

SHORT FICTION • SUMMER 2023

Fixing the Shingles

By Max Diddams

A zit.

At 38 years old, Aleksei Gargarin Chekov was far from puberty, but he did not need another reminder that he was the youngest and least experienced member of the crew. The stress of the micro-meteor strike on the solar charging arrays already had personalities flaring, and as the crew's head engineer, the burden had fallen on him to lead the repairs. For 72 hours now they had been on a continuous cycle of Extra Vehicular Activity missions to cobble together enough of the grid to guarantee they wouldn't run out of power, 52.732 hours of which his EVA suit's radiation counter told him he had personally spent outside.

An accomplished rower back on the ground, he had a lean, youthful build with a baby-faced complexion made insufferably cherubic by microgravity. No matter how he stretched his neck or angled the camera, his required social media reports to home always came out looking like an Olympic athlete with a baby doll head screwed on top. There was even a well-edited Valentine's Day card of him as an unflattering Cupid circulating around their internal Slack channel, and he had the added misfortune of accidentally being caught on camera rushing pink-faced to his room when he saw it.

At least, he had to believe it was accidental. They were supposed to be professionals, after all.

Ground control had tried to encourage him to take the attention in stride. Sentiment analysis showed he was popular by their metrics and "inspiring future astronauts everywhere." They encouraged him to finish the "Social Media and Me" wellness modules on the NASACare health app. Meanwhile, several online fan clubs had started, and his wife Anya had already moved from bemused to angry at the loads of messages she was receiving from his admirers.

Aleksei had earned his spot on the mission for several insightful advances in autonomous flight management, leap-frogging several other more senior choices. Choices that happened to be favored by several of his crewmates, including the commander, which was not lost on him. But when Aleksei's research team managed to send an autonomous ship through the trash belt at orbital speeds without collision or unsafe G-forces, a silent bidding war for his work erupted. His PhD-mentor-turned-CEO of their start-up Dr. Troy had been advertising early results of their data to several space agencies behind his back, promising completely autonomous ship flight and collision avoidance with a "fully invested implementation team." Not only would Dr. Troy pledge his own life to the safety of the system, he would even send his chief engineer Dr. Chekov in his stead. Dr. Troy had always been a giver.

While this rocketing career progression won accolades from mentors and friends, in pre-flight the shrinks noted that "this crew's interpersonal reactions during training are acceptable for mission tasks but fall short of aspirational. Recommend continued team building exercises." It hadn't been overt, but Aleksei felt the cliquishness. A missed email "he didn't need to be on." Running into the rest of the crew at a bar without him. They would always apologize and invite him over, but shy as he appeared, deep down he was too proud and would wave them off with some excuse. He had dedicated his life to this work, and everything was riding on his success. If they didn't respect him on Earth, then

he would prove himself in orbit.

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For the first few days after launch the installation had gone well.

Several mission-critical firmware updates had gone smoothly, and Aleksei was starting to feel a mote of acceptance after the first few navigation simulations were completed. He got particularly good marks for a roll arrest that stopped with so little jerk it caused a wave of paradoxical nausea in the commander. It had felt good to not be the one laughed at, and the commander's belches from the observation window had been comically out of character from his normally stoic demeanor.

They performed docking and undocking procedures with record-breaking consistency, and the forward-facing impact detection array proved sensitive enough to cause a small international kerfuffle by picking up an unmarked military satellite just outside their orbit. A few tweaks were needed, and there was much more research to be done, but he had smiled to himself as he began installing the last module. The ship would drive itself from now on.

Then there was a deafening clang and the power went out.

Batteries came rapidly back on line, but low red light bathed the crew as groans of complaint and multilingual obscenities were exchanged at his expense.

"Surely it's just a safety breaker thrown by the maneuver," he mumbled to no one in particular, as hot sweat beaded in tiny confluent puddles along his close-cropped hair. Three other crew members popped their restraints and went to check on the lab systems, while he and two others ran diagnostics at breakneck pace.

The power interface showed all solar voltage at zero.

Dread seized his spine.

Did I break the panels off?

This did not turn out to be the case, but in his anxiety, he struggled to vocalize the concern. The last maneuver had been so inconsequential it seemed impossible to have damaged the surprisingly robust solar panels the ship relied on for power. But try as he might, he couldn't get them back online. Cramps roiled down his abdomen and he glanced quickly at the toilet, not sure if he should stay strapped in to his chair, but one of the EVA team made the diagnosis from the window.

The solar array had been decimated by a micro-meteor swarm, and although below the level of detection avoidance, several high impact particles had peppered the main power arm and approximately a third of the surrounding panels. As he gazed upon the damage wrought, his guilt eased only to be replaced by a creeping cold sweat. Did they have enough power to stay alive?

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That was 72 hours ago.

He stared at himself in the mirror in the cramped bathroom after a terrible 2.5-hour nap. A pale white pimple leered at him from a cherry red base on the tip of his nose.

Why now?

The Velcro square on the inside of his EVA helmet was a life-saver for an itchy nose in normal times, but lately he had made a nervous habit of scratching it a bit too much and now it must have gotten infected. He sighed as waves of exhaustion rolled over him.

There is so much to do.

Idly, he reached his hands up to his nose and gave the pimple a squeeze. Pain arced across the top right of his face and instantly a film of tears blurred his vision.

He cursed, then wiping his eyes he suddenly realized he probably shouldn't be ejecting pus into the cabin. Glancing around with crossed eyes focused close, he searched for any matter that had achieved escape velocity. Unsuccessful, he glanced back at his face to find a weeping, watery crater.

A blister. I was so anxious I have a nose blister. They'll call me Pinocchio. Or Rudolf the Red, or something.

His tears burned differently now, and the pain arced across the side of his eyes again, threatening a migraine. He unwrapped his jumpsuit and took stock of himself for the first time in days. His lean, cut physique had atrophied slightly in microgravity and was paler now that they switched the lights from emergency red to fluorescent white. They had managed to supplement their remaining batteries with two of the more proximal power arrays, but they were still running out of energy.

He and the ship were both deteriorating. EVA work was exhausting despite the microgravity, and the suits were far from bespoke. Even now, a gentle red impression, probably from a seam, wandered down his left shoulder to the back of his arm with angry blotches just out of sight. His skin itched and burned.

As he shrugged on his jumpsuit, he hoped his crewmates had pulled off a miracle while he slept.

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But of course, there was no miracle. Over the last three days twenty percent of the damaged panels had been restored or replaced, but a key connection needed a delicate splice. The commander knew just the man for the job.

The overt blame and silent finger pointing had passed as it became apparent that Aleksei was not at fault. Tensions eased slightly as they determined they had at least 15 days before they would need to abandon the station, but ground control assured them the repairs were doable, just at a grueling schedule.

Officially, regulations required that no more than half the crew could be out on EVA missions at once. This was coached in years of safety culture, but pragmatically they only had one suit for every two astronauts. His paired EVA counterpart was the crew physician Dr. Deb Goldmark, though they had taken to calling her Dr. G. Aleksei caught her as she finished extricating herself from the EVA suit they shared – a task best accomplished with a friend. As she turned to thank him she furrowed her brow at his erythematous face.

“Aleksei, are you alright? You look terrible!” She queried in her inoffensively cheerful doctor voice.

Aleksei coughed a chuckle. Deb looked as terrible as he felt. Sweat matted her jumpsuit, and even from floating across the airlock he could smell the sour stench of gym socks and unwashed sauna wafting from the suit. Everyone had warned him about space smelling like burnt meat, but to him, the station had conjured up the memory of when he had burned his hair as a boy leaning over a birthday cake. The main thrust of the odor had mellowed, but the taste of ashes still clung to his palette. The fact that this cheery Midwestern soccer star's body odor could overpower space-stink and the air scrubbers finally pierced his dour mood. He smirked darkly and rankled his nose in protest.

“I’m fine, but what did you do in there?” he dodged, waving his hand in front of his nose.

She looked back at the suit and then grinned at him sheepishly. “I swear it was like that when I found it!”

He scowled, and she, sensing his mood, paused and looked him up and down. “Sorry. You’re doing great. We are doing great. Look, I know you must be taking this hard, but we’re going to get through this.”

She reached a hand up to squeeze his shoulder reassuringly, an awkward gesture given their relative geometry, but he winced and shrugged it away.

“You okay?”

“It’s fine, it’s fine. I just have a little rash from the suit there.”

“Want me to have a look?”

“No, no, no. Let’s... let’s just get this fixed.”

“I get it.” She sighed, raising both hands in surrender. “Lemme give you some time and we’ll double check to make sure you’re comfy. Sound good?”

“Yes, fine.” And after a pause, “Thank you.”

Dr. G smiled at him, but her eyes looked through him. “No problem at all. See you in a few!” she chirped as she dove past him for the sponge-bath station.

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I’m strong. I’m strong. I’m strong. I can do this.

30 minutes in and he had completely clouded his visor in humid sweat. He could barely talk, and the commander had been roused from sleep because he wasn’t staying on task.

“What’s wrong, Aleksei?” the commander’s voice crackled.

“I’m fine, I’m fine, it’s just my suit pinching.” He gasped between breaths. “I think an electrical panel or something is poking through. I’m getting electric shocks.”

“That’s not optimal,” the commander said to someone next to him. “Aleksei, are you having any system errors? Diagnostics look good here, if a little humid.”

“No, I- Yes, no errors, it’s just,” he stammered, distracted by another arcing shock. “Something is wrong, on my left side.”

From the screen bank inside, the commander watched carefully as Aleksei tried to maneuver his EVA suit to reach over his left side. First a right arm across, then the left up and over. He was flailing like a lost SCUBA diver and his breath came in ragged over the radio.

“I just, I don’t know. The readout says it’s fine, I just – FUCK!” He breathed sharply. Electricity arced across the side of his face and down his left arm. Sweat and tears formed a thick sheen on his face and sloshed into his mouth as he

struggled, choking him.

I am strong, I am STRONG damn it!

Aleksei had completely let go of the station and was now hanging by his tether. Muscular as he was, the EVA was not designed with flexibility in mind, and as he kicked and reached helplessly, the commander called for an emergency abort to get the panicked Dr. Chekov on board.

His EVA mate Sal Dominguez came to him, and he seized Sal like a drowning man, pulling awkwardly and sending them both into a spin.

“ALEKSEI, STOP MOVING, WE WILL GET YOU IN! HOLD STILL!” The commander’s voice barked over the radio.

Aleksei did not stop moving but Sal, an experienced SCUBA instructor, had anchored himself well and was prepared to arrest him. Locking on with a tether, Sal pushed Aleksei gently away and towed him to the airlock as he twitched and spasmed.

I’m dying, I’m dying. He thought. *I’ve been hit by a meteor and there’s an electrical fault. Oh my God I’m dying. I never, I never-*

The commander muted his garbled mumblings. Sal poked into the outer airlock door then gently reeled Aleksei’s spiraling suit in behind him, slamming Dr. Chekov unceremoniously against the inner door as he shook. As his helmet came up against the porthole, Dr. Goldmark stood stoically, eyes fixed on him like a sprinter on the line.

Three syringes were in her hand along with an oxygen mask and an ultrasound probe. Her face, held in a gentle smile, covered her mind racing through diagnostic algorithms. He seemed too well for a suit malfunction, but maybe decompression sickness with a stroke from an air embolism? Was he having a seizure? Was the arm pain actually referred pain from an evolving heart attack? Or a spontaneous carotid artery dissection? She fidgeted with the syringes behind her back in a rhythmic tick-tick-tick.

Aleksei was still reaching for his left arm even as the outer airlock slammed shut. Sal Dominguez erupted from his suit after an agonizing two-minute emergency pressurization cycle and hauled on Aleksei’s emergency release. Aleksei was still muttering in pain over the radio as the inner door cycled open, and Dr. G joined Sal in liberating the still-whimpering Aleksei from his confinement. But as the suit back opened, to their surprise, he exploded out and away from them in a shivering ball of sweat.

“Aleksei, hey, you’re ok, you’re ok,” Sal coaxed.

“Aleksei, you’re safe, what’s wrong?” Dr. G soothed.

But the panicked Aleksei was now spinning around, kicking and pushing out of reach, trying to get away from them.

“Getitoffgetitoff get it off GET! IT! OFF!” He howled as he flailed through the corridor twisting back at them.

The commander, appearing now in his path of flight, seized Aleksei around the arms from behind and locked his legs around his lower abdomen in a submission grapple. “Now, Deb! Now!”

But Dr. G was already ahead of him and deftly plunged her syringes into Aleksei’s exposed thigh. Dart delivered, she retreated to a safe distance from the flailing ball of limbs to appraise her work. Aleksei still writhed with much less

atrophied strength than expected and the commander looked at her with anxious eyes.

“What now? It’s not working!” he gritted between tumbles.

“Just give it a sec,” she replied laconically, not breaking her focus from Aleksei’s body.

Moves all four limbs, she thought.

“FUCK!” screamed Aleksei in a panicked rage as he tried to escape the commander.

Curses fluently, no speech impediment. Protecting his airway.

Slowly, his movements became more relaxed and his words turned to mumbles. He would still spasm every so often but with less intensity, and the commander slowly let him go.

“Ok, he’s sedate, should be ok. The ketamine, midazolam, and haloperidol should give us plenty of time but let’s strip him here and get an assessment,” Deb commanded.

Dull steel flashed as her trauma shears cut Aleksei free of his clothes and he floated in compression shorts before her. She felt a strong pulse, and his heart was definitely racing but coming down in rate. He was breathing quickly too, but his chest looked symmetrical and without blood or injury.

She rotated him over and as she did his arm came into view. Across his left upper back, a red, angry rash extended from the border of his spine down his left arm like a giant paintbrush stroke. Tiny blisters pock-marked the surfaces.

Had he been burned? A localized frostbite?

“Sal, any damage to his suit? Anything at all? No micro-meteor impact or anything, yeah?” She called out.

“Nada,” he hollered from inside Aleksei’s suite. “And nothing outside here either. We would have noted the decompression and you don’t get perforation without impact forces.”

“Ok, so no decompression injury, no trauma, no thermal injury – oh.” She paused and froze inches from his face. “Oh. Oh-ho oh no no no no. Get him back in the airlock.”

“What? The airlock? You think it’s the bends?” the commander asked. Their airlock was rated as an emergency re-pressurization chamber.

“Even worse. That,” she pointed at his back, “is shingles. And this,” she pointed to his face, “means it’s disseminated.”

Wheels and calculations turned in the commander’s head as he took in what she said. A dark look covered his brow, “But you can’t throw him out the airlock for that – “

“Not out – in!” she scolded, “because disseminated shingles is airborne. It spreads through the air. Go!”

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When Aleksei awoke, it was to a confused dream of running late for school as a boy. He was watching himself look for his favorite socks when he should have been leaving to catch the bus, and in the weird omniscience of dreams he could both experience the smells of their old apartment – sugar pine boards, foam mattress, and warm server racks – and

see just outside the bus pulling away without him.

He ached to tell himself to get up, to get moving, to not be late again, but his voice was frozen in his throat. Just as he willed himself to look out the window and see the bus disappearing down the street, his heart sank with the memory of inevitable demerits and scolding from his father.

He started awake with the bitter remnants of his dream still coloring the world. A gentle breeze was moving across his face from an air cyclor, and as he swallowed the stale saliva built up in his mouth, he soothed himself with reassurances that yes, he had made it to school that day, had even found his David Bowie socks, and was now a very successful Cosmonaut with a busy day ahead.

But the anxiety of missing the school bus still nagged at him as did the wrongness of his room's lighting, so he kicked out his limbs in a whole body stretch and immediately regretted it.

Fire and lightning were racing along his back and somehow found their way across his jaw. Memories of the last week came flooding back and roused him to a sweaty awareness as he took in his surroundings. The pain was ebbing with care, but a new anxiety rose as he realized he was nearly naked in the main airlock. Facing a mural comprised of a pink water bottle, some chocolate, a note with a smiley face, a tablet, and a condom urine bag Velcroed to the wall.

A gentle muted tap of knuckles on reinforced plexiglass drew his eyes away from the strange tableau to the inner window and a beaming Dr. G.

"Rise and shine sleepyhead!" she yelled through the shielding. She pointed to her tablet and gestured at his. He fumbled the power on.

"Hey!" her disembodied voice cooed from the tablet, "You're up!" She could see panic rising in his face. "You're ok! You're ok! You're safe! See?" She turned aside to show the empty room behind her with wall cameras wrapped in opaque specimen bags. "Just us. And you're doing great. A bit confused is to be expected, but you're safe."

"I don't remember how I got here, did I oversleep? Are we conserving power?" Aleksei started, unwilling to connect the present to some hazy memories that seemed like more than dreams.

"That's the midazolam. It tends to cause amnesia, at least in the doses we used to make you comfortable, so let me catch you up on some things you may have missed. The station is fine for now. You've got a pretty nasty case of shingles. I think we have the drugs on hand to help you, but we need you to stay in here until we can make a plan. Ground control doesn't like the idea of you blasting aerosolized zoster virus at the rest of us, and neither do I, frankly, but it's going to resolve, and you're going to get better."

She gave him the rest of the details, too. The current solar array power output, how the rest of the crew were doing, and an empathetic retelling of what he needed to know of his panic attack. She made him eat the chocolate before that part. He asked for a minute to himself.

She came back with a chocolate bar of her own and was pleased to see him inspecting his face in the tablet's front-facing camera. During the Cold War NASA had been unfairly criticized for spending millions on a space-ready ballpoint pen while Russian cosmonauts used pencils, and here was Aleksei using a ten-thousand-dollar mirror. She smirked to herself.

"Hey!" she knocked on the door. He startled slightly, then turned to her with his ice-blue eyes. His facial expression was still flat, though she couldn't tell if that was from avoiding pain or his mood. This time, though, he called her first through the tablet.

“It doesn’t hurt as much if I don’t move,” he said with a mumble. “But I’m worried, it’s getting worse on my face here.” He pointed to the misidentified nose pimple from the morning eons ago that had now turned into a small crop of four tiny blisters with a red rash that was creeping towards his ear.

“Yeah that sounds about right,” she smiled, “but I do think they’re going to get better soon. Here’s the deal: we need you to stay in a separate airspace than us until those blisters scab over.”

Aleksei groaned with dread. “Is this some kind of quarantine?”

“Yes, well there’s good news and bad news about that.”

“There can’t possibly be any good news about that.”

“Actually,” and Dr. G leaned in concernedly, “We’re going to need you to quarantine inside your EVA suit. For safety, you know.”

A flash of terror widened Aleksei’s eyes as they darted to his former prison.

“Just teasing!” Dr. G chirped. “Some of the old-school guys down Earth-side wanted to maintain an air lock that way but I yelled at them long enough that they abandoned the idea. Realistically we’re all protected up here as adults with good immune systems, but just to be careful they want you to isolate until the blisters scab over since the ventilation is more oxygen focused than pathogen focused.”

Aleksei bowed his head in relief and offered her a twitch of a smile on his pain palsied face. Then a frown came to his eyes, and he spoke carefully through rigid lips. “I deserve something like that after the trouble I’ve caused all of you. Would it be safer?” He thought of cramming back into the suit and tried to roll his shoulders gamely the way he would when their coxswain had them all sunburnt from overwork, but he winced from the shoulder pain and again from the facial exertion.

“Easy there, bud. That’s the good news. This wasn’t your fault! We all get screened for every disease pre-flight, but the shingles virus hides out in your nerves. It’s rare, but it can reactivate even like this in young healthy adults during times of intense stress and give you one hell of a rash.”

Aleksei pondered a moment then said, “But even the stress was my own fault.”

“Now you’re just being petulant,” she scolded. “I know you’ve been under pressure since arrival, but that’s part of the good news too – the wonks reviewed your work and say it’s stellar! Your mentor, what’s his name? Dr. Malfoy?”

“Dr. Troy.”

“Yeah, him. He even called to wish you the best and a speedy recovery.”

“He knows about this?” Aleksei crunched into a ball of agony, gasping sharply as his forehead came down on the wall and propelled him in a pathetic somersault.

“Not really. When the power went down we cut all the social media feeds, and after the scare with your EVA walk I just told folks you had an overexertion injury from excess EVA time. Commander backed it up and with everything else going on nobody paid too much attention. The PR folks thought it sounded a little heroic even, and that seems to be the way your fans see it.”

Anya is going to be furious, he thought, though a knot of anxiety untwisted in his gut as he fully realized he would live long enough to face her in person.

“Annd we’d kind of like to keep it that way,” Dr. G continued. “It’s a bit easier to explain for now, and works in your favor for future missions. Don’t get me wrong, Sal’s spooked by some old diving PTSD, and the Commander is making me do full skin exams on him each day to ensure his mission fitness, but everyone is just glad to hear you’re well. Here, I even brought you something.”

Dr. G cracked the airlock and passed in Aleksei’s computer, a bag of meals, and a small liquid packet that definitely was not contraband cognac. Dr. G winked at him through the window.

“Just relax, send your wife a message, and stay off social media. We’ll take care of the rest.” Dr. G smiled and was just about to push off when Aleksei spoke up.

“What about the navigation system? Is someone taking over for me?”

Her smile turned to a mischievous grin. “The ship flies itself now, Aleksei. You should know that.”

He stared at her dumbly through a crook in his elbow.

“Ok, ok. Commander’s kept an eye on it while you were out but he didn’t have to make any changes at all. Frankly, I’m not sure he entirely knows what changes to make, but let’s keep that between us.”

Dr. G’s eyes searched Aleksei’s for a response. His gentle floating through the airlock had bumped him into the opposing wall and caused him to unwind a bit. He eyed her and pushed towards the window with a sigh.

“Sounds like you all have this wrapped up pretty well,” Aleksei mumbled. “I think I’m out of a job here.”

“Your work isn’t done, Aleksei. I know the stress of the last few days feels like a disaster - and trust me, the financial guys will back you up on that one - but you are going to be remembered as the guy who built autopilot. Or how about ‘The Father of Space Navigation!’” She pantomimed grand explosions with a sweep of her arms that sent her spinning in a slow cartwheel.

She re-oriented herself to him and grinned conspiratorially, “At least it wasn’t space puberty, right?”

Aleksei met her eyes, and with the half of his face he had left - he smiled.

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