

## Pilot of Varying Lights

Coffee in hand, Sam Knightlinger walked from station to station, listening to conversations between controllers and astronauts from sources as distant as Mars, the moon and Earth Island—the planet's first permanent orbiting space colony. This new director of crew operations, a man with short cropped black hair, rich black skin, and a calm manner was observing the men and women seated at rows of display monitors in the humming NASA control center. Hearing a buzz among the controllers near the door, he looked back. He understood that it would be difficult getting a feel for the normal run of things today: A small group led by his supervisor had just come in and was converging on him through various aisles in the room.

Brisk and neat Della Swift, head of colony coordination, came up and touched his arm. "Sam, I want you to meet—"

Knightlinger thrust out his hand. "—Dr. Ardley, of course. I've seen you in holo."

Ardley hesitated pointedly then shook his hand. "We haven't met—So let the lady finish the introductions, all right?" Ardley was tanned and reddish-blond, crisp and assured.

As was her way, Della managed a wry and sorry smile for Sam. "This is Sam Knightlinger, new director of crew-op. Dr. Ardley and his assistants will be in and out the next few weeks, Sam—rushing to finalize plans and gear up for Island 2."

"Fine, Della." He made what could pass for a welcoming gesture then walked away.

Della Swift looked after with regret. Later she would excuse Ardley: "An arrogant son of a bitch, yes, but brilliant. The brilliant have pardon and they know it." Now she turned to Ardley. "Guess you'll have to help yourself. You've been in before."

Ardley smiled, taking her arm. "I prefer your assist to his anyway. Mind?"

Across the busy room and sipping lukewarm coffee, Sam continued his round, keeping clear of the little knot of engineers. Definitely *beige*, that man. Nope—should not let him get to me. He stopped short behind a balding controller whose voice was suddenly raised in agitation. Knightlinger put his hand on the man's shoulder.

He looked up. "Maj. Bishop's—lost his suit pressure—Capt. Boehme's up there alone in the shuttle."

"Gi'me," said Knightlinger, taking the headset from the controller. He remembered the name: She had authored a paper on intuition in space, something as yet untested. Evidence was anecdotal. Most astronauts, especially the scientists among them, now shied away from discussing it.

"Capt. Boehme, this is Knightlinger—director of crew-op." He had yet to meet Rebecca Boehme. His tone was firm and, he hoped, reassuring. "Tell me everything that's happened up there. Are you in command of the vehicle?"

He paused for an answer, his fingers absently brushing through his lightless kinky hair. Then her quiet voice sounded, as though coming not from space but the center of his mind.

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From the table in his palm-shaded backyard, Sam Knightlinger sat gazing at Rebecca Boehme's cap of brassy hair. His glance slipped to her fine-boned pensive face as she studied her preflight checklists. Twilight was deepening, yet she continued reading the lighted characters of the small display. He was disappointed with the tiny device held in her thin hands. *Glance up right now, you might catch something of yourself in my eyes.*

He reached for his wine glass, feeling foolish. He had hoped to expand her borders and lay them with colors. All the hues of intimate encounter. For months he had wanted to feel only Rebecca—around him, above him, beneath him. But it wasn't going to happen. He sighed, drank the wine.

Maybe Bishop's ghost was still hanging around, anyway. Little more than ten months had passed. She was concentrating now on recovery from a breakdown, on retraining, thoroughly occupied with her goal of returning to space. And Rebecca had something to overcome. She had both piloted and commanded missions before this loss of confidence. In some circles there was still speculation about her readiness. Most found her lacking in toughness, weak even. Too fragile for the job.

"More wine, Bo?"

She looked up, smiling. "Mmm."

He tipped the dark merlot into her glass. The ground shook. Down coast, as they watched, a night flight lifted off in a cloud of light. They looked at one another.

"Just 39 hours, babe."

Rebecca's slight answering smile did not match the intensity of her gaze.

Locking Capt. Boehme's helmet in place, Knightlinger smiled some encouragement. Through the dark reflecting faceplate he failed to make out her high cheekbones and what he knew of her serious expression. She acknowledged with thumbs-up that the suit's systems were go. He moved around to secure the helmet over the other crew member's more symmetrical features. The young pilot, Lt. Aiko Tsuchi, was about to make her second orbital flight, a supply run to NASA's space station within the geosynchronous orbit.

Sam stood a moment, smiling down confidence upon his friend before turning to climb out the hatch.

Preflight jitters had been flitting within, preoccupying her, but now she watched as the man disappeared. Like one coming out through foggy dreams to find the morning, she said, "Did you see that,

Win?"

"—Pardon, Commander?" There was trepidation in the answering female voice.

Shrinking, Rebecca made no answer.

The minutes passed as they continued checking onboard systems. T-minus five minutes. Commander Capt. Boehme and pilot Lt. Tsuchi studied the data displays and control banks around them, reviewing the positions of overhead toggles. T-minus 5 seconds. Capt. Boehme give computer command and the three main engines below started with a mighty bang. The solid rocket boosters boomed to life. A slight vibration.... Gripping the arms of her seat, Rebecca tensed as the tower of pad B went slowly past the wraparound windows above. Then, accelerating with sickening force, bucking and twisting, the shuttle rolled, pitched, yawed into the once familiar east-northeast Gibraltar course.

Far away and below, from an observation deck on the ground, Sam Knightlinger shaded his eyes and watched the flashing white point of the STS, tethered to its pale yellow flame and billowing contrail, until it disappeared through distant skies.

*Clean black space, with its mental and spiritual healing, Bo .... Get you some and bring it back in your eyes.*

They were only 126 seconds into the flight and already 43 kilometers out. The orange flame of the eight booster separators engulfed the crew's wraparound windows. Six seconds more—the boosters were gone, gravity sucked. The ride smoothed out but they did not relax. Watching the data displays, Boehme said, "Pressing to MECO."

"Roger, Commander." Thrust of excessive gravity prevented the pilot from glancing toward the captain. *I hope you're ready, Commander. Because the official line won't save us now.*

Feeling leaden, several times their normal weight, they were reaching for main engine cut off at orbital velocity.

The fuels in their external tank now expended, the orbiter pitched over, leveling off. There flowed blue curving earth out their windows. Rebecca's heart filled at the sight. Aiko Tsuchi monitored the sequence as onboard computers disengaged their orbiter from the great external tank. Three red lights on the panel before the pilot went out. Now the orbital maneuvering system's thrusters began firing for the final nudge into orbit. Heaviness fell away, as finally topping the orbit, they lightened to nothing.

The pair removed their helmets, and Rebecca saw Tsuchi's face slightly flattened, her ponytail drifting out like strands of black seaweed. With a pang of joy, she experienced anew the sensation of weightlessness. But the buoyant emotion was instantly quelled, as the specter of Win Bishop's body—afloat against fathomless blackness, his suit deflated—flashed into her mind.

Zero gravity. Major Winston Bishop, mission commander, was preparing to leave the orbiter to work on its robotic arm. The arm had malfunctioned just as they were extending it to retrieve one of the European Space agency's orbiting bio-labs.

*I'll have that thing operational in no time, Bo.*

They were suited and helmeted, floating on opposite sides of the sealed airlock hatch. *Monitor me. And don't forget, the sound of your larynx vibrating in my helmet excites me.*

She smiled, aware of the broad grin behind his obscuring faceplate. *Phoey. Think I'll report you.*

Winston Bishop chuckled. *Phoey? Better watch that language. I guess commanding that last mission went to your head. You forgot how to take orders, pilot.*

Rebecca said, *Orders? Phoey.*

She heard his answering chuckle. All good-natured, professional. Everything decent and orderly. The need for order out here was obvious. Bishop never lost that sense, was confident and reassuring under pressure. Yet, watching him check out a zero-torque drill, she recalled a time when he betrayed fear—in a flip remark comparing black holes to dark spots in the psyche. *Bottomless pits, right there in the soul.* (Grin.)

His back to her, Bishop was ready to exit the airlock.

*Win!* She called it out. *I've got an impression—you should use the MMU!*

The manned mobility unit, a backpack with encircling arms and powered by nitrogen thrusters, was something Bishop habitually refused when he had work that kept him in close range of the shuttle.

*You can burn back here faster if anything goes wrong.*

He turned about slowly. *Funny, a moment ago I felt the same thing.... But you know I prefer the tether.*

Tsuchi and Boehme had achieved a circular orbit, 210 kilometers out, when Rebecca unstrapped to come away from her seat. Moving the members of her body in unison, feet in the air and her short brassy hair fluffed out, she worked compulsively, loading the computers with instructions. To Tsuchi's discomfort, she said nothing as she began work.

Transporting a supply module, they were on target for the mission to NASA's "beehive," its network of floating stations and staging point for moon, geosynchronous, and libration flights. Tsuchi unstrapped and glanced at the taciturn commander, thinking, Unnerving, cold as Pluto in here. She slid to the after flightdeck to oversee the slow opening of the great payload bay doors. It was still a revelation to her, this view of shimmering azure atmosphere against blue-black space. The calm of infinity set her spirit strumming. Staring out, she mused on the peculiar notion, which some astronauts claim, that space carries promptings and peace unclouded by earth's dense atmosphere. What did it mean?

She turned back to begin checking vehicular response, but found Capt. Boehme usurping this job.

*What the hell am I supposed to do?*

She arced into mid-deck to see if the equipment was secure. In the cabin she did a double-take on discovering a water drop, the size of an orange, forming on one side of the chlorination valve. If it grew too large, its molecular attractions might be disturbed enough to break. Dispersed water droplets, floating willy-nilly about in the craft, might short out onboard electronic systems. She spun away and the movement nauseated her.

*Commander.* She called weakly from the opening between compartments.

Shaking off her preoccupation, Rebecca turned slowly. *What is it, Aiko?*

*There's a water ball in here.* Her voice quavered with nausea. *Maybe we should contact our controller?* She knew it a measure of her *own* lack of confidence in this mission with her commander.

Rebecca slid past her to examine the globoid seepage on the valve. Already as big as a grapefruit. Boehme glanced at the toolkit secure among the equipment and Tsuchi, following her gaze, reached for it. *What do you need? She surveyed the neat array of zero-torque tools.*

*Seven and W. Nausea gone?* Rebecca drifted back to let her in. Pointing to the opening, she said, *Lock seven into the ratchet of W and insert it there. When you're tightly engaged, turn it maybe ninety degrees—right.*

Aiko did as instructed, and the seepage stopped. *Better gather that with something,* said Rebecca as she turned toward the flight deck.

Tsuchi got a towel out of the tiny locker and gingerly soaked up the water. When she re-entered the cockpit, Boehme was strapped in and studying earth through the wraparound windows. Lt. Tsuchi secured herself, and, following a few practice burns, settled the orbiter back into the proper attitude for the remainder of the climb.

Staring at the earth just before sunset, Rebecca's gaze was caught by smoking Mount Etna. A prickly infilling of the glands about her eyes ... the quick compression of her emotional heart.... She held her breath as the sun sank behind them.

Win Bishop opened the outer hatch, secured himself to a line, and slowly drifted for the robotic arm.

*Where's my chatter?* She heard him ask it where she floated behind the airlock hatch. The impression causing her apprehension continued with her, even as the view beneath open cargo bay doors stunned her anew with its display of the blue beauty of space curving beyond. *You look pretty good out there. What-a-view.*

Lifting out of the bay, he passed out along the mantis-like arm. Then he paused, apparently looking at the planet.

Rebecca glanced at the MMUs attached to the bulkhead outside the airlock. He always claimed that the unit hampered his movements. She watched him reach for a tool floating tethered at his side. Then she heard

him gasp.

*Oxygen pressure?! A malfunctioning regulator would deplete his suit pressure, boiling his blood. He made a small gesture. Her arm went out to open the hatch, but her limbs were numbing. Bumping the bulkhead she negotiated the airlock.... Scarcely she heard the soft pfff in her helmet ... saw his limbs blossom out.*

She backed into the MMU and managed to release it. Fumbling to activate the nitrogen jet she felt it would never start, yet it fired and began propelling her towards him. Drawing up, she saw him outspread in the limp suit, floating like a flower on water. She turned for an instant. Smoking Mount Etna, on distant earth, met her bewildered gaze.

*It's dark, Commander, urged the pilot still strapped in beside her. Their cabin lights were out but the data displays glowed. Then, Look! A night flight!*

Through the wraparound windows Aiko and Boehme watched the fire of rockets from earth, winking, emerging through the atmosphere.

*Wonder whose? said the pilot as the light moved in the blackness of earth's shadowed bottom until it went out in the east. Bet it's a Fly-back F-1. That looked like the fire of SSMEs.*

The radio light came on in the panel. Rebecca flipped a switch, acknowledging.

*Sam here, came the friendly voice from earth. How you doin'?*

The voice gave her a welcome rush of inner sights: Good humored dark eyes, sea breezes, red wine under palms.

*Pretty good here, Sam. Had a leak in the chlorinator valve. Lt. Tsuchi corrected it. We've got lights out and are cruising in the dark at about 300km altitude. I see Delphinus—I think it is—outside my window, and in the east we just had unidentified rocket fire. Know whose? Over.*

*That would be China with spare parts for Island 2. You skipped by that valve leak pretty fast, babe. Care to tell yo'pappy what happened?*

Boehme chuckled and asked Tsuchi to fill him in.

Then the director of crew-op came back, saying, *Uh—We have a complication with one of ESA's communications satellites....* Already she felt her heart beating as he continued. *You may be uneasy ... I understand, Bo, but there's no one else around and I know you can handle it. Why not give Aiko her head on this one?*

Rebecca was silent. Then she acknowledged, and his briefing followed. Capt. Boehme signed off and, ignoring Sam's advice, ordered the pilot to turn on the overhead and start work on the coordinates. The commander unstrapped to prepare for extravehicular activity. She did not want a crewmember doing this walk.

Working on the coordinates Lt. Tsuchi said with deceptive evenness, *I'd like to do that EVA, commander.* But the other continued mid-deck. *Capt. Boehme.... Now Aiko spoke a note of warning: I'd be alone here, if anything ...*

*happened.*

It was manipulative but it worked.

Adrift in the cabin Rebecca swung about slowly, staring at her, vaguely reliving the nightmare of isolation.... Of traveling high above earth, repairing the robot arm—her own commander's body strapped to his seat in the cockpit. She fought the futility of trying to save either of them from her fears. Life had moved on, leaving both Win Bishop and her personal experience in some place she kept trying to call the past.

The craft and its lone space walker were in sunlight, the earth above glowing and milky white. Boehme watched Tsuchi on a display as the other ghosted toward the target; wearing the MMU and trailing a thin cloud of ice crystals.

*It's a miracle out here,* came Aiko's murmur inside Rebecca's helmet. Wearing the suit was a precaution taken in case she was needed out there.

*Your suit systems, camera, and MMU are all reading fine, pilot.*

Hovering near the spherical satellite, Aiko did not respond. Then, *Looks like part of quadrants two and three have been strafed by dust or something. Did you just see some of its particles disperse?*

Boehme glanced reflexively at the neighboring monitor. *Negative. I was watching you, not your pictures. Anything else?*

*The rest of the satellite appears operable, but maybe these pix'll show something.* Aiko said this coming around the spheroid into full view of the shuttle's monitoring camera.

*OK, c'mon back and I'll send the data to Sam.*

But Tsuchi had stopped near the satellite. *Roger, that.* But she did not move.

*C'mon.*

*I can't. The control's disengaged.*

*Well, keep trying. I'm coming out.*

Capt. Boehme unstrapped and slid to the airlock.

Outside she donned an MMU, ignited the tiny rockets, and glided past the supply module in the bay. Coming up on the stranded pilot, reversing rockets, she saw Aiko fiddling with the control on an arm of the unit. Rebecca reached to grasp the stick and felt it slip loosely from side to side. She started removing the housing, but stopped.

She seemed poised, as though listening. With Tsuchi wondering.

*Go out! Quickly! I'll push you.*

She grabbed the arm of the unit and began propelling her around the satellite. She circled widely, doubling their distance to the shuttle.

Aiko felt her fear coming true: Boehme was dangerously unstable.

*Commander, why are we going away from the orbiter?!*

Although seeming a void of motionless peace, orbital space is pocked with moving particles unchecked by friction, bits of debris and junk moving at tens of thousands of kilometers per hour. Before Rebecca could answer, a blinding flash blossomed where the satellite had been, sending silent reflecting radiance and fragments out through the corridor between spacewalkers and aircraft. In its rush of light their eyes were momentarily blinded.

Aiko breathed out her wonderment in silence. Was this it—the intuition?

*How did you know, Commander?*

The pressurized suit hid the other's shrug.

*I knew.*

The STS was soft-docking at the beehive. Sunlight glinted off banks of solar arrays as they passed into the docking sphere of one cylindrical station. The station spun slowly about its axis to provide .1 G—just enough gravity to keep coffee in cups and people in touch with the floor. The two astronauts checked in at the nearly empty flight desk to file their reports. On duty the dark young man with an engaged glance looked at the transcripts on the display. He exclaimed over the mishap. Meteoroid or space junk hits weren't unknown, but they were rare.

"Your ID says you're rated for inter-orbital flight, Capt. Boehme," said the man as he turned away from the monitor. "We've got an unscheduled trip to Earth Island, if you're interested. If you're too tired, I'll see who else I can scrounge up."

Rebecca turned to Aiko. "Want to pick up a pile of hours in the IOTV?"

The other's face lit up in the affirmative, emphasizing her beautiful horizontal features. She had yet to visit the elegant celestial city of space.

The young man glanced at the UT clock. "Give you an hour to rest up, then I've got to get Dr. Gas on the sling."

"Dr. Gas?" asked Tsuchi.

"The Very Great Architect of the Islands himself." He looked down his nose at them, nostrils flaring.

"His self," laughed Rebecca. To Tsuchi she added, "I don't think he likes my ideas—if that's the word for them."

"On what?"

"Space intuition."

"Is it ESP?"

"May be. But I don't call it that because it mixes it up with something else. It is discernment *and* extra to the senses yet completely relevant to them. Anyway, I have no scientific curiosity about it anymore." She said softly as though to herself, "Wish I hadn't written that paper."

"Ride should be interesting, then," the amused young man said with a smile. "They're throwing 'luncheon' for him day after tomorrow. Better grab a sandwich and get some rest." He gestured toward the hatch, which led through compartments to the snack area, "Soy sloppy joes today!"

Aiko giggled as they stepped lightly through the hatch. "Yummy."

"Yummy?—soy sloppy joes?"

"Not them." She looked back, flashing a smile over her shoulder at the man behind the desk.

They rocketed through the flashing radioactive Van Allen belt in the inter-orbital transport vehicle. Rebecca, her hair fluffed out, and Aiko, whose ponytail drifted, were at the consoles; the astrophysicist strapped in behind them. His blond hair always closely cropped—warding the foolishness of zero gravity—astute, self-assured, Dr. Chauncey Ardley listened with polite attention as Tsuchi described the destruction of ESA's satellite by the meteoroid.

*Remarkable. But Capt. Boehme is a remarkable woman. I was in flight-com the day you made your heroic deorbit.* His manner was lightly ironic, his voice smooth as satin.

Feeling heat rise in her face, Rebecca turned back to the panel.

Ardley continued. *Really, how did you know you and the lieutenant were in danger?*

Skimming the data displays, her back still to him, she wanted to say, "The Easter Bunny told me." But lightly she said, *Rather not say.*

He moved smoothly on. *Now you have piqued my curiosity of course. I've heard of space intuition, but we haven't studied it yet ... not seriously. Until we do—it does not exist. You swim, Capt. Boehme.*

*Mmm.* She nodded.

*Good.* He lit a gold-colored cigarette, murmuring, *It'll filter out OK. You don't mind do you?... We'll go swimming at the Lunar Club. You'll come, too, Lieutenant.*

Tsuchi laughed, recognizing the afterthought. *No thanks, got to do my nails.*

His eyes steeped in cigarette smoke, the physicist smiled.

The great mottled dome of the moon was out their windows on the left. In time a speck of light to the right began steadily growing. Later, as they drew near, it outshone the constellations, a shining great wheel—full of life. This great colony, held in place by the gravity of heavenly bodies, swung slowly, majestically, like a great spoked wheel in space. The vast mirrors, reflecting its image above, provided solar light and energy.

Tsuchi pointed out a shield of rock—slag from the furnace that was located ten km south of the torus. *Fly past the furnace and hover, commanded Ardley. We'll match those mass-catchers dock.*

Out the window they saw two massive, grid-covered Kevlar bags, full of moon rock, preparing to dock at the furnace. Glistening clumps of raw ore, floating in space, awaited the refining process that would extract glass, iron, titanium, magnesium, aluminum, all for use in building Island 2. Stacks of refined sheet metals, waiting for a tow to the fabrications sphere, were suspended beyond the glowing furnace.

*We've just begun coating the new island with aluminum extracted from that ore. Another year and we'll have our second self-supporting colony. Rocket up to it, will you Capt. Boehme.*

She turned to Aiko. *Take us on through Earth Island's spokes, close to the torus, and you'll get a glimpse into it before we go on to the fabrications sphere.*

Tsuchi inverted the vehicle and flew across the secondary mirrors and louvered shields covering the outer surface of the vast torus. Through the slanted shields she saw green and yellow fields, fountains, sheep grazing. A tiny gasp escaped her lips and she glanced at Ardley.

He smiled.

*Gerard O'Neill and his students designed the colony decades ago. My uncle was one of those students, and he inspired me. Invert again and you'll see her new sister.*

They drew slowly up past the fabrications sphere, above the hub of the torus. Further out they saw the skeletal structure of Island 2, the plastic-covered ribs of its torus, spokes, and hub revolving in space. Leading up to it from the fabrications sphere was a long vibrating hose. A conical vehicle attached and acting as a nozzle sprayed the skeletal torus with gleaming metal.

Ardley continued his smooth tutorial, saying, *The sheet aluminum we saw beside the furnace is boiled to vapor and shot through the nozzle under pressure. It hardens instantly on the shell.*

The two women murmured appropriately. It was not unexpected that such murmuring his due.

Undressing for her swim, Rebecca wondered why she bothered with him. Ardley was attractive and repellent in the same glance. She tried picturing him as a down and out failure. She chuckled. Chaunce Ardley with slumping shoulders and fraying cuffs.

She stepped from the women's lounge in a skimpy one-piece. Bright, laughing, sophisticated people clustered about the vast pool, solar bathing. Uh-oh.... Agoraphobia. Wrong turn. Better go back. It came swiftly to her that space was where she belonged—not society. But she could not have the first without that community. In polarity was the holding together—and the struggle to part.

In silver boxer trunks, his physique tan and sleek, Ardley approached. "Care for a drink, Rebecca?"

Charming smile. He's going to be nice. "Maybe a little chablis." She followed to the bar.

They took their drinks to the edge of the pool, refreshing their feet in its pink waters. A stream of Chaunce's friends and hangers-on came and went. Faint smiles crossed Rebecca's features and vanished. A lull came and Ardley set down his glass.

"Don't look so miserable, Rebecca."

There was an embarrassed pause. She might have brought up her breakdown as an excuse ... but she knew better. She was out of her zone—that was all.

He gave her a casual but sensual smile and squeezed her thigh before plunging into the rose-tinted waters. Burnished with red-gold hair, his body glistened up at her. Came an impulse to hurry away confusingly combined with a desire to stay and swim beside that attractive form. She sighed, downed her wine and stood uncertainly. He beckoned and she dove, meeting him under water.

Chaunce took her arm and pointed downward. She looked and saw the shell-strewn bottom. The two dove deeper and began plucking shells to carry away. They surfaced in a welter of pink bubbles and swam for the shady end of the pool. There they lined up their find according to species.

Delighted, she held up a yellow sunray Venus. "Imagine transporting all these from the planet!"

"My compliments." He cocked his head in a mock bow.

She smiled. No modesty, false or otherwise, here.

Suddenly he slapped his neck, swearing in irritation. "I didn't import that!"

"A mosquito!" Pure glee in her response. And happy pride.

"Don't look so damned pleased. Some cow-brained joker has spoiled the paradisaal softness of the place."

Rebecca's face flooded. She managed a weak smile. My cow-brained compliments. Shortly after the island's christening she had brought in a few vials of various insects, pupae and larvae, on one of her supply flights. Finding the mosquitos thriving after her long absence prompted the joyous outburst. Now she fervently hoped that the predators she had planted, the spiders and damselflies, were doing as well.

Chaunce misread her flaming features, and made a curt apology. "Maybe they came on some plants—I hate seeing this perfection marred."

Out of the memory of her sorrow, she asked, "Couldn't there be purpose, a ... sort of redeeming purpose ... in imperfection?" She offered it with a tentative smile. His face darkened. He was going to retort, but impulsively she slipped beneath the mild waters.

Piqued, he pursued. But as they swam she thought of Sam and found herself suddenly weary of Ardley, bone-tired as well. They surfaced, and, pleading exhaustion after the grueling flights of the past two days, she excused herself. He was rebuffed, irked, but, before she had gathered her things, was receiving the attentions of another.

Aiko was out. Rebecca stood on the balcony, gazing across the park. Path lights were on, enhancing the artificial night. The ring of secondary mirrors in space, just above the residential level, were turned so that solar light from the giant mirror was deflected. The still air was apple-blossom scented. It was late, not many were stirring. One couple was descending the stairs leading to a suite among the larger terraced apartments on her left. Familiar—the long dark hair of the woman.... Lamplight from the landing cast a glow on the man's blond head. Hand in hand, Aiko and Chaunce Ardley slipped into the suite.

That's that.

Casual sex always seemed incongruous, anyway. To find the intimate places and call forth pleasure, hands had to be not just any hands, but hands attached to a body full of a particular soul. It might have been Win Bishop.... —The MMU probably would not have saved him anyway.... *The sadness again.*

But now thoughts of Sam Knightlinger's kindness and friendly smile surfaced. Musing and wistful, she turned and went inside.

Troubled, Rebecca tossed on the daybed in the darkened room. She rolled on her side, her stomach, her back. Her conscience was uneasy ... pestered. What is it!? —the mosquitos!

She sat up rubbing her brow. If the balance isn't there ... more pests than predators?...

She closed her eyes, frowned, lay back and plucked at the sheet. When will I learn discretion, cease careless presumption?

Morning, and she was preparing to visit space. It was close to noon when, suited and carrying her helmet for the walk, she entered the docking lobby. Without gravity here at the hub, Rebecca grabbed the rail, pressing her Velcro soles into the Velcro carpeting, moving slowly to the flight desk.

Hearing a commotion she turned from the woman at the desk to see a group step from the tube and gingerly enter the lobby. Fifteen or twenty suited tourists, caring helmets and led by a young guide, came toward the desk. All were excited, laughing. The woman at the desk smiled at her.

*EMU touring today. Vacationers want to walk in space.*

In the docking area, Rebecca donned an MMU, fired it and did test maneuvers. Then she burned away, crossing over the torus where, below, the Lunar Club had its halcyon view of space. She glanced into the posh room far below where Dr. Ardley would soon be feted. Rebecca inverted and watched the slow revolution of the new Island, the brilliant aluminum drenching by the conical vehicle and hose from the fabrications sphere. Then, burning away, she headed into the deepness. Faintly flashing as she flew, cosmic particles darted across her retinas. Particles, particles, she mused, Everything is particles. People are particles. Gulfs and particles.

Now, thrusters off, floating in the cosmic atmosphere of stars, Rebecca saw the fulgent sun, a great star in the darkness of space. Beneath it hung the fragile half-planet earth—a fair, sapphire foot-stool. Opposite earth stood the moon with its bright white top, its bottom shaded and pocked green in the pale earthshine. All silent fragile spheres, every one. And surrounding them rode the monstrous, bright but navigable stellar network—devised, fused and piloted by a Mind and Force beyond human comprehension.

Reversing to a standstill, Rebecca felt herself caught in this divine snare of varying lights. She was organized stardust and soul, known through and through by the Pilot, drifting in the Pilot's measureless sea of star particles. She was silent, tipping in the presence of Silence.

Now, lighter yet surer than touch, guidance pressed gently on her spirit.

And she was disquieted. Heart thumping, Rebecca Boehme ghosted back toward the distant islands where two great wheels turned slowly, solemnly, in space. As she flew, Rebecca noticed the MMU tourists in that distance, hovering like bees along one side of the protracted hose. The nozzle vehicle was spraying the hull of the new torus in bright aluminum.

Then, even as she burned toward them. Then. Vapor under tremendous pressure burst from the hose near its couplings. Rebecca gasped as the wild white gas blew away the group that had gathered so close—a soundless explosion sending its members spinning wildly out. Out out into the fathomless ocean of space.

She chose one and fired after it but, unable to match the speed of the tiny sliver vanishing far ahead, she turned about searching for others. Too late. They were all shot out into black space on a ride eternal.

Her own oxygen pressure was almost gone. Stiff with anguish, she headed for the docking area. The blow of gas had ceased, its delivery hose empty, gaping, eerily afloat. Approaching the docks, she saw a score of vehicles preparing to rocket away on a hopeless quest.

At Kennedy Space Center Launch Complex 14, Sam Knightlinger left control and walked rapidly down the hall to his office. He went to the window and stood staring out at the canal basin where two dozen external tanks sat on barges, waiting to be towed to one of the vehicle assembly buildings. He smoothed his moustache and brushed absently through the wiry hair at his temples. News of the tragedy at Earth Island had just come down. He pictured her serious features, those still hazel eyes. Sam Knightlinger drummed his fingers on the window frame.

C'mon, kid. Get your butt back on this planet.

Draped over the foamed-in couch, clutching some pillows, Rebecca stared vacantly. Aiko was out. It was almost time to rocket back to the beehive and then on to Earth, but she lay staring without seeing the ponytail palm beneath a skylight in a high curve of the foamed-in white wall. Her eyes were puffy, a tear stood

on her lash. She felt the hand of sorrow hovering, poised to push down on her again.

An electronic monotone voice hummed into the quiet, announcing visitors. Tiny, lucent holo-images of Lt. Tsuchi and Chaunce Ardley were displayed in a curve of the room. Rebecca spoke, the door slid open. She sat up, slowly, fluffing her short hair with nervous fingers.

"The rescue vehicles are back," said Tsuchi. "We'll never see those tourists again."

Still wearing the silver textelite suit he had been feted in, Dr. Ardley wore a grim preoccupied expression. Feeling Rebecca's gaze on him, he exerted himself to smile and sit down beside her on the couch. She wondered idly what he was doing here: He would surely be staying to begin at least the appearance of an investigation.

"You're okay aren't you, Rebecca?" The show of concern grated falsely on her. She looked at him, quietly. Restive, he stood and walked the small space. Aiko hesitated, looking from one to the other, then slid onto a couch opposite Rebecca. No one spoke.

Rebecca's statement surfaced into the silence: "You didn't do adequate stress tests on that hose?... Or there was something else ... something neglected."

Chaunce stopped, looked at her, eyebrows raised. "Star knowledge again, Rebecca?"

He continued pacing. Of course he truly had misjudged it. But the engineers should have been more vigilant. The technicians could have caught the error. The damned tour group shouldn't have been up against it.

He glanced smiling at Lt. Tsuchi, ignoring her bewilderment, then said to Rebecca, "I wouldn't spread that around.... The perception, or question even, of your fitness for space.... There is no evidence on which to base those *false* accusations."

"Not yet." *Pressing ahead you imagine cosmic dread won't bring you downward into its orbit. —The abyss of light unfathomable. Unfathomable of what Is.*

He looked away, relieved that he had taken the trouble to change the data. His holo camera on the hose, as well as a score of other shortcuts.... The budget—the deadline—none of this had allowed for anything else.

"You'll be wanting to get back to Kennedy," he said smoothly, smiling at Lt. Tsuchi's confusion. "Or, you can visit a while longer with me. Rebecca is quite capable of the flight back." He turned and left the tiny suite.

The onboard computers were programmed for reentry. Orbiting blue earth, tailfirst and upside down, they are pressure-suited and strapped in. Lt. Tsuchi fired the OMS engines for the tug needed to slow the craft into elliptical orbit. The radio light came on. Rebecca flipped the switch. *Boehme*, she said.

*Sam here. How's it going? Ready to deorbit?*

*Affirmative.... Dr. Ardley's negligence was responsible for the accident at Earth Island.*

There was silence in her helmet. She waited. Then he said, *He has already radioed and said you might suggest something like that.*

*No proof, Sam. That I know.*

Again there was silence.

*It won't hold up, Rebecca.*

*I'm aware of that.*

*So what are you going to do?*

*Nothing. That is, I've already done it in telling him. And you.*

*—Right. Well, don't worry, there will be an investigation. You coming in now?*

*Want me in?*

*God, yes.*

She detected the presence of his lopsided sexy grin.

*I've got the runway down here carpeted in red.*

*Got wine?*

*Everything, babe.*

Sam Knightlinger left control and strode down the hall. On his way out to the runway he pictured peace in Rebecca's eyes, before hurrying on to the rest of her.

Before the first launch of *Columbia*, when the prototype of the space shuttle was gliding toward feasibility, NASA'S program inspired me to begin a short story. I wrote the first draft before the first launch in the late '70s, using research based on Apollo missions and then waited for what the shuttle astronauts' experience would make available to redraft the story for details. But the basic story was always the same. It had two alternative endings, one featuring confession/repentance, the other as you see here. The *Challenger* calamity made new hope for my ambition of publication, as did that of *Columbia* in 2003, but success for this story did not piggy-back on these tragedies. Along the way, Col. James Irwin read and suggested a couple ways to make the EVA more real based on his moon-mission Apollo flights and walks. The program closes, the hardware will be found in museums. So the story may not be vetted unless by a publication interested in themes of stewardship toward the divine and creation.