each was about the size of the dorm room she once lived in back at University. There were no walls yet, so she could pass directly from room to room.

Sam Lessing would have Stateroom 4. He would complain about being farther away from the bathroom, but secretly he would enjoy having an end room. Lily Baker would have Stateroom 3. The next room was the bathroom, but no plumbing had been installed yet. After the bathroom was Elliott Ormsby's room: he was second-in-command and therefore had Stateroom 2. She, as mission commander, got Stateroom 1. It was just a masking-taped area on the floor, but she already felt a certain possession of the space. It would, after all, be her residence for the most important years of her life.

The last room in the circular hab was the exercise room. They would install various pieces of gym equipment later in the building process. After she passed through the exercise room, Dorothy found herself back in the kitchen.

She looked up, staring beyond the hab (since they had not yet built a ceiling), and contemplated the heavens she imagined as being right beyond the roof of the building. The first ERV was sailing away toward Mars, and before long it would land on the surface and the adventure would be underway. Until then, it was just a matter of waiting.

Wednesday, 8 February 2006: 1 Year 241 Days to Ares III Launch

"We have achieved aerobrake into orbit." Ken Nguyen exhaled, running his hand through his short black hair and closing his eyes for a moment of thanks as the control room erupted into cheers. "What are the system readings?" he asked.

"Readouts look normal," responded Eleanor Johnson, a pasty-skinned woman next to him. She continued as the din calmed. "We're right on schedule, and there appears to be no damage to the ERV."

"Are there any dust storms on the surface?"

"None expected," she replied. "Landing should be clear."

"Good." Ken looked behind him to where the Ares teams were gathered.

About twenty crewmembers composed the first three teams and backup personnel. Most were watching the monitors display pages of system function readouts, but a few were talking amongst themselves. He would need to meet with each group individually over the next few months.

"Should I break out the champagne?"

Ken turned when he heard Dorothy's voice. She had left the waiting area and entered the main control room.

"Better keep it on ice until Friday," he said. "We're going to keep the Ares I ERV in orbit until then to make sure system readouts are fine, then we're starting landing. If landing goes well, then we can celebrate."

"Are we still meeting tomorrow morning to discuss the mission plans?" she asked.

"Yes, please remind your team to be in the briefing room at 0800 hours. I sent out the official memo last week to all the Ares teams, but a reminder never hurts." Ken sipped

his coffee, watching as the readouts continued to scroll up the monitor, sending word of the conditions far from home.

Thursday, 9 February 2006: 1 Year 240 Days to Ares III Launch

"The ship that will land tomorrow on Mars is the Ares I Earth Return Vehicle, or ERV." Ken brushed his black hair out of his eyes. "When Ares I lands, it will begin using the Martian air to make fuel for the Ares III flight home. A small chemical plant within the ERV will combine the carbon dioxide atmosphere with the hydrogen it has on board to produce methane and water.

Ken walked across the room, looking into the faces gathered before him. "Most of you should be familiar with this methanation reaction, as it has been practiced for over a hundred years. The methane produced in this reaction will be stored as fuel. The water produced will be broken down further into hydrogen and oxygen. The oxygen will be stored as fuel, and the hydrogen will be used to make more methane and water. The carbon dioxide atmosphere is also split into oxygen, which is saved, and carbon monoxide, which is a waste product.

"The ERV will continue this process for six months. By August, ladies and gentlemen, the 6 tons of liquid hydrogen will have been converted to 108 tons of methane and oxygen fuel. This is enough for the ERV to make the return trip to Earth as well as have 12 extra tons to fuel our ground rovers. Some of this extra fuel will be transported robotically to various emergency fuel dumps on the perimeter of the Ares III exploration region. The rest will remain at the landing site for regular refueling."

"You think it'll work like they say?" Sam Lessing murmured his question into the ear of his crewmate, Elliott Ormsby. "I don't have much faith in those automated robots."

"I am absolutely positive it will work," he replied. "Mostly." Elliott took a sip of water. "I'll feel better once the ERV's on the ground and fuel production has begun."

"By September of this year," Ken was saying, "The ERV will have completed its task. We will be able to confirm before any of you leave Earth that you have enough fuel to travel home. At this point, the crew of Ares III will use robotic rovers to explore the region surround the ERV and pick a spot suitable for landing. A radar transponder will be placed at this location, ensuring a safe touchdown.

"In late September of 2007, the Ares II will launch from Cape Canaveral. It will be identical to Ares I, which is already on Mars. Ares II will contain an ERV, just like Ares I. A few weeks after Ares II launches, Ares III will launch. The *Beagle* will be the primary component of Ares III, composed primarily of a habitation module, which I will detail later."

"Damn stupid name if you ask me." Sam rubbed his beard. "I don't care that it was the name of Darwin's ship; I don't like my spacecraft named after a bloody mutt. When we land, what are we supposed to say? 'The *Beagle* has landed?'"

"We aren't the ones choosing the names, remember." Lily steepled her fingers and looked straight ahead as she responded to Sam. "We just make the trip."

"Ares III will be flying from Earth to Mars using a modified Hohmann transfer." Ken brushed his hair out of his eyes again. "Ares III is a conjunction mission, which means that Earth and Mars are on opposite sides of the sun. It employs a free-return trajectory, which allows the Ares III crew to head home if they need to abort the mission in that fashion. We will be using a small amount of extra propellant to shorten the Hohmann transfer time from 258 days to 180.

"Ares II, however, will travel on a full Hohmann transfer, without the extra propellant boost, which means it will reach Mars about 50 days after the crew will. The

Earth Return Vehicle on Ares II is for backup in case there are problems with the Ares I ERV that cannot be repaired."

Ken continued his presentation. "On October 7, at approximately 1100 hours, Ares III will be launched here at Cape Canaveral. Ares III will lift to Low Earth Orbit before it drops its boosters and performs an engine burn, using the upper stage of the aircraft to propel it to Mars. The upper stage is composed of the habitation module and boosters. The hab-booster complex will make the journey in 180 days with one engine burn mid-course to ensure direction. At the end of 180 days, Ares III will aerobrake into orbit around Mars. After Mars Orbital Capture is achieved, the Ares III crew will spend a few days doing preliminary landing checks, and then they will land on the surface. This will occur in April 2008."

"Ares I's homing beacon will guide the landing. Landing, along with everything else on the Ares missions, should be almost completely automated, but Sam Lessing will serve as Ares III pilot to guide entry and landing." Sam raised his hand a little, as if the crew didn't know who he was. "Sam, as you all know, is an experienced pilot as well as top-notch mechanic. His primary role on this ship will not be as pilot, but as flight engineer."

"Yeah, yeah," Sam gestured sheepishly. "We all know our jobs."

Ken continued. "This next section of the briefing applies to all of you, although I am specifically addressing the crew of Ares III. Upon landing, you will begin the longest part of your mission. You will spend 550 days on the Martian surface. That's about 18 months, in case you aren't awake this morning. During this surface stay, you will be exploring. You are the eyes and ears of NASA. You will be going out in the pressurized land rover in groups of two, one scientist and one mechanic, so there are always two people at base camp. The rover can take you 1000 kilometers between refuelings. I expect that in the 18 months, you will not manage to cover the entire 785,000 square kilometers. Thus, you will have several robotic rovers. The pair at base camp will operate these rovers to explore places you cannot.

"Your field missions will accomplish a wide variety of tasks. The team of Ares III, like all the Ares missions, will pioneer the next branch of human civilization, and as such, you are explorers. You will explore every rock, every crevice, every mountain and canyon you can reach until you leave, 18 months later. Specifically, you will begin a geologic characterization of Mars. Study its climatic history. Search for useful minerals. Look for ice, water, and study the volcanic history. You have the supplies to build a greenhouse, and will be expected to. Search for signs of life." Here Ken took a deep breath and exhaled before continuing.

"The most important discovery you could make while on Mars is the discovery of signs of life. I doubt you will find life on Mars, but perhaps you will find fossilized remnants. It seems far-fetched, but nothing is impossible." He paused a moment before continuing. "Aside from the search for life, your most important task is to search for areas of geothermal activity. These pockets are crucial both to the search for liquid water as well as a renewable energy source to help fuel future Martian explorations.

"After 550 days, Ares III will use the Ares I ERV to return to Earth. You will spend another 180 days in space, during which time you can finalize your data. Write your reports." He smiled. "Celebrate."

Ken picked up the mission report. "Each member of the Ares III crew and backup team should have this mission report. You will find within this packet a listing of the expectations we have for you on your mission. One of the things NASA is asking is that each of you keep a daily field log, whether you are in base camp or in the field. Save your

personal feelings for a journal. This field log is a scientific record that will undoubtedly be made public."

Ken continued. "Let me remind you of crew responsibilities. The flight engineer is the heart and soul of this crew. Cooper will be an integral part of every stage of this mission. She helped build the hab; she will be the person to approach if anything goes wrong. She is also in charge of medical situations that may arise."

Dorothy looked down at her packet, at the pages of possible scenarios and courses of action for each, and wondered how she would ever prepare in just a year.

"The second flight engineer, Sam Lessing, is another mechanical resource. Scientists will have one of these mechanics with them at all times, whether in the field or at base camp. If it breaks, they will fix it. Lily Baker and Elliott Ormsby are the Ares III scientists. As such, your jobs will be research and data collection. Ormsby is also second-in-command to Cooper."

Ken switched on the slide projector to display the habitation module. "This is the habitation module, or hab as you all refer to it. If you are participating in a mission, you will spend several years in one of these. You have all spent time in the hab, so I will not spend much time identifying the specifics.

"The rooms of the hab are laid out in a circular fashion around the center airlock, which will be your portal between floors of the hab as well as a place of emergency shelter. Each room can be completely sealed off from all surrounding rooms in the event of a pressure leak. Each member of the four-person crew will be assigned a stateroom. All other areas are communal."

Ken turned off the diagram of the hab. "Ares IV and V will land on Mars in May of 2010, not long after Ares III has returned to Earth. Ares IV will contain the ERV for the next mission, and Ares V will contain the hab and crew. At the end of their mission, Ares V will use the Ares II ERV to return to Earth. Thus, every two years two Ares boosters will launch from the Cape. One will carry the Earth Return Vehicle for the next mission; one will carry the crew."

Ken paused for a few seconds to take a sip of water. "Each Ares team will have an opportunity to spend some time in the habitation module, working and adjusting to life in that situation. The Ares III crew will leave for Antarctica in November."

"Antarctica?" Elliott asked incredulously, looking to Dorothy, who looked as surprised as her second-in-command. "This is the first I've heard of that."

"A habitation module will be brought to Antarctica for your time there," Ken continued. "This will allow each of you to grow accustomed to the isolation and working conditions you will find on Mars. While in Antarctica, you will be assisting the Antarctic Search for Meteorites crews in their expedition to find lunar and Martian meteorites."

"You've got to be bloody kidding me," Sam protested to the other members of the crew as the room erupted in agitated chatter. "We're being recruited as meteorite hunters?"

"It isn't so terrible, really," Lily tried to comfort him. "I've done work with the ANSMET teams before. You may like it."

"And I may like my next ingrown toenail." Sam rubbed furiously at one side of his beard. "Can't wait till November."

Wednesday, 16 August 2006: 1 Year 52 Days to Ares III Launch

"Jettison upper stage," Dorothy said calmly, watching the warning lights blink red on the screen in front of her. "Release tether. Aerobrake on my mark." She pressed the buttons for the invisible crew members to whom she was issuing the orders, imagining them

beside her as she watched the indicator count down. Elliott would be seated to her left, and she could see him absentmindedly running his hand over his balding head as he punched buttons. At optimum altitude and angle, she pressed the series of buttons that would leave them in orbit. The screen readouts changed to tell her aerobraking was successful. They had not dived deeply enough into the atmosphere to necessitate landing, and they hadn't bounced off into outer space. The red lights winked off, leaving her in the dull glow of the screen alerting her that they had captured orbit around Mars. She rubbed her eyes and shut off the simulator.

"They sending you through piloting simulators now?" asked a gruff voice from right outside. Dorothy slid out from beneath the simulator and looked up.

"Hey," she greeted Lessing, accepting his hand and rising to her feet.

"I think they're trying to take my job away from me," he commented, blue eyes laughing. "Jesus, seven years as flight commander in the Air Force, and I'm being replaced by a scrub student of mine from University." He elbowed her jokingly in the ribs.

"I want to be prepared for everything," Dorothy looked down at the fingers of her former teacher and close friend. His well-tanned broad fingers dwarfed her thin white ones, his calluses rough on her skin. A stubborn, old-fashioned man, Sam preferred to work without gloves. He squeezed her hand before letting go.

"As if they haven't been pushing you through enough with the scientific field training. Plus Antarctica in a few months." Sam leaned against the simulator. "I think you need a break more than you need geology tutorials and piloting lessons."

"This is a big deal, Lessing." Dorothy naturally fell back into the way they had addressed each other in college, back before it became too familiar to change. He was the only member of the crew whom she called by last name. "They don't want to leave it in the control of a mechanic without making damn sure their asses are covered." She sat down and leaned forward, elbows on her knees.

"Even if she is a first-rate mechanic with degrees in geology, chemistry, and... what was that other one? The one I taught?" He smiled easily, prodding her with a gentle hand on her shoulder.

"Electrical engineering. And you know geology was just a minor." He could hear the smile in her voice, even though she was looking down.

"Not to mention two years as a medical assistant." He released her shoulder and began punching the buttons on the side of the simulator, selecting the order of simulation programs that would run for him. "Christ, they don't need the rest of us on this mission. They should just send you."

Dorothy didn't say anything, but stood up and faced him.

"I assume you're done with this," he said, gesturing to the simulator.

She nodded. "Yeah. I've been on it all evening. I think I could handle anything on that mission right now."

"Well, you'd better not," he warned, "cause then you'd be stealing my job on this boat." Sam slid his broad frame beneath the simulator with a groan, lying on his back. "It's not like everything isn't automated. They picked me because they wanted another mechanic, not a pilot."

"You have to get in the habit of saying 'flight engineers,'" Dorothy corrected with a smile. "It's more media-friendly."

"NASA's disaster prevention crew," Sam announced. "If it breaks, we fix it, and we do it with a smile. Mars, ho!" He started the simulator with a flourish, launching right into a complicated disaster sequence. Dorothy watched the external computer screens as Sam

guided the rotating hab-booster complex through a few maneuvers. "I can't wait for this," he confided, despite the simulator's warnings of pressure loss in several quadrants of the hab.

"Me, neither," Dorothy replied, before gathering up her belongings and heading out the door.

II

Friday, 17 November 2006: 324 Days to Ares III Launch

"The landscape is beautiful." Lily leaned against the airplane window, staring down at the leafy treetops of Christchurch, New Zealand. "It's like paradise down there."

"Maybe they do this on purpose." Elliott sipped his iced tea and watched the runway rise up to meet them. "Send us to a tropical heaven before the coldest place on Earth. NASA's sadistic."

"I'm just hoping there's bad weather on Antarctica." Dorothy absentmindedly rubbed her fingertips over the seat belt fastened in her lap. "We could be here for weeks."

"Doubtful," Sam said glumly. "I say three days tops. Just enough to outfit us and ship us off to Hell's freezer."

From the airport they were escorted to their quarters in Christchurch: a mid-class motel. Men were in one room, women in another.

"We can't even get separate rooms?" Sam scratched his beard. "I feel like I'm at summer camp."

"Oh, hush." Lily fought the lock, trying hard to get her key to turn. "You heard; the weather's fine down south and we're supposed to leave by Tuesday. It's not too long." She finally made the lock click open.

"We're scheduled to go into the International Antarctic Center tomorrow morning with the ANSMET crew and get outfitted with our cold-weather clothing." Dorothy hung her clothes neatly in the alcove, tucking her carry-on under the bed.

"Are we even going to need it?" Elliott asked. Elliott and Sam had opened the connecting door between their rooms and let themselves in. "I thought Ken said we would be working with the modified space suits while down there."

"I'm sure we won't be using them all the time." Lily was washing her face at the sink, looking at their reflections in the mirror. "We may want to go some places without the suits on. Especially if we find that there are design flaws that make our work difficult."

"I doubt that'll happen," Dorothy replied, "but we don't really know. It's a good idea to have real clothes anyway. Besides, we'll get to meet the ANSMET crew while we're at the Center."

"You've got to admit," Elliott said, smiling, "we did get a pretty good deal compared to the ANSMET personnel. They'll be sleeping in tents when we have the hab."

"True." They could hear the smile in Lily's voice even as she had her face buried in a towel. She dried off and looked back at them. "We even have heat."

Elliott laughed. "Probably won't be too easy for them to rough it when they're camping next to a giant self-enclosed habitat."

Dorothy ducked into the bathroom with a few articles of clothing. When she emerged, she had changed into a swimsuit and a cover-up sarong.

"I'm hitting the pool," she said, pulling a white motel towel off the rack and grabbing her key card. "Have to make the most of this weather before it's gone. Anybody else want to come?"

The other three murmured quick ascent, grabbing the necessary items from their luggage and following their mission commander down to the pool.

Saturday, 18 November 2006: 323 Days to Ares III Launch

"Okay, here we go. Men to the left, women to the right." The directions were issued by a middle-aged nondescript gentleman with a graying beard and square glasses. "Straight through those doors and we'll get you all set up."

Lily exchanged looks with Dorothy and the two women from the ANSMET team: Sarah Worth and Meghan Audette.

"It's okay," Meghan reassured them. She was the only one of the women who had been to Antarctica before. "We need to try things on so they divide us up by sex."

When they reached the room, they were each handed two orange duffel bags by the squat, heavy-set woman in charge. "You may take whatever you would like," she said, "but everything you bring to Antarctica must fit in these two bags. Try on everything you are given. Line up here and tell me your sizes."

Dorothy smiled at Lily and the both knew they were thinking the same thing: they had an entire floor for storage space. They could load up as much clothing as would fit.

"You can select either a one-piece or two-piece jumpsuit," the woman said, hands on her broad hips, pointing them to a pile of things.

"Which do you recommend?" Lily asked, selecting two one-piece jumpers and holding them up to her. "The one-piece suits look warmer."

Meghan shook her head. "I wouldn't get the one-piece. They're warmer than the two-piece ones, but every time nature calls you have to take the whole thing off." She started to laugh. "Last time I went, there was this guy showed up in a brand-new one piece jumper. Lasted the whole day before he couldn't hold it any more and had to take a dump." She kept laughing, and the other three women had stopped looking through the pile to listen. "He stripped right down to nothing in the middle of the ice, squatted down and did his business as fast as he could. Started to get dressed and realized he'd dropped his load right in the hood of his jumper."

"That's horrible!" Sarah gasped, straight-faced, as Dorothy and Lily laughed. They all selected two-piece jumpers.

At the end of the process they each had a jumper, several pairs of long underwear, thermal socks, white "bunny boots," hats, chemical heating packs, gloves and mittens, as well as a bright orange coat that had a their name on a patch Velcroed to the lapel. They carried their belongings back to the main room of the Antarctic Center and met the men there, each of whom was similarly burdened.

"Gonna have room for any of your own stuff?" Dorothy laughed to Elliott, who had more than any of them back at the motel.

"That's what the hab is for," he said, smiling. "Besides, some of the stuff is staying here until I get back."

"You can do that?" Sam asked.

William Tyler, one of the men in charge, nodded. "You can check one suitcase here at the Center for the duration of your trip. It'll be here when you return."

"Are we really flying out on Tuesday?" Sarah asked William.

"We are," he said, pointing to himself and four others, including Dorothy and Sam. "The rest of you are flying out on Wednesday. Guess we can't risk losing the entire Mars project in one crash."

"Guess not," Elliott laughed uneasily, looking around him. "So two planes. How long will it take?"

"Hard to say," Jim Skutter answered. He was the other man in charge of the ANSMET mission. "Some years, it just takes eight hours. Some years, twelve. Depends on the winds." He began folding his thermals to tuck into the orange bags. "Just enjoy your stay here while it lasts and try not to think too much about next week."

Wednesday, 22 November 2006: 319 Days to Ares III Launch

"I can't wait to land," Sam said, shifting in his seat.

"We haven't even taken off yet," Lily pointed out. "They haven't even started up the engines." She turned around, trying to look behind them. "At least, I don't think they have."

"You'll know when they do," Jim said with a twinkle in his eye. At that moment one of the pilots came back and handed them each a brown paper bag and a small box.

"Lunch," Sam said, looking into the bag. He opened the box. "And...earplugs." He looked at the three members of the ANSMET crew. "What, are you guys bad conversationalists?"

"Ha ha," said Robert Hartman, settling onto the cramped bench. "When they start the engines you won't be able to hear a thing. These are for your own protection."

"Yesterday I hear they got in after only about eight hours," Lily said optimistically. "Maybe that'll be true for us, too."

"Maybe," Meghan said, sounding doubtful and getting out a pad of paper from her bag. "We can write to each other," she explained. "Conversation will be impossible in another minute."

"Oh, one more thing." Jim said, suddenly turning serious. "If the plane should go down, find the heaviest object in the cabin and tie yourself to it. Drowning is preferable to freezing to death."

Before they could process what he said, the engines started with a roar that made Sam almost drop his earplugs in his haste to stick them into his ears. When the plane was running, the crew from up front came back and peered through a hole behind the passengers. Lily cocked her head at Meghan, who wrote "He's checking the engines" and passed it around. This did little to allay Sam's obvious fears.

The Hercules LC-130 took off at about 9 am New Zealand time. By 3 p.m., it was apparent Robert had to use the bathroom. Jim noticed Robert's anxious eyes and pointed to a hole on the side of the plane. Robert bit his lip and weighed his options for a good fifteen minutes before deciding he couldn't stand it anymore and letting loose over the ocean. Everyone pretended not to notice.

It took ten hours to reach McMurdo. By the time they landed, Sam felt like his ears were going to explode and his teeth had nearly rattled out of his head. All five of them were out of the plane with their gear just as a big bus pulled up.

"This'll take us to the cafeteria," Robert said when they could speak and hear again, getting on board. "That's where we'll get our room keys and a hot meal."

"Thank God," Meghan said, sighing. It was a bumpy ride back to the cafeteria but they were overjoyed to see the rest of the crew waiting for them when they arrived.

"Glad to see you," William greeted them as they came running over. Dorothy and Elliott looked very relieved to see everyone had arrived safely. Perhaps she had gotten the drown-vs-freeze speech too, Sam thought. "Let's get you guys settled," William beckoned.

"How many people are here?" Lily asked, looking around at the busy cafeteria as they waited for the desk personnel to find their room keys.

"There are 1200 or so people here during the summer." Jim, one of the veterans, was the one who answered. "Not all of them are scientists, but a lot of us are. You'll get to know a few faces before you go out into the field."

"Here we go," said the desk clerk, emerging with a few keys. "Rooms for the new beekers."

"What are beekers?" Sam asked when they were out of earshot. William laughed.

"Mac Town has its own language," he commented. "Beekers are scientists. You'll notice that the Crary Center, a very nice looking brand-new lab, is situated on Becker St. I think it came from the little glass chemistry beakers but I can't be sure." He led them to a table after they had gotten something to eat.

"Who studies here, besides ANSMET?" Lily chewed thoughtfully.

"Tons of people," Jim answered. "Geologists, biologists studying the penguins, glaciologists, people who study dust in the ice, radio and gamma ray astronomers, you name it. It's really a hot spot down here." He paused to laugh at his own joke.

When they had finished eating, Will and Jim led them outside to wait for "Ivan the Terre-bus," the bus that would bring them to the dorms.

"It's almost warm here," Dorothy observed incredulously, looking around her. "It can't be much below freezing."

"It does stay fairly moderate here on Ross Island," Jim replied. "That'll change once you get out on the ice."

"So glad," Elliott replied.

The bus pulled up and they got on, holding on as they bounced their way to the dormitories. The two-story wooden buildings loomed ahead like prison encampments. They went indoors and Sam wrinkled his nose, beard scrunching up under his lips.

"Stinks like mildew," he complained.

"Everybody tracks snow in from the carpet," Jim said, ushering them to their rooms. "I'm warning you," he paused, "this isn't the Hilton."

The door swung open to reveal a small dorm with three bunk beds.

"You're damn right it isn't the Hilton," Meghan commented, looking shocked. "Six to a room?"

"You'll be sharing it with some other scientists," William said, unlocking the door next to theirs. "ANSMET won't be in one room all together."

After they got settled, Will and Jim called them together to discuss the upcoming activities.

"On Friday we'll be off to Happy Camper School," Will announced, looking very pleased.

"Which is..." Sarah asked tentatively.

"Well, that's the preparation shakedown trip. We'll show you how to operate the snowmobiles, set up camp, etc. Some of that really doesn't apply to you Mars people, because as I've been told, you have a hab of some sort already out at the site." Jim shifted from one foot to the other. "It takes two days. On the second day you'll do some crevasse training, learning to rescue someone from an ice crevasse, stuff like that." He paused. "It's your orientation."

"What about when we get back?" Dorothy asked.

"Well, then you'll have lots to keep you busy. One day we'll pack food boxes. One day we'll organize equipment. Trust me, it'll be tons of fun." Jim yawned. "For now, though, get some rest. Take the evening off. Go into town and have a beer. Meet some of your roommates." He handed them each a sheet of paper. "There are a couple of things to note while you're here. First, no Hollywood showers. Here we get two minutes of hot water. One to wash, one to rinse. Navy showers." He pushed his hands into his pockets.

"Second," Will picked up. "You're allowed three showers a week. In the field there won't be any, so enjoy them. Also, you'll find a map of Mac Town on the back of that sheet. You'll see we have two bars, a gym, a church, lots of sundry sites. Take tomorrow to go see what's out here."

"I think that about wraps it up," Jim finished. "If you have any questions just ask one of us. We'll meet at 1900 hours tomorrow night to talk about snow school."

III

Wednesday, 29 November 2006: 312 Days to Ares III Launch

One week later found five of the team crammed into a Herc flying over the endless sea of white snow and ice. "We're approaching Nunatek mountain," William scribbled down on a piece of paper and handed it around. They sat nervously as the Herc descended. "Hold on," Will scribbled quickly, holding it up for all to see. Before they knew what to expect, the plane jolted suddenly. Henry Fields, the sixth member of the ANSMET team, bit his lip and blasphemed something that was drowned out by the engines. The plane bumped along the snow, bouncing its passengers about, before taking off and circling again. This time it touched down without a bump.

Someone opened the hatch, and Will was the first off the plane. He didn't take the time to look for the hab; he just grabbed supplies out of his bag and started trying to get a radio going. Dorothy, who had been briefed for this, gathered everyone off the plane and started unloading supplies from the back of the plane. The propellers spun furiously above them, a terrifying sight, but they hurried to drag sleds and drive Skidoos off the plane and onto the snow. Dorothy looked back and saw that by bouncing along the ground first before landing on the second pass, the plane had cleared the snow away to create a runway for takeoff.

Will waved his arms that he had a radio going, and the crew of the Herc acknowledged it. A crew member ran around to check that all materials were off the plane and then climbed back on board. The Herc taxied down the makeshift runway before lifting off again into the sky.

And then there was silence. They had each removed their earplugs, but the overwhelming quiet was so intense it was practically deafening. "The hab's over there," Will pointed, making them all turn toward the horizon. They hoped to see it, but it was beyond range. They took it on faith that Will was pointing in the right direction.

"They had to land it far enough that we could place it on the ice," Will explained, shielding his eyes from the glare off the snow before putting on his goggles. "We land on snow because it's softer, but we camp on ice to find the meteorites. Everyone, gather up your gear; we're traveling."

It may have been warm on Ross Island, but on the flat plain it was a different story. Dorothy looked around at the people bundled in red-orange coats, indistinguishable one from the other, on Skidoos dragging heavy sleds across the frozen tundra. She was warm at first in her cold-weather clothing, but that feeling didn't last as the wind cut through her. The wind always blew from the South Pole, she had learned from Snow School, so they were heading South. That made sense; they landed upwind from the site.

After over an hour of driving the novelty had worn off. Elliott was looking around, obviously bored, and Sarah Worth was practically falling asleep. They traveled for most of the day. Dorothy's thumb was beginning to lose all circulation from pressing continually on the accelerator button. Fortunately, they didn't have to travel for much longer after that before they reached the hab.

"How did they get this here?" Sarah asked in awe, rubbing her thumb and looking up at the two-story structure raised above the landscape.

"Flew her in on a C5 early last week," Dorothy said proudly, looking up at it. "I hear it wasn't much trouble at all."

"Let's set up camp," Will directed, gathering supplies off the sleds. Dorothy and Elliott helped them pitch the three tents and make sure that the radio was working before calling in to McMurdo.

"This is Sierra 072," Will said into the radio.

"Sierra is S for science," Meghan whispered. "72 is the number of our mission."

"We copy, Sierra 072," said a tinny voice from the speaker.

"Five souls in camp and all is well," Will reported, smiling.

"Roger that."

Will made a motion for them to keep listening. They could hear other fragments filter in from all over the continent. They listened to another crew reporting that they were having trouble with a piece of equipment and would need to add a replacement to their supply run. Someone else was complaining that they knew they had packed an extra thermal pack, and someone must have stolen it back on base. It was like listening to the news and overhearing a CB radio all at once.

"Sierra 072," he said after a few minutes. "Shutting off. Over and out."

In the sudden silence, they could hear the habitation module creaking as the metal contracted from the cold. The noise was eerily loud in the quiet air. As the other three continued to get settled, Dorothy and Elliott lowered the entrance ramp to the storage floor. They climbed up into the hold.

"The rover looks fine," Dorothy said, walking over to the two-man Mars Car they had designed for the mission. "I'm so glad we get to test the prototype while we're down here."

They climbed on board the rover and started up the engines, which whirred to life easily. The rover had been built for these temperatures, because it wouldn't be any warmer on Mars. Dorothy then drove it out of the hold onto the icy terrain behind the hab. The equipment was surprisingly responsive. When they shut it down and climbed out, all three ANSMET team members were standing in front of them.

"Glad we brought you guys Skidoos," Will said sarcastically.

"We could never use the rover for finding meteorites," Dorothy replied. "Too imprecise. We're just field testing her for cold."

"Let's have a look at this thing," Sarah said eagerly, peering up into the hold of the hab. "Can we come up?"

"Sure," Dorothy said, and Elliott nodded.

Will, Henry and Sarah climbed the ramp into the near-empty storage hold. Then Elliott led them up the ladder of the airlock into the second floor. They exited the airlock into the fully-equipped kitchen.

"This is ridiculous," Henry said, walking around from room to room. "You have running water?"

"Of course we do," Dorothy said impatiently. "We didn't build this thing to come to Antarctica. We're going to be living here for two years."

"Why aren't we sleeping here?" Sarah asked impatiently. "It's not like you lack the space."

"We're under strict orders not to use the facilities for more than four people," Elliott said apologetically. "It's to test the systems and see how efficient they are."

There was a dull whine as Dorothy fired up the hab's internal energy system. Lights winked on across the kitchen.

"Four people my ass," Will protested. "We'd all fit on here."

"Well," Dorothy said, "I'll talk to everyone else when they arrive tomorrow and we'll see what we can work out." She looked around hesitantly. "And for tonight, since half our crew isn't here, I don't suppose there'd be any harm in you all sleeping here."

Sarah had disappeared around the corner, but they could hear her shriek across the hab. "BEDS!" she cried. "They've got BEDS!"

Dorothy woke to the smell of eggs and bacon sizzling. She yawned and rolled out of bed, nearly tripping on Sarah, who had lost the straw pull and didn't get a bed for the night. Still, the woman looked quite content bundled up on her air mattress on the floor.

Dorothy pulled a robe around herself and stumbled to the kitchen room. She blinked a few times in amazement, but Henry really was standing there cooking bacon and eggs. "What are you doing?" she asked. "Where did these come from?"

"Well, living out on the ice like we'll be," Henry said, "we need to keep up our strength with a hot breakfast." Dorothy turned to see Will already sitting at the table. He merely smiled at her. "We have a few good things before we have to resort to packaged food. We have to eat the eggs before they spoil."

"Well it certainly smells good," she agreed, finding her own plate and silverware. "I'm starved."

"Oh, but you don't get any." Will smiled up at her. "Your rations are limited to that dehydrated food you brought." She went to argue, but he raised a hand. "You guys insisted you have to test your systems just as they will be on Mars. And I don't think there'll be eggs and bacon on Mars."

"What's going on here?" Elliott and Sarah emerged from different entrances to the kitchen, both looking confused.

"Sarah," Henry said, "there's eggs and bacon here for you. Elliott, well, I'm afraid you'll have to make do with what you have." He flashed them each a sweet smile before dishing out the steaming breakfast onto the correct plates.

Elliott morosely prepared an instant breakfast for himself and Dorothy, which they ate in the adjacent common room. "This can't go on," he whispered to her. She shook her head.

"Don't worry. Once the others arrive, we'll lay out some ground rules."

"I need to excuse myself for a minute." Henry stood up, pushing away from the table. He started walking toward the bathroom. Elliott stood in the doorway and blocked his way.

"Oh no, you don't," Elliott said with a smile. "Testing the systems, remember? I'm afraid you'll have to go outside."

Henry looked at Will, but Will only shrugged. Henry dejectedly got his gear together to head outside.

"Hey, guys!" Sarah looked out the window of the hab. "I think the others have arrived."

It was about time, too. The group had not reached any sort of treatise about use of the hab space, and there was going to be definite unrest unless things were worked out more definitely. They each bundled up in their warm clothing and trundled down the ramp from the storage level.

"Hullo!" Jim waved from his Skidoo after letting it slide to a halt. The other four members of the party, indistinguishable from each other except by a few unique articles of clothing, dismounted and began pulling things off the sleds. The ANSMET crew started settling into the tents almost immediately.

"Wait a minute," Meghan said, halting the action. "Did you guys come off the hab?" She put her hands on her hips. "None of you slept out here last night, did you?"

They all looked at each other. "Maybe we should go inside and talk," Dorothy suggested.

"Okay, how about this: we all sleep here, trade off beds every night, and everyone gets to share the amenities of the hab like the shower and the toilet." Robert folded his hands on the table.

"Hell of a steep bid, Bob," Elliott said, leaning forward as well from his seat near Jim at the common room's table. "Do you want us to talk about this for *another* hour? How about we just sleep here, you all sleep in the tents, and we only work together gathering meteorites?"

"That isn't very fair," Sarah protested. "You DO have all this extra space you aren't using."

"Okay, well, what can we compromise on?" Dorothy asked the group. "We want to make sure the systems are being tested correctly. We also want to make sure that our food reserves are managed properly, as well as our energy reserves. And NASA wants to monitor our water usage."

"So why don't we restrict the bathroom and all its features to our group," Sam began, "and let them sleep in the hab? We'll be using the same amount of heat, no matter what."

"Where in the hab?" Lily asked, looking around. "There isn't a lot of floor space, and we will be out here for about six weeks."

"I think we can make do on the storage floor," Henry said, shrugging. "You don't seem to be using it."

"No," Dorothy agreed. "Most of that space won't be used until the actual trip to Mars."

"So...what?" Meghan asked. "Is this the final verdict? We get the storage floor and all our food, and we still have to piss in the snow, and you guys get the upstairs floor, with none of our food, and all of the amenities?"

"It's better than the other years," Jim reminded her. "We'll get a heated place to sleep."

"But we'll still have to cook in the tents," Sarah said. "We can't be cooking in here."

"True. But that won't be too bad." Will shrugged. "One of us will run down to light the stoves every morning, just like usual. We'll keep an extra mattress in the tents so we have a place to sit while we're cooking. I suppose it'll be pretty pleasant after all."

Nine Days Later

"This really sucks." Sarah shivered as she lit the propane stove. Meghan nodded as Sarah continued her complaining. "I think it's worse to come from a warm room out into the cold every morning than to just be in the cold from the beginning. At least then you get used to it."

Meghan sighed, looking in the direction of the hab as if she could see through the opaque orange material of their tent. "I know," she agreed. "I've been having dreams about toilets. I'm so sick of taking dumps in the snow."

They heard Will fire up the radio from outside and call in to base. He didn't sound as cheerful as Meghan remembered him being on the last mission.

"This is Sierra 072," he said. "Six souls in camp. Four souls in Shangri-La. All is well."

"Morning," said a cheerful voice from outside the women's tent. Sarah and Meghan had finished breakfast and were getting ready to go on the day's expedition. They recognized Dorothy's voice.

"Yeah, well, we'll be out in a minute," Meghan snapped, turning off the stove to leave.

"Ready to go?" Dorothy and Lily were standing there, looking very well rested and pleased to be going out on another day's outing.

"Yup." Sarah looked to the side, where the others were getting ready as well. "Are you two the only ones coming?"

"No, Elliott's over there and Sam will be right down. It's Sam's day for the shower and he's taken a little longer to get ready."

Dorothy heard a distinct snort from her immediate right, where Henry was helping Bob load the sled. She frowned. The situation really hadn't resolved itself with regard to the living situations, but she imagined they would all get used to it within the next few weeks.

"Load up, team," Jim hollered, motioning them all to start their Skidoos as Sam came clomping down the ramp. "We've got a lot of meteorites to find."

"I'm gonna do it," whispered Bob, sitting up in his bed. "It's been almost two weeks and I can't stand it."

"They'll kill you." Meghan shook her head. "It's not like they won't hear you."

"I don't care." There was a wild look in his eyes, and, he flung the covers aside. "This is for all of ANSMET."

Jim and Will looked at each other, but said nothing. Apparently neither "Mom" nor "Dad" wanted to be involved in this breach of agreement. Sarah opened her eyes for a moment, then shut them to continue to pretend to be asleep. Henry just watched, wide-eyed.

Bob smiled at all of them, then slid as quietly as he could up the ladder in the airlock.

Dorothy rubbed her eyes, then her ears. She looked at her watch. It was about one in the morning. She took a moment to remember where she was and what had woken her up. Surely that wasn't the shower running?

"Out!" boomed a voice that could only be Sam Lessing's. "Get out of there!"

Dorothy scrambled to her feet and ran to the bathroom, where Sam was dragging a very naked, very wet, very triumphant Robert Hartman out of the shower stall. She gasped and held a hand to her mouth, trying to suppress the giggles that were threatening to erupt.

"I did it!" Bob was celebrating, holding both hands above his head, dripping onto the carpet, not even attempting to cover himself. "I took a shower!"

Lily emerged from her room, blinking the sleep from her eyes, then gasped and immediately covered her eyes with her hand. She shook her head.

Elliott was last to emerge. By the time he came out, the five other ANSMET crew members, dressed, had climbed up the ladder and were standing around in the very cramped hallway watching Bob dance a triumphant jig in his naked glory. Elliott stood there, aghast, jaw open, before finally coming to his senses. He looked at Sam, who was fuming, Lily, still covering her eyes, Dorothy, trying not to laugh, and the five astounded ANSMET personnel, and did the only thing he could.

He began to applaud.

Bob smiled and put his hands on his hips. The applause filtered to each person in turn, even to Sam, who was grudgingly beginning to see the humor of the situation.

"For God's sakes, people," Dorothy said, shaking her head. "Will somebody get the man a towel?"

The arrangement was different after that. Everyone still slept in the hab, but now everyone cooked in the hab, as well. And everyone used the bathroom in the hab. And everyone got one shower per week, whether ANSMET or NASA. And everyone was much happier.

IV

Saturday, 23 December 2006: 288 Days to Ares III Launch

"It's cold out today." Elliott pulled his gloves off and started removing his space suit. He stood in the airlock, looking into the lounge. He could hear someone working around the corner and stepped over to see who it was. "Damn heaters in these things must be hardly working," he complained.

"It's called energy efficiency." The voice came from beneath a mass of short black hair that was bent over a microscope in the lab. "It's supposed to be summer out there." Lily lifted her head and smiled. "Shouldn't you be working on your tan?"

"Very funny." Elliott straightened his sparse hair and carried his suit into the airlock, where he hung it alongside the others. "Sam is just about ready to come in. He's gathering the samples. We found some today that might really pan out."

"I still haven't had any luck with this distribution pattern," Lily said, looking up from her laptop. They had been attempting to make patterns out of the location of the meteorites, hoping to learn something from that data.

"Maybe it'll show up once we find more," he offered, emerging from his stateroom with an extra pair of socks which he pulled on over his already-covered feet. "ANSMET should've known better than to use us as meteorite-hunters. It's not really our line of expertise."

"Speak for yourself." The geologist typed a new series of coordinates into the computer, her brown fingers deftly tapping over the keys. "I happen to have years behind me. Never here, though." She frowned at the screen before continuing to speak.

"Dorothy is out doing tests on the rover," Lily continued. "She's checking the cold-weather operational parameters. I am actually the only one in here where it's 'warm.'" Lily rubbed her hands together. "You get used to it after a while. I'm feeling fine right now."

Elliott settled at the table in the reading room and pulled his logbook from the bookshelf. He was just beginning to write when Sam clattered up the airlock.

"Ho, ho, ho," he greeted, passing through the reading room with his bag of samples. "I have presents." He was just about to pass into the lab when Lily held up her hand without looking up from her laptop.

"No snow in the lab," she said. "It may not be sterile in here but it certainly is clean and dry."

"No snow, only ice." Sam pulled off his boots anyway and climbed from his modified space suit, setting the bag down next to him. "I know they made these things less bulky recently," he complained, "but it sure reminds me of the snowsuits mum put me in as a kid." He hung it in the airlock and padded back to the lab in his thermals.

Lily rubbed her eyes with her fingertips and sighed. "How were things today?"

"Clear weather," Sam said, carrying the samples into the lab. "Cold as blazes, of course, but that's to be expected." He looked out the window at the blue-white terrain and sighed. "Nice to be back in here, though. Where's Cooper?"

"Working on the rover," Elliott answered, scribbling in his notebook. "Doing what she does best."

"Fine mechanic, ain't she?" Sam asked, trying to spot his former pupil in the rover off on the horizon. "Not quite as good as me, but we can't all be the best." Elliott coughed into this book, hiding his laugh. "Elliott, you know I'm just pulling on your leg. There's a reason she's mission commander and I'm not." He looked off into the distance, squinting a little. "Why'd she leave the rover so bloody far away? Oh, never mind, she's driving it over."

The rover rumbled over alongside the campsite and groaned to a halt. The hab stood out on the plane of ice. The three orange tents that the ANSMET people used had long since been packed, so the hab was alone on the horizon. Dorothy got out of the rover and climbed up the ramp into the airlock of the hab, then up to the living floor.

"Hi," she greeted, pulling her helmet off and shaking out her short curls. "Rover's looking fine. I drove it around for awhile, and things seem to be working perfectly."

Dorothy hung her suit alongside the others. "How did things go in the field?"

"We got a few more samples," Sam said, picking up a labeled bag from the lab. "Exciting things to send off to Houston."

"Any from yesterday look like lunar or Martian meteorites?" Dorothy warmed a cup of tea.

Sam shook his head as Lily shut the cover of her laptop. "Nothing. As far as I can tell they're all normal chondrites." Lily finished straightening up the lab and pulled a chair up next to Elliott, who was still scribbling the day's events in his log.

"ANSMET will be happy, though," she said. "We have at least a half-dozen meteorite samples that look promising. We're almost doing as well as their own expedition teams."

"NASA certainly knows how to make use of us." Dorothy sipped her tea and sat beside the others. Sam leaned against the doorjamb, rubbing the top of his foot against his other leg.

"I can't believe we're here," Elliott said at last, after closing his logbook and putting it back on the shelf. He scratched his jawline, thinking, while the other six ANSMET members clattered up the airlock. There was much shuffling of orange coats and warm-weather clothing. Soon the others had settled down, each taking a seat on the floor or leaning against the wall. Henry went into the kitchen area to make some hot soup. Elliott started speaking again.

"We'll be gone in less than a year. What do you think it'll be like?"

"The flight," Lily asked, "or Mars itself?"

"All of it. I can't imagine going." He looked out the window as if imagining the copper-red landscape. "Can't believe they picked me. They could have any biochemist they want. There are quite a few others who are just as intelligent and well-qualified."

"And that's why we have a hell of a backup crew," Dorothy said. "If something happens to any of us, the mission can still succeed."

"God forbid," Sam added. "We've all been training together from the beginning. If there's a reason one of us can't go, it's going to be hell fitting someone else in at the last minute." He shook his head.

"When do you find out?" asked Will, settling down with a groan. "Could any of you be replaced at any time, or is there a cutoff? Like what if someone gets sick the day before takeoff?"

"They really don't want to take chances," Lily said. "Dorothy has enough training in medicine to act as doctor while on the mission, but if someone gets any sicker than the flu, they're getting pulled out."

"Rough," Meghan said, shaking her head.

"I don't think it'll happen, of course," Dorothy said. "We've all been screened for everything. Still, a lot can happen in a year." She shook her head.

"Hey," Meghan said, looking up at Sam and Elliott. "No offense, but aren't you two a little old to be flying to Mars."

"It's a trade-off," Dorothy answered quickly, especially since she could see that Sam was about to make a comment that wouldn't be in the interest of diplomacy. "Lessing and Elliott have more experience in their fields than many younger candidates. Lessing was flight commander in the Air Force, and Elliott has fronted the field in Mars biochemistry research." She smiled. "We all have to pass the same physical trials, no matter what our ages."

There was a brief lull before the ten crew members broke up again into their own conversations. Henry offered to make tea for everyone. Many accepted, and others filtered off to either gather their belongings or prepare food for the night.

"So, did you get a Christmas tree while you were out there?" Lily asked the people who were left, which included the other three NASA personnel and Bob. She folded her hands and rested her chin on them.

"Yeah, right in the first forest we came to," Elliott answered, laughing.

"Lily's right." Dorothy finished her cup of tea. "We celebrated Hanukkah for you, Elliott. You and Sarah. Now you have to put up with Christmas for us." She washed her mug in the sink. "We'll figure out what to do for a celebration tomorrow. I still can hardly believe it's the holidays. Doesn't seem right without all the store decorations and holiday traffic. Although at least we know it'll be a white Christmas."

"Well, I think we're getting a shipment in from McMurdo tomorrow morning," Bob said. "Special trip. Gifts from the states."

"Nice that they're flying out here on Christmas Eve just for us." Dorothy came back and stood near the table.

"I'm going to do a little reading in my stateroom before dinner if anyone needs me," Lily said after a few minutes. She pushed up from the table.

"Sounds good to me," Dorothy said, one hand resting on the back of a chair. "I'll be back out in a few hours. Maybe I'll catch an afternoon nap."

Sam remained at the table even after Elliott wandered off to his own room and Bob went downstairs. Sam rubbed his beard, looking out the window at the rover. "Maybe I'll just take a look at her before dinner," he said to himself, getting up to don his space suit again. "A little tinkering to relax." He climbed down into the airlock.

Sunday, 24 December 2006: 287 Days to Ares III Launch

"Happy holidays!" The cheerful young man exited the LC-130 cargo plane with a broad smile barely visible beneath his cold-weather wrappings. "I hear you guys could use some Christmas spirit." He pulled his scarf off and shook out his short blonde hair. Frank Ellis was tall and lanky and looked no older than twenty-five.

"Good to see you, Frank," Dorothy greeted the pilot with a warm hug. "I didn't know they still had you stationed at McMurdo. Didn't see you last month."

"They sure do," he replied. "I'll been doing some work here for another few months. They offered me a pretty nice bonus to stay. Guess it's hard to find pilots down here." He rubbed his gloved hands briskly together. "It's been awhile since I've been inland. Forgot how cold it gets! We stay warmer near the water in Mac Town. You remember how nice it is."

Dorothy smiled. "Let me help you bring some stuff into the hab." Together they loaded boxes onto the sled that she had brought with her. Jim jogged over to join her. "Is this all for us?" she asked.

"Of course it is," he said. "Ares and ANSMET. I'm delivering for everyone. Speaking of which, where are the others?" Frank looked around as they got the last box loaded.

"They're meeting us back at the hab to help unload," Jim answered.

"Where are the tents?" Frank asked as they approached the lone hab. "Don't you ANSMET people have some orange tents you usually sleep in?"

"Things are different this year," Jim said with a smile. "We have this here tuna can to keep us all warm."

"I see. Really roughing it, then?" Frank slapped him on the back as they unloaded the sleds. Jim laughed.

"Sure beats last year," he assured.

After everything had been carried up into the hab, Frank had to leave immediately. "I'm sorry I can't stay longer, guys," he said at last, regretfully, standing up. "I still have things to do back at the base. I'm sure you all want to see what Santa brought." He smiled, giving handshakes or hugs where appropriate. "Besides, wouldn't want anyone stealing the plane."

After he left, they unpacked the boxes. It was crowded in the small living room between ten people and as many boxes. Along with basic amenities for the rest of their stay, they had each received a few pieces of mail and a package or two.

"My sister sent me thermal socks," Lily laughed, holding them up. "Guess those will come in handy." She rummaged around in the box. "A new Bee Gees compilation CD."

"You like the Bee Gees?" Dorothy raised an eyebrow.

"Yes, thank you very much, I like the Bee Gees." Lily pulled an envelope from the bag. "She also sent me some pictures of my nieces and nephews. Wow; they're getting so big now."

"My aunt and uncle sent me a few books." Dorothy picked one up. "*The Worst Case Scenario Survival Handbook*," she read aloud. "They always had a sick sense of humor." She smiled absentmindedly as she leafed through it.

"Oh, my brother sent me the Three Stooges Collection!" Elliott was more excited than any of the other crew members. "The whole series on DVD. Wow, this will keep me busy the entire way to Mars."

"That's a great camera," Bob said to Sarah, leaning over to take a look at it. "Pentax?"

"Yeah." She was turning it over in her hands excitedly. "I've always loved photography." She dug deeper in the box. "And film! Lots of film!"

"How are you going to use that out here?" Bob asked. "Drop the film off at Wal-Mart on our next trip out?"

"I'll just bring the film back with me when we return to Mac Town," she said, straightening up. "It's better than one of those silly digital things."

"What'd you get?" Jim elbowed Henry.

Henry held up a six-pack of Sam Adams Pale Ale with a grin.

"From back home in Boston," he said nostalgically, looking at a bottle. "Aw man, this brings me back."

"Beer freezes out on the ice," Meghan said, brow furrowing. "Wine's the only thing you can thaw and have it still be drinkable. Dry, but drinkable."

"But beer doesn't freeze in this nice habitation module," Henry said, holding the bottles aloft. "It stays perfectly cool, just the way I like it." He popped a bottle open on the edge of the table and took a long swig.

"I got an electric blanket," Bob said, shrugging. "Runs on a rechargeable battery pack. Too bad it's not too cold in here."

"You may need it," Elliott said gruffly. "If you take any more showers out of turn, you'll end up sleeping back out in the snow." They shared a laugh as everyone finished opening and comparing presents.

"What's in there?" Lily asked as Sam pulled the wrapping paper from a small shoebox.

"My mom's fruitcake," he said grimly without opening it.

"You don't sound very excited," Dorothy observed.

"You won't be, either, if you taste it," he warned. "Her fruitcake makes dehydrated food look like Thanksgiving dinner." He turned the box over in his hands. "Maybe if I drop it from the shuttle it will burn up on reentry."

"You could always bury it in the ice. Preserve it for future expeditions." Elliott cracked a smile.

"Save it for our next trip to the shore," Dorothy added. "Maybe the penguins will eat it."

"Or you can just chip it into blocks and send it off to Houston for analysis," Lily said, laughing. "Tell them it's a meteorite you've never seen before and you'd like them to identify it."

By that time they were all laughing. Sam finally opened the box and removed the offending object wrapped in layers of aluminum foil. "Hell, maybe it'll be good this year," he suggested, setting it aside. "We are going to Mars, after all. Miracles can happen."

"Where's that from?" Lily gestured to an unopened box leaning against the sofa.

"It's to all of us from the people at McMurdo." Dorothy read the tag aloud. "'Hope this makes things feel more like home. Make sure you share with the others,'" she read. "Wonder what's in here." She tore through the wrappings.

The McMurdo base staff had sent them a four-foot plastic Christmas tree, complete with several strands of lights and a box of ornaments. "Oh, that's so sweet," Lily said, opening the tree box.

"And dreidles," Sam laughed. "Looks like they didn't forget you two. Too bad it's a little late for Hanukkah."

"Never too late," Sarah smiled, looking at the box. "We'll play tonight."

They assembled and decorated the tree in the center of the lounge area, keeping their presents beneath it. Someone found a CD of Christmas carols in the shipment and popped it into the CD player on the bookcase.

"Now it feels more like home," Sam observed. They each nodded assent. "Let's have some eggnog."

"You brought eggnog?"

"It was in the shipment," Sam shrugged. "Guess they thought of everything."

Tuesday, 26 December 2006: 285 Days to Ares III Launch

"I see one!"

The line of Skidoos converged on the black chunk of rock lying on the blue ice sheet.

"Don't contaminate it," Lily warned, taking her thumb off the throttle and getting off her snowmobile.

"No shit," Meghan replied in her usual manner. "Do you *have* to say that every time we find one?"

Lily stood upright and tried to look dignified, a difficult task with a red pompom jostling around on her hat. "It just so happens that contamination is the worst thing that can happen. You should all know that."

"We do know that," Jim said, squatting next to the rock. "That's why we don't have to say it!"

The nine other people gathered around Jim to block the wind. Bob brought a day pack over from the sled. It was the meteorite collection kit. They had learned that Jim had a particular way of setting things up. He set the pack down in front of him, then unzipped it and brought out the scissors and a nylon bag. He picked the rock up with his scissors.

"OC," he said, meaning "Ordinary Chondrite." Will took the record in his notebook as Jim spoke. "20% fusion crust."

"Are you sure?" Sarah asked, squatting next to him. "It's pretty weathered. Is it possible that's the cause of the black surface?"

"Looks like fusion crust to me," Lily agreed, leaning down to look at it.

Meghan, without speaking, pulled out a metal box from the collection kit bag. It had markings in centimeters all along the bottom. She moved the box close to the rock to measure the meteorite's size and called out figures. "Two by one by one," she said, and Will wrote it down.

Jim slipped off his gloves and placed them beneath his knees as he changed from a squat to a kneeling position. He used his bare hands to pick up the bag and open it, careful not to touch the inside as he scooped the rock in. He folded the bag over twice and asked for a number.

Elliott handed him a tag that said "7735" on it. Will wrote down the number as Jim inserted the tag into the fold of the bag. "Tape," he said automatically, and Dorothy was already pulling the big roll of white tape out of the bag and handing it over. He wrapped the bag almost totally, leaving only the metal tag exposed.

Ceremony and contamination threat over, he tossed the sample into the day pack. He used his GPS to record the position where the sample had been found as the rest mounted their snowmobiles. "Move on," Will directed, climbing back on his Skidoo and leading the group back across the ice.

By the end of the day, they had several ordinary chondrites and a carbonaceous chondrite, black inside and out. Bob had found it and was proclaiming himself hero of the day. Of course, he forgot to leave a loop in the tape for the next person, making him lose his "hero of the day" award and instead be granted the "bonehead of the day" award.

It was several miles back to camp when they left the site of their last meteorite. The blue sky had been replaced by an ever-growing cloud. "White out," William warned. "Better get moving."

Wednesday, 27 December 2006: 284 Days to Ares III Launch

"You guys have to see this!"

Dorothy rolled out of bed, rubbing her eyes, and pulled her bathrobe around herself. She padded to the living room window, where Elliott was standing with his face pressed into the glass. "It snowed last night."

"Damn right it did," breathed Sam. "How can we look for meteorites in that? The snow will cover everything up."

William and Jim had made their way up the airlock ladder. They were followed by most of the others; Sarah was sleeping, as usual.

"We can't look for meteorites," Will said. "Even though it wasn't a blizzard, we have to wait until the wind blows the snow out of the way. It'll be a few days."

"At least we're not in tents," Meghan said, looking at the white wilderness. It was a good thing they had their snowmobiles underneath the hab. "Nothing like being tent-bound while we wait for snow to clear."

"Radio into McMurdo," Will said to Jim, hands on his hips. "Tell them the bad news."

They used the radio built in to the hab to radio their base. "McMurdo, McMurdo, this is Sierra oh-seven-two. Ten souls in camp and all is well. But we're snowed in up here."

"Sorry to hear that, Sierra 072," said a voice back through the tinny speaker. "Maybe you'll get to enjoy your New Year's indoors."

"Roger that. Let's just hope we're back to work soon." Jim shook his head. "I hate wasting time," he confided to them. "I just want to be back on the ice."

They listened to the other groups call in their seven-thirty checks, from the group of glacierologists doing some work out on the ice to the stammering penguin-studying biologists who seemed to get stage fright once they got on the speaker. They finally shut off the radio and looked at each other.

"What now?" Sarah asked. "We just hang out here?"

They nodded to each other. "Yeah," Dorothy said. "Looks like we just hang out here."

Monday, 1 January 2007: 279 Days to Ares III Launch

"I feel sick."

Meghan rolled over out of her air mattress and staggered toward the airlock, holding her head. "Ohh," she winced, hanging on to the rung of a ladder before climbing up. "I think I shouldn't have had that last glass of champagne."

"Would that have been your ninth or your tenth?" Henry leaned up, propping himself up on his arms. "Or could it have been the alcoholic eggnog?"

Meghan murmured something indistinguishable as she weaved slowly up the ladder. The sounds of retching were muffled from the ANSMET people on the storage floor, but not from everyone else.

"I told her not to finish the wine," Dorothy said, trying not to listen to the noise as she warmed some oatmeal on the stove. "She just wouldn't listen."

"Well, it was New Year's Eve," Lily rationalized. "We all imbibed."

"Yes," Sam said, "but not to excess."

"I would call this an unnecessary use of NASA facilities," Elliott commented, wrinkling his nose as the sounds stopped and the toilet flushed. "Some water just shouldn't get recycled."

"Is she finished yet?" Jim asked, climbing the ladder. "Don't worry," he assured, peering around the corner in the direction of the bathroom. "She did this the last New Year's that she came to Antarctica, too. Only we just had wine that time. I think it's sort of a New Year's tradition for her."

The other ANSMET people trickled up slowly. Sarah was last, as usual.

"We still snowed in?" she asked, looking out the window. "It looks better today."

"I think we can go out today," Will said. "The wind seems to have finally cleared off most of the snow."

"Thank goodness. This hab is nice and all, but I want to go outside and get something done." Dorothy scooped out her portion of the oatmeal.

Meghan had eased her way into the room, still squinting slightly but much more subdued. She plopped down on the sofa in the living room and said what none of them wanted to.

"We have to leave in less than two weeks."

There were a few moments of silence. Bob cleared his throat a few times, not really intending to say anything, then walked out and headed toward the restroom. The others had begun making their own breakfasts, and Will muttered something about needing to radio in to McMurdo. None of them wanted to think of going back.

"It's hard, you know?" Jim said, settling back in one of the kitchen chairs. "I mean, every year it's hard. This place gets to be more and more my home, but then after six weeks on the ice, it's over. We go back to McMurdo, we spend a few days in New Zealand, and we head back to the states." He stared into his mug of hot chocolate, studying his reflection. "We wait for next year."

"I suppose it's back to tents next year," Meghan said, rubbing her eyes. "No more heated rooms or sleeping with your boots off."

"Well, most of us aren't coming back," Henry said, holding a spoonful of oatmeal over his bowl, just pausing there. He looked down as it dripped off the spoon in soggy clumps. "I'll go back to Boston."

"I'll get to see my boyfriend again," Sarah said, staring out the window. "I really do miss him."

"Yeah, it'll be nice to get back to real life," Meghan said. "Get my parakeets back from my neighbor."

None of the Mars crew had spoken. "We have ten months," Sam said at last.

"Ten months left," Dorothy repeated, looking around her. She ran a hand through her hair. "It's hard to believe."

"What if you decide you don't want to go?" Bob asked. "Can you drop out?"

"None of us would," Elliott said immediately. "This is too important. We've been training for this for too long to get cold feet."

"Besides," Lily said with a small smile. "This is it for us. If we get back, I mean, our lives are all set. We'll never have to work again."

"When we get back," Dorothy insisted, giving Lily a dirty look. "This is a foolproof plan. We have contingency plans for everything that can go wrong."

"Nothing's foolproof," Bob warned, shaking his head. "Make something foolproof and they will build a better fool."

They were interrupted by the sounds of Will calling in to McMurdo. "Looks like we'll be able to head out today," he said after introductions had been made and call signs exchanged. "It's cleared up."

"Roger that, Sierra 072. Getting some stuff done before it's all over, I see." The voice at the other end of the radio was tinny, as usual.

"Trying to, anyway. A lot can happen in a couple of weeks."

"Come on," Jim said, gesturing, while Will finished the call. "Let's get ready to head out."

Friday, 12 January 2007: 268 Days to Ares III Launch

The LC-130 Hercules roared in for a landing on the snow near where they had made camp, right at the edge of the ice sheet, the pre-planned takeoff point. As they loaded the plane, Dorothy was plagued with the fear that their flight would be unable to take off due to extra weight. Will and Jim had told them that such things often happened. The previous night had been colder than anything she had ever experienced, thanks to their lack of the miracle that was the heated habitation module. She looked off to the horizon, wishing she could see the hab. She imagined it was still warm inside.

At last they were airborne, her ears plugged, her lunch bagged and resting on her lap. They didn't even have to dump any cargo, but they did have to leave behind half the crew until the next Herc flew out tomorrow. She felt like she was abandoning friends forever, never to see them again, even though that wasn't true. They would spend a week or so together at McMurdo and then again in New Zealand, but it was hard to see the orange tents beneath them as she peered out the tiny windows in the side of the plane.

Elliott patted her hand to reassure her that it would be all right, somehow seeming to read her thoughts. She smiled at him and resumed staring out the porthole in the plane and watching the ripple of blue water beneath them.

VI

Tuesday, 24 July 2007: 75 Days to Ares III Launch

"I've discovered a slight abnormality."

The doctor was a small beetle-like man with thinning black hair and large bottlebrush eyebrows. He scurried more than he walked, and his every move was too fast for Elliott's taste.

"What kind of abnormality?" he asked, not very worried. He was over 55 years old and abnormalities popped up now and then.

"It seems you have an enlarged prostate." The doctor looked up from his clipboard and adjusted his round, black-rimmed glasses. Elliott raised his eyebrows.

"It isn't anything serious, right?" he asked, a little nervous. "I'm not exactly free to spend time in a hospital." He looked around at his surroundings and imagined being there for any longer than the hour allotted for his check-up.

"Yes, Mr. Ormsby, I know. But I'm afraid we'll need to run some tests before we can clear you for travel. "It could be nothing." He looked back down at his clipboard. "But better safe than sorry, right? You won't have very much medical equipment in space." He adjusted his glasses again. "We'll get this all checked out right away. Let's schedule you for a biopsy, shall we? What do you have for Thursday afternoon?"

Monday, 30 July 2007: 69 Days to Ares III Launch

Elliott Ormsby rubbed the wooden rook between his thumb and forefinger. Chess was such a wonderful game. He had learned to love it back in college. Bob had been an excellent opponent while they were in Antarctica. He hadn't opened his set since the last day, that cold afternoon while they hoped the Herc would arrive and played chess on a lap tray, small heaters warming them just enough that they could remove their gloves to handle the pieces.

Chess was predictable. Controllable. Every piece could be accounted for, every move carefully selected to minimize the chance of failure. There were rules governing every turn. No dice to roll, no risk, nothing beyond the reach of one's fingertips. The rook gleamed beneath the pressure of his callused thumb. He set it carefully down on the corner of the board. There was no other piece to replace it. He couldn't just put a knight or a bishop or a pawn there; it had to be that particular rook. It was part of a set. The pieces were ordered a certain way, and each sat in his designated place, completing the whole and forming a team. They functioned together.

But in every game there was sacrifice and triumph, giving and taking, the ebb and flow of strategy. Sometimes a piece had to be sacrificed for victory. Sometimes one had to yield to a different path, to step aside and let the other pieces fall into perfect position. Sometimes there was only one way to play the game.

Elliott flicked the king over onto its side with his forefinger. The king tipped to the board with a hollow thump, rolling back and forth in a small semicircle before coming to rest, unmoving, silent. Checkmate.

He pushed up from his kitchen table and quietly left the room.

VII

Wednesday, 7 August 2007: 61 Days to Ares III Launch

"What do you mean, dropped out?" Lily leaned forward in her chair, pressing her hands against the tabletop. She looked over at Sam, who looked equally worried. "It's two

months until launch. We've been training with Elliott since the beginning. I don't care how sick he is. He can't just 'drop out.'"

Dorothy looked at Ken Nguyen, who nodded at her to continue.

"Elliott has prostate cancer." She said it quietly, matter-of-fact, looking at each of them in turn. "The first symptoms were found at a recent physical. It's very early, and at this stage there is a very high recovery rate, but he can't go through radiation treatments en route to Mars." She looked down at her folded hands, fingers crossed and intertwined.

Ken started speaking where she left off. "These two months are the most important ones. You've seen the backup teams. COMET has already selected the replacement biochemist from one of the other groups."

"Wait a minute," Dorothy interrupted. It was the first she had heard of his replacement. "This isn't just the role of biochemist. Elliott was my second-in-command. He knows these mission scenarios as well as I do. He's been training with us all along. Whoever you got...hasn't even been with us to Antarctica."

"You two are not the only two astronauts capable of leading this mission," Ken continued. "The Committee for the Organization of Mars Expedition Teams selected Mark Whitman for the biochemist seat."

"Absolutely not," Dorothy exclaimed. "I've worked with him in the past. He's a pompous ass. What about Grace Fahey? She's equally qualified and her team has been doing more training than Whitman's team. His team wasn't even slated for launch for another two missions."

"Grace Fahey, as a matter of fact, is going on maternity leave in three months, which you probably didn't know." He rubbed his thumbs together. "It would be nice to consult all of you before a decision is made," Ken returned, "but the truth is that with this little time, COMET has to proceed without you." He sighed. "You are all adaptive. That is one of the reasons you were selected. I expect you to act like adults and conduct yourselves as members of one crew, and to put your personal feelings aside. The members of COMET have made their decision based on the information they have which, might I add, is more complete than what you all know. Whitman may be a 'pompous ass,' as you put it, but he is also the best biochemist on NASA's panel and he has been working on Ares missions since the beginning. He is best prepared of all the biochemists to fill in last minute. I expect that you will work with him as you worked with Ormsby. As to knowing enough to be second in command, Doctor Cooper, you may find that Whitman knows even more than you." Ken shuffled his papers into a neat pile. He couldn't meet their eyes. He knew Elliott as they all did, had worked with him, had seen through to this stage of the mission. Delivering bad news never got easier. "Cooper, you will meet with Whitman tomorrow morning at 0900 hours to review backup plans."

Thursday, 8 August 2007: 60 Days to Ares III Launch

"Scenario," Ken continued down the list. "You cannot obtain orbital capture in the hab."

"Use the lander to compensate," Dorothy answered quickly.

"True," Mark offered. "But then you have to decide whether you want to transfer propellant to the hab, use the Ares I or II ERV for Earth return, or use the ERV for a short-duration surface stay."

"Well that goes without saying," Dorothy returned. "Of course any backup plan will have a range of decisions carried with it."

Ken continued. "Scenario: you land 800 km away from the targeted landing site."

"Use the rover," Mark answered.

"Yes," Dorothy added. "The rover has a one-way range of 1000 km, and can easily reach the target site."

"Scenario: You land 1500 km away from the targeted landing site."

"Wait two months until Ares II will be positioned to land near us," Mark answered first again.

Dorothy shook her head. "That's a moot point. We won't be that far off. Lessing is an excellent pilot, not to mention we have a feedback targeting control system."

"Well, of course," Mark replied. "And a homing beacon is set up on the Ares I landing site," Mark added. "I know we won't be off by more than a few meters, but we can't assume anything."

"Scenario: a solar flare en route to Mars."

"Take shelter in the airlock," Dorothy replied.

"The shielding there is better than the rest of the hab," finished Mark.

Ken closed the packet. "That seems to be all. Not bad. Lessing and Baker have already had time to review the backup plans. I just wanted to go over them again with you two, since ultimately you will make the decisions. If you have no questions, you're dismissed."

Mark hurried to catch up with Dorothy as they left. "You know your material," he commented.

"It appears we've both done our research." She kept walking for a few meters, then stopped short and looked at him. "I don't want to pull rank on this mission," she said bluntly.

"I don't want to give you any cause to. I don't have any intention of causing a mutiny." He shifted his papers to his left arm. "I'm going on this mission as a biochemist. What say we put aside whatever differences we've had in the past for the sake of the mission?" He offered her his hand.

She paused. "I suppose that if we put Ares first, there shouldn't be any problems." She accepted his handshake.

"Come on," he offered. "Let me buy you lunch."

"Some other time, perhaps," she said politely, not wanting to spend any more time with him than necessary.

"No, really. Let's catch up on old times." He smiled. She sighed. The easiest way to shut him up was probably just to go with him.

"Okay," she said, and wondered if he detected the reluctance in her voice.

"I really don't know...it happened so fast; before I knew it I was accepting the position." Mark laughed, completely at ease. He folded his arms and rocked back in his seat, looking around them. Pedestrians passed the little sidewalk café without a second glance. Dorothy glanced over her shoulder a few times, wishing she were one of them.

"And that was Yale, you said?" she asked disinterestedly, stirring her drink with the straw. She took a sip and wished she had ordered something alcoholic.

"No, that was Princeton. I told you, I turned down Yale." He waved a hand nonchalantly. "You know Yale. They always have their panties in a wad about one thing or the other." He took a long swig from his beer. "Anyway, I was recruited for NASA right out of that position. Moved down here to the Cape, started doing biochemistry." He ran a hand through his hair. He had always been handsome, Dorothy was reluctant to admit.

Even back in college. It was generally his egotistical, self-centered attitude that turned her off. Too bad she wasn't as shallow as her first roommate had been.

"How is your old roommate Maribel?" Mark asked, seeming to read her mind. Dorothy had wondered how long it would take them to get on the subject of the past, and it looked like it only took until the drinks arrived.

"We really haven't spoken since college," Dorothy replied. "She moved out after that first year and we only kept in touch sporadically until graduation." She pressed her teeth together at the memory of being kept awake her freshman year by the squeaking of the second twin bed in the room. Funny how old dislikes hang on. Little did she know at the time that she would run into Mark in graduate school and then again a decade later at Cape Canaveral. She bit the straw into a thin horizontal line as she sipped her root beer through it. Little did she know at the time that she would spend two years of her life in the same tuna can habitat with him. If there was a God, and she believed there was, then He must have a sense of humor.

"That's really a shame," he was saying when she started listening again. "She really was a sweet girl. Do you know if she has any family? Where she's living?"

"She has seven children and lives in Tennessee." Now why did she say that? She didn't know anything about Maribel Sweeney other than the fact that she used to grind her teeth in her sleep and wasn't sleeping often enough for that to become annoying.

Mark obviously didn't understand. "Oh," he said, seeming confused. She thought that perhaps any information about someone other than himself was difficult to comprehend.

"I'm joking," Dorothy said at last, exasperated. She hoped the food arrived soon. "I don't know where she is."

"Oh, okay." He took another swig of his beer and smiled that smile that had earned him the reputation he carried with him to graduate school. "Funny, isn't it?" he asked, looking off to the sky in preparation for waxing poetic. "We say we'll keep these bonds the rest of our lives. Then we grow apart. It really is sad. How different our lives would be if we continued the friendships we fostered in our youth."

Dorothy avoided rolling her eyes by staring fixedly into her drink and trying to poke the ice cubes down to the bottom of the glass with her straw. They bobbed back to the surface repeatedly.

The rest of lunch wasn't quite as agonizing as she had expected. Mark settled down to his food almost as readily as he had settled down to a long conversation about his history, and Dorothy managed to enjoy most of the meal in silence. He did, however, make time to share a list of his recent publications with her. By the time he walked her back to her car, she was so thankful to be leaving that she almost jumped in and sped away without saying goodbye.

"I'll see you tomorrow," he said brightly. "We have another meeting at 9."

"Yes, see you then," she said with an acidic smile, giving a halfhearted wave and dropping into the seat of her car. She watched him saunter back to his car in her rear view mirror before she popped the clutch and accelerated away.

Thursday, 30 August 2007: 38 Days to Ares III Launch

"Hi," Dorothy said softly, closing the door behind her. "How are you feeling?"

"About like you'd expect," Elliott responded, shrugging. "It's not exactly something you plan for."

He was sitting on his recliner with his feet up, a bowl of chips on his lap. The TV was blaring "Plan 9 from Outer Space." "Watching more sophisticated stuff these days?" she asked, smiling and sitting down on the couch. "I'm surprised that I don't see the Three Stooges on here."

"Yeah, well, I watched the entire collection the first week I found out." He rubbed his balding head. "Then I watched it again. It's pretty much gotten old by now."

"I bet," she agreed gently.

He smiled. "So how are things down there at NASA? I hear you guys are getting ready to launch."

"Just five weeks left," she nodded. "Five weeks," she repeated, disbelieving. "It seems like only yesterday we got put together as a crew."

"I know. Time sure does fly." He didn't meet her eyes. He stared down into the chip bowl.

"Listen, Elliott," Dorothy confessed, leaning forward and resting her elbows on her knees. "It's just not the same working with Mark. Everybody hates him." She paused and reconsidered. "Okay, not everybody hates him. I think I'm the only one that hates him. But he's not the second-in-command you were. Trust me on this." She sighed. "I just want you to know that we really miss you."

"I know," he said, smiling. "But it sure is good to hear it. I tell you, a guy thinks he's just replaced in the blink of an eye when it comes to this sort of thing. I was pretty sure you'd all moved on with the new crew arrangements. Five weeks isn't very long."

"Don't tell me that," she repeated, wincing. "It still seems so unreal." She leaned back on the couch. "Tell me the truth. Isn't part of you relieved to be staying here?"

"Of course," he answered quickly. "I mean, cancer is something big, but it's something we know how to deal with. But out there..." he gestured toward the TV where a sweeping view of the night sky filled the screen. "it's a different story. We don't know anything about it. You know how it is. They show us these backup plans and mission statements, they draw little diagrams, but when those engines ignite, it's you and the unknown. That's some scary shit, right there. Cancer is something I can handle."

He paused for a moment, looking suddenly wistful. "But you know?" he asked, smiling slightly. "It's really something. I still envy you guys. To walk on another planet, to gather its rocks and explore its surface...it's epic. Who would've thought, you know? It's amazing. You guys are gonna make history. Maybe I'll be written in the history books as the guy who almost went." He snorted self-deprecatingly before becoming serious again. "Although," he said, "it's really something to have been part of it at all."

"Well, Elliott," Dorothy reminded him, "there are other missions. You know you'll beat this. Maybe you can go on a later Ares."

He smiled and shook his head. "This is the end of that game for me, Dor. I'm not going. I think it'll be nice to offer my services to the ground crew and keep both my feet on this planet."

"Well, you can always change your mind." She said it automatically, but she knew he never would. Elliott had a way about him. When he decided something, he decided, and that was it. It wasn't that he was stubborn. He was intuitive. He knew things, had a sense of the layout of the future to some degree. Maybe he had seen this cancer a long way off. Maybe he had been just as surprised to find out as she had been when he called her up at 1:00 in the morning to tell her. But regardless, he knew what the next few years would bring for him. She could see it in his eyes.

"It'll be okay, you know," he said, looking over at her and flashing her a smile. "You know that, right?"

She smiled back at him, then nodded. "I know," she answered, then a little quieter. "I know."

VIII

Friday, 21 September 2007: 16 Days to Ares III Launch

"We have liftoff." Cheers and applause rocked the control room as the Ares II lifted off the Cape Canaveral launch pad. The narrow-nosed rocket cut through the atmosphere into orbit.

"That's it," said Ken Nguyen, relaxing visibly. Satellite pictures fed onto the screens, live feed of the Ares II as it carried its Earth Return Vehicle into Low Earth Orbit. "Keep watch on it until tomorrow," Nguyen ordered. "Unless unforeseen circumstances arise, we'll launch from LEO exactly as planned."

Dorothy breathed a heavy sigh of relief, settling back into her chair in the mission control room. Her knuckles were stiff from gripping the cold metal arms of the uncomfortable chair. Every step of this plan had to go off smoothly. The unmanned portions of the mission frightened her most, because there was no one to make repairs if something went wrong.

Mark leaned over to Dorothy. "Is there going to be an official briefing soon? It seems that all the work we've been doing has been in pairs or individually. At least since the Antarctica trip."

"The four of us will meet with Nguyen at 0800 hours tomorrow. We'll receive the mission synopsis then as well as a detailed report." She shrugged. "We all know it inside out and backwards, so it shouldn't be anything new."

Mark leaned back and focused on the computer readouts in front of him. "Can't wait."

Saturday, 22 September 2007: 15 Days to Ares III Launch

"I thought that would never end," Sam groaned, stretching the frame of his large body in every direction. "I was expecting them to roll in cots for us to spend the night. Look, it's already dark out."

"It's almost seven," Lily said, looking at her watch. "Of course, I know that, since I've been checking my watch since two this afternoon."

"Since two?" Sam asked. "I've been doing it since ten this morning."

"I thought it was a pretty informative briefing," Dorothy said politely, trying to be diplomatic since they weren't alone walking down the hallway.

The other three looked at her as if she had suddenly grown another head. "What, did you have a book hidden in that mission report?" Mark asked.

"It's a book on its own," Sam complained, hoisting it up to chest height. "Damn thing's gotten a lot bigger since we had the first schematics. Think we'd be able to bring more food if we left this behind?"

"Very funny, Lessing," Dorothy said, smiling a little. "You know those personnel weren't any happier to be there than we were."

"Then you admit it," Mark said. "You admit you weren't happy to be there."

"Well, there are places I would have rather been," she replied seriously before she couldn't keep a straight face any longer. "Like getting a root canal, for instance. Jesus, I'd rather have been anywhere but in that crappy meeting."

They all laughed as they made their way outside into the growing darkness.

"Go home to your nice beds," Mark directed. "We'll be quarantined before you know it." He gave a jaunty salute to Dorothy. "See you later, Cooper," he said, sauntering off toward his car.

Friday, 5 October 2007: 2 Days to Ares III Launch

Mark dealt five cards to each of his opponents and leaned back in his chair, balancing it on two legs and propping his feet on the table. "Jacks and deuces are wild," he called before sliding his cards off the table and arranging them in his hand. Lily regarded her cards with a somber expression before placing two cards face down on the table.

"I'll take two," she said, and took the cards Mark offered in replacement.

"One for me," Sam directed, stroking his beard.

"Dealer takes two." Mark helped himself to the top two cards of the deck.

"I see the rest of this crew has found a good use of their time," Dorothy greeted, walking into their common room carrying a checklist of pre-launch items. She set it down on the endtable and stood with her hands on her hips. "Just because we're in quarantine, people, doesn't mean we can't get something productive done."

"Queens," Mark muttered. "Did anyone else get the feeling just now that we should make queens wild?"

Dorothy sighed, sitting down at the card table. "Deal me in next hand," she directed, ignoring his comment. "Everybody seems to have moved their personal effects into the hab right on schedule."

"Yes ma'am," Mark answered, tossing his bet into the pot. "Now it's just the waiting."

There were a few minutes of silence as they all focused on the game and their own personal thoughts. "Two days," commented Lily at last after Mark won the hand and Dorothy was dealt in. Lily focused her almond eyes on her cards. "I've never imagined myself as an astronaut."

Sam grinned lopsidedly. "Me neither. Never thought they'd pick me. Never thought I'd even want to go."

Mark got uncharacteristically quiet. "I used to think about it a lot. Didn't look like my life was headed there, though." He flicked the edge of a card back and forth between his fingers. "Just goes to show you that you never know." He paused a moment, then took one card. "Hell, NASA doesn't even expect us to make it back."

Dorothy replaced three of her cards. "I gave away my cat last week," she said. "Didn't know it was going to be so difficult."

Sam swapped two. "Tell me about it. How do you tell someone to water your plants and that by the way, you may never come home?"

"Did you update your will?" Lily asked, showing her ace and replacing four cards.

"Yeah," Mark said. He bet lightly. "Not many people to leave anything to, though. Guess that's what it takes to be on an Ares mission." They looked at him. "What, you think I don't know that they picked me because I don't have a family?"

Dorothy raised Mark's bet. "I didn't make a will," she said harshly, as Sam and Lily fattened the pot.

Mark thought for a moment, then bet everything he had. "It's just another gambling game," he said. "You win or you lose, but you still play. We come back or we don't. Simple as that."

Dorothy looked him hard in the eyes, searching for something. "I don't know about you," she said slowly, pushing all her money into the center of the table, "but I plan on coming back."

Lily nodded solemnly. She looked at her hand, then bet everything as well.

"Sounds good to me." Sam added his winnings to the pile of money in the center of the table. "And I call."

Mark laid down his hand. "Full house." Lily and Sam folded, but Mark's eyes were only on Dorothy, a challenge in his eyes. In that gaze she recognized something about him, something that had slipped her mind but that she now remembered from the time she first knew him.

Dorothy smiled a little, challenging back. She showed her hand. "Four kings." Mark's smile didn't wane; in fact, it widened a little. It was like he had found a worthy adversary.

Dorothy pulled in the pot. "Here's to coming home again."

IX

Sunday, 7 October 2007: Day of Ares III Launch

Dawn seeped into the small four-bedroom quarantine suite and found the members of the Ares III mission in different states of readiness. Sam was waking up, rubbing his eyes, batting at the alarm clock with a sleepy paw. He had slept fitfully all night, about like one would expect. He set his large feet on the floor and stalked off to the bathroom.

Lily sat up as soon as her alarm went off, folding the covers back neatly and clicking the switch to silence the high-pitched beeping. She looked to the side of her bed and picked up her notepad. Every night, as was her ritual, she listed the things she was to accomplish the next day, so she didn't have things on her mind when she went to sleep. Last night, she had written "Take off for Mars" and nothing else. She looked at that neatly handwritten line, stared at it, then set it aside and got up to dress.

Mark slept peacefully in the room next door, his sleep undisturbed by dreams. He was on the third snooze of his alarm clock and really had no desire to awaken until Sam was out of the bathroom, which would be at least two more snoozes. He smiled to himself in slumber and rolled over to face the wall.

In the last bedroom, Dorothy stared up at the ceiling with blank eyes. She hadn't slept the entire night. The hours really did pass rather slowly when one was awake, and she had watched one, two, three, four, and five o'clock tick past without resting. The radiators creaked at night. She wondered why this was the first night she had noticed it.

Dorothy welcomed the slight change in the air that came with dawn. She could feel the space around her becoming charged with the excitement of the day. Sunday was an auspicious day for a launch. Services were being held that morning back home. She wondered briefly what the sermon was about.

She heard the water running and knew Sam was doing his morning ablutions. He was always first in the bathroom. He managed to take longer than any man she knew to get ready in the morning, even when it wasn't his day to shower. She didn't know what he did in there, but it took a long time. Dorothy didn't get up right away when her alarm clock went off; instead, she tapped the alarm off and continued to make patterns on the ceiling. In less than 24 hours, her life would change forever.

With that in mind, she rolled out of bed to greet the day.

Elliott saw the launch from the sitting area outside the mission control room. He was glad he had come in to watch. He had originally wanted to stay home, to watch the launch on TV, but at the last minute changed his mind and sped to the Cape. He was seated with several dozen members of the Ares crews, but there was complete silence as the countdown ticked slowly down. He wondered what they were thinking. Sam would probably be remembering his problems with the LC-130 in Antarctica. Lily would be praying the Our Father, which he knew she did secretly every morning without fail and also when she was afraid, even though she didn't tell any of the other crew members she was a religious person. He could read her lips when she whispered softly to herself. He knew nothing of his replacement except what Dorothy had told him. How was she dealing with someone who drove her so crazy? How would they be for two years? Perhaps they would kill each other en route.

Dorothy. He had always had a deep admiration for her. She had more spunk than any of the rest of the crew and she did her job to a fault. But beyond that, she was loyal. She wanted the best for the mission, he knew, and she was probably running through every

last-minute protocol in her mind as the counter ticked down. Maybe she was completely calm.

Or maybe, like him, she was completely terrified.

"I can't believe this is really happening." Grace Fahey cradled her burgeoning belly and watched the shuttle out the window. She had been taken off the Ares list upon becoming pregnant, but had been invited like Elliott to watch the launch. Elliott smiled at her, wondering what she was thinking. She didn't seem at all disappointed to be staying on earth. Of course, she hadn't been slated for this mission. The excitement was infectious, however, and the room was almost buzzing with nervous energy.

The ground crew didn't recite the countdown out loud, but Elliott did. He whispered the numbers to himself as they ticked slowly past. The shuttle was poised on the launch pad, an arrow reaching toward the sky, and he wondered if he would ever see his friends again.

The counter reached one. The engines ignited, vaporizing thousands of gallons of water released below the shuttle to absorb the heat. The Ares III lifted slowly off the launchpad, trembling with the weight of its mission, splitting the clear blue sky.

Elliott jumped to his feet, mouth falling open, awestruck as the powerful rocket shot heavenward on the computer screens, quickly dissolving out of sight.

"We have liftoff."

He was swept into the embraces of ground crew and Ares personnel. The screaming crashed over him, songs of celebration, joyous calls and whistles and cheers. He laughed and danced with his compatriots, caught in the moment, eyes raised skyward as he imagined the Ares III soaring into the heavens.

In front of the main monitor, Ken Nguyen ran a hand over his eyes. Readouts indicated that the upper stage had fired its own engines and broke away from the rest of the rocket. The hab pulled away from the upper stage on a tether, stopping when the tether was 330 meters long. He watched anxiously: if this stage didn't proceed correctly, there would be no artificial gravity for the mission. A small rocket engine fired on the hab, making the tethered hab and upper stage revolve at two revolutions per minute, producing gravity equal to 38% of Earth's. This was the level of gravity that they would find on Mars.

He turned his gaze to the long trail of white smoke from the rocket. Before his eyes, it disappeared slowly, blown apart by winds, until it was as if there had been no launch at all.

Twelve hours later

"I think I've lost weight."

Sam bounded down the hallway of the hab to where Dorothy was staring out the window of the common room.

"It's the artificial gravity," she said automatically.

"I know," he said. "But I feel 62% lighter." He jumped up and down. "Whoa, this is weird. My head feels lighter than my feet."

"That's because there are high gravity variations with respect to height since we're rotating. You'll get used to it. Now take it easy," Dorothy reprimanded. "You'll break the hab."

Sam shook his head. "Sourpuss," he murmured, leaving the room.

"What was that all about?" Mark asked, entering the common room and relaxing down onto a kitchen chair.

Dorothy shrugged and continued to stare out the window. The stars revolved slowly past the window as they spun on their tether. Every so often she caught a glimpse of Earth, green and blue and amazingly more and more distant as they sped toward their destination.

"Snap out of it," he said, shaking her shoulder. "We're on our way. The launch was a success. We're twelve hours closer to Mars."

"I know," she replied, breaking her gaze. "But it's so unreal."

Lily bustled in carrying a long list in her hands. "I've completed our inventory of the supplies and equipment," she said, leafing through the pages. "Nothing was damaged in the launch. Everything appears to be just fine."

"Good," Dorothy replied, turning around on the couch to face the common room. "What about personal effects?"

"Mine are okay," Mark replied.

"Mine too," Lily said.

"I didn't go through mine yet," Dorothy said. "What about Lessing?"

"Oh, he's jumped on the treadmill," Lily replied, smiling. "Maybe he's resolved to get in shape this mission."

"It's awfully late to be exercising," Mark said, looking at his watch.

"Why, what time is it?"

"It's almost nine, by Earth time."

"What about Mars time?" Lily asked.

He grimaced. "I didn't switch watches yet."

Mars's day was slightly longer than Earth's, having an extra 39.6 minutes to Earth's 24 hours. The timekeeping system they would be using divided up the day into 24 Martian hours, each composed of 60 Martian minutes, and each minute was 60 Martian seconds. Every time unit was 1.0275 times its terrestrial counterpart, not quite enough difference to be noticeable.

"I don't think we should switch until we land," Dorothy shook her head. "We don't want longer days on this ship than we already have."

"Oh, it won't be that boring," Mark replied, grinning. "In fact, I'm looking forward to it. There's a lot of reading I've been wanting to catch up on."

"I brought my favorite movies," Lily said. "And music."

Suddenly, the Eagles's "Take it Easy" erupted through the hab, blasting out from the exercise room. Sam's robust voice was the accompaniment.

"Speaking of music..." Dorothy began, shaking her head. "Looks like we'll be sharing tastes from now on."

Monday, 22 October 2007: 15 Days After Ares III Launch

"Check."

Dorothy leaned back in her chair, folding her arms, and surveyed the board smugly. She already had check; it was only a matter of time before she had checkmate. Mark rubbed his chin thoughtfully, touched his knight, then withdrew his hand before moving it. Finally he slid his bishop forward.

"Checkmate."

Dorothy let her chair drop forward and leaned close to the board, brow furrowing. She could see no discernible move she could make. Exasperated, she tipped her king over with her fingertip and folded her arms again.

"Oh, don't be so sour," Mark said. "It took me years to be this good at chess."

"Oh, shut up," Dorothy murmured.

He said nothing, only smiled, collecting the pieces.

She helped him close up the game. Mark was the only other member of the crew who shared her penchant for board games. They had brought quite a supply on the trip. Their experience with darts had proved unsuccessful, however, because with the limited gravity their darts flew much higher than they had anticipated, and to avoid damaging any more of the hab, they relinquished darts in favor of other games.

"I think I've had it with this for today," Dorothy said. "I think I'm going to go read."

"You're just sore because I beat you again," Mark challenged. "I believe you're 0 for 4 today."

"That's ridiculous," Dorothy replied. "I'm not so competitive that I can't enjoy a game without winning."

He smirked.

"I'm serious," she said.

"Then why don't you want to play anymore?" he challenged.

"Fine. You want to play? Let's play." She sat back down in her chair. "What is it this time? Checkers? Poker? Parcheesi?"

"How about Blackjack?" he asked, pulling the deck of cards over between them.

"Okay," she agreed.

"Let's make it interesting," he said with a smile. "Best four out of seven hands. Loser makes dinner."

"You're on," she replied, rubbing her hands together.

Mark won the first game as dealer when Dorothy busted at 24. They swapped roles each game. Dorothy won the second and third hands; Mark took the fourth. By the sixth they still stood even.

"I hope you cook better than you play," Mark taunted easily, cutting the cards. Dorothy's first two cards were a six and a jack: sixteen, the worst possible player's hand. Mark's dealer hand was a ten and a five: fifteen. Dorothy tapped her fingertip on the tabletop behind her cards. "Hit me." He flipped one more over. Four. She waved her hand over her cards with a sigh of relief. "I'll stand at 20."

They were playing by traditional house Casino rules where the Dealer stands at seventeen, so Mark flipped another card for himself. It was a six. "Twenty-one," he announced, smiling. "I think I'd like pasta tonight. You're making the sauce from scratch, I hope."

Dorothy wrinkled her nose at him. "Good game," she said mechanically, and pushed up from the table to make dinner.

Tuesday, 30 October 2007: 23 Days After Ares III Launch

The sun never rises in space. Dorothy stared out the window of her stateroom, watching the stars flow past her like a liquid, and wondered why she hadn't thought of it in those terms before. She had programmed the lights in her room to come up slowly at seven, just like the sunrise on Earth, but after three weeks she still hadn't adjusted to the fact that outside her window it was always night. It was eight o'clock in the morning, Earth-time, but outside it could be anytime after nightfall. She turned her gaze up to the ceiling.

Dorothy, like the others, had adjusted her sleep schedule to minimize her time awake during the journey to Mars. She went to bed early and slept late, even taking a nap in the afternoon sometimes. A month before they landed, she would begin to acclimate herself to a normal sleep cycle again. For the past few days, though, it had become increasingly difficult for her to sleep. She rested fitfully, sometimes waking as often as every hour, and was unable to sleep in past eight. She attributed it to general restlessness.

Finding her mind too active to go back to sleep, Dorothy rolled out of bed and padded to her closet in her pajamas. She selected a comfortable pair of sweats and an old long-sleeved T-shirt and got dressed. She opened the door to her room and stepped into the hallway.

"Morning, Cooper," Sam greeted her, coming around the corner. "Sleep well?"

She shrugged noncommittally. "The same as always. You?"

"I slept great. Everyone else is a bit sluggish, though." He looked over his shoulder. "Lily's always up by now and she's still in bed, and Mark's just reading mission plans."

Dorothy nodded and wandered past him without saying anything else. She poured herself a glass of orange juice to take her morning Vitamin D supplement. The little green pill slipped down easily, and she leaned against the counter to sip the rest of her orange juice. Mark didn't look up from the mission book when she walked into the room.

"Reviewing?" she asked, settling into an easy chair.

"Mmm," he murmured in the affirmative, turning the page.

"We have five months, you know," she said, only half-joking. "There's plenty of time for that."

Mark muttered something unintelligible as his manner of response and turned another page in the book. Dorothy switched on the DVD player.

"Can you leave that off?" he asked, a little annoyed. "It's barely nine o'clock in the morning. I'm still not awake yet."

Dorothy switched the DVD player back off. She grabbed a book off the shelf and settled in to read, deciding not to pursue an argument. She had five more months to live with Mark in close quarters and she didn't want to make things more difficult than they already were. Already they were acting like bickering schoolchildren instead of professionals. She let herself get absorbed into her book.

"I'm making lunch. Do you want anything?"

Dorothy looked at her watch and realized she'd been reading for most of the morning. "Sure," she replied, rubbing her eyes. "Whatever you're making."

Mark walked into the kitchen and started preparing some soup. He leaned casually against the counter with his back to her, idly stirring the soup in the saucepan. She looked up from her book and just watched him standing there. He wasn't quite as annoying when he wasn't talking.

"I smell soup," Lily said, walking into the kitchen. "Who's cooking?"

"I am, but I just made enough for two." Mark turned around. "I thought you had jumped ship."

"I was catching up on my field log," she replied.

"What could you possibly have to say?" Mark asked. "It's not like we're doing anything besides sitting."

She didn't reply, but turned and started rummaging through the cabinets for something to eat. "I hate this dehydrated food," she said, wrinkling her nose.

"At least we get a meal of whole food every day," Dorothy reasoned. "Previous astronauts didn't even have that. You'd better get used to it, because we have two more years of living on it."

"I suppose eventually my taste buds will fall off," she said, pulling a package of something unidentifiable out of the cupboard and beginning to prepare it.

Mark carried two steaming bowls of soup over to where Dorothy was sitting on the couch and sat opposite her. "Lunch is served, madam," he said gallantly, making a sweeping bow and handing her the bowl. He had even put some soup crackers in it.

"Thanks," she replied and began eating. Sam came into the kitchen and started making himself lunch as well.

"Anyone up for a Monopoly marathon after lunch?" Mark asked, looking around at everyone as he carried his bowl into the kitchen.

"Not me," Lily said, shaking her head. "I think I'm going to write a letter to everyone back home."

"Okay, how about you, Sam?"

"Sure. I've got nothing better to do." He sat to eat.

"Well, Dorothy?" Mark asked, turning to face her. "Want to play?"

"Yeah, I guess so," she shrugged, scraping the last remnants of soup out of the bowl. "Haven't played Monopoly all week."

"I'm afraid I have a hotel there, too." Dorothy picked up the deed to St. Charles' Place. "That'll be \$750."

Mark grumbled good-naturedly, mortgaging his last two properties and still coming up short. "You got me," he said, tossing his deeds into the pile.

"Good game," Sam said, having already been bankrupted a few turns earlier.

"Don't take it too hard, Mark." Dorothy packed the money back into the box. "I always win at Monopoly."

"Well, I suppose you have to have one game that you can win at," he said with a condescending smile. There was a teasing twinkle in his eye that kept Dorothy from getting upset.

"Okay, that's my cue to leave," Sam said. "I think I'm going to go work out."

As he left, Dorothy wrinkled her nose. "I hope it's his day to shower," she said, watching him walk into the exercise room.

"Hey, you want a beer?" Mark asked, getting up.

"Sure," she replied. "I didn't think we had any."

"Of course we do," he said, rummaging around on the bottom shelf of the refrigerator. "I certainly hope if they're sending us into outer space for two years, they send us with two years' worth of beer."

She laughed and took the proffered beverage. "Thanks." She used the edge of the table to crack the top off the bottle. "Want to watch a movie?"

"Sure." He settled in next to her. "What do we have?"

"Everything." Dorothy gestured to the full DVD stand.

"Got any classics?"

"Sure. How's Casablanca?"

"Fine by me."

She settled in on the other end of the couch as the movie started. "I didn't know you liked the classics."

"Sure." He toed off his shoes. "But I really have a soft spot for old westerns."

"Ugh. You can watch those on your own time." She settled back against the cushions and took another swig of beer.

Dorothy finished her bottle right as the final credits were rolling. She sighed and smiled.

"You don't cry at old movies?" Mark asked, taking her bottle and bringing it to the kitchen.

"No, never. I didn't even cry at Bambi when I was little."

He came back and settled down next to her on the couch. "So," he said, smiling.

"So, what?" Dorothy raised an eyebrow.

"Tell me about you. It's been almost a month and none of us have talked about our pasts."

She looked at him oddly. "I think you know all about me." She shied away from him, getting up instead and rummaging through the bookcase. "Want to play poker?"

He still had the same smile on his face. "Yeah, sure."

She sat down at the table and he joined her. "Let's up the ante," she said.

"Dinner again?"

"No, let's try something different. Loser gets one of the winner's showers this week." She cut the deck and shuffled.

"So the winner gets three, and the loser gets one?"

"Yes."

He ran a hand through his hair and scooted his chair closer. "You're on."

"They still playing in there?" Sam walked into Lily's stateroom running a towel through his hair. It was still wet from the shower.

She nodded. "Been at it all night. I think they're going to kill each other."

He smiled. "Can I sit?"

"Sure." She gestured to her desk.

Sam rested the towel on his lap. "What do you think it is between those two?"

"Dorothy and Mark? I don't know. I'm just doing my best to stay out of everyone's way." Lily closed her laptop and set it next to her on the bed.

Sam leaned forward, placing his elbows on his knees. "They're a lot alike, you know. It's good for the success of the mission."

"And it's bad for us," she replied, sitting back on her elbows and crossing her legs out in front of her. "I hope they don't fight the entire trip. Sometimes I feel like a babysitter."

Sam smiled. "Well, you know how these long trips are; they bring out the worst traits in people. You read the mission reports on long-duration space flights and confined quarters. People either form alliances or rivalries. General bickering is pretty common, but I don't think it'll last forever."

Lily frowned. "I hope you're right."

"Did you know I used to be married, Lily?"

Lily looked at him with a curious expression on her face. "No, I didn't."
"Yeah," he smiled, a wistful look in his eyes. "Her name was Mary. She left me a widower about ten years ago. Man, I loved that woman. When we first got to know each other, though, we fought like cats and dogs."
Lily blinked a couple of times, her face expressionless. "I see."
He looked at her for a few minutes. "Never mind." Sam stood up and draped his towel over his shoulders. "It's getting late. I think I'm going to hit the sack."
"Me too. Goodnight, Sam."
"Goodnight, Lily."

"Ha! Flush beats straight. That's thirty five hands for me and thirty for you."
Dorothy dashed off a tally mark next to her name. "Sure you don't want to quit now? I'm certainly going to reach fifty before you."

"We'll see about that." Mark scooted closer. He shuffled the deck, tongue wetting his upper lip. "I'm about to start a lucky streak. I can feel it."

"Yeah, I'm sure." Dorothy took a hasty bite from her granola bar and collected the cards into her hand.

Two hours later, Dorothy was one game away from fifty. Mark trailed behind by a dozen. "Two pair, ace over fives," Mark said, tossing down his cards. "What do you have?"

"Three of a kind." Dorothy fanned her winning jacks in front of her. "It seems I've reached fifty."

"Yeah, yeah." He leaned back in his chair and folded his arms.

"I get your Friday shower." Dorothy looked up at the wall where they had posted the water distribution schedule.

"Sure we can't share?"

Dorothy looked back at him and raised an eyebrow. "No," she replied. "No sharing."

He smiled broadly and put his feet up on the table. "All right, then. Off to bed with you."

"Yeah, you too. It's almost ten." She yawned. "I'll be seeing aces in my sleep."

"Well you sure won't be seeing any more in real life," he replied, shuffling the cards. "I'll bet I can win that shower back from you."

"We'll talk about it tomorrow. Good night."

"Night."

Mark watched her leave, absentmindedly shuffling the cards as Dorothy wandered out of sight around the corner. "Absolutely," he murmured to himself. "A good night indeed."

XI

Monday, 5 November 2007: 29 Days After Ares III Launch

Dorothy looked up from her book when there was a knock at her stateroom door. "Come in," she said, wondering whom it was. At least she had only three people to choose from.

Mark stuck his head in. "Hi," he said. "What are you doing?"

"Just reading." She sat up. "You can come on in."

"Thanks." He entered and shut the door with his elbow. He had two beers in his left hand and a pack of cards in his right. "Do you mind if we play in here tonight? Lily and Sam have one of those 3-D puzzles spread out all over the table and I hate to ask them to move it."

Dorothy raised an eyebrow. "You, do someone a favor?" She insulted him almost reflexively, and the words were out of her mouth before she thought about it.

He tipped his head to the side and looked at her without saying anything. She flushed immediately, both from the penetrating nature of his stare and from the realization that she might have insulted him. "Sorry," she said. "I didn't mean that."

"I *am* trying, you know," he said, taking a seat on the floor and setting the drinks next to him. He removed a bottle opener from his pocket and popped the cap off one beer. He handed that one to her and opened his own. He stared into the open mouth of the bottle for a couple of seconds, then looked up at her. "I don't try to be an asshole."

Dorothy looked away, drawing one leg up underneath her. "I know," she admitted after a moment. "I just don't think about it. I'm sorry if I hurt your feelings."

He smiled. "Nah. I'm a lot tougher than I look."

"You'd have to be," she replied easily, then winced. "There I go again," she said, shaking her head. "I don't mean those things. I don't know why I say them."

"You know, I'm not in competition with you," he said. She looked at the deck of cards he was shuffling, then back at his face with a raised eyebrow. He set the cards down. "I mean besides in games. I think you have this idea that I'm trying to take over your job."

"No, I don't think that," she said, shaking her head and moving off her bed to sit beside him on the floor. "I don't know what I think. I don't know why you *irritate* me so much." She took a long swallow of the cold drink in her hand.

He laughed. "I do. It's because we're so much alike."

"Oh, no," she replied, shaking her head with a smile. "We are nothing alike."

"Okay, then, it must be because I'm so much better than you at poker."

Dorothy laughed. "Right. That's why you've only taken half of your allotted showers in the past two weeks."

"Maybe I'm just letting you win." He shuffled the cards again with an easy overhand.

"Well maybe you should stop letting me win before you start to stink." She wrinkled her nose in disgust and then laughed again. She was feeling relaxed, rested, and playful. She never quite knew what to make of her time with Mark. Sometimes he brought out her petulance and stubborn childishness, and sometimes she just felt at ease. Dwight had been the only friend back at NASA that she could relax around, and she missed that comfortable interaction. Maybe she could let down her guard with Mark.

"I beg your pardon," he said with mock indignation. "My shower was this morning."

Dorothy just smiled, leaning back against the side of her bed. "Well, are you going to deal the cards, or are you just going to shuffle all day?"

"Shuffling all day sounds fine," he replied. "I think we should up the ante a bit."

"To what? Do I get your bathroom privileges, too?" she crossed her feet out in front of her.

"I don't think so," he replied. "But I'll offer you this. If you win, you get my allotment with the washing machine this week. If I win, I get your shirt."

"What?" she laughed. "Uh-uh. No way."

"What, afraid you'll lose?"

"No, of course I won't lose. But my shirt isn't worth your silly laundry time." She took a thoughtful swig of beer. "I'll take your pants."

Mark laughed. "Why do you want my pants?"

"It's only fair. My shirt for your pants. And I'll hang them on my door for all to see."

"I have other pairs, you know," he commented, taking a sip. "I won't miss these even if I do lose, which I won't."

"You'll miss them for the rest of the game." She grinned playfully. She wasn't sure exactly what had come over her, but she felt impish and decided to enjoy it. Once they reached Mars, the mission was only going to become serious, and they wouldn't be able to goof off as much. After all, she thought, what harm could one card game bring?

"Okay, fine. But you're the one who's going to lose, not me." He dealt the cards.

They were mostly silent during the game except for taking new cards. Dorothy looked over her hand thoughtfully, not sure whether it was strong enough to win. Mark's face was totally expressionless as he studied his cards. Finally he laid them down. "Two pair. Ten high."

Dorothy stared at her cards, not looking at him. "Two pair," she said, setting them in front of her. "Nine high."

Mark didn't say anything, only smiled as he kicked back a long swig of beer. Grumbling, Dorothy pulled her shirt over her head and threw it at him, hitting him right in the face. "There, are you happy?"

"No fair!" he complained, looking her up and down. "You've got a tank top on under your shirt."

She grinned. "You didn't ask for my tank top. You asked for my shirt. Now deal again."

"This time for the tank top?"

"This time for your pants."

He laughed. "Okay, okay." He scooted a little closer.

"You trying to look at my cards?"

"No, of course not," he replied. "I don't need to."

She did win the next hand. "Bloody hell," he said, unbuckling his fly. "Maybe I should've looked at your cards."

She folded her arms triumphantly as he stripped down to his boxers and handed her his pants. "Wanna lose your shirt this time?" she asked, adjusting the straps of her tank top. "Or do you want to quit?"

"No, no, we can play again."

"It's my deal. You dealt twice in a row." She shuffled the cards and dealt them out. By the end of the hand it was obvious she wasn't getting more than a pair of aces. She tried to be expressionless but she knew there was triumph in his eyes. He returned her pair with a straight.

"I can't believe I wasted that straight on your piddly little pair of aces," he teased, taking a sip of beer. Dorothy sighed and pulled her tank top up over her head. "There, you got the tank top, are you happy now?"

He swallowed hard and almost choked, setting the beer aside. "You're...umm..."

She lifted her chin. "I'm in outer space. Why should I wear a bra in outer space?"

"They're..." he began.

She shoved him. "...not here for your approval, that's what they are," she laughed, pushing him away from her with her foot. "Give me my top back now."

"Oh, no. You lost it fair and square and it goes on my door for a month." He held it just out of reach. She tried to grab it, leaning over him, but only managed to knock him over.

"Give it back," she said, climbing on top of him to try and reach the tank top he was extending far above his head. She finally succeeded in grabbing it out of his hand and sat up, straddling his hips, to pull the tank top over her head. She rocked back on her hips and realized why he had gone completely still beneath her. Suddenly, the game didn't seem as innocent anymore.

She looked down and saw him looking up at her with perfectly clear brown eyes and an unidentifiable expression. He was studying her face. He lifted a hand and traced a red curl falling over her brow, his touch gentle, a small smile playing at the corner of his mouth.

Dorothy felt warmth flood her lower abdomen. She swallowed hard as he continued his gentle caress. He cupped his hand behind her head and gently drew her face downward.

"It's your deal," she said abruptly, pulling away and scooting back beside the bed. She pushed her cards toward him with her toe. She averted her gaze and tried to still her trembling hands.

Mark sat up slowly and drew his legs beneath him. "Yeah," he said, shuffling the cards overhand. They were both silent, unwilling to make eye contact. "Actually, I think maybe I should head off to bed," he said awkwardly.

"Yeah," Dorothy said. "Yeah, me too."

"Okay." He stood up and looked at his pants, still lying on the floor beside Dorothy. He picked them up, knowing the game was over in more ways than one. "Good night," he said, opening the connecting door between their rooms.

"Night," she said, and was unable to meet his eyes.

Dorothy settled back against the bed, absentmindedly rolling the beer bottle back and forth across the floor between her feet. She looked at the connecting door and imagined she could see past it to where Mark was likely lying in bed. She couldn't shake the tingling feeling in her stomach, the feeling she hadn't experienced in a very long time. She got up and turned the temperature down slightly in her room, feeling warm.

Why had she let it go that far? She should have known where it would lead with the two of them. They both had felt it from the beginning. She knew she was fueling the fire, and she had let it happen, whether out of a sense of curiosity or to flirt with the unknown. She shook her head and cursed herself for being stupid. To get her mind off the situation, she grabbed her favorite book off of her bookcase and curled up on the bed to read.

Mark lay awake staring at the darkened ceiling. He studied the way the light from the stars outside reflected in the mirror and diffused through the room. His body was still pulsing; he could hear his heartbeat thudding rhythmically in his ears. He closed his eyes and tried to remove from his mind the image of Dorothy straddling his hips, her breasts pressed

to his chest, her lips parted and laughing. He rubbed his eyes and ran a hand over the top of his head. He tried to calm his body, but it wasn't listening to him. He groaned softly to himself and rolled over to sleep.

XII

Tuesday, 6 November 2007: 30 Days After Ares III Launch

"Morning," Dorothy said uneasily, brushing past Mark in the small kitchen to reach the refrigerator.

"Morning," he returned, stirring the oatmeal on the stove and not turning around. "Sleep well?"

"Yes, you?" she returned, drinking some of the orange juice they had made from concentrate a few days before.

"Fine."

Dorothy shook out a Vitamin D pill into her hand and swallowed it, leaning back against the refrigerator and watching Mark out of the corner of her eye. He was scratching the back of one leg with the top of the other foot and mesmerizing her with that simple movement. She drank her juice steadily, trying not to remember the feeling of his hands pulling her down to him. His presence in the nearby kitchen was distracting and she was forced to go into the living room to get air.

"No, that doesn't go there. Do those bricks look like they match up?" Lily snatched the puzzle pieces out of Sam's hand and pulled them apart.

"Oh my God," Dorothy said. "Have you two been at this all night?"

"We're almost finished," Sam said, pawing through the pile of small gray pieces.

"It doesn't look like it," Mark commented from right behind Dorothy's shoulder. His breath on her ear made her jump and scoot away onto the couch. Mark scooped a spoonful of oatmeal into his mouth and swallowed, gesturing at the puzzle with his spoon. "In fact," he continued, "it doesn't look like you've gotten very far at all."

"Well it's a difficult puzzle!" Lily snapped, eyes flashing. "Why else do you think we've been at it for fourteen hours straight?"

Dorothy scooted farther away on the couch, Lily's demonic gaze and flaring nostrils more than a little frightening, but she couldn't help but smile. The woman so seldom showed any emotion at all. Apparently they had just never seen her tired enough. "I think," Dorothy said slowly, choosing her words carefully, "that perhaps you two should go to bed."

"We can't go to bed," Lily said incredulously, as if that was the most ridiculous thing she had ever heard. "We're not finished with this puzzle." Sam, however, seemed rather relieved. Dorothy smiled, thinking maybe he had been afraid of what Lily would do to him if he left and went to bed.

"And you won't be finished today," Mark said. "Come on. Before you kill each other."

"Or us," Dorothy added.

Lily looked at the half-finished Bavarian castle in front of her and the large pile of gray pieces she was trying to fit together, then rubbed her eyes and sighed. "Maybe you're right," she said, pushing up from the table and standing on wobbly legs. "We can come back to this later." She yawned and staggered off toward her room.

Sam dropped the pieces he was working on and followed suit, visibly relieved.

"I can't believe they've been up all night," Dorothy said to break the silence that fell as soon as they were alone together.

"I know," Mark agreed, settling down next to her and taking another bite of oatmeal. "There's more on the stove if you'd like," he said.

"Thanks," Dorothy replied and got up to get some. She sprinkled a liberal coating of cinnamon and sugar over it and leaned against the counter. She was decidedly more comfortable when Mark was in a separate room.

Seeming to read her mind, and acting perhaps just to spite her, Mark finished his last bite of oatmeal and returned to the kitchen to rinse his bowl. He brushed right past her to use the sink, his arm rubbing against hers as he turned on the faucet. She jumped as if burned; after being so aware of his presence, the contact was like an electric shock.

Mark finished washing his dish and put it back in the cupboard. He turned slightly to face Dorothy and tried to read the expression in her eyes. She was definitely affected by him. He could see the goosebumps rising on her arms from standing so close. Her unsettled demeanor was interesting, and he smiled slightly to himself as he walked back into the living room and sat on the couch.

Dorothy switched on the DVD player and looked for a movie: anything to take her mind off last night. She selected a comedy and slid the disk into the drive. She was still berating herself for her stupidity. Why had she let them get that close? What was it about him that affected her? She had had unwelcome dreams all night. She sat on the chair and pulled her knees up beneath her as the movie started.

XIII

Tuesday 13 November 2007: 36 Days After Ares III Launch

Dorothy sat bolt upright in bed as alarms started shrieking through the hab. She blinked her eyes a few times, not sure what exactly was happening, then tumbled out of the bed and grabbed her robe. It was then that she recognized the alarm.

By the time she reached the airlock, Lily and Sam were already inside. Lily was wrapped in her bathrobe and Sam was wearing pajama pants and a T-shirt. Mark appeared behind Dorothy, pushed himself into the small space, and sealed the door behind them.

The alarm continued to blare, although muffled, as they huddled together on the small platform in the airlock. The ladder dropped down out of a hole in the platform behind Sam, and he leaned against the rail blocking it.

"How long will we have to stay in here?" Lily asked, looking around.

"You aren't claustrophobic, are you?" Mark asked.

"No, but I may develop it."

"It depends. After the solar flare passes, the alarms will go off when the radiation level returns to normal." Dorothy was acutely aware of Mark breathing against her ear. They had managed to stay away from each other the last week, allowing distance to prevent any awkwardness, but the small airlock challenged all sense of personal space. His arm was pressed up against her side as he held onto the railing. Dorothy flinched as he exhaled again, his hot breath triggering the nerve that ran down her back. She tried to move away, but there was nowhere else to go. She forced herself to breathe evenly and tried to focus on the situation they were in.

The shielding in the airlock was better than in the rest of the hab, so they remained there as protection from the radiation. Dorothy closed her eyes as the sirens continued to wail. It was an eerie sound, because they all knew what it meant. Radiation from a solar flare was too intense for any of them to take without substantial risk to their health. The trip itself, actually, added to their chances of developing some form of cancer down the line, and they all understood the risks when signing up for the mission. But there, in the silence of space, without medical doctors quoting statistics, the sirens made the dangers frighteningly real.

The alarm switched off without warning. Sam shook his head, ears still ringing, as they unsealed the door to the airlock and stepped back into the hab. Everything appeared to be completely untouched, but Dorothy felt as if she was stepping into a nuclear reactor.

"Radiation levels are back to normal." Lily dictated the readout as it flashed up on the computer screen in the hab. "I'm sure pretty soon we'll get a message from home asking if we're all right. I might as well confirm that now." She typed into the terminal and sent the message, knowing that with the delay they would receive it in less than half an hour. The delay would be slightly longer once they actually reached Mars. Lily didn't bother to send the radiation readouts; NASA could access those remotely from the Cape.

"Back to bed?" Sam asked, still looking groggy.

"I'm going to make a cup of tea." Dorothy handled the teabags with care, her hands still shaking. "Does anyone else want one?"

"I'll have one," Lily said, coming into the kitchen.

"I think I'm going back to bed," Sam said. "Thanks anyway."

"Me too," Mark confirmed. A few minutes later the tea was ready, and they sipped it silently around the round table in the lounge. Lily kept glancing at the window as if expecting to see a giant red flame enveloping the hab.

"Glad that's over," Mark said, stirring his tea and taking a sip.

"Until the next one." Lily stared gloomily into her teacup.

"If there is a next one," Dorothy said. "We all responded well. The alarms worked perfectly, and we should have minimized the risk by acting quickly."

"I think I'm going to finish this in my room and try to get some sleep," Lily said, standing and carrying her teacup with her. "Goodnight."

"Night," they both responded.

"I think we should both try to get some sleep," Mark said, offering a hand to help Dorothy to her feet. She ignored it and stood up on her own.

"Yeah. I agree." She followed him along the corridor to their separate staterooms.

He smiled. "Goodnight." With that, he disappeared into his stateroom.

After she finished her tea, she lay awake in bed, heart still pounding from the radiation alarm. Her eyes were growing heavy from lack of sleep. Eventually sleep won her over, and she slipped into fitful dreams.

XIV

Thursday 10 January 2008: 95 Days After Ares III Launch

"That's it. We're right on target." Sam and Dorothy walked into the lounge. "It seems that last night's engine burn went perfectly."

"We're at the halfway point," Lily said, walking over to the wall where they had hung a calendar. "A little less than three more months to go."

"I've never had such cabin fever," Dorothy complained, collapsing on the couch. "Six months is a long time."

"Well we get email from home tomorrow," Mark said. "It's Friday."

"That's true. It's kind of nice to get it all in one fell swoop once a week." Dorothy leaned over to the Jenga stack Mark was studying and removed a piece from the bottom without making the tower move. Mark shot her a dirty look and went back to studying the structural integrity of his tower. They had become a little more comfortable over the past two months, a little more relaxed around each other. Neither of them mentioned the evening back at the beginning of the trip, and it was almost as if it never happened. Dorothy could almost pretend, as she sat down next to Mark, that they were just old friends, until he brushed against her and she jumped. She scooted a little farther away from him and finished her thought. "Plus," she said, "it does save NASA the trouble of uploading email to us every other hour."

"Do you get that much?" Sam asked.

"Well, Elliott has been writing to say how he's been. Those emails go to the group so you all get them. And I get some stuff from NASA, you know, latest reports of things on Mars, and I'm on a few mailing lists." Dorothy stole another piece from Mark's tower, unable to resist.

"You don't seem to understand the meaning of 'solitaire,'" he grumbled, shaking his head with a small smile. "I get mostly spam mail. Like I have a need to refinance my home right now."

"Can't NASA filter those out?" Lily asked.

"I asked them not to go through my mail," he replied, sliding a piece out of the Jenga tower and making the entire structure collapse with a clatter. He mildly started setting it up again.

"Too much porn coming to your account?" Dorothy teased.

"Maybe," he teased back with a smile. He raised an eyebrow at her, and her mouth went a little dry. She turned away.

"I asked my sister to send pictures every week," Lily said. "I miss my nieces and nephews."

"Well I'm sure you have plenty to send back to her, now that you've developed that obsession with the digital camera." Mark finished setting up the tower and studied it carefully from every angle.

Lily smiled but didn't refute it. Right after Christmas, she had decided to photo-journalize the trip, and they had all been subjected to incessant photography at all hours of the day and night. "You shouldn't be that annoyed," she said. "Most of the pictures I have are of you guys playing board games."

"That's cause that's all they do," Sam said, nodding over the top of his book to Dorothy and Mark. "For now," he murmured under his breath.

"Actually, the trip hasn't been so bad for me," Lily said, settling down on the couch. "I have been organizing my notes."

Dorothy stood up from the table and walked over to the calendar. There was a "DP" marked on the calendar for that day's date. "Lily, do you want to do shots now or later?" she asked.

Mark looked up. "We don't have the right kind of liquor for shots."

"Not those kind of shots," Dorothy said, mildly annoyed.

"Might as well get them over with now," Lily said, following Dorothy into the laboratory and sitting down in a chair. She pulled her sleeve up to her shoulder.

Dorothy returned to Lily carrying a syringe and vial. She cleansed Lily's upper arm and administered the injection. "There," she said. "Good for another three months." She placed a bandage on the area.

Lily slid off the table and retrieved another syringe. "I'm still squeamish about doing this," Lily said, cleansing Dorothy's arm.

"Yes, well, I can't give myself these injections. That's why we all had some basic medical training back on earth."

Despite Lily's fears, Dorothy felt only a normal prick and the familiar minimal pain of an injection. "You'll get used to it by the time we get home again," Dorothy assured her, allowing the geologist to put the bandage on her arm.

"Kind of silly if you ask me," Lily said, following Dorothy back into the lounge where the men were trying not to pay attention. "I'm not having sex on this mission."

"Well, regardless of who is or isn't having sex, we have to be protected." Dorothy sat next to Mark and removed a piece from his wobbly Jenga tower. "Depo Provera is NASA's choice for this mission."

"It's not 100% effective," Lily said. "There's always a failure rate. They just chose Depo because they don't want us having our periods. Too many supplies to bring for a two-year mission. Although they're kidding themselves if they think I didn't bring anything for backup."

Dorothy smiled, suspecting the same thing. "Well, you know that extra cargo space is more money. Anything we don't have to pack is better."

"Maybe if we'd left the dartboard behind, we could've packed more things." Mark tipped the tower over with an ill-calculated removal.

"I don't know. We may learn the hang of that dartboard yet," Dorothy said, looking at where it was still placed on the wall.

"How effective is that stuff, anyway?" Mark asked casually, nodding in the general direction of the lab.

"Effective enough," Sam mumbled over the top of his book with a slight smile. He was consistently amused that even after three months, Dorothy and Mark were still hanging in there. The halfway point of the mission was upon them and the hab was growing smaller every day.

"It's about as effective as sterilization," Dorothy said. "Nothing's 100% effective except abstinence."

"Which we all practice quite religiously." Lily rubbed her arm.

"What would happen if someone got pregnant?" Mark asked.

"Why, Mark, did you miss your period?" Dorothy asked, smirking.

He gave her an annoyed look.

"Well," Lily said thoughtfully, "it's too dangerous to induce an abortion in flight."

Dorothy nodded. "The complications can be very serious. It's not something that we could risk." She wrinkled her brow, wondering how something like that would pan out. "I suppose the woman would have to carry to term."

"But there have been no studies about the effects of reduced gravity on pregnancy." Lily looked concerned.

"That would be a study, then, wouldn't it?" Sam said dryly.

"The baby would be the first Martian." Dorothy grinned. "How strange."

"Yeah, well, it's not exactly something I think we should experiment with," Mark said uneasily.

"Don't worry, Mark," Sam said, shaking his head. "Nobody's going to be getting pregnant."

"I'd be worried about the health of the mother," Mark said, trying to seem like he had no one in mind. "Who knows what complications could arise with giving birth on Mars?"

Dorothy looked over at him. Sometimes he surprised her. He looked at her and smiled.

"I think I'm going to head back to my room and take a nap," Lily said, standing. "I'll be back for supper."

Dorothy sat down next to Mark. She leaned against the back of the couch and looked at him. Maybe he wasn't such a jackass after all. She allowed herself to entertain that possibility as he studiously examined his wobbly Jenga tower. "Hey," she said, just as he was trying to remove a difficult piece. He froze mid-motion and looked at her. "Sorry," she amended. "But do you want to go into the other room and play cards?"

He smiled at her, and the long-standing silence was broken. He left the Jenga tower as it was and dusted the cards off. They hadn't touched them since the evening of Poker several months before. She led him into the back room, and he touched the small of her back as he guided her through the open door. The action didn't seem strange at all. It felt almost expected. They sat on the floor to play a game of Blackjack.

Sam continued to read as Dorothy and Mark drifted out of the lounge. When he was alone, he pulled out his laptop and navigated to a saved file. He scratched his beard and stared at the screen in front of him before beginning to type. He had never done any creative writing in his life before, but after about a week of keeping a log, he decided that he wanted to try something different. Thus, Sam had started writing a novel.

He didn't want his crewmates reading it, so he kept it secret. He only wrote when no one else was around. He was no novelist, but something about the trip brought out his creative spirit. With Lily asleep and Dorothy and Mark bonding over cards, he contentedly typed away. There were at least a few more hours to dinner.

Wednesday, 14 February 2008

"Happy Valentine's Day."

Dorothy blinked sleepily as she woke up and looked around, disoriented. She finally focused on Mark standing at her bedside with a laden tray. "What are you doing?" she asked, yawning.

"I'm bringing you breakfast in bed," he answered, setting the tray across her lap and pulling her desk chair over to sit beside the bed. "For Valentine's Day."

"Thanks," she said, sitting up to dig into the meal he had laid out for her. "This is wonderful."

Mark beamed. "Look, I'm doing something nice for someone other than myself. Aren't you proud?"

Dorothy smiled through a mouthful of toast. "Very proud," she said after she had swallowed. "There may be hope for you yet."

Mark put his stockinged feet up on the end of Dorothy's bed and leaned back a little. "I do my best," he said.

She had to admit he was being a perfect gentleman. He had been as good a friend to her in the past month as he had been a foe for the time before that. One game of blackjack and they had fallen right back into their old habits of joking around. She had pretended not to notice the way he looked at her sometimes, the way his eyes played about the curve of her shoulders, the way he made any excuse to touch her. It was easier to just try to withhold meaning from it all.

"So I heard there's a big Scrabble tournament today," Mark said. "The top four players in all of outer space are getting together in the lounge for some intense action."

She laughed. "Yeah, something like that," she said. "We haven't done much with Scrabble this trip."

"There's too much thinking with Scrabble," Mark said, shaking his head. "It'd be way too tough to play every day."

"For you, maybe," she teased with a grin. She took a sip of her orange juice. "I'm sorry I didn't get you anything," she said with a small shrug. "I didn't think we were going to do anything about it. I haven't celebrated Valentine's Day in about eight years."

"No time?" he suggested.

She nodded. "Yeah, that, and no date. But work keeps me fairly busy. There are always things to repair."

"Is that all you do?" he asked. "Are you really a mechanic?"

She shrugged noncommittally. "I do lots of things," she said. "Never really settled on just one field. I almost went to med school once, but that didn't pan out. Never been good at sticking to any one thing."

"Hence your love life?"

She stiffened visibly, then relaxed a little. It was only Mark. "Maybe," she said, then buried her expression by taking a bite of oatmeal.

"I'm the same way," Mark confessed, but paused in his speech and didn't elaborate. She looked at him curiously and saw that he was looking at something out of the corner of his eye. She had a framed photograph half-buried under a pile of papers at the foot of her bookcase. He reached over and pulled it out. "Is this you and your parents?"

"Yeah," she nodded. She finished her meal and set the tray aside. "I'm surprised you never noticed it before. It's from my high school graduation."

"Old picture." He smiled. "What happened to them?"

"Plane crash." She pushed herself further upright in bed and folded her legs beneath the covers.

"I'm sorry," he said, mumbling a little and looking back at the photograph. "I didn't know."

"No, it's okay," she said, smiling. "It was a long time ago." She got out of bed and took the picture out of his hands to set it back on top of the bookshelf. She looked down at it before turning back to him. "I should shower," she said. "It's my day. I've been looking forward to it."

"Okay, you do that," he said, picking up her tray. "I'll clean this up for you."

"I miss breathing fresh air." Lily looked up from her tray of letters as Mark put down the first word of the Scrabble game. "Is that affecting anyone else lately?"

"Not until you mentioned it," Dorothy said. "But I understand where you're coming from. It does always smell a little bit like a hospital when I open the door in the morning."

"Or it smells like Mark," Sam said casually, adding "caustic" to the board on Mark's word "tram" and taking six new letters.

"I resent that," Mark replied, faking indignation. "Dorothy and I don't even play for showers anymore."

"Thank God for that," Dorothy said. "I was taking so many showers, I didn't quite know what to do with myself." She smiled and put "class" down. Lily diligently tallied up the points and added them to Dorothy's section of the scorecard.

"We won't be able to smell fresh air again for another two years," Lily said gloomily. "It'll all be recycled on Mars, too."

"At least it'll be new recycled air, though," Dorothy amended, trying to be hopeful as Lily took her turn with the Scrabble board.

"Hey, I don't think you gave me the right number of points, there," Mark said, pointing to the scorecard. Lily narrowed her eyes.

"I certainly did," she snapped. "Count them yourself."

"But I play first so my score's doubled," he returned. "You only gave me points for one."

"Is that the rule we're playing by?" she asked, tapping her fingers on the tabletop.

"Yes, I'm afraid he's right," Dorothy said.

Lily neatly erased her previous score and wrote the new one in. "Better?" she asked.

"Yes, thanks," Mark said with a smile.

"It's hard to believe we've been out here for four months now," Dorothy said to break the tension.

"For you, maybe," Sam replied. "I'm going to go crazy if I don't get out of this hab soon." He took a deep swig of ice water. "There's only so much to do."

"Well, I have cabin fever, too," Dorothy amended, pausing to take her turn, "but I don't mind it so much knowing we're more than halfway there." She looked at her tiles as the game continued.

Sam put down "ensnare," using up all seven letters and getting a fifty-point bonus.

"I suppose so," he said warily. "But this tuna can may be the death of me yet."

By the time the letters had run out about an hour later, Sam had won the game by a very healthy margin. "Why don't we play this game more often?" he asked with a grin, scooping the letters back into a pile. "For a mechanic, I seem to have a much better grasp of the English language than any of you."

"Oh, put a sock in it, Lessing," Dorothy said, smiling and tossing her leftover "Q" good-naturedly at him. "Do we want to play again or is this it?"

"Well, this is our third game," Sam said, "and I have beaten all of you every time. Would anyone like to lose again?"

"No, I think I've had it with losing for the evening," Mark said, pushing up from the table as they finished putting the pieces back in the bag.

"Me too," Lily said. "I'm going to do inventory of our supplies."

"Sounds fun," Dorothy said dryly. "I'll see you all later this evening."

Dorothy looked up from a book when there was a light rap on the connecting door between her room and Mark's. "Come in," she said.

"Hi," he said simply, closing the door behind him and taking a seat on the desk chair. "Thought I'd come visit. What are you doing?"

"Catching up on some reading," she said mildly, holding up her book.

"You've read that already."

She smiled. "Yeah. It's one of my favorites."

"I saw you carrying it around back in November." Mark got up from the floor to sit on the bed. He brushed her hand gently with his to take the book from her. "*Ender's Game*. I love this book."

"It's great," she agreed. "This is my third time reading it."

"Do you have the rest of the series?" he asked. She shook her head "no" in reply. He got up and disappeared back into his room to reappear with three well-worn books in his hand. "These are the next three. They get a lot weirder, but I think you'll like them." He handed them to her. "Don't lose them, now," he admonished.

"Thanks," she said as he sat back down beside her. She took the books from him and set them next to her. "I didn't know you were a sci-fi reader."

"I thought it was a given in this line of work," he said with a smile. "Yeah, I dabble a little. I prefer westerns."

"You and your westerns!" she said, shaking her head. "I don't understand it."

Mark just smiled and leaned back against the wall. "So what are we supposed to do for the next two months?"

Dorothy shook her head again. "I have no idea."

Mark rested his hands across his stomach and looked up at Dorothy out of the corner of his eye. "Are you ever going to tell me about yourself?"

Dorothy sighed and lay down, propping herself up on one elbow. She was surprised when Mark moved her feet from the bed into his lap and began absentmindedly rubbing them with one hand. "What do you want to know?" she asked.

"I don't care," he said, gesturing with his free arm. "Tell me something."

Dorothy smiled and reflected. She hadn't had a foot rub in so long.

"Well," she began cautiously, "I was born in Illinois. My parents both worked at a car dealership, which is how they met. I was an only child. Umm...well, my childhood wasn't that interesting, but I did have a dog named Sassafra."

"Well that's interesting," he commented with a smile. "What kind of dog?"

"Beagle," she replied. "Fat, fat beagle. She used to roll down slopes all the time because she'd lose her balance."

Mark laughed.

"So yeah, anyway, I went to school, yada yada yada, graduated high school." She looked over to her left and seemed to stare fairly intently at the opposite wall. "The summer

after my Freshman year of college, my parents died in a plane crash." She looked back up at the ceiling and held her hand up to look at her fingernails. "It's never something you expect. Their life insurance paid for me to get a small apartment in the area and paid for the rest of my schooling, which was helpful of course, but it's not like I ever planned for it." She bit a tiny piece off the edge of her fingernail. "It's not like I wanted them to die or anything."

Mark didn't say anything, but he continued to look at her as she kept speaking.

"My aunt and uncle helped me out from time to time. I worked full-time to put myself through school and then got a few odd jobs. I worked two years as a medical assistant while I was in graduate school for electrical engineering. That's why I gathered so many skills along the way, I suppose." She folded her arms under her head and tilted her neck down to see Mark still rubbing her feet. "You're pretty good at that."

"Well maybe I'm a certified massage therapist," he replied with a smile.

"Really?"

"No." He grinned broader.

"I might have believed it," she said simply.

"Go back to your story," he said.

"Right. Anyway, after grad school, I landed a job doing some work with JPL. Grunt work, mostly, but I kissed the right ass and eventually got noticed by someone from NASA." She smiled wistfully. "I thought that was the end of all my problems."

"It wasn't?" he asked, feigning disbelief.

She raised an eyebrow and continued. "The rest is merely details, but I was in the right place at the right time and I applied for a position in the Ares project. Long story short, here I am."

"I see," he said, nodding.

"Well what about you?" she asked after a pause. "I mean, aside from the life story you told me over lunch before we left."

He laughed. "Do I really talk about myself that much?"

"You're getting better," she admitted. "But I still think you're your own biggest fan."

He shrugged. "Guilty as charged." He kneaded her toes between his strong fingers. "Well, my parents were both on the custodial staff at the local junior high school out in Munsonville, New Hampshire."

"Both?"

"Both," he repeated. "My mom stopped working right after she found out she was pregnant with me, and then they got married. She was 19 and he had just turned 21." Dorothy didn't comment, so Mark continued. "They couldn't really afford very good health care, I guess, and she didn't have the best obstetrician." He looked up thoughtfully. "We lost her when there were some unfortunate complications with the C-section. My dad worked two jobs to support him and me while I was growing up, and I took my first job at 14 to help pay the rent. I used to package syringes at a medical supplies company that had just opened up in the area. I didn't kiss the right ass, I suppose, because I had that same job for four years until I finished high school."

"What about your dad?" Dorothy asked.

"Drank himself to death," Mark said simply, an ease in his voice that belied his words. "Died at age 40 of cirrhosis."

"I'm sorry," she said carefully.

He shrugged. "It's not really an issue anymore," he assured her. "It's been more than fifteen years now. I can definitely look back without it bothering me. But after that

happened, I moved down to Florida, where I met you. I was awarded a full scholarship to the University of Florida for academics."

Dorothy suddenly felt guilty about accusing him of being such a braggart. "That's really impressive," she said.

Mark smiled. "Hell, you know I'm my own cheering section." He coughed and cleared his throat, then adjusted his legs a little. "My feet are falling asleep."

"You can lean down here," she offered, moving to the side a little. "So what happened then?"

He eased himself down next to her and propped himself up on one elbow. "Well, I told you the rest over lunch that time. I graduated with High Latin Honors and continued on to grad school in the area for biochemistry. After that, both Princeton and Yale offered me teaching positions. I took the one in Princeton, where I taught for about five years. I was recruited for NASA right out of that teaching job, so I moved back to Florida, and I've been there ever since."

"That's quite a story," she said, looking up at him. "I suppose it's a miracle you're even here."

"In many ways," he replied. "It's ironic, too. I always expected to spend my life living alone in some dusty professorial apartments somewhere."

"And instead, you're crammed into a tuna can with three people you barely know."

"Exactly." He thought for a moment, swirling one lock of Dorothy's hair around his finger absentmindedly. "No matter how tightly-packed we are, though, space is a really big amount of nothing." He was staring out the window. "Just emptiness, with no sign of life besides yourself."

"That's the hardest part for me, I think," Dorothy said. She exhaled softly. "Out here, there's too much being alone."

Mark looked down at her. She met his eyes, and they were both silent. At that moment, there were no words between them, and she didn't pull away as he slowly lowered his lips to hers.

His mouth was warm, inviting, tasting of the coffee he had drunk earlier and something heady and rich. It had been so long since she kissed a man. She curled her fingers around the back of his head to bring him closer. "I want..." she murmured against his lips. "I want..."

"Shhh," he murmured into her mouth, his fingers brushing over her collarbone. "It's okay."

She tugged at the bottom of his shirt and dragged it up over his head. "I want this," she said quietly, so quietly it was almost a whisper into his lips.

He nodded. "I know," he answered, and pulled her mouth back to his.

XVI

Thursday, 15 February 2008: 131 Days After Ares III Launch

Dorothy opened her eyes slowly, blinking to adjust to the light that was flooding her room. Her body felt heavy. She rolled over to one side and looked at Mark sleeping quietly next to her. She smiled wistfully and brushed her fingers across his lips before getting out of bed and looking for her bathrobe.

"Hmmm..." he murmured in his sleep, rolling into the place where her warmth had been. When he didn't find her, he woke up. "Dor?" he asked sleepily, rubbing his eyes.

"Hi," she said with a smile. He looked over. "What time is it?"

Dorothy looked at the clock on her wall. "It's almost 7."

"Too early." He rolled back onto his back.

She wrapped herself in the bathrobe and came to sit beside him on the bed. She leaned down and he wrapped his arms around her. "Are you okay with this?" he asked after a moment's pause.

She raised herself up on one elbow to look down at him. "Fine time to be asking," she said with a wry grin.

He smiled. "No, I mean...I don't want to mess things up or anything. This happened awfully quickly, and..."

She cut him off by placing a finger over his lips. "It's okay," she said reassuringly. "Don't talk about it." She looked over toward the other staterooms. "Do you think they know?"

"They'll find out eventually," Mark said, sitting up. His short hair had begun to grow out, and it was a bit tousled. He tried to flatten it down with one hand. "So what happens now?" he asked, looking up at her as she got back off the bed.

"We eat breakfast," Dorothy replied simply, and headed toward the kitchen.

"Sleep well?" Sam was already awake when Mark staggered into the kitchen after Dorothy.

Dorothy nodded as casually as possible as Sam looked back down at his book. "Good," he said, leaning back in his chair.

"What time did you get up?" Mark asked as he took the glass of orange juice Dorothy handed to him.

"I didn't go to sleep last night," he replied calmly. "I haven't been sleeping well these last few weeks, so I'm allowing my body to reach a state of exhaustion." He sipped from his coffee, not looking up from the book.

"Well that coffee won't help." Dorothy was mixing some powdered milk. She poured the watery milk over her cereal and carried the bowl into the dining area, where she sat down next to Sam.

"It's decaf," he replied, returning to his book. Dorothy could see the dark circles under Sam's eyes. He seemed paler than usual.

"You okay, Lessing?" she asked, giving him a light-hearted punch in the shoulder. "You don't seem yourself."

"I'm fine." He scratched his beard. "Just a little bit anxious for us to see land again."

"We all are," Mark said, coming and sitting down next to both of them. He swallowed his Vitamin D pill and grimaced. "I wish they had some sort of coating for those. They taste terrible going down." He took a long swig from his orange juice.

"We're on the home stretch, now," Dorothy reassured him. "Before long we'll be able to get off this hab and do some walking around."

"I know. The scenery in front of the treadmill isn't that spectacular." Sam turned the page in his book. "And outside the window, nothing ever changes."

"It's kind of creepy," Dorothy replied. "We should really do something about that."

"Do something about what?" asked a voice from behind them. Lily was emerging from around the corner. She looked she had been woken up by the talking.

"The constant nighttime outside. We need something else to look at." Dorothy looked toward the window where the stars were spinning eerily past them.

"I could take care of that," Lily said, yawning. "I need a project for today. I haven't written anything on my to-do sheet in ages."

"Do you guys want to plan a game session this afternoon?" Dorothy tried not to be distracted by the way Mark was casually rubbing her knee through her robe.

"No," Sam said firmly, setting the book down and finishing his coffee. "I'm so sick of playing games."

"Okay..." Dorothy said slowly. "Umm..."

"I think I'm just going to read." Sam got up from the table and lumbered back toward the bedroom with a book under his arm.

"What's wrong with Sam?" Lily asked.

"I'm not sure," Dorothy answered. "Apparently he hasn't been sleeping lately."

"He'll get over it," Mark assured. "You can only stay awake for so long."

"That's true. I haven't been sleeping well lately, but I had an excellent night's sleep last night." Lily went into the kitchen. She finished the orange juice and removed another can of concentrate from the freezer to thaw.

"Maybe I'll watch a movie today," Dorothy said, looking toward the DVD cabinet. "I haven't watched anything in almost two days now."

"So is the verdict in? Have we watched everything we own yet?" Mark looked over into the living room. "It sure seems like it."

"I think so. Maybe there are a few left." Lily took her own Vitamin D capsule. She grabbed a granola bar out of the cupboard and disappeared back into the bedroom without any explanation.

"So...what now?" Dorothy asked, turning toward Mark. "Are people avoiding us?"

"I'm not sure, but I don't really mind if they are." Mark finished his juice. "I wish we had some fruit. I could really go for some strawberries. I don't know why...I just have this craving."

"Well, we have strawberry jelly."

"It's not the same." He brought his glass to the kitchen and rinsed it in the sink. "I get my biweekly shower today. Pretty exciting."

"Indeed. I don't get mine for another two days now."

Mark grinned. "Want to share mine?"

Lily settled down on the floor of her stateroom with a sketchpad and her art kit. She had taken a few rudimentary drawing and painting classes back in college, and it remained one of her favorite hobbies. She put a Bee-Gees CD in her stereo and hummed along to "Cucumber Castle" as she pulled a colored pencil from the box.

She didn't really understand what the difficulty was in this trip. There were always things to get done. She kept her part of the hab clean, exercised daily, and maintained her field log of the trip. When there was nothing to work on, she reviewed the mission plan and the exploration schedule. She watched a lot of movies, played board games with the rest of

the crew, and had some time each day to read. But when she found she was getting short-tempered, she preferred to draw.

Lily looked up at the walls of her stateroom. She had basically wallpapered them entirely with drawings. The rest of the crew never saw her room, so perhaps they didn't know. She hung portraits of her nieces and nephews, landscape scenery, and animals and plants of the Mojave Desert wherever there had been bare wall. She had most of the Desert drawings on her ceiling so she could look at them when she was awake in bed. Two weeks of insomnia had prompted her to move them there from the wall.

The Mojave Desert was one of her favorite locations. She had traveled there on a geology expedition and fallen in love with the area, returning to it almost every spring.

A new song came on. She sang along, bobbing her head a little. "Caroline...Fallen Angel...Caroline...oh oh oh, oh oh oh..." She wished she could paint, rather than draw, but the smell would be too strong for the enclosed area. The colored pencils didn't have the same effect on the eye that paint did.

Continuing to sing, she drew a new pencil out of the box and put it to the sketchpad.

XVII

Friday, 7 March 2008: 152 Days After Ares III Launch

"One month left!" Dorothy pulled the "32 days" off the tear sheet they had designed. "Thirty-one days until we enter Mars orbit."

"We'll have to take these off the windows soon," Sam said, tapping the drawing that was covering the glass. The one they had hung in the living room window was an underwater scene, fish and seaweed frozen in suspended animation.

"We have a broadcast today," Dorothy reminded them, looking at the calendar. "We'll be getting a video of questions from NASA to answer in video that they can edit into tonight's news broadcast."

"When should we be getting that?" Lily asked.

Dorothy looked at her watch. "In about an hour. Guess we had better put our official clothes on."

"So in one month, we can expect to enter Mars orbit. After a week there, we'll land on the surface." Dorothy switched off the recorder. "What's the next question?" she asked Lily. Lily pushed play, and their interviewer began speaking again.

"What are some of the things you hope to accomplish while on the surface, and which are your priorities?" The man on the video straightened his tweed jacket and leaned forward toward the camera with interest.

"Lily, do you want to handle this one?" Dorothy asked.

"Sure," Lily settled back after pausing the interview video. "Recording in two, one..." she warned.

"Excellent question, Jim," Lily said. "We'll first of all be setting up a greenhouse. But one of our most important tasks while on Mars is to search for water. This will most likely be found as frost on the surface, but we will be searching for areas of geothermally-heated subsurface water as well.

These areas are also areas where we can expect to test for the presence of microbacteria. If life in some form exists on Mars, it will most likely be found in the heated areas below the surface."

"If I can add something," Mark said, "These geothermal areas are amazingly beneficial to continued exploration on Mars. Not only could they be a source of water and even Martian life, but they also will provide an energy source that can fuel the other Ares missions."

"And cut," Dorothy shut off the recorder. "Next?"

Lily pushed play, and Jim began speaking again.

"How is it living in space?" he asked. "What's your life like while travelling?"

Sam took that question. "Well," he said, looking around, "We have a lot to keep ourselves busy. We have a full library, DVD collection and board games, in addition to an exercise room and whatever we each brought with us. It certainly gets boring, but once we get to Mars there'll be plenty to keep us busy." He forced a smile. "That'll only be a few weeks more."

They switched back to Jim. "Is it difficult to know how far away you are from Earth? How is the isolation?"

Dorothy smiled as they recorded. "We try not to think about that, Jim. But with four people in an apartment smaller than any of us have ever lived in before, let's just say it doesn't seem very isolated at all."

"That's it," Lily said. "Cut. Now we need to send this back, and wait to see if they need anything else from us." She transmitted the video back to Earth with a few keystrokes. "It feels so weird to be in these NASA suits." She smoothed down the navy jumpsuits. "I've been living in T-shirts."

"Well it's PR day, so none of that. We have to look professional." Dorothy unzipped the high collared jacket down to her white tank top. "At least while we're on-screen."

"I'm pretty excited about my family seeing this," Lily said, looking as impassive and non-excited as usual. "We have only been exchanging pictures so far."

"We'll be the top story on the news, I hope," Mark commented. "I doubt anything more exciting is happening."

"It sure doesn't seem very exciting," Sam groaned. "I can't imagine anyone would really want to see us."

"We're a rare commodity," Dorothy said. "Four humans en route to Mars? People love us."

"There's a website on NASA where civilians can trace our progress." Mars settled back in his chair. "It's one of the most popular pages on NASA."

"Where do you get all this?" Sam asked.

"In my email."

"I never get email," Sam grumbled.

"You aren't on the right mailing lists, then," Mark said, shrugging.

"So when will we hear back from NASA?" Sam asked, changing the subject. "A little less than 45 minutes each way, right? So an hour and a half?"

"Well if they need anything, they'll have to film new interview questions, so I guess we should give them a few hours." Dorothy settled back against the couch with her orange juice. "In the meantime..."

"No board games," Sam objected loudly. "I'm still so sick of them I could spit."

"Well we haven't been playing around you for that reason," Mark replied.

"There's not a whole lot else to do," Dorothy said, looking around. "Now we really have watched every DVD we own."

"I'm sure you and Mark could find something to do," Sam commented offhandedly, raising one eyebrow without looking up from the book he was staring into.

Dorothy and Mark looked at each other. They both knew it was only a matter of time before everyone found out, but they hadn't expected it to be brought up in quite that way.

"That's enough of that, Sam," Lily said, giving him a gentle tap on the shoulder. "My alarm clock hasn't been working quite right. Do you mind taking a look at it for me?"

"Sure," he said, putting his book down and following Lily into the bedroom.

"I... umm..." Mark said, putting his hands into his pockets and rocking back and forth.

"It's okay," Dorothy interrupted, shaking her head. "It was going to come up eventually."

"I don't really know what's been with Sam," Mark said, looking around the corner to where Lily had taken Sam. "He's been nothing but miserable lately. At least he was cordial during the interview."

"He'll be okay. It's a response to the conditions. Irritability, disagreeable nature, general malaise. I think he's worried about the landing. This is his biggest part of the mission, and he knows that."

"Come on," Mark said, drawing her to him and kissing her. "Let's make some lunch and then we'll check to see if there's more word from NASA."

Elliott sipped from his cup of decaffeinated coffee and watched the pre-recorded television broadcast. "If I can add something," Mark was saying on the screen, "These geothermal areas are amazingly beneficial to continued exploration on Mars. Not only could they be a source of water and even Martian life, but they also will provide an energy source that can fuel the other Ares missions."

"So they look pretty good," Elliott commented.

"Yeah. They all seem to be holding up pretty well." Grace settled back on the couch. "Thanks so much for hosting this, Elliott. It's great to be able to all get together once in a while."

"Yeah, thanks," said Greg Holmes, another of the future Ares crew members. "This has been a lot of fun."

"They're speaking again. Shut up." Grace shushed Greg with a wave of her hand as Jim read off the next question.

They listened intently to the rest of the interview with the seven other people in the room: most, like Greg, were on the Ares team, but there were a few NASA officials on the ground crew that were taking their evening off to watch the broadcast in Elliott's living room.

After Dorothy had finished with the part about it not seeming like isolation, and the interviewer gave his farewell speech, the people watching with Elliott gradually began chatting again. Grace took a few crackers from the tray being passed around and looked at Elliott. "Is it just me," she asked, "or does Sam not look very good?"

"He doesn't look himself, you're right," Elliott nodded. "I think he's probably been under a lot of stress lately."

"But the rest don't look so bad at all." She bit into a cracker. "He seems to be faring the worst of all of them."

"Well, we'll see if he improves by the time they get to Mars."

"Speaking of improving..." Grace began, brushing her long black hair back over her shoulders. She blinked her almond-shaped eyes as she paused.

"I'm doing much better," Elliott smiled. "Thank you for asking. I've apparently been responding very well to treatment."

"Good, good. I'm so glad to hear that." Grace smiled warmly back. "So in another month, let me host the landing party, okay? I'll find a babysitter for Geoffrey and we'll have everybody back to celebrate the first people on Mars."

"Don't you think NASA will have something?" Elliott took another sip and finished his coffee. "I figured we'd have to be there."

"I mean for afterward," Grace corrected. "I don't think NASA will allow us to get drunk on their time."

Elliott laughed. "You may be right," he said. "Okay, it's on you. Before you leave tonight, try to get everyone's attention to announce it."

"Okay," she agreed, and touched his hand in goodbye as she turned to mingle with the rest of the group. Elliott had a wan smile on his face as he watched her leave.

VIII

Monday, 7 April 2008: 183 Days After Ares III Launch

"We've successfully achieved aerobrake into Mars orbit." Sam announced that phrase into the microphone and sent his words hurtling on a 45-minute journey back to

Earth. Dorothy squeezed Mark's hand as he whooped; Lily breathed a sigh of relief and walked into the living room. Sam wiped his brow and closed his eyes, giving thanks to the powers that be. As they watched, an immense load seemed to lift off his shoulders and he seemed almost back to normal again.

Sam went into the lounge to see Dorothy, Mark, and Lily pressed against the window, staring down onto the planet. Mars gleamed beneath the hab, a dusty red-orange jewel. She had been explored by rovers and probes but never by humans: they were to be the first. The hab spun silently past the communications satellite they had already located in orbit.

"It's beautiful." Dorothy's breath condensed on the glass as she whispered the words, looking down at the softly-colored planet beneath them. Mars was soft red and pink and orange with a swirl of what looked like cloud cover near the southern pole.

"Dust storm," Mark said, watching the cloud. "It's out of season. It should be gone within a day or so, I'd imagine."

Lily said nothing, her camera clicking away as she photographed the planet beneath them. She filled the entire memory card before setting the camera aside. "Hey, where did you leave the video camera?" she asked suddenly.

"There's one recording automatically from the hab," Sam said. "The external one is sending images back to NASA."

"I mean for us. I want a video of this." Lily disappeared into the lab and came out with the hand-held video camera. She pointed it out the window and watched the picture show up in the screen on the back.

"I think we're officially tourists," Sam said, peering down at the planet. "Look, Phobos and Deimos." He pointed out the two moons of Mars.

"So we'll be in orbit for what, a week?" Lily asked, panning the camera to record all of them.

"Yep. NASA's going to be checking to make sure all the readouts are correct and it's safe to land." Dorothy found that her hands were trembling. "I can't believe we're really here."

Mark nodded. "I know. It's amazing, isn't it?" He looked out at the stars. "It's a whole different world."

Saturday, 12 April 2008: 185 Days After Ares III Launch

"I need to get off this hab," Mark groaned, pacing back and forth around the habitation module. "I'm going insane here."

"We're all going insane," Dorothy returned. "We just have to be patient. We'll be down before you know it," she assured him. "Only two more days, you know. We can make two more days of life up here."

"Only if we're going to make history at the end of it," Mark said, looking down at the planet. He swallowed. "I feel so far from home," he said softly, so softly Dorothy barely heard it. She laid a gentle hand on his shoulder.

"We can make this home," she said to him. "This'll have to become home for us."

"I'm so damn sick of this place." Sam stalked into the room. "Is all this pre-landing crap really necessary?"

"Yes," Dorothy admonished. "Unless you don't really care about the safety of this mission." She took a step away from Mark. "We're all bored, Lessing," she said, a little shortly. "Let's just sit down and take a look at the mission plan. Mark, can you get Lily?"

Mark nodded and left the lounge. He knocked on the door of Lily's room.

Lily opened the door. "What's going on?" she asked, standing in the doorway.

"Dorothy wants us in the lounge to review the mission plan." He peered over her shoulder. "Did you do all those?" He gestured to the pictures on the wall.

"Yes," she stated, not inviting him in. "I'll be there in a minute." She was a little anxious; she hadn't shown anyone her drawings.

"Can I see them?" Mark asked, still looking.

Lily hesitated, then decided it really couldn't hurt. "Only for a minute." She allowed him to enter her room. He walked around. He stopped in front of a drawing of a boy and a girl.

"Are these your sister's children?"

"Two of them, yes." She put her hands in her pockets.

"Where are they now?"

"My sister's family moved back to Jamaica to be with my parents."

"You're from Jamaica?" Mark was surprised. "You have no accent at all."

"I'm second generation born in America. My parents didn't move to Jamaica until they retired. My grandparents emigrated to America right after they got married, so whatever accent I would have had has been lost from living here for so long."

Dorothy wondered where Lily and Mark were. Sam was munching on a granola bar, looking decidedly sullen.

"So, you still sleeping with him, Cooper?" Sam asked casually.

Dorothy stared. "I don't really see how that's any of your business," she said carefully, trying to keep her voice even.

Sam shrugged. "Whatever you think is good for the mission." He folded his arms and looked over his shoulder to where Mark had gone.

"I don't really know what you mean by that," Dorothy said slowly. "But I think that any sort of alliances within the crew are beneficial to the overall mission's success."

"Hey," Sam said, raising both hands defensively. "What you do behind the door is your business. I knew it was only a matter of time with you two, and I'm happy for you. But I expected that a smart girl like you would want some sort of a relationship. I never expected you'd be satisfied with just a casual affair." He took another bite from his granola bar.

Dorothy exhaled before speaking. "What makes you think we don't have a relationship?"

Sam shrugged. "I don't know. You tell me."

Dorothy shook her head. "I don't think we should be having this conversation," she said. She looked past him into the hallway. "Lily! Mark! Hurry up."

Lily emerged around the corner, Mark following close behind.

Dorothy straightened the pile of papers in front of her to hide the shaking of her hands. "Okay," she said, clearing her throat. "In two days, we land on Mars. We need to review our work for the next week." She turned to the first page. "Mark...you'll be setting up the greenhouse with Sam. Is that clear with you two?"

"Clear as mud," Mark said wryly, smiling and kicking back in his chair.

Sam nodded. "Got it."

"Lily...you and I will be setting up the solar panels. These tasks should both be finished by nightfall on Day One." She turned the page. "Day Two. Mark, you'll be setting up the plants in the greenhouse. Lily you'll be doing a basic geological survey of the immediate area surrounding the hab." Lily nodded. "Lessing, you and I will be confirming the wiring in the ERV and the rover."

"Roger," Sam said, giving a jaunty salute, seeming as if nothing was wrong. Sometimes he was impossible to figure out.

"Day Three will begin our explorations." Dorothy turned the page to the area map. "Lily, you and Sam will be making the first mission. Lily, this is your element. You know what we need to explore and what type of material you should bring back to the hab."

"Got it," Lily nodded.

"Day Four will be Mark and I. Day Five will be Lily and I, and Day Six will be Mark and Sam." Dorothy flipped to the next page of the pile. "Does everyone feel comfortable operating the robotic rovers?"

There was general nodding.

"Okay, then. So should we switch to the Martian calendar and time system today or tomorrow?"

They resolved to change clocks and calendars at midnight. After the impromptu meeting, Lily went back to her room. Mark followed. "Can I keep looking?" he asked. She nodded, more than a little surprised, and let him back in.

"So besides charcoals and colored pencils, do you use any other...uh..." he struggled with the word, gesturing with one hand.

"Mediums?" Lily supplied.

"Yeah. Mediums." Mark stood in front of a depiction of a sailboat.

"I like to paint better," Lily confessed, "but they need to be used in well-ventilated areas only."

"Ah." Mark thrust his hands into his pockets. "So...you like the desert?" He pointed up to the drawings on the ceiling.

Lily's eyes lit up and she sat down on her bed. "I love it. I spend a week every Spring in the Mojave desert." She pointed to one of her drawings above her head. "This is my favorite place to watch the sun set." She fingered the edge of the blanket and exhaled in a soft sigh.

He saw the sadness and changed the subject. "Hey, this is all of us!" A charcoal drawing near the closet caught his eye. It was the four of them playing poker. "When did you do this?"

She pulled a printed photograph from a neat stack of other papers. "I took this of the three of you last month, and then I added myself when I drew it." She smiled. "It's one of my favorites."

"Well maybe you can do one of all of us on the surface of Mars," Mark said with a grin.

Lily smiled. "I look forward to it."

XIX

Monday, 14 April 2008: Landing Day

Elliott watched the ship begin its descent out of orbit on the screens in the NASA control room. Their signal blacked out as the hab entered the upper atmosphere of Mars. The room held its breath, waiting anxiously as the first humans to reach another planet hurtled downward toward its surface. He crossed his fingers and hoped the aerobrake had deployed correctly and their descent would be slowed. He wondered if they would all make it, if they would be able to complete their mission, if any of them would return. His throat felt tight as he thought of himself out there. He squeezed his eyes shut.

It was difficult to remember that everything they saw had a 45-minute delay. The ship was either crashed on the ground already or it had landed safely and the astronauts were walking on the surface. Elliott felt the tension in the room: everyone knew the future of the space program would be forever changed by what happened in the next few minutes.

It felt like an eternity before the screens winked on again. Sam Lessing's tinny voice proclaimed victory throughout the control room and television screens all over the world. "Ares III has landed."

The room erupted. Ken Nguyen collapsed in his chair, exhausted and relieved. Elliott didn't hold back the tears as he hugged the other people sitting with him. Grace Fahey was clutching a baby to her breast and laughing hysterically in glee. Champagne emerged from hidden corners of the room despite specific orders that no alcoholic beverage was to be brought into the control room, and nobody cared. There was laughter along with tears and spontaneous bursts of cheering from personnel crowded there. Thousands of people had gathered outside the main building at Cape Canaveral to watch the landing on portable television screens and outdoor monitors, and at the word of success, had commenced celebrating. They formed a fluid sea of people surrounding the buildings. The message was broadcast in hundreds of different languages simultaneously to countries around the world. For that moment, it didn't matter that all four crew members were American. Race, ethnicity, nationality dissolved with the words "Ares III has landed." Four humans were on Mars.

"And that's it, people. We're clear." Sam exhaled and rubbed his eyes. The hab was settled neatly on the ground approximately three meters from the landing beacon. He turned off the microphone projecting to NASA and leaned back. "Well, what do we do now?" he asked.

"I think we make history," Mark said, walking quickly to the airlock. He removed his spacesuit from the storage chamber and began to step into it as the others followed his example.

"This mic working?" Dorothy asked into the helmet of her suit. The others nodded. "I suppose I can broadcast back to Earth, too."

"Roger that," Mark affirmed. "But only if you flick the switch here," he said, pointing to a spot on the controller. "They'll be able to hear whatever we say up here forty-five minutes later. No swearing. This will probably be broadcast for the next hundred years. Here, everyone turn your switch on now."

They climbed clumsily down the stairs to the storage level and sealed the airlock above them. The storage floor was packed with supplies, enough to keep them equipped for two years or more. Dorothy looked at her crewmates as she pressed the buttons to lower the ramp. She saw nervousness, apprehension, but most of all, joy. They were about to do something no one had ever done before.

The ramp lowered smoothly to the ground, opening a hatch into another world. They looked at each other.

"Someone has to go first," Mark said to Dorothy, and smiled. The others nodded. She took a deep breath and descended the ramp into the open air.

Dorothy walked out onto the surface and all the words left her mouth. Mars was a burnished sea of rust-red terrain beneath a cloudy rose-colored sky. The ground was the color of a desert sunrise, flame-colored red and orange and bolder than any place she had seen. It was hard for her to believe how cold the planet was, since it reminded her of a hot Arizona desert. The rocks that lay at her feet were dust-covered and tinged with that rusty hue that seemed to saturate everything in sight. She closed her eyes to remember her words.

"Here we step forward," she announced, "as one race of Humankind." She looked back at Sam, Mark, and Lily. "Here we step forward united, looking into the future, turning a page in history. Here we step forward into a new age."

She looked back at the others, and they nodded to her. "Go on," Mark mouthed. She took a deep breath and, with one step forward, Dorothy Cooper walked on Mars.

The other three crew members walked down the ramp. Mark stepped out first, then Lily, then Sam. The dust swirled up around them as they stepped out onto the planet.

"This is incredible," Mark said, looking around. Always the geologist, Lily bent down to pick up a rock and turned it over in her hands. Sam looked at her and said nothing, caught up in the moment.

"Elliott, I wish you could see this," Dorothy said, looking out so that her helmet camera could capture some of the images. She walked out a little farther and turned to see the hab standing tall on its supports. "Mission control, all of our equipment seems to have come through unscathed," she said, becoming mission commander once again. She turned to her left. "We're right near the ERV, exactly as planned. The homing beacon guided our landing perfectly." She punched a button behind a panel on the side of the hab that raised the landing ramp. "Come on, everybody," she said, gesturing for the other crew members to follow her. "Let's go check out the ERV."

The ERV stood silently on the Martian surface, awaiting their arrival. Dorothy opened it up and climbed inside. The ERV was smaller than the hab but had a similar layout. She went to the control panel. "Fuel production is complete. Everything's in order here. We should be fine once we need to take off again." She climbed back out and looked around her. "We'll double-check the wiring in here tomorrow. We need to get today's tasks completed before nightfall."

They went back to the hab. "Mission control, we're going to turn you off for now," Dorothy said. "Ares III over and out."

Same Day

"You got it?" Dorothy asked, helping Lily lift one of the large solar panels.

"Yes," Lily said, getting a solid grip on her end. "It's not heavy so much as it is bulky."

"I know," Dorothy agreed. "Let's get this over to the hookup." They carried the solar panel to the frame where the other panels were already in place. Together they locked the panel into its bracings.

"You go collect the next pieces," Dorothy directed. "I'll hook this up."

"Got it."

As Lily disappeared back into the hab, Dorothy connected the wiring between the panel and the frame. She confirmed the mobility of the directional brackets so they would be able to turn the panels remotely as needed. She stood back up as Lily arrived at the assembly site with a box of panel supplies. She set them out on the tarp they had laid down.

"We have everything?" Dorothy asked, kneeling next to Lily.

"Everything's accounted for, yes." Lily nodded. Together they fitted the reflective solar plates into the larger panel. "We're almost done with these," Lily commented. "I'll help with the greenhouse afterward if the guys haven't finished."

They gingerly transported the last panel over to the frame and locked it in. "I'll take care of this," Dorothy said. "Why don't you go check on the men?" She settled down to complete the wiring.

"How's it coming over here?" Lily asked, approaching the greenhouse structure. She raised the volume on her suit's speaker.

"Hi, Lily," said a voice in her headset.

"Mark, where are you?" she looked into the formless deflated lump, trying to identify which crawling figure was which.

Someone began backing out from under the structure. Mark stood upright at last. He looked at Lily, face flushed beneath the faceplate of his mask. He spoke into his microphone.

"Sam, you ready for inflation?"

"Ready," Sam replied.

Mark fired up the pump and stood back as air began to flow between the two outer layers of the greenhouse. Lily watched as it grew into a structure taller than a man and as wide as the hab.

"Okay, looks good," Sam said through the speaker. He was visible beneath the clear plastic since it had been inflated. "Should we set up the mud room now?"

"I'll help," Lily offered, helping them attach a separate plastic structure to the front of the greenhouse. As they inflated it, Dorothy came over.

"Nice job," she said. "It looks good. Why is Lessing still inside?"

"He's checking for leaks and laying down the flooring," Mark answered.

Dorothy tapped the double-layered greenhouse wall. Dorothy could see Sam zipping the last of the flooring into place around the circumference of the greenhouse. He stood up and came out into the short inflated hallway, zipping up the greenhouse behind him. He exited the little inflated mud room between the greenhouse and the outside atmosphere and zipped that door up behind him as well.

"Everything looks good, Cooper," Sam said. "The walls are airtight. The greenhouse shouldn't collapse or anything."

"We'll that's good," Dorothy replied. "Lily and I got the solar panels all hooked up and ready to go. That should cut back on our use of the stored fuel."

"Well that's it, then," Mark said. "It's almost dusk. We can get out of these god-awful space suits."

"I agree." Dorothy looked around her. "Looks like we're done for the day."

They tromped back up the ramp of the hab. It was much roomier in the storage area since they had removed several boxes of solar panels, the greenhouse assembly materials, and the bulky air pump. The next day they would unpack the rovers.

"It's nice to be able to get outside the hab," Sam said, slipping out of suit and hanging it in the storage chamber. "Makes coming back to it not seem quite so bad."

"Home sweet home," Mark groaned happily, stretching. "It's nice to get out of the suits, too."

Dorothy closed the airlock door behind them. She padded to the fridge in her socks and took a beer out of the back. "Would anyone else like one?"

"I'll have one," Mark accepted.

"Yeah, me too," Sam replied.

"Lily?" Dorothy asked.

"Okay." Lily shrugged. They kicked back around the table with their drinks.

"The work is much easier with limited gravity," Lily observed. "I can lift those panels easily, and back on Earth I never would have been able to."

"I agree. It's going to be tough to go back to Earth." Mark sipped his beer. "Tough to face reality again, too." He looked thoughtful. "I suppose things here don't have the same consequences that they do back on Earth."

"What do you mean by that?" Dorothy asked, sitting up a little straighter.

He shrugged. "I don't know. It's just that we live in such a capsule environment. We don't have to worry about the rest of the world."

Sam gave Dorothy a knowing look, and her heart twisted a little. She covered it by taking a deep gulp of beer and wrinkled her nose at the taste. It was a lot bitterer than she thought it would be.

"Anyway, forget me," Mark said, making a dismissive gesture with his hand. "I'm just waxing poetic. This whole 'being on another planet' thing is a little weird for me."

"It's weird for all of us," Lily admitted. "Speaking of weird things, can someone explain this calendar a little better to me?"

Sam stood to remove the calendar from the wall and set it in front of them. "I can do this. I spent a while going over it when I was having that insomnia period. Here on Mars, we're going by the signs of the zodiac for months, because the Mars orbit is elliptical and we have to divide it up by portions of this orbit."

"So where are we now?" Lily asked, leaning over to take a look.

"Well," Sam said, turning to the back of the calendar where the information was listed. "See, the year here is 669 Martian days."

"Sols," Dorothy corrected. "We have to call them sols so we don't confuse them with earth days."

"Well that'll get annoying," Mark said, taking a sip of water.

Dorothy raised an eyebrow at him, then looked back at Sam. "Go on, Lessing."

"Okay." He settled his chair again. "The year is set up so that the months are equated with whatever constellation Mars would be in, if we were looking from the Sun. So in the middle of each month, whatever month we're in should have its constellation directly overhead at midnight. Neat, huh?"

Even Mark was beginning to take an interest, and leaned forward to look.

"You know, Mark, Ken went over all this with us before we left." Dorothy smiled slightly.

"I don't remember," he answered. "I must've slept through that meeting."

"Okay, going on," Sam continued, ignoring the exchange. "We start each year with the vernal equinox, because that's what we do with every other planet. I don't know how that works. I'm not a planetary scientist; I'm an engineer. But as you see," he said, pointing, "that means the year begins with the month Gemini and ends with Taurus."

Sam settled back in his chair. "The Martian months all have different lengths. The shortest month is Aquarius, which only has 46 days, and the longest is Leo, with 66 days."

"I'm a Leo," Mark said with a smile. "How very exciting."

"So let's get back to this," Sam said. "Right now we're in Leo. It's Spring here, and it's the best time of the year weather-wise. The dust storm season will begin in six months in Capricorn."

"What about years?" Lily asked. "The Martian year is twice as long as the Earth year, so we can't use Earth years anymore if we're using Martian months."

"I was getting to that," Sam said, pointing to the corner of the cardboard square. "See, we started the year at 1961, because that's the first time we landed anything on Mars. January 1, 1961 is Gemini I, year I. There's a whole formula for it, and it's really complicated and nobody really cares. But at the end of it all, we're in year 26. It is 21 Leo 26." Sam settled back in his chair and sighed.

They looked at each other. "Okay, great," Mark said. "So now what?"

"We'll, look here," Sam pointed to the corner of the chart. "Here's the duration of our trip. We'll leave Mars on October 16, 2009, Earth time, which is 14 Gemini 27. We'll see 10 months of the Martian year and all four seasons."

"We should be finishing most of our exploring by the start of Capricorn to avoid the dust season." Dorothy flipped to Capricorn. "If the storms become bad enough that we have to stay indoors, we'll already have lots of samples to study."

Tuesday, 22 Leo 26: Day 2

"How's it coming?" Dorothy asked, walking into the greenhouse enclosure.

"It's coming well," he said through the speaker in his helmet. "I have most of these planted. The gloves make it difficult to work, though."

"These are tighter than gardening gloves," she said, coming over and planting a few seeds in their pots. "It can't be that bad."

"Well, I do all my gardening without gloves," he said.

She was surprised. "You garden?"

"Of course I garden," he said, looking over his shoulder at her. "Why, do I look like I'm not a gardening type of guy?" He smiled when she didn't answer. "Can you get another bag of soil out of the hab?"

"Sure," she said, leaving him and walking across the rocky ground to the hab. She pushed a button to lower the ramp and climbed up onto the storage deck.

"Let's see..." she said to herself. "Soil...soil...oh yes, right over here." She opened a crate and removed two bags of vacuum-sealed potting soil. She carried them both with ease thanks to the lowered gravity. Dorothy clomped down the access ramp and pushed the button to raise the ramp behind her.

"How are these?" she asked, coming into the greenhouse again.

"Perfect," he said and pulled one open. He struggled a bit to open the bag by hand. He filled a row of tiny cups with soil and set the bag aside. He moistened the soil in all the empty cups.

"What are you planting?" she asked, coming over to see.

"Tomatoes," he said.

Dorothy laughed. "I started salivating when you said that. You have no idea how I'd love a fresh garden tomato right now."

He smiled through the visor in his suit. "Me too," he agreed, sprinkling a few of the tiny seeds onto the moist soil. "I have no idea how these will grow, but it'll be interesting to find out." He used a wooden block to press the seeds down, then sprinkled another layer of soil over the seeds and moistened it. "So, taking a break from the ERV inspection?" He flattened the soil again, then moved on to a new row of cups and seeds.

"Yeah. Lessing's looking into some of the launch mechanisms, and I'm making sure all you guys are on schedule." She gave him a playful shove. "Those tomatoes had better be planted by dusk."

"Aye aye, Captain." Mark saluted. He gave her a smile through his faceplate.

"Hey, can I ask you something?" Dorothy asked hesitantly, wishing she had pockets to put her hands in.

"Sure," Mark said, standing a little more upright. "What's on your mind?"

"Well what do you think about..." her voice froze before the word "us." She wanted to ask, wanted to confirm that Sam didn't understand their relationship, but she couldn't do it. She realized she didn't really want to know. "...dinner?" she finished weakly. "I'm not sure what to make."

"I'll make something," he said, looking puzzled. "Were you really going to ask about dinner?"

"Yes, of course," she answered quickly. "I think I'll go test the rover." She hurried out of the greenhouse.

Dorothy woke to someone slipping into bed beside her. "What time is it?" she asked sleepily.

"It's only ten. You fell asleep pretty early tonight." Mark brushed a long red curl off her forehead.

"What are you doing here?" She sat up on her elbows and blinked a few times, trying to make out his face.

He smiled, suddenly a little unsure of himself. "Well...I thought you might like some company."

"I'm nobody's booty call," Dorothy murmured, flopping back onto her back. Mark smiled. She was obviously still waking up.

"You're not a booty call to me," he whispered, brushing her forehead with his lips. He wrapped both his arms around her.

She looked into his eyes, a little more awake. "Okay, then," she answered, willing herself to believe it.

"We won't do this if you aren't okay with it," Mark said, pausing.

She nodded. "I know. I do want this." *But maybe I want something more,* she thought, but the words didn't pass her lips.

Mark took Dorothy's hand and placed it gently along the side of his face. She felt the rough brush of stubble against her palm and the sharp angle of his jaw. His lips were soft beneath the brush of her thumb, and his eyes were dark and liquid. "Let me make love

to you," he whispered, running his hand along the bottom of her ribcage and over her stomach. "Let me love you."

Dorothy smiled and closed her eyes. Did anything really matter here? This wasn't Earth. The rules were different. Maybe just believing it would be enough.

"Okay," she said simply, and drew his mouth down to hers.

42 *Leo 26: Day 21*

The Juventae Chasma loomed before them, rock cleaved as if with a giant's hammer. "This is remarkable," Lily said, looking out the front window of the rover. She pressed both gloved hands against the glass as Dorothy drove them out to the crater's rim.

"Not bad," Dorothy said. "So we're looking for..."

"Friable Layered Deposits," Lily finished for her, unbuckling her restraints and hopping out of the rover before Dorothy could even turn it off. Dorothy climbed out after her crewmate as Lily continued talking. "FLD's for short. They're pyroclastic deposits from explosive volcanism. We're looking for evidence that the Tharsis volcanoes had explosive volcanism in their history."

"And we use the geologic record for this?"

"Exactly," Lily confirmed, sliding down the shallow outer edge of the chasm. "This is one of the places we expect to find these layered stacks." She found a flat place to stand and peered over the edge of the chasm. "A lot of what I'm looking for is going to be further down. Do you have the rappelling gear?"

"Okay, what do you have?" Mark leaned over Sam's shoulder. "How close are you to the edge?"

"Close enough," Sam replied, teeth pressed tightly together. "We aren't playing with remote controlled cars, you know. One wrong move and this rover goes right into the Valles Marineris."

"That's why you're driving," Mark replied with a smile. He looked into the monitor. "Turn the camera this way." He pointed counterclockwise. "Let's get a shot into the canyon."

It had taken a little too much time of Sam's careful driving to maneuver the robotic rover from the hab to the edge of the canyon, and his patience was wearing thin.

"Don't you have your own monitor you can be looking in, instead of having to lean over my shoulder?"

Mark leaned back. "Sorry," he muttered, pushing back to his own chair. "Didn't know it was that much of a big deal."

"Never mind," Sam said. He gently twisted the controls in his large hands, and the view in front of them shifted. "There," he breathed, settling back in his chair. "That's what I've come to see."

Mark leaned closer to the screen. Sam had raised the rover's camera up as high as it would go on its arm and angled it down into the canyon.

"Christ, that's amazing," Mark said, his face almost pressed to the monitor. "It's so...deep."

"Three times deeper than the Grand Canyon," Sam said, awe in his voice.

"And almost as long as the United States," Mark added. Sam tugged back on the controls to lift the camera up and pan to the right. "You can't even see the end of it."

"It's wider than we'll ever explore," Sam agreed. "So what do you think? Is this the place we should aim for when we come out here?"

"Looks relatively flat," Mark nodded. "I think it's a good pick." He tapped a few keystrokes into his monitor, and the view changed. "Let's see what the women are up to."

They could only see the back of someone's space suit and a few meters of rigging tethered to some rocks. "Looks like Lily's rappelling," Mark said, tapping the glass. "If you squint, you can see that it says 'Cooper' on the back of that suit."

"Yeah, I can tell," Sam nodded. "Hope Lily's found what they came for."

"I hope so, too," Mark agreed.

"Oh, look!" Sam pointed. "She's coming up."

They watched as a small suited figure climbed up over the edge of the chasm and got to her feet. She was carrying a white sample retrieval bag over her shoulder. Lily opened the bag and handed the contents to Dorothy.

"They're blocking the camera." Mark tilted his head as if he could see around Dorothy's back. "But it looks like they got something."

"Great," Sam said. "I wonder if they got a sample of FLD's."

"We did," exclaimed a tinny voice from the speaker, making them both jump. "You two were talking about us, I assume?"

"Roger that, Lily," Mark said with a smile. "I must've hit the broadcast switch."

"This might be what we're looking for," Dorothy said through the speaker. "We'll have to do some tests, but I think we've got what we need from here."

"Glad to hear it, Cooper," Sam said into the microphone. "I think you two should head on home."

"Roger that, base," Lily said. "We're on our way."

Thursday, 1 Scorpio 26: Day 171

"We've still got nothing." Mark collapsed back in his chair with a sigh. "We've been here almost three months and we haven't found any water-rich spots of geothermal activity."

"Take it easy," Lily soothed. "We have quite a few more months to go."

"I know," Mark said. "But I was really hoping to have found something." He turned the calendar to the next page. "It's already Scorpio. The dust storm season will be starting up in two months, and who knows what that'll do to our explorations."

"Isn't it enough for you that we've confirmed the existence of the cryosphere?" Lily watched Mark guided the robotic rover over the uneven terrain. "We know now that there's frozen water under the surface, and that's more than we knew when we came here."

"That's true." Mark guided the rover around a large boulder. "And we've only checked out about a third of the spots that we were hoping would have geothermal activity. We still have a few dozen more."

"That's the spirit," Lily said, patting him on the back. "We'll find liquid water. Don't worry."

"Why are you so confident?" Mark asked.

Lily shrugged. "Someone has to be. Dorothy is out in the field, so I have to be the resident optimist of base camp." She smiled and took a sip of water.

"What did you say?" Dorothy's disembodied voice echoed in the room.

"Sorry...I must've hit the broadcast switch again by accident." Mark flipped it off. "I'm telling you, I bump that stupid switch all the time. We really should tape it down or something."

"Hey, guys?" Sam asked through the speaker.

"What is it, Sam?" Lily asked, leaning closer to the microphone.

"I think we're about ready to head back. The sun's starting to go down."

"Yeah, shit, I lost track of time." Mark looked up at the Martian chronometer on the wall. "It's going to be dark soon."

"All right then. Field crew, over and out."

Sam switched off his broadcasting switch. "Come on, Cooper. I think we have enough samples."

"This is andesitic basalt," Dorothy said, standing upright as she tucked a wrapped sample into her collection bag. "Lily will be thrilled that we found this here. Maybe we'll get a little more insight into this planet's volcanic history if we know about the composition of the igneous rock." She hopped into the rover and strapped in. Sam climbed into the driver's seat and pulled the canopy closed. He pressurized it, and they removed their helmets.

Sam started the engine as Dorothy checked the Land-Based Positioning System, a network of three sensors that had been positioned by robotic rovers on the perimeter of the exploration area before their landing. The sensors were used to triangulate their position.

"What does the LPS say?" he asked. "Are we good to go?"

She nodded and pointed over the horizon. "Head that way."

They bounced along in silence for a few minutes, the stillness only broken by occasional beeps from the LPS when they needed to change direction. "That thing's amazing." Sam nodded toward the hand-held directional device.

"I know," Dorothy nodded. "I'd be lost without it."

Sam glanced over at her and smiled. "Cute." He turned back to face the horizon looming dusty-red ahead of them. "So...you, uh, think the mission's going well?"

Dorothy nodded. "Yeah. We're right on schedule." She looked down at the field log in her hands, then up at Sam. "Why, you don't?"

"I didn't say that." He turned 3° west when the LPS beeped accordingly. "I think we're finally getting used to this place." He rubbed his gloved hands against the steering levers. "Nice that everything's working well, I suppose..." His voice trailed off, and Dorothy could see him looking up at the darkening sky as they drove along.

"Turn the lights on," she directed.

He smiled. "Seems a shame to disrupt the dark."

"Yeah, well, it would be a shame to disturb a big boulder, too." She leaned over him to flick the switch herself, and the land in front of them was flooded by light. "There. Now concentrate on the road."

"Yes, ma'am," he murmured, still lost in thought. When they had travelled for almost another fifteen minutes in silence, he piped up again. "Hey, Cooper?" he asked.

"Yeah?"

"Do you ever think that maybe we shouldn't disturb this place?" Sam scratched his bushy beard. "You know, live and let live?"

"How do you mean?"

"Well, you know. All our rovers, and landing equipment, and all that...we really just clutter everything up. We've been here for a few months now, and I keep thinking that I'll stop feeling this way, but I really don't. Mars was fine before we got here. Did you ever think maybe this planet doesn't want us here?"

Dorothy laughed. "That's ridiculous, Lessing. The planet doesn't want anything. It just...is."

"I suppose so," he said hesitantly as the hab became visible on the horizon.

In the last remnants of sunlight, the hab and the ERV cast lengthening shadows on the ground, pointing long, thin, ghostly fingers at the approaching rover.

Wednesday, 2 Sagittarius 26: Day 226

"And here we are again." Dorothy climbed out of the rover and stretched her aching limbs. "Another geothermal activity hunt."

"This one could be it," Lily nodded, removing her gear from beneath the rover.

Dorothy helped her gather the equipment. "Don't you think we'd be sick of this by now? So far, nothing but duds, but I always get so excited when we try a new one."

"Well, you know there's a lot at stake."

"And I'm never comfortable leaving Lessing and Mark alone at the hab. The whole thing makes me squeamish." Dorothy shook her head.

"Why do you think that?" Lily asked, opening a few collecting bags. "They're perfectly capable of operating the robotic rovers. I think they're going to set up some thermal sensors today."

"No, it isn't that." Dorothy wrinkled her nose, wishing she could scratch it through the face mask. "I just always get the impression that Mark and Lessing don't get along very well."

"Do you think Sam resents that you're sleeping with Mark?"

"No, I don't think that at all. Lessing's always been like a father to me." She knelt next to where Lily was powering up the drilling equipment. "But there's some emotion there that I can't quite put my finger on." She cleared some of the rocks away from the area and checked the sensors. "That's the spot, all right. Go ahead and start drilling." Dorothy switched on her transmitter. "Base camp, we're ready to drill."

"Roger that. We won't try to call you for another hour, then." Mark turned off the switch and settled back in his chair. "There. Do you want to drive, or should I?"

"I'll drive," Sam grimaced. "We're dealing with very sensitive equipment here."

Mark rolled his eyes as Sam sent the rover off to the North. "Right," he breathed. "Like they never trust me with multimillion dollar biochemical equipment."

"Not on my watch, they don't," Sam said without looking up from the screen. "You've fucked enough up on this mission," he said under his breath.

"I'm sorry, what did you say?" Mark asked, spinning in his chair. "What's that supposed to mean?"

"It means that I think maybe you've been a little careless with some very important things." Sam pushed the rover a little roughly over a steep incline.

Mark stiffened. "This is about Dorothy and I, isn't it?"

"So what if it is?"

"Listen," Mark said, "I don't know what the hostility is about, but it's really none of your business what we do."

"It's my business if you think you're just going to screw around with her and then drop her for something better once we get back to Earth."

"Yes, Sam, that's exactly it. Let's see if I've got it right." Mark spun angrily and set his jaw. "I actually don't care anything about her. I never have, and I probably never will. I've won her over with my charm; she's unable to resist me, and she can be my own personal fuck toy until we get back to Earth. Once I'm a hero, my options will be open, and I can leave her for the next best thing that comes along. I mean, what else am I supposed to do on Mars, right?" He tried to keep his voice calm. "That's really what you think I'm doing, isn't it?"

Sam paused. "I don't know what you're doing," he said slowly. "But Cooper and I go way back, and I'm not about to watch you hurt her for some cheap thrill." He skipped the rover over a small hill and bounced it along the terrain. "At least get a relationship or something."

"We have a relationship. What makes you think we don't have a relationship?"

"Well okay then." Sam eased off the rover a little. "I don't know. This whole stupid planet's getting to me."

Mark settled back, trying to lower his blood pressure. He grunted something and stood up. "I'm getting a drink."

"Hey listen, Mark..." Sam said, turning.

"Yeah?"

Sam scratched his beard. "I'm sorry I made some assumptions."

"Yeah, well," Mark replied, walking away, "maybe you should think about that before you go accusing other people of being living scum." He wished there was a door to slam as he stalked into the kitchen.

Dorothy was leaning over to help Lily position the drill when a voice clicked on in her headphones. She realized Mark must've bumped the broadcast switch again and was about to push the manual override when she caught what he was saying.

"I actually don't care anything about her. I never have, and I probably never will. I've won her over with my charm; she's unable to resist me, and she can be my own personal fuck toy until we get back to Earth. Once I'm a hero, my options will be open, and I can leave her for the next best thing that comes along. I mean, what else am I supposed to do on Mars, right?"

His voice was suddenly drowned out as Lily started the drill. She waved at Lily to stop, and the other woman turned off the machine. "What?" Lily asked.

"Didn't you hear that?"

Lily shook her head. "I turned on the manual override. What was it?"

Dorothy sank to the ground, swallowing. "Nothing," she replied, keeping her voice as steady as possible. "Go back to drilling." She leaned her head back on the rover and closed her eyes.

"Hey," Mark greeted her when they got back that evening. "Did you guys find anything?"

Dorothy slammed her collection bag on the table and didn't reply.

"No, nothing," Lily answered him. She hung her suit neatly in the storage closet and brushed it down to remove the sand. "It was another dud."

"Too bad." Mark went to put an arm around Dorothy, but she pulled away.

"What?" he asked. "What's wrong?"

"Nothing." She shook back her hair and grabbed her field log out of her bag. "I'm going to get some stuff written down."

"Aren't you going to eat?" Mark asked.

"I'm not hungry," she tossed back over her shoulder, turning down the corridor and vanishing into her room.

"What's wrong with her?" Mark pointed to where Dorothy had disappeared.

Lily shrugged. "How much have you two been exploring with the rovers? I need to know for tomorrow."

"I'll show you," Sam said, guiding her over to the lab and control room.

Mark hesitated. He wanted to follow Dorothy, to see what was wrong, but maybe she just needed some time to herself. He bit his lip and decided to leave her be.

By 9 that night, she still hadn't emerged. Mark knocked gently on the connecting door between their rooms. When there was no answer, he peered in. Dorothy was lying on her back on her bed, staring up at the ceiling. "Hey," he said quietly. "Can I come in?"

"If you want," she answered, not looking at him. He came in and sat beside her.

"Are you all right?"

"I'm fine."

He reached over to touch her forehead with the backs of his fingers. She flinched when his skin brushed hers. "What's the matter?"

Dorothy inhaled and closed her eyes. "I don't want to do this anymore," she said quietly.

"What?" Mark looked around. "Do what?"

"This. Us." She turned her head toward the wall so she didn't have to look at him.

"I don't want to do it. It doesn't work."

"What do you mean, it doesn't work?" Mark looked around, bewildered. "It's worked fine so far. We've been here months now, and it's still working."

"No, it isn't." She pushed herself up to a seated position. "It doesn't work. It's no good for the crew and it's no good for the mission. We should just forget there was ever anything between us."

"I don't understand." Mark leaned in. "What changed?"

"Everything changed, Mark." She spat the words at him. "I've been kidding myself to think that this was okay. The rules are different here. There's no one else to go to, so somehow we think it doesn't matter, and we can just do what we want..."

"Slow down," Mark stopped her. "You aren't making any sense."

Dorothy set her jaw. "What happens when we go home?" she asked. "You expect me to believe that it'll all be okay, and we can just pick up where we leave off?"

"We're not home." Mark shook his head. "We don't have to think about home. We can just think about this, and here, and we'll deal with home when the time comes."

"No, we can't." She flopped back down on her back. "We can't just pretend. I can't just pretend." She covered her eyes with her arm, and her words were muffled. "I can't pretend there's nothing after this. I can't pretend this means something that it obviously doesn't."

Mark swallowed, but he had nothing to say. She didn't love him. She had just been in it for the physical comfort. How had he missed that? "Well, I suppose that's it, then," he said softly, standing up.

"Yeah," she agreed, but she couldn't meet his eyes. "I guess that's it."

"I'll see you tomorrow, Commander." He walked into his room and shut the door behind him.

Dorothy turned her head away so she wouldn't have to watch him leave.

XXII

"I'm sorry to wake you, Sir, but we're having some trouble connecting to Ares III."

Ken Nguyen sat up in bed, suddenly awake, and flicked on his bedside lamp. He adjusted the phone on his ear. "What do you mean?" he asked.

"I mean we've started getting errors from the communications satellite. I think you'd better come down here."

Something in his tone made Ken's stomach turn. "I'll be right in."

Less than an hour later, he was leaning over the shoulder of a young woman to look at her computer screen. "So when did these reports start coming in?" he asked.

"About 3:30," the woman answered, pushing her wire-framed glasses back over the bridge of her nose. "Every terminal is reading the same thing. It appears that the satellite has lost Mars orbit."

"That's impossible." Ken shook his head.

"I'm afraid not, Sir."

The readouts from the satellite were unmistakable. "I don't understand. I need to speak to the engineers in charge of the design of this equipment."

"But that was years ago." She blinked up at him.

"I don't care; find them." Ken hurried back to his own terminal with a sick feeling in his stomach. For whatever reason, the satellite was losing orbit, and at the current trajectory would crash into the planet within several weeks. It would be six months before another satellite could set up orbit around the planet; six months that they would be out of communication with Ares III. He looked over to where the young woman was frantically making phone calls. He would have someone's head on a platter for this.

Thursday, 9 Capricorn 26: Day 284

"We have an incoming transmission." Lily called loudly enough to be heard by the rest of the hab. "I think it's important."

The others got into the lab just as the video was coming up. "I have some bad news." Ken looked worse than they had ever seen him; it looked like he hadn't slept for a week. "We're going to lose the communications satellite."

"What?" Dorothy asked, as if he could somehow hear her.

"I'm afraid the satellite has lost orbit. This is the last transmission I'm going to be able to send or receive before we lose contact altogether. The satellite's orbit has degenerated, and it's expected to crash onto the surface of the planet within the next few weeks. It should land in the Northern Plains, far enough from you that you won't be in any danger, but we will lose communication with you until we can put another satellite in orbit."

Ken ran a hand through his hair in his own nervous habit. "We'll be launching another satellite within the next two weeks on an accelerated Hohmann transfer, and it should enter orbit 180 days from then. Until that time, you are to continue operations as normal. Repeat, continue as normal. This shouldn't affect your mission as much as it will affect us back here on Earth."

"So they think," Mark snorted.

Ken looked behind him, then back toward the camera. "Off the record, we've determined the cause of the orbit loss is due to a malfunction in the navigational equipment. The company in charge of the satellite has denied any responsibility for this malfunction, but we still have our suspicions. There was very tight competition for this contract. It's possible they cut a few corners that shouldn't have been cut in order to get the contract." He sighed. "You're an excellent crew, and we trust that everything will be fine until we're able to reach

you again. I expect a full report six months from now. Godspeed. This is mission control, over and out." The video winked to black.

There was complete silence in the lab as they processed the message. "I don't believe it," Mark said. "I don't believe we're losing communications."

"Well, we are." Dorothy sighed. "You heard him. We're to continue as normal, and they'll put another satellite into orbit."

"Six months is a long time to wait." Sam scratched his beard. "We won't have access to any of our communications equipment. We'll be transmitting everything by ham radio, and that's only line of sight."

"We still have the LPS, though," Lily reminded them. "We'll still be able to explore."

Sam tilted his head. "I don't like the thought of that thing up there ready to crash down onto us."

"It'll be fine, Lessing." Dorothy shook her head. "It's not going to crash anywhere near us. Now, there's nothing we can do. Better get back to work."

"What a jackass," Mark interrupted, somewhat vehemently. "Here we are, working our asses off, and they didn't even have the courtesy to tell us about this when they first found out. They researched the cause of the malfunction and found the engineering company and everything. Don't you think this is something that could've been brought to our attention, say, yesterday?"

"What good would it have done?" Lily responded calmly. "We can't save the satellite."

"No, Mark's right." Sam straightened in his chair. "Dammit, he did this so we didn't get to respond to him. If we're really losing contact with this satellite, we can't send him a message back. He did this on purpose so he wouldn't have to face us!"

"Bastard." Mark kicked the console. "Leaving us stranded here for six months with no word from home? What the hell is that?"

"Hey," Dorothy said loudly. "Easy. I'm sure Ken spent this time trying to regain control of the satellite. There's no use getting angry. We can't do anything now."

Mark sighed loudly. "Fine. I'm going to go check on the damn greenhouse." He stormed out of the room.

Dorothy looked at Lily and Sam, but they were both silent and sullen. "I..." she began, but didn't have anything to say. "I'm going to go over our mission reports." She slipped out of the room.

"So it's just us, now, I guess." Lily looked out the window at the dusky red landscape. "Four of us and Mars."

"It's a sign." Sam looked around. "We shouldn't be here. We should've left this planet alone."

"Don't be ridiculous, Sam." Lily set down her clipboard on the counter and walked out of the room.

XXIII

"And in related news, NASA has just confirmed reports that they have indeed lost contact with the Mars exploration crew Ares III."

Elliott leaned closer to the television. "Did they just say what I think they said?"

Grace raised her eyebrows as the reporter continued.

"It seems that faulty wiring in the navigation system has caused the satellite to lose Mars orbit." The television screen showed a computer animation of the satellite slowly spiraling in toward Mars. "At its current trajectory, the satellite is expected to crash into the planet within the next few weeks. NASA officials report, however, that the crew is not in danger from this crash, even though little of the satellite is likely to burn up in Mars's thin atmosphere." They panned back to the reporter, who was straightening papers in front of her and looking characteristically earnest. "This satellite is currently controlling all communications with the crew. Ares mission control has reported that they plan to put another satellite into Mars orbit, and this satellite is expected to come online shortly after completing its six-month journey."

As they proceeded onto sports, Elliott turned off the TV. "I hope everything's okay. We should call Ken."

"He won't be in now. It's almost 6:30. We'll get in touch with him tomorrow. Don't worry. I'm sure it'll be all right. It's only a communications satellite. It's not like it's used for navigation or anything." Grace watched as Geoffrey crawled across the floor, babbling.

"Yeah, I know. You're right." Elliott smiled as he looked at Geoffrey. "He's getting so big."

"Yes. It's hard to believe." She traced his hair with a finger as he settled on the floor near her feet to play with one of his toys. "I got a call from his father today."

"Really." Elliott shifted a little in his chair.

"Yes. It's a good thing I withdrew from the Ares team when I did. I don't think I would be able to handle these divorce proceedings otherwise."

"I'm sorry it had to happen so soon after Geoffrey was born." Elliott smiled in sympathy. "I know it must have been tough."

Grace smiled and stood up, stepping over Geoffrey to walk to the kitchen. "At least I've had good friends along the way," she said, patting Elliott on the shoulder. "Watch him, will you? I'll make us some dinner."

Tuesday, 14 Capricorn 26: Day 289

"It's happening today. I can feel it." Mark settled next to Dorothy at the breakfast table.

"You said that yesterday, too." She scooped another bite of bland oatmeal into her mouth and looked at him out of the corner of her eye. They had been balancing on an uneasy truce since that night almost a month ago, but they still didn't know how to relate to each other.

"I really mean it this time." Mark sipped from his orange juice. "The satellite's going to crash today."

"Well, be sure to keep an eye out for falling satellites while you and Sam are out there today."

Lily came into the kitchen in her bathrobe, looking decidedly well-rested given the circumstances. "Good morning," she greeted them.

"Why are you so happy?" Mark asked.

Lily didn't answer. She poured a bowl of cereal. "Dorothy, did you mix a new packet of powdered milk?" She looked in the refrigerator. "I don't see any."

"I opened some rice milk for a change." Dorothy took another bite of oatmeal. "Lily, have you seen Lessing? I haven't seen him since dinner last night."

"I passed him on my way to the bathroom last night. He didn't look very good." Lily joined them at the table. "I think it's just stress. He's been out on the last three geothermal search missions."

"That's right," Dorothy confirmed. "And we had planned another for today. Maybe we should switch today and tomorrow's schedule. Why don't you two continue to do testing of the basalt compositions in the Juventae Chasma?"

"Okay," Mark nodded.

"Then Lily and I will test the next location for water tomorrow." Dorothy rinsed her bowl. "She's better with the drill than you are, anyway."

Mark immediately opened his mouth to come back with a sexual pun, but he realized it was no longer appropriate and let it go unsaid. He took another sip of orange juice.

"Are we ready to go out?" Sam came into the room dressed to leave. He chugged down a glass of juice.

"Just about," Mark replied. "We're going to switch the schedules for today and tomorrow. You and I are heading out to the Juventae Chasma. Dorothy and Lily will do the drilling tomorrow."

"Okay." Was it Dorothy's imagination, or did he look relieved? She knew that constantly drilling for water and being disappointed was a difficult job.

"Yeah, Lessing. You and Mark go out and test some basalt." She watched as they pulled on their suits. Sam climbed down the ladder first. "Hey," she said as Mark went to follow. He looked up at her. "You be careful, okay?"

Mark smiled. He pulled the helmet down over his head and headed out.

"Okay," Dorothy said, going into the lab where Lily was staring at the jury-rigged video feed for the robotic rovers. "How's it coming?"

"Good," Lily said. "I don't know much about ham radio, so you'll have to help me out here. How are we connected to this rover without the satellite?"

"Simple." Dorothy settled down in the main control chair. "This was an old hobby of Lessing's back when I was his engineering student. He taught me enough to get by. We're dealing with FSTV, or Fast Scan TV. It broadcasts similar to a video feed, but it's

done through radio lines. This circuit," she said, pointing to a part of the wiring, "amplifies the received audio and sticks it into the status line of our serial port. Our software determines the frequency by the time between zero crossings, then converts the tones to the images we'll see here." Dorothy switched everything on, and they were treated to a live feed of the surface of Mars.

"It looks exactly like the satellite images," Lily commented, sitting beside Dorothy. "I thought it would be grainy."

"No, we're working with the same recording equipment as before, but we had to set up a frame grabber on the rover to be able to transmit the signal in a way that the ham radio could pick it up." She began to maneuver the rover across the ground. "Of course, now we're restricted to line-of-sight work, but we may be able to set up a ham radio tower somewhere to give us better access to the area."

"Fascinating." Lily shook her head. "I never knew you could do that."

"Yeah, well, many people don't." Dorothy settled back in her chair. "I hope things go well with the guys today."

"They will." Lily leaned back in her chair. "They're both very competent."

"I'm worried about Lessing," she confessed. "I'm afraid the isolation's getting to him."

Lily said nothing, only shrugged and continued watching the screen. After a few minutes of watching Dorothy sampling the material from a crustal fracture, she spoke up again. "If anything happened out there," she began, "how would we get in contact with them?"

Dorothy paused. "Well, once they're out of our line of sight, we really can't. On the bright side, at least we don't have to worry about Mark bumping the broadcast switch anymore." She swallowed. No more conversations to overhear, thankfully. She didn't need to listen to that. Fortunately, Lily was too engrossed in the picture on the monitor to notice how Dorothy's hands were shaking.

"Watch the edge of that crater," Lily directed. "Try and get a sample of that material right there. I think that's part of the ejecta blanket."

"Just dust now, though," Dorothy said, sampling it anyway with the rover's spindly arms.

"But still worth collecting." Lily leaned forward as Dorothy collected the material tentatively. "Can you get a little closer to the edge? I think there may be a second layer right over the crater lip."

"I'll try," Dorothy replied, easing the rover forward. The image on the screen bumped a little as she reached the edge of the crater and tilted the camera down. "Easy," she said under her breath as she moved the rover closer to the lip. "Almost there... shit!"

The screen went haywire as Dorothy lost control of the rover over the lip of the crater. There was no sound, only images of the rocky cliff wall and the rose-red sky, then static. Dorothy pushed back from the controls angrily. "Dammit! Now who's going to repair that?"

"We'll have to go tomorrow," Lily said. "There isn't enough fuel in the manned rover to take them all the way to the robot. We'll have to come back here and refuel."

"There's a fuel dump north of the Juventae Chasma," Dorothy reminded her. "Maybe they could fill up there and then head out to the rover."

"I think it's a bad idea," Lily warned. "Those fuel dumps are only supposed to be used for emergency."

"There's another dump only fifty kilometers west," Dorothy said. "There's always at least that much in the tanks. If there were an emergency, they could use that reserve."

Lily raised an eyebrow, but didn't argue. "Whatever you think is best," she said quietly. "Would you like me to radio them, or should you?"

"Please radio them," she directed. "I'll get the coordinates."

Dorothy listened to Lily explaining the situation as she copied down the coordinates of where they'd lost the rover. She handed over the piece of paper, and the geologist read off the numbers.

"That's far," she heard Mark say through the speaker. "We won't be able to get in tonight until after dark."

"Well it needs to be taken care of." Dorothy, leaning over Lily's shoulder, spoke into the mic. "We can't do it tomorrow if we want to test for geothermal activity."

"Okay," Mark said hesitantly. "We'll take care of it."

Mark switched off the switch on his speaker. "Sam?" he asked. The older man looked up from where he was typing coordinates into the LPS. "Let's head out."

"There, I think that about does it." Sam spoke aloud to himself as Mark climbed back over the crater's rim.

"There aren't any more pieces on the ledge," Mark said, coming over to where the other man was working. "We have all of them."

"It was a pretty easy fix," Sam said. "All things considered. She should be ready to go."

"Jesus, it's late." Mark looked at his watch. "I'm starving. I can't believe we have to drive all the way back tonight."

Sam set the rover back on its treads and looked up at the sky. "It's beautiful out here," he said softly. "Don't you wish we could just stay?"

"No," Mark answered, annoyed. "I wish we could just get back home."

"What do you mean, home?" Sam stood up to his full height and pointed toward the sky. "You mean Earth?" He laughed, his breath fogging the faceplate of his helmet. "You have to be kidding. Earth isn't home anymore. They've abandoned us, don't you see?"

"You're ridiculous," Mark answered, turning back toward the manned rover.

"There's another satellite on its way."

"It won't get here until we're almost ready to leave. Until then, it's us and this planet." He squatted down next to the rover and brushed a thin layer of sand off the video recorder lens. "The planet's unhappy with us."

"Don't talk nonsense."

"You don't think She knows why we're here?" Sam's eyes were large and liquid in the absolute darkness of the Martian night. "She knows we want to tame her. That's why She's taking down our satellites, cutting us off, swallowing our rovers." He looked around. "She doesn't want us to make it home. If we don't go back, no one will follow."

"Sam," Mark said again, his voice shaking a little. "Sam, turn on the damn rover." The engineer was starting to frighten him with his superstitions.

"Maybe we should leave it off," Sam said. "Maybe She would like it better."

"Sam, just shut the hell up and turn on the rover!" Mark's voice was high, almost frantic. He rushed over and turned the rover's cameras on. "Base, do you read?" he asked into the microphone in his suit. "Base, test the rover."

"We read you, Mark," Lily's voice came back. "And we've regained control of the rover."

"Roger, Lily." Mark kept an uneasy eye on Sam, who was watching the small robotic rover maneuver about. "Base, we're on our way back."

Sam got into the rover peacefully, without any struggle, and had no expression on his face as Mark drove them both back to camp.

Wednesday, 15 Capricorn 26: Day 290

Mark had dark circles under his eyes from lack of sleep when he met Dorothy at the breakfast table. "We can't let him go out until he gets over this," he said, shaking his head. "I swear he's going to do something rash."

"Well what do you suggest, locking him in his stateroom? This is a very common occurrence in long-term missions." Dorothy sipped her coffee. "The crew develops hostile feelings toward the home planet, an 'Us vs. Them' mentality. You did the same thing yourself when Ken gave us the news last week. We're just lucky Lessing's the only one who's had this problem."

"Maybe we should sedate him," Mark offered.

"Don't be ridiculous," Dorothy spat back. "He's not dangerous. He's just developed an unnatural awe of the planet."

"Unnatural's the word, all right." Mark rubbed his eyes with his hand. "I'm not trusting him to drive the rover today. I feel like he'll push it right back over that cliff so the planet won't get mad." He sighed. "If he's like this now, what will he be like in Taurus, after another four or five months? I'm telling you, Commander, we need to keep him away from everything."

"Do you have to keep calling me Commander?" Dorothy asked. "For crying out loud, just because we're not having sex anymore doesn't mean you can't use my name."

Mark shrugged. "Whatever you feel comfortable with." He reached over and brushed past her hand.

"What was that for?" she asked, snatching back her hand, and he paused just before grabbing the sugar bowl that was slightly past her wrist.

"I was getting the sugar," he said calmly. "Is that all right?"

Dorothy opened and closed her mouth a few times, then pushed up from her chair. "I'm going to get ready to leave," she tossed back over her shoulder.

Mark watched her disappear around the corner, decidedly confused. Sometimes he had no idea what that woman wanted from him.

"They won't find water today," Sam stated matter-of-factly, idly twisting a Rubix cube in his lap. "The spot's going to be a dud."

"Why do you say that, Sam?" Mark asked, feeling distinctly like he was entertaining a five-year-old.

"Well, isn't it obvious?" Sam shrugged. "Until the planet is content with our presence, she isn't going to give us anything we need."

"Oh," Mark replied, easing the robotic rover up an outcropping of rock.

Sam leaned toward the screen. "Maybe you should adjust the amp," he commented, looking toward the FSTV circuit. "I'll bet I can get the signal a little stronger." Suddenly the engineer again, he fiddled with a knob or two on the circuit. Mark was surprised when the signal did suddenly become stronger and the picture clearer.

"Thanks," he said. "This is much easier now."

"No problem," Sam said, settling back into his chair. "I hope Lily and Cooper are doing well on their wild goose chase."

"Still nothing," Dorothy said, looking into the hole where Lily was removing the drill.

"Well at least we've been able to collect some water from the permafrost." Lily began disassembling the drill. "Not enough to really live on, though."

"Well, yes, but you're right. At least we've been able to conserve some of our water reserves by converting the permafrost." Dorothy helped her pack up. "This spot does have some more geothermal activity than the last few, however. I don't know how much of it we could use for energy, but we could definitely make use of it in some way."

"I agree." Lily helped her load everything back into the rover. "It's past sundown. I hope Sam and Mark are all right."

"Well, no one's called, so they must be fine." Dorothy climbed into the driver's seat of the rover and looked up to where the sky was darkening. "I wonder when the satellite will crash."

"The readouts Ken sent us said the orbit was only degenerating slightly, so we may have some more time yet." Lily closed the door and strapped herself in as Dorothy drove them toward home. "Well, another sol, right?"

Dorothy nodded. "Yeah. Another sol."

Friday, 24 Capricorn 26: Day 299

Dorothy sat upright in bed, heart in her throat. She had felt something. She wrapped herself in her bathrobe and knocked on the door to Mark's room.

"Come in," she heard, and the voice sounded awake. She opened the door and entered.

"Did you feel something?" Dorothy asked, coming over and sitting on Mark's bed.

"Funny you should mention it, but yeah...I think I did feel something." Mark scratched his head. "Well, something woke me up, anyway."

"Do you think it could be the satellite?" she asked. "I didn't think we'd feel it if it was as far away as it was supposed to be."

"Maybe it wasn't as far away as they thought," Mark said, pushing up to his feet. He looked out his window. "I don't see anything," he said, looking outside. "My room faces North, and there's nothing new on the horizon."

"I guess we have no way to tell," she said. "Unless the LPS picked something up."

"I don't know," Mark said, getting back into bed. "Maybe we should wait until the morning to check things out. You and I are both going out today, anyway."

"Right." Dorothy got back up. She suddenly felt awkward sitting on his bed with him. She was reminded of the times she slipped in during the middle of the night and watched him sleep, only to later slide in beside him. She was reminded of the times she thought they were making love, when they were actually just having sex. Her heart twitched in her chest. "I should go."

"Okay," he said, lying back down. There was something in her eyes, something more than he had seen in a while. "You could stay," he said softly.

She hesitated. He saw her hesitate, then something change in her eyes and he knew she wasn't his. "No," she said firmly. She turned and left, closing the door behind her and quickly getting back into her own bed. She wanted more than sex. She wanted someone who'd be there for more than a season.

She stared out the window for a long time before falling asleep.

"The LPS isn't working." Mark stated the obvious as they turned on the controls. "It can't find our position."

"What do you mean?" Dorothy looked over his shoulder.

"I think the satellite did crash last night. And I think it took out part of the North LPS sensors." He pointed at the readout screen. "Look: all three sensors are reporting active and sending signal, but we're getting no position readings from them. That equipment is on the North LPS sensor tower."

"But that's impossible," Dorothy said. "The satellite was supposed to crash way up in the Northern Plains."

"Well, yes, it was supposed to." Mark looked up at the sky and sighed. "What are we supposed to do now?"

"Well we have to repair it, obviously," Dorothy said. "But it's almost a sol's drive from here. We don't have enough fuel for that."

"What about the fuel dumps?" Mark took from the storage compartment a map of the exploration area, complete with the fuel dump locations. "Look, we already expended all the fuel at this site." He pointed to a dump near the perimeter of their search radius. "But here," he pointed, "is a location three kilometers West of that. If we go there, we'll use up about half of our fuel reserves. There's enough in the storage region to get us to the LPS

sensor and back to the dump. Providing we don't get lost, we'll then have enough to get home."

"And how are we supposed to get there?" Dorothy pointed toward the North. "We have no directional sensors, and we have a sol's travel both ways."

"We'll have to follow the sky." Mark looked up. "We need to see the stars to determine our latitude, but we can determine longitude day or night."

"I think we're getting ahead of ourselves, here," Dorothy said, holding up both hands. "Let's go back inside."

They went back to the kitchen table and laid out the maps. Mark explained the situation to Lily while Dorothy looked at the maps.

"Hey, Lily, where's Lessing?" Dorothy looked around and noticed that he wasn't there. "He would be better at fixing this sensor than I would."

"He hasn't left his room since last night," Lily said with a shrug. "I figured he was just reading."

Dorothy and Mark looked at each other. "I'll go check on him," Dorothy said, getting up and turning the corner. She knocked at Sam's door. "Hey, Lessing?" she asked cautiously. "You there?"

When there was no answer, Dorothy slowly opened the door. Sam was laying on his bed, clothed in what he had been wearing the day before, staring blankly up at the ceiling. She walked in cautiously.

"Hey," she said, walking up to his bed. "Hey, are you okay?"

He rolled his head over to look at her, but his eyes were blank. He was sweating profusely.

Dorothy pressed the back of her hand to his forehead. "You have a fever," she said. "You're burning up." She left his room and backtracked to the lab, where she found the digital thermometer and brought it back to Sam. "Here. Let me take your temperature." She pushed it into his mouth, which had almost disappeared beneath the curls of his beard. It looked like he hadn't trimmed his beard in weeks. It beeped, and she checked the temperature. "103°. Lessing, how long have you felt like this?"

"I don't know," he said weakly. "I haven't really been sleeping well lately."

"When's the last time you had something to eat?"

"I don't remember." His head rolled back on the pillow.

"I'm going to get you something. You stay right there." She left the room and reentered the kitchen. "Listen, guys, Lessing's really sick. Someone's going to need to keep an eye on him." She started preparing some soup. "I don't think we can fix that sensor today."

"Well it looks like we may have to." Mark pointed out the window. "We're in dust storm season, and it looks like one might not be far away."

Dorothy looked south, and sure enough saw the makings of a dust storm in the way the sky was growing overcast. "We wouldn't be able to make it," she said. "It would reach us before we got back."

"Not necessarily," Mark said. "If we left immediately, we could likely make it back before late tomorrow. In which case, we could probably beat the storm."

"But what if we wait?" Dorothy asked. "Could we wait until the storm clears?"

"We have no idea how long that would be." Lily took the soup from Dorothy and set it on a lap tray. "You two need to leave right away. I'll take care of Sam."

"I'm not sure exactly what's wrong with him," Dorothy confessed. "But it looks like a stress-induced condition. We read all those mission reports about the increased percentage of anxiety attacks as well as viral and bacterial infections."

"Could stress be causing that?" Mark pointed toward Sam's room. "The guy's been talking funny for months now. All this crap about the planet's feelings, the planet's wishes. Maybe he's just gone crazy."

"He hasn't gone crazy. I've read about this sort of thing. Dorothy's right." Lily nodded. "I've never heard of it appearing this severely before, but this is an unusual mission." She looked back toward the room. "But it's not like he's violent. I'll be fine."

"Will you be all right until tomorrow?" Dorothy looked torn. "I don't want to leave you here."

"I can handle it. Here, I'll go bring this to him right now. You two should get ready. You'll need more supplies." She took the tray and vanished around the corner.

Dorothy and Mark looked at each other. "This is it, then," she said. "Come on. Let's get packed."

Less than an hour later, they were bouncing along in the pressurized rover. Dorothy and Mark had removed their helmets and suits to travel comfortably, since they would be driving for most of the day. "Are you sure we have everything?" Mark asked, looking behind him into the storage compartment.

"Yes, of course." Dorothy sighed. "So how exactly are you navigating, here?"

"Mostly by the sun," he confessed. "It'll be much easier tonight when the stars are out."

"I can understand determining latitude by the sun," Dorothy said, "but longitude?"

"I'll use Phobos and Deimos to triangulate our position." He looked over at her.

"Not bad, huh?"

She smiled a little. "So long as you know what you're doing."

Dorothy stared out the window as Mark drove on, wishing she had a radio to listen to. The rover bounced across rocks and over gentle slopes and larger hills. Each was lost in thought for the first hour or so of the drive. After about two hours, Mark stopped the rover to identify Phobos in the sky and determine their position.

"We're right about on target," he confirmed after completing the calculations. "At least we're just traveling due North until we reach the first fuel dump. It'll be easier than trying to go diagonally." He kept driving. After another half hour of silence, he looked over to his right and saw that Dorothy was fast asleep in her chair. He chanced a subtle brush of her forehead with his fingers. She murmured something and smiled in her sleep.

Dorothy woke up after sleeping for about two hours. "Did I doze off?" she asked groggily. "I'm so sorry."

"That's okay," Mark said with a smile. "You looked like you could use it."

"Thanks," she said with a yawn. Mark looked so innocent over there. She watched him drive out of the corner of her eye. How could he hide it so well? It almost seemed like he really cared about her sometimes, but she knew he saw nothing in her. She turned to look out the window.

They drove on until dusk without making much conversation at all. They stopped every few hours to chart their course and make sure they were on track, ate from the supplies they had brought, and drove on. They reached the first fuel dump several hours after nightfall. They stopped to rest and plan the rest of the trip.

"Okay," Mark said, looking at the map. "Now if we head due West, we should reach the second fuel dump. We can navigate using the stars..."

"Hey, Mark?" Dorothy asked, looking upward. "What stars do you intend to use?" Mark looked up. "Aw, shit."

In the time since night had fallen, the sky had become completely overcast. The wind was beginning to pick up.

"I think we underestimated the length of time it would take us to reach this dump," Dorothy stated. "The dust storm's already underway."

The limited Martian atmosphere kept the winds from blowing too strongly, but the storm overhead had completely obscured the sky. "This doesn't look good." Dorothy struggled into her suit. "Put your suit on, Mark. I'm going outside."

Dorothy opened the storage compartment and pulled out one of the homing beacons. She carried it over to the emptied fuel dump and affixed it to one of the large fuel storage tanks. When she walked back to the rover, Mark was looking off into the distance. "I'm not sure what to do," he confessed. "If we head out, we'd be driving blind."

"Well, we don't have enough fuel to get back to camp. We have to find that dump." Dorothy looked at the empty fuel tanks and cursed quietly. If she hadn't made them use up that stored fuel, they could be on their way already. She looked at Mark, silhouetted in the glow of the headlights. "Come on," she said. "Get in. We'll drive."

They pressurized the rover and took off their helmets, but they left the suits on in case they needed to go out again.

"Okay," Mark said, turning the rover. "We headed due North to get here, so turning due West should be as simple as going left. Geez, I'm glad we set these tanks up in line with each other. At least we don't have to navigate angles."

"You know," Dorothy said, "driving blind isn't going to be as easy as you make it sound. For fifty kilometers?"

"I know it isn't going to be easy," Mark said, turning to face her, and for the first time Dorothy could see the anxiety in his eyes. "But we don't really have a choice, do we? Getting lost means death out here. We have a homing beacon on this dump. At the very least, we should be able to return here."

Dorothy closed her mouth. They both knew that returning to the empty fuel dump wasn't going to do them any good if they didn't have enough fuel to get home, but neither of them wanted to confront that possibility. She closed her eyes. "Okay," she said. "Let's go."

XXVIII

Lily paced back and forth in the hab. Sam had refused to eat anything, babbling deliriously in his sleep, and his fever hadn't come down. She had heard nothing from Mark and Dorothy, and the dust storm had started hours before. She looked at where Sam was laying on the bed and wondered if they would ever come back. Maybe his silly superstitions about the planet had some truth in them, after all.

She dismissed that thought as idle nonsense and downed another gulp of beer. She never drank much, but the stress was making her jittery. She knew a few beers would calm her down, so she took another long swig. Lily sat down in a chair in Sam's room. He had settled down a little, still feverish but no longer ranting. She looked at the clock on the wall; it wasn't quite midnight. She stared out the window, imagining that she was just in the Mojave Desert again.

Sometimes, back in the desert, the sandstorms would obscure everything, and she couldn't go outside. At those times, she would just watch the hypnotic flow of the sand. Lily imagined she was back there, and thought of home. Her eyelids felt heavy. She set the bottle down on the ground and rested her head back against the chair. She would nap to be more alert later in the night. She fell asleep with the "Our Father" on her lips.

Dorothy looked out the window at the blowing dust. "I think you made a wrong turn. We should have been there by now."

"Turn? What turn? I've been driving straight."

"You made a wrong turn. I just know it. Maybe you've been driving crooked this whole time." Dorothy looked at the map. "Didn't we already pass this boulder?"

"It's a boulder. Every boulder looks the same." He sped up a little. "I'm sure it'll be right over the next hill."

"You've been saying that for an hour," Dorothy snapped. "You need to veer right more. I'm almost positive you're heading southwest. We should've been there by now."

"I know which way I'm going," Mark yelled back. "Will you shut up already?"

"I'm Commander of this mission, and I think you're going the wrong way!" She pointed back to their right.

"Oh, don't pull rank. That's so like you, isn't it?" He sighed, then turned the rover right and headed the way she was pointing. "When something isn't just exactly the way you like it, you order it to change. Did you ever stop to think that maybe other people have feelings, too?"

"Who, you?" Dorothy almost spat out the phrase. "Please. You don't have feelings. You just have fuck toys. Or do you think I didn't hear that?"

"What the hell are you talking about?" Mark increased the speed on the rover, driving deeper into the swirling dust. "You don't make any sense, you know that?"

"Oh, shut up I don't make any sense. I know exactly why you were sleeping with me." She turned and looked out the window. "I'm just the best you could get, isn't it? I'd be a better lay than Lily, I suppose. Just win me over with your charm and leave me for the next best thing once we get back to Earth."

"I don't know what's wrong with you, but I never said any of those things." He swerved around a particularly large boulder that the headlights had suddenly illuminated.

"Oh, don't try and get me to believe that," Dorothy spat. "I heard you talking to Lessing. Maybe you should've taped the broadcast switch down, Mark. I heard everything you said." She looked him square in the face, and he was surprised to see that her eyes were tear-filled.

Mark turned back to face the road, shaking his head in disbelief. "I don't know where you get these things."

"What, you expect me to believe it isn't true? I heard you with my own ears."

"And did you hear anything else, pray tell?" He looked over at her. "Anything I said before or after that?"

"No, that was enough, thanks." She folded her arms and willed herself not to cry.

Mark sighed, exasperated. "For Chrissakes, Dorothy. I was being sarcastic. I was trying to make Sam realize how ridiculous he sounded. He was accusing me of being all of those things, none of which are true."

"I'm supposed to believe that?" Dorothy tried to stop her voice from shaking. She wanted it to be true.

"You can believe whatever you want," Mark said with a shrug. "You're the Commander, not me." He looked at the fuel gauge. "But we don't have enough time to argue. I turned North like you said, and now we're completely lost. What the hell are we supposed to do now?"

Dorothy looked at the map in front of her, then out at the swirling dust. "I... I don't know," she said. "If we keep driving, and we get lost, we'll run out of fuel before we reach the dump."

Mark fell silent. He stopped the rover and looked over at her. They just breathed for a few moments, staring at each other, knowing something had to be done. Mark spoke first. "I think I know how to get to the next fuel dump."

"How?" she asked, disbelieving. "You expect me to believe that you just know?"

"I don't know," he said, shaking his head. "But I think it's about ten kilometers that way." He pointed to the south and west of them. "The ground's too rocky to see it on the horizon, but I think we're almost there."

"So let's go," Dorothy said with finality. "Drive us there."

He shook his head. "We can't do it that way," he said. "Like you said. If I'm wrong, we've lost all chance of getting home again."

"So what do you suggest we do?"

Mark looked outside, then back at Dorothy. "One of us will have to walk there."

"That's crazy." She shook her head. "Whoever went would die. And how would that help?"

"No, it makes perfect sense." He smiled. "I'll bring a homing beacon. If I find the dump, I'll affix the homing beacon there, and you can drive directly to that spot. No wasted fuel driving in circles. It's the smartest way." He shrugged. "And if I don't make it, then you can search in another direction for the dump."

"Or I could use the homing beacon to find you. And hey, who says you should go?" Dorothy straightened in her chair. "I'm the one who got us into this by telling you to turn North. I should go."

"You have no idea where to look," he replied. "That's ludicrous."

"No more ludicrous than wandering outside during a dust storm," Dorothy replied. "Besides, I'm Commander."

"Don't give me that shit again," Mark retorted. "It's my idea and I should go."

"I won't let you do that."

Mark sighed, looking out the window again. He paused, then turned back to Dorothy. "I'll play you for it."

"What?" Dorothy shook her head. "You have cards out here?"

Mark laughed, reaching into the small storage compartment inside the rover. "What do you think Sam and I used to do when we got bored?"

She shook her head. "You're unbelievable. Okay, fine. What do we play, Blackjack?"

He paused, shuffling the cards quickly between his hands. "Let's make it simpler than that. Whoever draws the high card goes. Aces are high." He met her eyes. "Deal? This way it'll be fair."

She took a deep breath and exhaled. "Okay," she answered. "Fair."

XXIX

Sam sat up in his bed, heart and head pounding. He looked to where Lily was asleep in the chair, then out at the window. He saw the swirling dust and knew a dust storm was upon them. Slowly, he eased out of bed, trying to make as little noise as possible even though his dizziness made him lean on the wall every few steps. He made it out into the main corridor of the hab. He felt groggy, disoriented, confused.

He looked for the other members of the crew, but the hab was empty. Dorothy and Mark were gone. He searched every room. They were missing. They had gone into the dust storm.

Sam closed his eyes. It couldn't be. That would be suicide. They couldn't have gone out where no one could find them. He looked out the window, and a wildness seized him. He had to find them. He had to bring them home.

Sam ran to the airlock and pulled on his space suit. They could be hurt. They could need his help. They would need whatever they had in the hab. He tore open the doors to the medical cabinets and pulled all the supplies down into his arms. The bottle of Depo Provera and a roll of gauze tumbled down at his feet. The bottle smashed, and the gauze rolled a streak of white netting across the floor. He ignored them and just grabbed everything he could see. He threw it into a box and dragged it down the airlock. What else might he need? He grabbed the portable drill out of the storage level and ventured out into the dark Martian night.

"Cooper!" he cried, spinning around, looking into the darkness. "Mark!" He walked around the hab, calling for them. He had to find them. No one else would. They would be lost forever; the mission would fail, and they would die out alone on the planet. He couldn't let that happen.

The box in his arms was heavy, and he could hardly carry both the supplies and the drill. There was no time to waste. Already they could be somewhere, crashed, fallen into a gully, dying. He rushed out into the dust, blindly heading North, knowing they would be out there and he would find them.

He tripped on a rock and fell sprawling onto the ground, the supplies falling out of his arms and crashing out in front of him. He got up onto his hands and knees, head swimming, and blinked to clear the black spots swirling in his vision. Several bottles of medicine had smashed. He pulled everything else together that he could and struggled back to his feet. "I won't let you down, guys," he said, staggering on into the dust-filled night.

Dorothy looked at the deck in front of her. She cut with a trembling hand and pulled out the card. It was an eight of clubs. Her stomach turned over. What would Mark draw?

Mark looked down at the cards, then up at her. He took the deck into his hands and cut it, opening right to the ace of spades. She looked up at him, but there was no expression on his face.

"That's it, then," he said, nodding. "Fair and square."

"Don't go," she begged. "Please. We'll find a way to get home."

He smiled at her and brushed the hair off her forehead. "I'll make it, I promise. And if I don't, you had better get out and find that fuel dump so you can make it home."

"I won't," she said, shaking her head. "If you don't make it, turn the homing beacon on, and I'll come find you."

"If you do that, you'll never get home. We'll run out of fuel and we'll both die." Mark smiled. "I won't turn it on unless I find the fuel dump. Promise me you won't come after me. Promise."

She shook her head, squeezing her eyes shut. "I can't do it."

"Promise." He took her by the shoulders. "If I mean anything to you, promise."

She looked up into his eyes, knowing she may never see him again. "I promise," she said softly.

He pressed his mouth to hers, covering her protests, swallowing the tears that she was trying to hide. She wrapped her arm behind his head and drew him closer, unwilling to let him go. He pulled away from her after a long moment and met her eyes. "Put your helmet on," he directed. She did as he asked, and he did the same. He spoke into his microphone. She heard his words echo in her head. "Never," he said, "ever listen to anyone that says I don't love you."

And with that, he opened the door to the rover and left.

She watched as he pulled additional oxygen tanks and the homing beacon out of the storage compartment. Without looking back at her, he set off into the darkness.

Dorothy pressurized the rover and removed her helmet to wipe the tears from her eyes. She watched him until he was out of sight, then looked back down at the floor where something caught her eye on Mark's side of the rover.

There lay the other three Aces, right where they had fallen from Mark's sleeve.

XXX

Lily woke groggily and looked around her, trying to remember where she was. She remembered having the third beer and going to sleep. She looked at the bed, and her stomach turned as she realized Sam was no longer there.

She rushed into the hallway and looked around frantically, still disoriented from just waking up. "Sam?" she called. "Sam, where are you?" The bathroom was empty, as were all the other rooms of the hab. The lab was trashed. It looked like he had taken all the medical equipment with him. She looked into the airlock and saw that hers was the only suit left hanging in the storage compartment. "Shit," she breathed, and quickly struggled into her suit.

The Martian night was completely overcast and filled with swirling dust. Lily shone her flashlight on the surrounding area and winced when she saw the bottles smashed all over the ground. "Oh, God, Sam," she murmured. "What are you doing?"

He had left the area, obviously, but any footprints had been erased by the blowing dust. She looked around, helpless. Where were Mark and Dorothy? She was stranded. Sam wouldn't be able to get far. His tanks held enough oxygen for a sol's work, which would limit him to a twelve hour walking radius. When Mark and Dorothy made it back, they could look for him. He couldn't have gotten too far.

Lily climbed back into the hab and sealed it behind her. Once back into the living room, she stripped off her suit and sat on the couch, staring anxiously out the window. She could do nothing but wait.

XXXI

Mark looked behind him only once and saw that the rover had dissolved into the haze of swirling dust. It wasn't a difficult walk. The wind wasn't blowing very hard, but he was a little dizzy from lack of sleep, and the rocks around him seemed to shimmer as he looked at them. He walked on into the dark and unending night. Maybe he would never find the fuel tanks. If he failed, though, Dorothy would never make it back to camp.

He steeled himself against those thoughts and walked on.

The minutes swirled by with the dust and he wondered where he'd end up. The night was black, blacker than pitch, and the beam from his portable lantern was swallowed by the darkness. Eventually he grew a little more accustomed to the storm, and he could see the long shadows he cast on the rust-red ground. He held his light aloft to check his heading and saw his before him the man he had become: a ghostly black wraith silhouetted against a circle of ruby-tinged light. He followed the shadow on into the dusty night and wondered where they would someday find him.

Dorothy called "Red" and flipped another card down onto her lap. She had shut off the rover except for the heating systems and life support, and the glow from the equipment cast an eerie green light over her cards. She saw that the card was clubs and added it to the pile of the missed guesses.

She called the next card Red and it was Spades. She called the next card Black and it was Hearts. They were black, they were red, they were black or red, but they all shone iridescent green before her in the light.

The homing beacon receiver sat on the dashboard in front of her. It hummed softly into the silence, warm and activated, receiving nothing. She called "Red" for diamonds and counted it correct, but still the receiver was silent.

Mars is a desert. Here and there the rocks rise high as cliffs, there are tall volcanoes and deep valleys, but for most of the land there is only the flatness of unending desert. You can see 40 kilometers to the horizon on a clear day. Mark wished his light penetrated the darkness and dust; maybe he could see the fuel dump there. He realized that ten kilometers was a world away when there was no sense of direction.

His thoughts were loud inside the silence of his helmet. He wondered what Sam was doing. Sam, who felt life from Mars, who wanted harmony between the people and the planet, who was slowly going insane from the stress inside his fever-stricken mind.

Funny, Mark thought, how they were so quick to judge him insane. After all, they had lost their communications and their navigation systems, almost lost a rover, and gotten stranded out where rescue was impossible. To any superstitious person, it certainly looked like Mars had it in for them.

Mark laughed and kept walking. Maybe he was running low on oxygen to his brain. The idea was ludicrous, and he knew it. The planet didn't want anything. Out on the frozen tundra, surrounded by blowing dust, it was quite apparent that there was nothing more to Mars than met the eye. There were no secret caverns, indigenous beings, or oceans of flowing water. There was only a dry, dirty, red-ochre ball of dust and rock spinning silently in the darkness of the universe.

Mark stumbled over a rock he hadn't seen and fell hard onto the ground, lifting a cloud of dust that was quickly whisked away by the wind. He coughed, the noise echoing loudly in his helmet, and pushed himself up to hands and knees to find his lantern. He raised the glowing torch.

Before him, illuminated in the lantern's reddish glow, stood two silver fuel tanks.

XXXII

Dorothy leaned back in her chair and stared out the window, the cards laying silently in the palm of her hand. She wanted to look for him. He would never find the fuel dump on his own, walking out in the desert with enough oxygen for two days and no food. She imagined she could see him there, dark hair falling across his brow, trying to determine if he recognized the boulder before him.

Death for both of them would be either from starvation or asphyxiation. Maybe he would just take off his helmet and let the sudden pressure change bubble nitrogen in his lungs and kill him. Maybe she would take one of the small cyanide pills that was standard in every field first aid package. Maybe she would just sit in the rover, staring into the darkness, until her eyes closed. It felt like days, but it was not yet even close to dawn.

Men to Mars: a fool's errand, or the next great step in history? Did it really matter? She smiled wistfully to herself and wondered why she hadn't noticed the ridiculous nature of it all. He would die and she would die, now or sometime down the road, and the planet would continue to turn. Somewhere, millions of miles away, some people on a small, small world would mourn them, but the planet would continue to turn, and the rest would get on with their lives. Happiness is a turn of the card, Red or Black, take your guess, and whichever you choose, in the end it's the same. You get half right and half wrong and you play again. The silliness is in giving it a bigger meaning.

Dorothy sighed and looked into the wind and thought about Sam. He was wrong the whole time. The planet didn't want them to leave. The planet would keep turning, spinning, whispering siren calls to those who could see it, and whether they colonized it or mined it or left it alone was no concern. It's all the same in the end; everything would come to neutral. You guess half right and half wrong and you play again. One game at a time, left of the dealer goes first, and each hand of poker is just another day.

The homing beacon receiver before her whirred to life and began beeping steadily, calling her on.

Dorothy tucked the cards under the seat and headed West.

XXXIII

"Let's go," Mark said as Dorothy hurried out of the rover. "Let's fuel up so we can fix this sensor and go home."

She paused to look at him as he prepared the methane and oxygen tanks. He looked different somehow, ten kilometers of difference. She couldn't put her finger on exactly what, but something made her look at him twice. They fueled up the rover with half the fuel in the tanks, saving the other half for the journey home. They didn't speak any more to each other until they climbed in and pressurized the vehicle.

"Dorothy," Mark began, turning to face her. "I..."

She shook her head and put her hand over his mouth. "Don't say it," she said. "I don't need to hear it. Take today for today, and we'll deal with tomorrow when tomorrow comes."

He paused and raised an eyebrow, trying to understand where she was coming from, but finally nodded. "Okay," he said simply. "Let's get this done."

Dorothy opened the map. "We don't have to drive blind here, do we?"

"No," Mark said, shaking his head. "The LPS emits a signal which enables the computer to triangulate our position. That signal is still coming through, but the position isn't being computed. We should be able to follow it right there."

"Okay," Dorothy confirmed, looking at the map. "Drive."

They reached the LPS sensor after another hour's driving. Dorothy climbed from the rover first and surveyed the damage.

The site before them was eerie. They found where the satellite had crashed. There was a small impact crater and charred, twisted debris scattered across the landscape. In the glow of the rover's headlights, the debris before them took on a dull yellow glow.

"It's so silent," Dorothy said, climbing out. She put her hands on her hips and looked around. "Like the aftermath of a hurricane. It looks like some monster tore everything apart."

"Hey, there's the LPS sensor." Mark jogged across the dusty ground to the sensor set up just beyond the epicenter of the crash. "It looks like we lucked out. The satellite missed the sensor."

"Yeah, but look what happened to the electronics." The door to the main sensor equipment was knocked off, exposing the damaged internal parts of the sensor. Dorothy shook her head. "It looks like you were right: the signal is still being emitted and bounced off our rover, but the electronics for computing the position have been fried. This actually isn't a complicated wiring job."

"Get to it," Mark directed.

"Okay," she said, already unplugging something inside the sensor tower. She turned suddenly. "Hey, Mark?" she began, her voice loud in his ears. He looked back.

"What?"

She looked at him, pausing for a moment, her face serious. "Thanks."

He nodded. "You're welcome."

She turned back to the sensor tower.

"Okay," she said, turning her broadcast switch back on. "Turn on the LPS."

Mark switched on the device in the rover, and it whined for a moment as it searched for a signal. He knew that all three sensor towers were transmitting signals that the rover was intercepting and sending back. The main sensor tower that Dorothy had just hopefully repaired would receive all this information and triangulate a position. He wasn't a

superstitious man, but he crossed his fingers anyway. There was a pregnant pause before numbers began scrolling across the screen.

"You got it!" he confirmed. "We're clear. Seal it up and let's get the hell out of here."

Dorothy did as he asked, trying to keep the dust out of the electronics as she sealed the panel. She raced back to the rover.

"Fuel dump," she directed. "We'll fill up, and then we're home. Think you can get us there?"

Mark looked pointedly at the LPS, then reached over and switched off the receiver for the homing beacon. "We're on our way," he confirmed, turning South into the lightening dawn.

Sam collapsed to his knees with dizziness. His head was spinning and he couldn't stop thinking about Dorothy and Mark. He could almost hear them calling to him. He blinked again, his head swimming, black spots flashing before his eyes. He hadn't been on his feet in days, and he was a very ill man. He wondered if he was hearing correctly. Were they really calling to him?

He had walked in circles all night, actually only traveling a few kilometers, but with the dust storm, he couldn't see the hab on the horizon. Maybe he had walked to them. Where were they? Was it possible they had fallen into a valley nearby? Were they calling from below him?

Sam set up the drill and turned it on.

Layers of rock peeled away, dust and dirt churned up and cast into the blowing windstorm. He exhausted the depth of the drill and turned it off, then looked into the hole. There was nothing. No cavern beneath him that his crewmates could have fallen into.

He looked up, catching the sound of something on the wind. He turned up his speakers, the microphone on the outside of his suit finding sound in the storm. That could be them, farther off his right shoulder. He turned, shouldering the compact drill, muscling the box of supplies back under his arm, and headed toward the sounds.

"Sam's gone." Lily was outside when Dorothy and Mark climbed out of the rover. "You need to take the rover and find him."

"Where has he gone? What do you mean, gone?" Dorothy shook her head. She hadn't slept in two days and it was beginning to take its toll.

Lily explained the situation as best she could, leaving her companions shocked and bewildered. "And I think he took the drill."

"This can't be good," Dorothy said, shaking her head. "At least we know he couldn't have reached the second ERV by now."

"How long does it take to walk 50 kilometers?" Mark asked. "Are you sure he couldn't do it in a day?"

"He's not good shape," Lily said, looking off to the horizon. "It would take a fast walk and he couldn't do it sick as he is. He only has 12 hours worth of oxygen. It's been at least 10 hours since I found that he was gone."

"Okay," Dorothy exhaled. "I'll go. Mark, I think you should stay. You haven't slept in 48 hours."

"Neither have you," he pointed out. "And I have a better chance of overpowering him than Lily. No offense," he was quick to add. "But we have to be practical here. We don't know what his state of mind is like. He could be violent."

"Well whoever goes, goes." Dorothy looked around, not wanting to think about Sam being violent. That wasn't the man she knew. "At least the dust is lightening up a little. That'll make it easier."

"He can go," Lily said. "I'll stay here in case he comes back. He's right that if it comes down to brute force, he's a better candidate than I am."

"Okay," Dorothy nodded. "Mark, back into the rover. This time I'm driving. Lily, we should be within ham radio distance the whole way."

"Got it," Lily said, nodding. "Keep in touch."

As they strapped themselves into the rover, Dorothy handed Mark the map. "Let's do a wide sweep of the area, starting with a 5 km radius and moving outward from there. Got it?"

"Got it." He programmed the desired radius into the LPS. "God," he said. "I'm glad to have this back."

"Me too." Dorothy headed East toward the place where the second ERV would be waiting for the Ares IV crew. She could only hope they'd get there in time.

XXXIV

Sam pulled the drill from the hole. They weren't down there, either. Behind him was a ragged trail of pockmarked drill sites every half-kilometer or so. He packed up the drill again and moved on, following the ever-elusive voices, swaying a little on his feet and wishing he could wipe the sweat from his brow. He staggered across the terrain, dizzy. His oxygen warning light was on. He had less than an hour's worth of air left, but he didn't really understand the immediacy of his situation. He was caught in the hypnotic lull of the drill.

"Here," he said, sinking down to his knees again and unpacking one more time. It was routinely soothing, the digging and the flying dust in the wind. The storm was letting up a little, but he didn't notice. He noticed nothing but the planet beneath him.

He eased the drill down into the ground and turned it on, the loud whine drowning out his racing thoughts. He would find them this time.

Layer upon layer of rock was stripped away as he drilled down, hands trembling, knees shaking. His oxygen warning light buzzed, but he heard only the drill. Maybe the planet would give them back. Maybe they would be all right. Maybe he could find them in the deep bowels of Mars, find them and drag them back to the light. He would be Orpheus, and the drill would be his Lyre.

The drill reached bottom, and he switched it off once more to withdraw it from the hole. He looked around, but they weren't there. Maybe the next location. Maybe he would get it next time.

He withdrew the last of the drill and was about to pack up when his vision blurred completely. He slid down to a seated position, lungs hungry for oxygen. He coughed, choked, grasped at his helmet, and the world dissolved before him.

XXXV

The next day

"Hey, I think he's coming to."

Sam blinked groggily, looking around. "What happened?" he asked, trying to sit up.

"Easy," Dorothy cautioned. "Lay down. You could have killed yourself out there."

"How..." he asked, bringing a hand to his head. "How did I get back here?"

"Dorothy and I found you just in time." Mark smiled. "You're a very lucky man, Sam. Another few minutes and you would've been dead. As it was we were hard-pressed to pressurize the rover in time for you to get oxygen. Fortunately, we found you in time."

Sam winced as he pushed up to a sitting position, more gently this time. The events of the previous days were coming back to him. "God, I've been a jackass," he said in amazement. "I could've killed everyone."

Dorothy smiled. "It's okay," she said encouragingly. "It's perfectly normal. One of the most common occurrences in long-duration space missions is an overcompensation for one's self-perceiving weaknesses. People bite off more than they can chew, so to speak, with regard to the mission. Plus you had a very high fever and were running around without eating. At least all you did was smash a few bottles."

"I feel better," Sam confessed. "I'm sorry I made you come out after me."

Mark punched Sam lightly on the shoulder. "Don't worry about it. You owe us one."

"Your fever's broken, now," Lily said. "But we all agreed that you should stay in bed this week while we take care of this new excitement out here."

"What do you mean?"

Mark grinned. "Well, we went back after we got you in last night to pack up the drill and the medical supplies that you carried out into the desert. As it turns out, your half-assed drilling wasn't quite so half-assed."

Sam scratched his beard. "I'm not sure I understand."

"You found water, Lessing!" Dorothy smiled broadly. "Well, the first stages of it, anyway. One of the places you drilled was right near a spot we hadn't really expected to pan out, and had postponed until later in the mission. But there were traces of liquid water available there. We'll be setting up the mechanics for a well and doing the rest of the drilling over the next week."

"I don't believe it." Sam laughed. "You're kidding me. How can I help?"

"By staying right here," Lily said sternly. "We don't want you relapsing with a big drill in your hands."

"Exactly," Dorothy nodded. "You're out of the field for the next week."

Sam groaned. "So what am I supposed to do?"

The others looked at each other. Mark shrugged. "Well, we've been neglecting the greenhouse lately. Do you know how to garden?"

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"I love tomatoes." Sam smiled as he picked another tomato out of the basket. "I think I've done some pretty amazing work here with these."

Mark snatched another one from the basket and bit into it like an apple. "I still think I could have done better, of course, but all this biochemistry has really kept me busy since we discovered the reservoir." He shook his head. "It's been about four months, and I still have stuff to do."

Dorothy took a bite. "I've been craving a tomato since I got here. How fitting that we don't get a crop grown until right before we leave."

"Ironic, isn't it?" Sam sliced his neatly with a paring knife and lightly salted each piece before sampling. "Ah, Mother Mars has been good to us."

"Please, no more talk of this planet like that." Dorothy shook her head. "It gives me the creeps."

"Yeah. Last time you started going nuts on us, we had to salvage medical supplies from the other ERVs," Mark continued. "We still don't have any Depo Provera."

"Hey, I already apologized a million times over the last six months." Sam shook his head. "Besides, now you have to be celibate like the rest of us. It's only fair."

Lily looked up from her sketchpad to get another look at all of them. "Sam, take your feet off the table," she directed. "You can't change position like that in the middle of a drawing."

"Yeah, fine," he grumbled, putting his feet back on the floor. "That better?"

She smiled sweetly. "Yes, much better. I'm almost done."

"Well we're almost out of tomatoes," Dorothy commented. "And the there'll be nothing left to keep us at this table."

"Hey, I'm just about finished..." She bit her lip and tilted her head to the side, then erased a bit and re-sketches it. Another quick check and she gave her approval. "Okay. Here we are." She held it up for all of them to see.

"Oh, Lily, that's fantastic." Dorothy leaned to get a closer look. "I love that you can see the planet out the window."

"Hey, not too shabby." Sam scratched his beard. "You made me look slimmer. Hang it up, would you?"

"All right." Lily left the room to get some tacks.

Mark finished his tomato and stood up. "I'm going to take a nap. Dor, do you want to come?"

"Sure." She pushed up to her feet. Sam smiled a little behind his beard and took another slice of tomato into his mouth. At least they didn't hide their feelings for each other anymore.

Mark slipped an arm around Dorothy as she curled up into bed in front of him. "I want to make love to you again," he murmured. "Like the first night we got back. Do you remember?"

"Of course I remember," she whispered. "But the Depo's worn off several times over by now and I can't let myself get pregnant on Mars. I'd be six months along by the time we got back."

"I know," he agreed, smiling. "No little Martians." He kissed the back of her neck. "We'll just have to keep doing what we've been doing."

"Although," Dorothy said slowly, "if something were to happen late enough on the way back from Mars, we really wouldn't have to worry about delivery in the ERV. It'd only be two or three months along..."

"Commander Cooper," Mark said, affecting shock. "Are you inferring that you want to have my baby?"

Dorothy smiled. "Maybe."

He dropped a kiss on her lips. "This'll still work when we get back, right?" he asked. "You know, 'us'?"

Dorothy thought for a moment. "It should, unless you decide that you only want me to be your own personal fuck toy until we get back to Earth, at which time you'll drop me for someone better."

He laughed. "I suppose I'll hear about this forever, won't I?"

She nodded. "You bet."

He shook his head. "No...I want you to be my own personal fuck toy long after we get back to Earth, too."

She smiled. "Kiss me, you egotistical jackass."

"You're the Commander," he said, and did as she asked.

There was a knock at the door, and Mark opened it. "Yeah?"

Sam was pointing to the lab. "I think you guys need to come in here."

They hurried down the hall to where Lily was camped out in front of the monitor, watching spurious signals come in and then static. "We just started receiving transmissions," Sam whispered.

An image of Ken Nguyen suddenly winked onto the screen. Behind him was the entire Ares crew. Elliott stood right in front. He looked none the worse for wear, although he gone a little more bald in their absence. At his side stood Grace Fahey and her son, Geoffrey. They recognized members of the ground crew as well as old friends from the meetings and the parties.

"Ares III," Ken said, speaking loudly and clearly. "If you are receiving this transmission, you know that our satellite has achieved Mars orbit. Everyone here at mission control is hoping things down there on the planet have been fruitful and productive, and that you're looking forward to leaving for the return to Earth in just a few short weeks. I expect that you will report to us by the end of today with a full status report as well as copies of your log files from the past 180 days." Here he paused, then continued speaking. "I think I can speak for all of us here when I say that it'll be good to hear from you again." The transmission winked off.

The Ares III crew looked at each other.

"So where do we start?" Sam asked.

Mark ticked things off on his fingers. "We lost the LPS, we crashed a robotic rover, we almost got ourselves killed driving without navigation,"

Lily continued. "We survived a week-long dust storm, we survived Sam's insanity bout, we drilled our exploration area into a block of cheese,"

"We lost all our medical supplies, we successfully grew tomatoes on Mars, and we discovered a geothermally-active area with a water reservoir." Mark finished.

Dorothy smiled. "I think it's time to give them one hell of a status report."

Epilogue

Saturday, 1 May 2010

"Are you sure we shouldn't be at mission control for this?" Dorothy looked over at Elliott. "I keep feeling that we've abandoned them."

"They'll be fine without us." Grace smiled and directed Geoffrey toward a stack of Duplo blocks.

Mark pulled Dorothy back to lean against him. "I think we all deserve some time to relax on our own. It's been one press conference after another since we got back. I'll be happy when the attention's not on us anymore."

"That time is coming sooner than we expect." Sam gestured toward the television and sipped his beer. "The broadcast should be coming through in just a few minutes."

Lily was helping Geoffrey assemble a wobbly tower. "I can't believe how long it's been," she said, shaking her head. "I'm leaving for Jamaica on Tuesday morning. It's going to be hard being away from you three." She smiled at her crewmembers. "I haven't been able to sleep well these past few weeks since we got back. I'm not used to all the space in my apartment."

"Well pretty soon you'll be with your family again." Sam patted her shoulder. "Promise you'll come and visit."

"Well I'm not leaving for good yet, Sam," she laughed. "I'll only be gone for a few weeks while I set up my apartment and visit my family. Then I'll be back here for the rest of the summer to tie up loose ends and finish these ridiculous press briefings." She shook her head. "I need to be back with my family."

"We'll miss you," Mark said, smiling sincerely.

"Be sure you let me know when the wedding is going to be." Lily raised her eyebrows. "You know, once you two figure out that you're getting married and all."

Dorothy and Mark looked at each other.

"I think that's a discussion for a different night," Dorothy said at last, laughing nervously. "We have enough on our minds right now."

"It's strange to be home," Sam said, shaking his head. "I have to finish my novel."

"Why didn't you tell us you were writing a novel?" Dorothy laughed. "Come on, Lessing. How long has this been going on?"

He shrugged. "Well you know, I wrote a little bit on the way there, and then stuff happened and I put it away. I started to look at it again on the way back. It's just my account of the trip and all, but who knows? Maybe somebody would want to publish it someday." He smiled sheepishly.

"Will you let us read it?" Lily asked, looking up from her seat on the floor.

Sam scratched his beard. "Maybe sometime," he said. "It would be nice to get an objective opinion. You know, for editing's sake."

"Sure," Mark nodded. "Editing's sake."

Elliott got up to go to the kitchen. "Would anyone like a beer? Dorothy, you haven't had anything all night."

"I know," she shook her head, her hand going automatically to her stomach. "I can't have anything."

"Oh," Elliott amended, blushing. "I forgot." He disappeared into the kitchen. Dorothy noticed the way Grace's eyes followed him, watching him, and knew things had changed a little bit while they had been gone. She looked at Lessing, eyes glued to the television, and thought of the way he almost gave everything to save them. She looked at Lily and remembered drilling into the Martian soil, desperately seeking water. She thought

of Elliott and the email they received en route home that his cancer had gone into remission. She watched the way he and Grace looked at each other, and wondered if they even saw it themselves. She turned and looked at Mark, who was idly twirling a strand of her hair between his fingers and smiling at her, and thought of the future. Space separates people, or sometimes binds people together, and time brings change.

But years later and there they were, and in reality she knew that nothing had changed at all.

"Elliott! Get back here. It's coming in." Sam jumped up to turn the volume up on the television. Elliott ran back into the room, beer forgotten.

The voiceover of the NASA announcer was narrating the blank screen, nervousness in his voice as he explained that the radio blackout was complete and they should be receiving feedback any moment. Dorothy held tightly to Mark's hand, and everyone leaned forward toward the television.

First there was static, and then a tinny voice crackled over the speakers. "Repeat, do you copy? Mission control, this is Ares V. We have achieved landing."

Sam jumped to his feet and whooped, punching the air. "Ha! They made it!"

"Another crew," Lily grinned. "It can really be done. We aren't the only ones."

"It's hard to believe, isn't it?" Mark smiled, looking around at their group. "All this time, all this effort, and it's all at its end."

"No," Dorothy said, shaking her head. She looked at the television as the first grainy images appeared on the screen, then gradually came into focus. "Our mission is over. But for the rest of the Ares project," she pointed at the screen, "it's a whole new hand of poker." She smiled. "We're in a new age, now, and it's only just beginning."

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