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# The QUANTUM JUMP By ROBERT WICKS

ILLUSTRATOR LLEWELLYN

Captain Brandon was a pioneer. He explored the far reaches of space and reported back on how things were out there. So it was pretty disquieting to find out that the "far reaches of space" knew more about what went on at home than he did. **B**<sub>RANDON</sub> was looking at the Milky Way. Through his perma-glas canopy, he could see it trailing across the black velvet of space like a white bridal veil. Below his SC9B scout-ship stretched the red dust deserts of Sirius Three illuminated by the thin light of two ice moons. He looked at the Milky Way.

<sup>21</sup>He looked at it as a man looks at a flickering fireplace and thinks of other things. He thought of the sun, 52 trillion miles away, a pinpoint of light lost in the dazzle of the Milky Way—the Earth a speck of dust in orbit just as this planet was to its master, Sirius.

Nine light years away. Of course, thirteen years had passed on Earth since they had left, because the trip took four years by RT—relative time. But even four years is a long time to be shut up in Astro One with five other men, especially when one of them was the imperious Colonel Towers.

"A quantum jump—that's the way to beat the Reds," the colonel had said a thousand times. His well-worn expression had nothing to do with quantum mechanics—the actual change in atomic configuration due to the application of sufficient energy. Rather, it was a slang expression referring to a major advance in inter-planetary travel due to a maximum scientific and technological effort.

"Let 'em have Mars and Venus," the colonel would say—"Let 'em have the whole damn Solar System! We'll make a quantum jump—leap-frog ahead of 'em. We'll be the first men to set foot on a planet of another solar system."

Four years had gone by in the ship; thirteen years on Earth. Four years of Colonel Towers. Military discipline grew more strict each day. Space does funny things to some men. The "we'll be the first men" had turned into, "*I'll* be the first *man*."

But it was Captain Brandon who drew the assignment of scouting Sirius Three for a suitable landing place for Astro, of sampling its atmosphere and observing meteorological conditions. Even as Brandon climbed into the scout-ship, Towers had cautioned him.

"Remember, your assignment is to locate a firm landing site with ample protection from the elements. Under no circumstances are you to land yourself. Is that clearly understood?"

Brandon nodded, was launched and now was cruising one hundred thousand feet above the alien planet.

Brandon tilted the ship up on one wing and glanced down at the brick-red expanse of desert. Tiny red mists marked dust storms. Certainly this was no place to set down the full weight of Astro nor to protect the crew and equipment from abrasive dust.

He righted the ship. Far on the horizon was a bank of atmospheric clouds. Perhaps conditions were more promising there. He shoved the power setting to 90 per cent.

A fire warning indicator light blinked on. Instantly Brandon's eyes were on the instrument panel. The tailpipe temperature seemed all right. It could be a false indication. He eased back 22 on the power setting. Maybe the light would go out. But it didn't. Instead he felt a surging rumble deep in the bowels of the ship. Luminous needles danced and a second red light flashed on.

He snapped the vidio switch and depressed the mike button.

"Astro One, this is Brandon. Over."

A steady crackling sound filled his earphones; a grid of light and shadow fluttered on the screen. A thought entered his mind. Maybe he had put too much planet curvature between Astro and himself.

"Astro One, this is Brandon. Come in, please."

A series of muffled explosions rocked the ship. He chopped the power back all the way and listened intently.

"May Day! May Day! Astro, this is Brandon. May Day!"

A faint voice sputtered in his ear, the face of Reinhardt, the radioman appeared before him. "Brandon, this is Astro One. What is your position? Over."

Brandon's voice sounded strange and distant as he talked to his oxygen mask. "Heading—one-eight-zero. Approximately six hundred miles from you. Altitude one hundred thousand feet."

"What is the nature of your trouble, Brandon?"

Before Brandon could answer, the face of Colonel Towers appeared beside the radioman's.

"Brandon, what're you trying to pull?"

"Engine trouble, sir. Losing altitude fast."

"Do you know the nature of the trouble?"

"Negative. Might have thrown a compressor blade. Got a fire indication, then a compressor surge. Chopped off the power."

Towers frowned. "Why didn't you use straight rocket power?"

"Well, sir—"

"Never mind now. You may have encountered oxygen or hydrogen-rich atmosphere—melted your compressor blades. Try an air start on straight rocket. I want that ship back, Brandon. Repeat, I want that ship back!"

"I may be able to ride it down. Get it on the deck intact."

"Try an air start, Brandon." Towers leaned forward, his eyes fixed on Brandon. "I don't want you to set foot on that planet, get me?"

But there wasn't time to try anything. The cabin was filling with fumes. Brandon looked down. A fringe of blue flame crept along between the floor and the bottom of the pilot's capsule. A cold ache filled the cavity of his stomach.

"Too late. I'm on fire! Capsuling out. Repeat, capsuling out."

"Brandon—!"

The colonel's glaring face flicked off as Brandon pushed the pre-ejection lever into the lock position severing all connections between the ship and the pilot's capsule. Brandon had a strange, detached feeling as he pushed the ejection button.

 $\overline{_{23}}$  There was an explosion and the pilot's capsule shot up like a wet bar of soap squeezed out of a giant's hand.

The ship turned into a torch and sank beneath him. Brandon closed his eyes for a moment.

When he opened them he was staring at the Milky Way, then the desert as he tumbled over and over. He talked to the Milky Way.

"Ten seconds. Should wait at least ten seconds before releasing the drogue chute so I'll clear the ship." Then he spoke to the desert. "And maybe another ten to give the capsule time to slow down."

He counted then pulled the chute release. Nylon streamed out behind him and snapped open with a tremendous jar. A moment later, bundles of metal ribbons floated out and billowed into a giant umbrella. The last thing he remembered was the taste of blood on his lips.

When Brandon opened his eyes he was staring at the silvery disks of the twin moons. They were high in the sky, obscuring the center of the Milky Way. Funny he should be lying on his back looking at the sky, he thought. Then he remembered.

The capsule was on its back and Brandon was still strapped securely to the seat. His whole body ached. Tendons had been pulled, muscles strained from the force of the ejection. His oxygen mask was still in place, but his helmet hung partly loose. He adjusted it automatically, then unbuckled the seat straps. He took a deep breath. Under the oxygen mask, he was aware of dried blood clotted in his nostrils, caked around the corners of his lips.

With an effort he sat up on the seat back and looked through the perma-glas. A tangle of cords stretched out to the nylon of the main chute draped over a dust dune. Beyond it he could see the gleaming metal ribbons of the drogue chute.

Ahead of him, behind some low hills, he could see a dull red glow. The ship, he thought. Astro may already be hovering over it.

He dragged the survival kit from behind the seat and pulled out some rations, a first-aid kit, finally a tele-talkie. Raising the antenna, he plugged in the mike cord from his mask and held down the "talk" key with his thumb.

"Astro One, this is Brandon. Come in."

As he talked a picture flickered on the screen. It was the radio room on Astro One. Colonel Towers was pacing back and forth in front of the radioman.

"Shall I keep trying to raise him?" he heard Reinhardt ask.

"Damn fool stunt," Towers sputtered. "Know what I think? I think he went down deliberately. Just to be the first human being to walk the ground of a planet of another solar system."

"Astro, this is Brandon. Come in please."

<sup>24</sup> Towers continued to pace and talk. "He did it to spite me."

"But we can't raise him sir," the radio operator said. "Maybe he didn't get out of it alive."

"Colonel Towers, can't you hear me?" Brandon yelled into his oxygen mask.

"He got out all right," the colonel said. "He's just stalling to make it look good."

"We aren't going to give up the search are we, sir?" asked the radioman.

"It would serve his soul right." The colonel stopped pacing and faced the radioman. "Keep trying to raise him, Reinhardt. I'm going to bring us down to forty thousand feet and search the area where he went down. Helluva waste of rocket fuel tooling around in the atmosphere," he muttered, disappearing through a bulkhead door.

"Wait! Colonel Towers!" Brandon called. But he knew it was no use. Obviously he could pick up Astro but they could neither see nor hear him.

"Captain Brandon, this is Astro calling. Over." The radioman repeated the phrase a dozen times and each time Brandon acknowledged, swore and acknowledged again. Finally, in desperation, he switched off the tele-talkie.

He snapped open the back of the unit and studied the maze of transistors, resistors, and capacitators. If there was something wrong it was subtle, like a burned out resistor or a shorted condenser. Whatever it was, it was beyond emergency repair. He dropped the tele-talkie behind the seat and examined the gauge on his oxygen tank. There was enough to last the night but not much more.

He sat down in the capsule to think. The first thing they'd locate is the burning ship, he decided. Then they would probably start searching in ever-widening circles. But would they see him in the faint light of the ice moons?

He looked back at the nylon chute again. Another thought ran through his mind.

Suppose they don't spot me in the dark. When the sun—Sirius, I mean—comes up, there's a good chance they'll spot the parachute and search for him.

He slid the canopy open and looked down at the red soil of Sirius Three. He hesitated for a moment, then swung his feet over the side and dropped to the ground.

"At least I'll have that satisfaction," he said, grinning under his oxygen mask.

Very much aware of gravity after years of weightlessness, he walked to the canopy of the chute and spread it out on the flat ground in a full circle. It billowed in the wind. He searched around, found some glassy black rocks and anchored down the chute.

Then he looked at the orange glow that marked the funeral pyre of the ship. He had a decision  $\frac{1}{25}$  to make; stay here with the capsule or head for the fire.

Couldn't be more than a thousand yards away, he decided. Charging a walkaround oxygen bottle, he transferred his oxygen hose to it. He snapped the survival kit to his belt and picked up the tele-talkie.

The ship was more than a thousand yards away. The first mile was across flat desert. He picked his way cautiously, his boots churning up clouds of powdery dust. He remembered the Russian reports of the weird and deadly creatures they had encountered in the Martian deserts.

But aside from a few gray patches of brush there seemed to be no sign of life. After all, he thought, the Earth held no life for the better part of its existence. And Towers had selected this planet because it bore relatively the same relationship to the brighter, hotter Sirius as did the Earth to the sun. While farther away it should have approximately the same conditions as did the Earth. And it had seas, not as large as on Earth, but seas, nevertheless.

Yet there was a fallacy in the argument. Presumably all of the stars in the outer arms of the Milky Way and their planets were about the same age. With similar conditions as the Earth, life must have been born and walked out of the seas of Sirius Three just as it did on Earth.

Something scurried into a wisp of brush, as if to bear out Brandon's realization. He froze, his eyes on the brush, his hand reaching for his hydro-static shock

pistol. He could hear nothing but the wind hollowing his ears. He stood for a long moment, then cautiously skirted the brush, and continued on toward the burning ship. There was an odd clicking sound and he stopped. It sounded again. Brandon realized he was perspiring despite the chill of the desert night. Again he moved on, the sound fading in the distance behind him.

The next mile brought him to a great sheet of ancient lava laid bare by the elements. He climbed to the top. The fire still seemed to be about a thousand yards ahead, beyond a ridge of low hills.

A distant flare lit up the sky ahead of him. It glowed for a few moments and died. They've found the ship, he thought. After four years, I had completely forgotten about the store of photo-flash flares.

He watched for awhile but saw no more flares. Finally he scrambled down the other side of the lava sheet and continued on toward the wreck, moving slowly but steadily.

The third mile brought him to the scene of the crash. A smoking cylinder of fused metal lay in a gully. Parts were strewn along the bottom. A wing, untouched by the fire, was leaning tip down against the edge of 26 another lava sheet some distance away.

He sat down. Another flare flashed in the sky behind him silhouetting a row of grotesque trees. I'm over here, you fools, he thought. He watched until the flare flickered out, then turned his head back toward the remains of the ship. There wasn't much of a glow to it now. It would be hard to see unless Astro was right on top of it.

He raised the antenna on the tele-talkie and snapped it on. The screen glowed into life. Towers was stepping through the bulkhead door into the radio room. Just like a television play in installments, Brandon thought. Scene two coming up.

"No sign of him at the scene of the crash," Towers told Reinhardt.

"If he got out," observed Reinhardt, "he could be a hundred miles away or more."

*"If* he got out," Towers said in a tone that irritated Brandon.

"I got out," Brandon said. "And right now I'm walking around your precious

planet like a boy scout. Damn this tele-talkie! I'd give a year's pay if you could see me now, Towers."

"We may yet spot the escape capsule," Reinhardt was saying.

"We're still continuing the search," put in Towers. "But I don't mind telling you I'm not wasting much more fuel."

The radio operator started to say something, hesitated and finally settled for, "yes, sir."

Brandon swore and snapped off the set. He looked at his walk-around bottle.

"Can't stay here any longer," he muttered.

He couldn't find the capsule. He walked three, perhaps four miles. He stopped and blotted his moist brow with his sleeve. He wasn't going to find it. Before him stretched an endless carpet of red dust. The light from the two moons was growing dim, as each settled toward different horizons.

He sat down. A cloud of powdery dust settled over his legs. The lightness in his head told him that his oxygen was running out. The weakness in his muscles reminded him that it had been a long time since he had walked in a planet's gravity. A distant flare lit up the horizon. He choked off a sob, and beat his fist in the red dust. A wave of nausea swept over him. Bitter stomach juices welled up in his throat but he swallowed them down again.

Desperately he turned on the tele-talkie.

"Astro, this is Brandon," he said.

"Brandon, this is Astro," Reinhardt said.

Brandon's body tensed. "Thank God I finally got through to you. Listen, Reinhardt, I must be about three—"

"Brandon, this is Astro," said Reinhardt in a monotone. He said it again and again and again.

Brandon fell back on the 27 ground. His breathing was short, strained. His face was bathed in perspiration. The oxygen, he realized, was giving out.

What are the odds, that the air of Sirius Three is breathable, he wondered. One in a hundred? The planet has water and both animal and plant life. Certainly it has sufficient gravity to hold its oxygen. But what other elements—noxious gases might be present. Maybe the odds are closer to one in fifty, he decided.

"But it's no gamble when you have nothing to lose," he told the Milky Way.

Ripping off his oxygen mask, he took a deep breath of the alien atmosphere. The dust choked him, his ears rang. Black spots danced before his eyes, then melted into solid blackness.

Brandon could hear Towers' voice in a vortex of darkness.

"Let's face it—Brandon is dead. Must have burned with the ship, at least that's the way the report will read. Get me, Reinhardt?"

"Yes, sir," the disembodied voice of Reinhardt replied quietly.

"We're going to set her down on a solid piece of ground near one of the oceans." There was a pause and Brandon could almost see Colonel Towers drawing up to his full height. "I'm going to be the first man to set foot on a planet of another solar system. Know what that means, Reinhardt?"

"A quantum jump sir?"

"Right. Leap-frogging ahead of the Reds. Wait till they read the name Colonel John Towers—maybe *General* John Towers—*General*."

Brandon opened his eyes. Sirius was turning the sky to gray, trimming a few scattered clouds with gold. As he stared at the sky, Sirius rose with a brassy glare. Near it he could see its white hot dwarf star companion. It was going to be a real scorcher, he decided; worse than any desert on Earth. He sat up stiffly.

On the tele-talkie screen, Reinhardt, alone in the radio room, was calling quietly for Brandon. The bulkhead door swung open and Towers poked his head through.

"Knock that off," said Towers sternly, "and take your landing station." As Reinhardt rose to his feet, Brandon reached over and turned off the set.

Brandon took a deep breath. His head spun and for the first time he realized that he was still alive. He gazed across the shimmering desert to a ridge of scrubby

hills. Blue mountains rose up beyond them. Great floes of black lava had rolled down onto the desert floor at some distant time. They were spotted with clumps of gray grass even as was the desert. The hills were studded with weird trees standing stiff, branches outstretched, like an army of scarecrows.

The air of Sirius Three was doing strange things to him. Two of the trees seemed to be  $\frac{28}{28}$  moving. He swayed and sat heavily.

As he watched through a haze of red dust whipped up by the morning breeze, the two trees came closer, turned into men wearing desert uniforms and leaned over him.

"Are you okay?" one of them asked.

Brandon said nothing.

"We saw you from our observation station over on the hill," said the other pointing.

They helped Brandon to his feet and gave him a swig of cool, sweet water from a canteen.

"I'm Captain Brandon, of the Astro One."

"Astro One?" The man removed his pith helmet to wipe his brow and Brandon noticed the gleaming US insignia on the front of the helmet. "The Astro One left Earth thirteen years ago," the man said.

"Only four years by RT," Brandon said.

The man smiled and put his helmet back on his head. "A lot of things have happened since you left. There was a war which we won, and I guess you guys were almost forgotten. And there was a lot of technological development."

"You mean you had a quantum jump?" asked Brandon parroting Colonel Towers' favorite expression.

"Odd you would know that," replied the second man. "It was through quantum mechanics that we learned to approximate the speed of light. While nine years pass on Earth when we make the trip, our RT is mere moments."

"Good Lord!" Brandon said. "You must have passed us up."

"Been on this planet for nearly a year," the first man said. "Got men on dozens of planetary systems throughout the Milky Way. One ship went a thousand light years out. By the time they come back, civilization on Earth will be two thousand years older."

"Have you got a tele-talkie?" Brandon asked.

"Sure," said the first man, producing a set one-third the size of Brandon's.

"Could you tune it to 28.6 microcycles?"

"Sure," the man said again. He turned a dial with his thumb and handed the unit to Brandon. Brandon depressed the "talk" button. A crystal clear image of Colonel Towers, putting the finishing touches on his full dress uniform, appeared on the screen.

"This is an historic occasion," Colonel Towers was announcing to his crew. "Open the hatch—and, Reinhardt, be sure to stand by with the motion picture camera."

"Excuse me, Colonel Towers," said Brandon quietly.

Towers swung around and looked out at Brandon. The colonel's face paled.

"I have something to tell you," said Brandon grinning, "about the quantum jump."

## THE END

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