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*New Worlds to Conquer*

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# Reverse Action

By

John Russell Fearn

Writing under the pseudonym Vargo Statten.

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*If the precious Canthite did not get to Pluto within the given time limit it would reach that certain stage of its evolution when it would explode with shattering force. The whole thing was a desperate gamble—a race against time!*

The trouble at the Plutonian outpost started in the simplest way. One man ventured outside the outpost in his pressure-suit, stayed too long, and returned with a raving case of cosmosis—or, more literally, cosmic radiation fever. Quite unable to control his actions he shot two of the medical specialists who tried to attend to him. In retaliation two other specialists shot dead the stricken man.

This was considered inhuman by the small governing body controlling the outpost, but on the other hand several of the settlers agreed with the specialists . . . So it grew, this bickering and argument amongst some five-hundred men and women, all of them specialised scientists on the System's farthest world, gathered together in a city under an air-tight dome, surrounded by the black, relentless wastes of Pluto and overhung by the everlasting stars.

Rapidly the disorders got out of hand. Radio messages began to seep through to faraway Earth. Finally, the Commanding Officer of Commercial Spacelines realised something had to be done—and quickly. So he sent for Irwin Grant, one of the most reliable space-pilots in the Service.

"Only one thing we can do about this business, Grant," the C.O. said, when he had given particulars of the Plutonian disorders, "and that is to get some *canthite* to the Plutonian governors as fast as possible."

"Yes, sir," Irwin Grant assented—and waited. He was a forty-year-old man, grim-faced, hard-jawed, and looked as though he had a perpetual grudge against life.

"*Canthite*, as you know, Grant, is an atomic by-product which upon explosion produces long-term paralysis. Long enough anyhow for the governors to regain control of the outpost. On the other hand, *canthite* is difficult stuff to deal with because of its high mutational speed. If it is not transported to Pluto within a given time-limit it will reach that certain stage of its evolution where it explodes with shattering force. The whole thing will be a desperate gamble—a race against time."

"Yes, sir," Grant assented, thinking. "However, given the fastest ship in the Service, and a crew of the toughest rocketeers, I don't see any reason why we shouldn't make the trip in time."

"I knew I chose the right man," the C.O. smiled. "I know you will probably succeed in scrambling a crew together—and 'scramble' is indeed the right term, for only fugitives and down-and-outs are willing to fuel a machine which has a three thousand, three hundred million mile journey to make . . . The point is, what about the technical side? Whom are you using for first mate?"

“I think Anderson will fill the bill, sir. Have I your permission to bring him in here?”

“By all means! Where is he?”

“Waiting in one of the ante-rooms.”

The C.O. nodded and pressed the intercom switch at his elbow.

“Have Mr. Anderson shown in here, please . . .”

In a moment or two Anderson entered. He was short, blunt-featured, with wiry black hair. Down his right cheek was a deep-laid vicious scar. He looked both tough and reliable.

“Robert Anderson?” the C.O. enquired.

“Awaiting orders, sir.”

“You have first mate’s papers and navigation credentials?”

For answer Bob Anderson laid them on the desk. As he did so the C.O. and Irwin Grant exchanged glances. In the eyes of both men there was a significant light as though they had come to a mutual decision over something exclusively between themselves.

“Yes . . .” The C.O. bent his head to the papers. “These seem to be in order, Mr. Anderson. Now I’ll give you the details.”

And for Anderson’s special benefit the C.O. repeated all that he had told Grant. When he knew the facts Anderson merely gave a shrug of his thickset shoulders.

“Be tough going, sir, but there’s no reason why we shouldn’t make it. I’ll be glad of the privilege to work under Captain Grant.”

“Good!” The C.O. sat back in his chair. “I understand that you two men are firm friends?”

“Have been for many years, sir,” Grant acknowledged.

“All to the good. When the two controllers of a space machine are also firm friends in private life it makes for that mutual understanding so necessary in your work . . .” All the time he spoke the C.O.’s eyes were studying Anderson pensively.

There was silence again as the C.O. finished speaking—long-winded as usual, either talking for the sake of it, or else so that he could study these two men who had been assigned to such a dangerous mission.

“Are there any particular instructions, sir?” Grant ventured at length.

“They will be sent to your quarters, Grant. Your job now is to get a crew together. When you have done that notify me and I will do the rest regarding the *canthite* . . . For the moment that will be all.”

Both men saluted formally, shook hands with their superior, and then departed. Out in the corridor they relaxed and looked at each other.

“No easy job,” Anderson commented. “I can’t see the crew taking kindly to it.”

“Neither can I, but we’ll get one together somehow——”

Grant paused and turned as the office door of the C.O. suddenly opened and the brass-hat himself appeared.

“Oh, you’re still here, Grant! Good! I’ve just contacted the Operational Base and you will be using the ZM/10.”

Grant’s eyes brightened. “The ZM/10! Why she’s a brand new vessel, sir, isn’t she?”

“Almost. Had her trials, of course. Certainly the fastest space machine yet built. You should make the trip easily enough in her . . . She’s down at the Operational Base so I should go and have a look at her whilst you also sign on your crew.”

Neither man hesitated any longer. In a matter of minutes a Service helicopter had transported them from the Executive Building to the enormous space grounds, and certainly

there was no need to try and *find* the ZM/10. It stood towering amongst its fellow machines, gleaming brightly new from its transparent nose to tapering rocket-exhaust fins.

“She’s a beaut!” Bob Anderson murmured. “Better give her a look-over.”

This took both of them an hour, by which time they were satisfied that they had quite the most efficient machine in the Service for their “beat-the-clock” assignment.

“Come to think of it,” Anderson said, as they strolled back towards the low-built squat edifice where they hoped to get together a crew, “that machine might be capable of coming pretty near the speed of light.”

“Very possible,” Grant assented. “Even some of the smaller machines have reached the speed of light at times: I know, because I piloted ’em!” He smiled rather sternly for a moment and then changed the subject. “Better see what we can do about a crew.”

They entered the nearest of the low buildings and looked about them. Here in the great space, looking very much like a one-time Labour Exchange interior, were gathered groups of men and women, talking and idling, waiting for the possibility of a job of some kind in the mighty space fleet. There were all kinds here, from stewards and pursers to hostesses and rocketeers. Some of them skilled, others unskilled—but all of them accustomed to the fantastic life of riding the void.

Upon the entry of the two uniformed men there was a hopeful stir. Grant stood for a moment and looked over the assembly, then he turned to the nearest Interview Room, entered it with Anderson beside him, and closed the door.

“That motley crowd out there should give us what we want.” Grant tugged off his uniform-cap and tossed it down. “But first of all, Bob, let’s get something straight.”

“Surely! What, for instance?”

Grant hesitated, then said slowly, “I’m making this signing-up business another inspection parade. You take down the particulars of each applicant and, if the need arises, I’ll give you the nudge.”

Bob Anderson gave a serious little smile. “So you’re still searching for the needle in the haystack?”

“Yes. And I’ll go on searching until the crack of doom if need be! Some day, Bob, I’ll find him! Three years ago Slade Jackson murdered my wife whilst I was away on a voyage. He murdered her because she would not hand over certain private papers of mine which contained technical information—enough information anyhow to enable an ambitious man to get in the Space Service. Because my wife would not comply she was shot dead and Slade Jackson took the papers . . .”

Grant’s eyes were smouldering as he paused for a moment—then he made a weary gesture.

“But why the hell do I need to repeat all this? It was Slade Jackson all right! The ultra-violet photos the police took of my wife’s eyes showed that. He was the last person she looked upon before her death . . . Slade Jackson, whom nobody has ever seen since! Beyond a doubt he escaped into space, Bob, and one day, like the dirty skunk he is, he’ll turn up amongst the mob looking for a job. Since we are the principal space-port I never give up hope of spotting him. I’ll know him again when I do, no matter how much he’s changed . . . Huh! Once my best friend. A blond-haired, square-faced chap. Yes, he’ll turn up because he’s got to!”

“Why has he?” Bob asked quietly. “After all, if he stole those papers it is probable that he knows enough by now to be something high up, not just a down-at-heel rocketeer.”

Grant shook his head. “Not with the kind of nature he’s got. A crafty devil like him would be bound to bring about his own downfall. Perhaps he rose pretty high somewhere unknown to most of us, but by this time I’ll wager he’s dropped to plain space roving by now.”

“Maybe.” Bob Anderson was looking thoughtful.

Then suddenly Grant turned to the intercom ’phone and switched on to the Clerk in Charge.

“Have a dozen men sent in,” he ordered. “Category, Rocketeer; Destination, Pluto; Room Six.”

“Right, sir.”

So the men began to enter and whilst Bob Anderson sat and noted down the details, Grant searched each face in turn as the men came to him to receive their final orders . . . The men were of all kinds, most of them strong and beefy giants, accustomed to the rigours of the void and the sheer hell of acceleration. Above all, they were used to the killing temperature of a rocket-hold.

Actually, Grant only required six men, and from the dozen who had been sent in he selected his crew—but not one of them had the face he was looking for. At length he dismissed the unwanted ones and appraised the remainder.

“Your salaries for the return journey to Pluto will be double the normal rate,” he stated. “That is because the trip entails a certain amount of danger and a great deal of endurance on your part. The machine you will man will be the ZM/10, which you can see on the space-ground outside. I shall be your captain and Mr. Anderson here will be first mate. Any questions you wish to ask?”

“Only one, sir.” One of the men touched his greasy cap. “When do we start?”

“Now I have my crew I can make my own time. We depart at dawn tomorrow when the space lanes are reasonably clear. You have the rest of today—and tonight—free. Anything else you wish to know?”

Apparently there was not, so Grant jerked his head and the six men departed slowly, talking amongst themselves. They had hardly departed before a messenger from administrative headquarters entered, carrying a medium-sized parcel wrapped in vivid yellow paper.

“The Commanding Officer’s compliments, sir.” The messenger saluted and put the parcel carefully on the desk. “He directed that I should deliver this to you—one consignment of *canthite* for which you are to take the full responsibility. He requests that you notify him as promised when you have a crew.”

“Tell him my crew is chosen,” Grant replied, eyeing the parcel. “We leave at dawn tomorrow.”

“The message will be conveyed, sir!” Again the salute and a quick departure. Bob Anderson got up from his desk and came to look at the parcel.

“*Canthite*, eh? Can’t say I’m very familiar with the stuff.”

Grant glanced at him. “Pretty rare atomic by-product, but mighty useful as a paralysis-producer. We’d better put this in the ZM/10’s storage hold where it will be safe. And let us pray to the gods that we make the journey to Pluto before the damned stuff explodes!”

Anderson nodded sombrely. From the C.O. himself he had heard of the mysterious product’s tendency to rapidly evolve to explosive point unless it were sealed down in the heavy lead matrix of a specially-designed projector—such as existed on the Plutonian Outpost—where its mysterious energy could be dissipated in the form of paralysing radiation.

*Canthite* was dangerous enough to make nitro-glycerine seem like plain water by comparison  
. . . .

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At dawn the following day Grant arrived at the space grounds to find Bob Anderson and the crew awaiting him. This was purely a matter of routine observed by all space-ship crews, it being a tradition that the commander must enter the vessel first.

Accordingly Grant did so, then when the crew had filed past him through the airlock and descended to their own quarters he hurried along the narrow corridor to the storage hold and unlocked the heavy door. Switching on the light he looked at the yellow parcel, then he switched the light off again and seemed to be studying the storage hold's gloomy depths.

"Nothing wrong, is there?" Bob Anderson came and looked over Grant's shoulder.

"No, everything seems to be okay. I was just looking at that parcel in the dark—even if that does sound Irish—to see if it is giving off a mutational glow. Apparently it isn't, so we should be okay, at least for a while. That insulated paper should provide plenty of protection. However——"

Grant fumbled in his uniform pocket and pulled out a small phial filled with primrose-coloured fluid. Switching on the light again he stood the bottle upright beside the parcel, secured it with string so it could not fall, then returned to the doorway again.

"What's the idea?" Anderson was looking puzzled.

"Oh, just some stuff of my own. It might counteract the mutational effect a little. Anything that helps to slow down *canthite's* evolution is worth having . . ."

Grant shut the door and turned the key, putting it in his pocket; then he gave Anderson a glance.

"You have your duplicate for this hold in case of emergency?"

"Sure thing!"

"Right! Our time's about up. Let's get on the job."

They returned along the corridor and took up their positions in the control room—Bob Anderson to the switchboard and Grant to the outlook port with the navigation map below it. He gave directions which Anderson immediately relayed to the rocket-hold.

There was a pause, then came the familiar whine of the jet motors starting up. Abruptly they blasted forth with all their force and the huge vessel began to rise swiftly, whistling through the morning mist and then rising with ever-mounting velocity through the successive layers of atmosphere, and finally out into the star-blazoned emptiness of the void.

"How did the men react yesterday when you told them the kind of speed we'll have to get up?" Anderson asked presently. "I was too far away to hear you speaking to them."

"They took it fairly well." Grant paused, his harsh mouth compressed. "Just the same, Bob, they're a tough bunch! When I made an examination of their papers last evening I found that every one of them have criminal records. Of course, a criminal record doesn't stop a man from being released from jail in order to become a rocketeer. It's the worst job there is and tougher than any prison discipline. Right from the start I'll have to show them that I'll not tolerate any monkey business. That *canthite* has got to reach Pluto in time even if we burn out every rocket tube!"

Grant turned aside again, watching the receding globe of Earth for a moment or two, then he looked up towards the stars.

"Increase to four atmospheres," he ordered briefly.

"Four atmospheres it is . . . ." Bob Anderson relayed the signal to below.

Little by little the velocity of the ship began to build up, the increasing strain being balanced as much as possible by the floor gravitators and equalisers. Even so, Grant was not fool enough to think that the maximum speed would be any picnic. Excessive speeds meant madness—space madness. Delusions. He had been that way himself once.

“What’s our velocity?” he asked presently, his eyes still on the stars.

“Five hundred per sec.”

“Increase to six atmospheres.”

Routine instructions. Nothing more. A silence dropped for a while, except for the vibration from the rocketholds below, but this was felt more than heard. Outside, stars, sun and moon blazed in brazen majesty.

“About those new scientific inventions of yours,” Bob Anderson said presently, sitting back in his powerfully sprung chair. “Did you get any further with them?”

“Fraid not. Been busy on too many jobs. Wouldn’t be any use anyhow, I’m afraid. The C.O. has got it firmly fixed in his head that I’m a good pilot for a dangerous assignment and therefore his interest in my inventions is precisely zero.”

“But that’s fantastic! You’ve got scientific ideas which could revolutionise the world. You know a lot of new tricks, too, about space travel and space radio. That secret fuel you were working on, for instance, to supplant atomic power—You’re a fool to let such things slide. There’s only one mind like yours to every generation. The world needs inventions like those!”

“Mebbe . . .”

Grant turned from the port to look at the gauge; then he gave a start and glanced about him as there came a sudden violent spluttering from one of the rear tubes. It exploded sharply once or twice and then recovered itself.

“Queer!” he said, frowning. “Sounded as though the firing circuit was broken for a moment, else we got a trace of water vapour gumming up the works——” He snatched up the intercom ’phone. “What’s going on down there, Dawson?”

Bob Anderson saw Grant’s expression change as he received the answer. “I’ll come right away,” he promised, and hitched the instrument back in position.

“Something serious?” Bob asked quickly.

“From the sound of it, yes. Faulty electrical contact and Dawson got the full blast. Put in the automatic and come with me.”

Bob obeyed and then got to his feet. Together, he and Grant traversed the length of the ship and then descended into the hot rockethold to find the men gathered in a little group about a fallen body on the floor. They stood back as Grant elbowed his way through. Dawson lay full length, his body in the fixed, contracted attitude which bespoke death from electrocution.

Grant’s lips tightened as he looked about him. Set, sweating faces loomed in a half circle.

“Well,” he asked. “What happened? You, Brogan—you’re second-in-charge down here.”

Brogan, stripped to the waist, looked uneasy. “I don’t rightly know what *did* happen, skip. Dawson was at the switchboard, doing his usual job of controlling the firing apparatus; then all of a sudden, when he closed one of the main switches, he shot back here as though he’d been kicked in the belly. The tube misfired for a moment whilst the emergency circuit took up.”

“So that was it!” Grant moved to the switchboard and eyed it closely, taking care to avoid touching anything. Finally he pulled an instrument from his jacket pocket and studied it carefully.



"This fourth main switch is alive," he announced. "Naturally Dawson got the current when he closed it." He debated, brows down. "Odd how it got like that. Only thing to do is keep that switch cut out and use the emergency circuit. Can't waste time now on repairs. Brogan, your papers classed you as an electrician. Know enough to take over Dawson's job?"

"I'll do my best, skip."

"Carry on then; I'll see your pay's adjusted when we get back home. Blake—Bostock, put Dawson's body in the storage-hold, section four. He'll have to be examined by the authorities when we reach Pluto. Switch on the refrigeration unit to keep the corpse from decomposing— Now, the rest of you, give it all you've got! On this journey every second counts."

Grant turned back to the ladder and with Bob Anderson finally came into the control room again. Bob Anderson's brown, scarred face was serious.

"You can call that an accident if you like, Grant, but——Well, a ship as good as this one, checked to the last detail, shouldn't develop an electrical fault like that! Maybe somebody fixed it so Dawson would get killed?"

"Could be. The vessel was open on the spacegrounds during the night for anybody to enter. Normally the space-port guards would stop anything like that, but somebody intent on villainy might get by." Grant gave a sigh. "I knew I'd signed up a bunch of cut-throats and now I'm convinced of it. It's a true saying that there's many a grudge settled in the rockethold."

He returned to the desk, made out a report on the mishap, and then pushed it on one side.

"Any one of those men might have had a reason for wanting to kill Dawson," he mused. "So one of them fixed it—legitimately. Dawson's record showed him to be as big a crook as any of them, but he was a damned rocketman, just the same——"

He turned and looked at the hairline bisecting the stars. "We lost two degrees on that misfire. Check back on the angle of ascent."

"Okay."

"Charge to eight atmospheres."

"Eight atmospheres it is."

Again the pressure of mounting speed made itself felt. There was a slight but noticeable increase in the movement of the Moon as the ever speeding vessel neared its field. Out ahead of the sky was a powdered endlessness of stars, nebulae, and far-flung galaxies.

"Needle in a haystack was right," Grant mused aloud, presently.

"Huh?"

"Nothing. Just thinking of Slade Jackson. I always do when I survey the infinity of space. He could have taken a spaceship and gone anywhere way out there—to the asteroid mines, the nearer worlds, the further worlds—anywhere!" Grant pulled from his jacket pocket the photograph the police had given him, studied it long and earnestly, then put it back in his pocket.

"I'll find him yet, Bob—— Twelve atmospheres!"

"Twelve atmospheres it is." Anderson relayed the order and then looked questioning. "Twelve atmospheres so soon? You're building up pressure in those tubes at the devil of a rate——"

"I know it, but we've leeway to make up. We lost a fraction of speed in that short circuit and in the aggregate it tots up. Better to have time in hand. Give the ship a chance."

Bob shrugged and looked at the velocity-needle as it began to creep along its graded scale. Gradually the machine attained the 1,500 miles per sec. mark . . . . And still the velocity

increased.

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For six hours Grant built up the speed of the machine steadily and began to draw away from the recognised space-lanes for the inner planets towards the vast open spaces existing between the orbits of little Mars and mighty Jupiter.

Satisfied with his final check up he joined Bob in a meal and then retired to take the first spell of rest. He had no idea how long he had slumbered before he was awakened by a violent shaking. Bob's scarred, anxious face was bending over him.

"Wake up, Grant! More trouble below. Mutiny or something! Brogan's been killed!"

"What!"

"You'd better come. It's more than I can handle."

Grant floundered out of his bunk, dressed hastily, then fled down the narrow corridor, buttoning his jacket as he went. Once he reached the rockethold behind Bob Anderson he found a state of sullen passivity reigning. Though three of the men should have been in their hammocks off duty they were standing with the remaining one looking down at the floor.

There lay Brogan, face up, a ghastly jagged wound across his forehead. Grant's eyes darted to the switchboard. Part of it lay smashed from sledgehammer blows.

"What this time?" Grant's voice was cold with fury.

"Brogan went mad, skip."

"That's right! Baxter had to sock him with a wrench before he went for us. He's one damned powerful man and——"

"One at a time!" Grant interrupted; then, "You, Baxter—you hit him with a wrench?"

Baxter nodded sullenly and indicated the weapon on the floor.

"I *had to!*" he burst out defensively. "The boys here will tell you! Brogan had got into his hammock, then after a while he jumped out of it and went berserk. Started smashing the switchboard with a stoke-iron—and then he went for us. I had to poleaxe him to save the rest of us."

The other men nodded grimly as Grant looked at them. Then Baxter added: "If you ask me, skip, this blasted ship's haunted. First Dawson, now Brogan—— There's a jinx!"

"Stop drooling!" Grant ordered. "It's more than likely that one of you men had reasons for wanting both Dawson and Brogan out of the way." He turned and surveyed each man steadily. "I'm wise to your criminal records, remember. The only ghosts aboard this vessel are the ones your guilty souls think up! Get this, the rest of you: if there's any more trouble down here I'll have what's left of you brought before the Enquiry Board on a charge of suspected murder the moment we reach Pluto. Understand?"

The four nodded slowly, glancing bitterly at each other.

"All right then: now get back to work. Put Brogan's body with Dawson's and carry on."

Grant turned to the damaged switchboard and studied it.

"I think I can fix this myself. Bob, get back to the control room and stay on duty."

Bob Anderson went rapidly up the ladder whilst Grant pulled off his jacket and shirt. Then hauling across the repair kit, he set himself to work. The men watched him in between moments of routine activity. The damage Brogan had done looked far worse than it really was. In twenty minutes Grant was finished with the repairs and turned to the men again.

"If you get precious little rest from now on it's your own fault," he said curtly. "You say Brogan went mad. I say it was more likely a fight. Anyhow, you are two men short and the

deficiency has got to be made up by the rest of you. You take over the switchboard, Baxter. If you get in a jam call me in the control room.”

Grant mopped his saturated body and then returned to the control room. Bob Anderson was poring over the instruments.

“Fix it?” he questioned, looking up.

“Yes; for the time being. I was——” Grant stopped in the act of buttoning his shirt to stare through the port. “What the hell’s wrong here?” he demanded. “We’ve lost heaven knows how much speed! We’re not even through the asteroid belt yet!”

“I know,” Bob Anderson admitted quietly. “We must have lost it whilst that rumpus was going on down below.”

“But even then . . . .” Grant studied the instruments, “Even then,” he continued, “there seems to be no increase in speed for the time in which I slept! Six hours short! Why the hell didn’t you keep up the speed I ordered?”

“Because I was afraid to.” Bob Anderson’s voice was concerned. “I think we’ve taken on too much, Grant, and it’s high time you realised it! You’ve seen how those men down there are behaving. If we keep on increasing and increasing they’ll finally mutiny in real earnest. Then we’ll——”

Grant swung to the intercom, and switched it on.

“Hey, Baxter. We’re nearly six hours behind schedule. Build up to twenty-seven atmospheres as fast as you can! The *limit!* Our lives depend on it.”

He stood waiting for a moment with a set face, then nodded as there came a sudden surge of acceleration.

“Okay, if you can keep ’em at it,” Bob said grimly. “If you ask me, I think they’re out to deliberately sabotage your efforts to reach Pluto.”

“They’ll seal their own dooms as well as ours if they do that. We reach Pluto or get blown to Kingdom Come . . . .” Grant gave a frown. “What would be their object in trying to sabotage things, anyway?”

“I don’t know, unless it is in the interests of one of them to be sure that *canthite* never gets to Pluto. Those who started the revolt at the Plutonian outpost doubtless have agents scattered everywhere throughout the System. One of them might be at work.”

“Fantastic!”

“Perhaps. But you can’t deny that those two deaths were more than peculiar.”

Grant turned away to the port, stood for a long while looking out. Space, black beyond imagination, crowded in from every vantage—space which was drenched in the implacable, frozen glitter of stars and suns. And, far away in the backdrop, green Neptune. Pluto was not even in sight yet.

Grant turned suddenly and looked at the velocimeter. It registered 80,000 miles per sec. . . . The pressure of speed began to increase even more. Despite every device for counteracting acceleration there was a labouring drag making itself felt in the hearts of both men, a straining at the lungs.

The control room door opened suddenly and Baxter came in, nervously fingering the sweat-rag about his throat.

“What do you want here?” Grant snapped, eyeing him.

“I’m acting as spokesman for the boys, skip. You sort of seem to be forgettin’ that your orders involve suffering for us down there. The faster we go the higher the heat rises and it’s

gettin' more than flesh and blood can stand. What are you trying to do?" Baxter demanded angrily. "Kill us?"

"Any more of that, Baxter, and I'll clap you in irons!"

Baxter gave a crooked smile. "You won't do that, skip. You need all of us working. But we're men, same as you and Mr. Anderson 'ere. We're entitled to know what this is all about. Have you reckoned that twenty-seven atmospheres is going to bring us close to the speed of light? Nothing human can stand that!"

"By what right do you dare question my orders?" Grant demanded in fury. "You'll stand the speed the same as I will. The same as Mr. Anderson will. Spaceships have flown near the dead-line speed before now, and their crews have survived! So shall we! Either we reach the ultimate of speed, or die," Grant added, quietening. "We're carrying *canthite*, Baxter, and if we don't get it to Pluto within scheduled time it's going to explode. Tell *that* to your mutinous friends below!"

Baxter's expression changed. "*Canthite!* My God, none of us knew about that—— That's different, skip." He drew himself up and saluted suddenly. "No disrespect intended, sir. Twenty-seven atmospheres it is."

He went out hurriedly and Grant gave Bob Anderson a significant glance.

"So much for your theory of sabotage, Bob. They didn't even know we have *canthite* aboard. Now they *do* know they'll give the ship all she's got."

"Brogan or Dawson might have known there was *canthite* aboard," Bob mused. "And I still think there's a sabotaging effort somewhere." He shrugged, dismissing the matter. "One hundred thousand miles per sec.," he announced.

"Right! Prepare for——" Grant started speaking then suddenly staggered as a violent explosion rocked the ship from end to end. Bob sprang to his feet in alarm, looking grimly about him—then together he and Grant raced down to the rockethold to find acrid volumes of smoke belching upwards.

Coughing and spluttering, Grant stumbled through the smoke wreaths. Baxter and Blake were on their knees, trying to help up the fallen figures of their-two remaining colleagues. Flame and choking exhaust were belching from a broken section of rocket exhaust chamber. Grant swung round and slammed on the safety valve, putting that particular tube out of commission.

"Baxter!" He dragged the man to his feet. "Baxter, what *this* time?"

"Dunno. A blow-out, I think. Escape feed choked, perhaps. These two boys got the full blast and the concussion killed them." Baxter's eyes were frightened. "Skip, I still think there's a jinx!"

"Jinx be damned!" Grant looked at the fallen men. He felt a little sickened by the sight of the ghastly injuries they had sustained. He motioned for them to be moved into a corner . . . . The smoke began to thin somewhat.

"There are four of us left in this ship," he said deliberately. "And we still have to get to Pluto on time. We can't throw *canthite* overboard because it would follow in the wake of our gravity and blow up just the same. It means we've all got to work like demons. You two keep control over the electrical equipment. You, Bob, give me a hand to patch up this tube: it can be done in about an hour. So far we have lost no speed since we're travelling at a constant velocity—but we are not *increasing* it as we'd planned. And we must—we *must!* Use all your available emergency tubes whilst I fix this one."

"Right, skip!" Baxter responded, and bundled Bates to his post.

Grant went to work immediately on the tube, Bob handing him the tools he needed. The further Grant proceeded with the repair the more puzzled he became by certain peculiarities concerning it. Once he pulled out a piece of broken coiled spring and part of a mechanism.

“That never got inside this tube by accident,” he muttered, his eyes narrowed. “This was not a natural blow-out——”

“It looks to me like part of a time-bomb,” Bob said, studying the “souvenir”. Then his scarred face became grim. “I tell you, Grant, this thing is deliberate! Either the person who tried to fix this trip is dead, else he is back on Earth—or else it’s one of those two men,” he murmured, glancing towards them.

“Plenty of alternatives, anyway,” Grant growled. “Hand me that welder.”

He began to work with desperate speed, and at the end of two hours he was able to relax. The tube was patched up, and it held as firing resumed in the ignition chamber. Grant nodded in satisfaction and turned to look at the gauges over the pressure controls.

“Twenty-seven atmospheres exactly,” Baxter said, mopping his face.

Grant studied the subsidiary velocimeter. “Even at this pressure we shan’t move fast enough to make up our leeway. Make it thirty. We’ve got to risk it.”

“Dammit, man, that’s asking for it!” Bob cried, clutching Grant’s arm. “Thirty is the limit of pressure. You’ll blow every tube to bits if——”

“Thirty!” Grant commanded inexorably. “Get on with it, Baxter.”

Baxter was grim faced and obviously doubtful, but he obeyed. Grant wheeled, motioned Bob, and they returned to the control room.

Through the port the hosts of heaven were apparently unchanged, so vast was their distance. Beyond that sense of inner pressure and constriction in the skull there was nothing to suggest that the machine was travelling now at 130,000 miles per sec. and the speed still increasing.

“Keep this up and we’ll just make it,” Grant muttered, getting into his shirt again.

“Yes and if we *overshoot* we’re sunk!” Bob Anderson gave a meaning look. “It’s as easy as anything can be to overshoot the deadline when you’re near the speed of light. God knows what would happen then!”

Grant did not appear to be listening. “If only I knew who planted that bomb . . . .”

He shrugged and turned his attention to Pluto, now visible in the distant void; then he moved his gaze to the velocimeter needle. By imperceptible degrees it had crept up to the 145,000 mark, and was still advancing.

“Without mishaps we’ll just make it,” he said, regarding the chronometer; then he staggered a little at the appalling load on his body. Bob Anderson, too, could hardly move in his chair.

150,000 . . . . Eternity seemed to weigh between. 170,000 . . . .

Grant sat down suddenly, all the counteractive mechanisms failing to maintain a decisive balance against the excessive rate of progress. Bob gave a heavy-jawed smile and eased himself in his spring seat. Then his eyes began to shade with alarm as he watched the speed needle.

180,000! Pluto was visibly nearer.

“Grant!” Bob Anderson’s voice was more of a gasp. “Grant, we’ve got to ease up! Six miles a second faster than this and we’ve reached the limit——!”

“Mebbe you’re right.” Grant crawled out of his seat and switched on the intercom. “Cut all rearward tubes to zero and use counteractive blast . . . .”

Grant dropped the 'phone from his leaden hand and stared through the port. A frown gathered on his forehead as the rearward rockets still flared and no counteractive blast came into being. It was utterly contrary to orders——

“Grant!” Bob Anderson shouted suddenly, alarm dragging him to his feet. “Your orders aren’t being obeyed! Look at the velocimeter!”

Grant gazed at it in fascination—184,000 miles per sec.

“Man alive, get moving!” Bob shouted, dragging him to his feet. “We’re going to overshoot the deadline! We’ve got to use the counterblast or we’ll——”

He floundered to the control room door and Grant followed him like a man intoxicated. Confused and dizzy, they blundered down the ladder and into the rockethold. Heat like an inferno clamped about them. Baxter and Bates lay sprawled helplessly on the metal floor, their eyes staring fixedly above.

“Again?” Bob Anderson whispered.

“Dead all right, from natural causes,” Grant replied. “Heat and the terrific acceleration. Too much for their hearts——Cut out those switches!”

Bob swung to obey. Grant watched the slave-gauge, then he gave a startled cry. The needle was pressed right on the deadline maximum—186,000 miles per sec.

“We’re going to overshoot——!” he started to cry; then it seemed as though something struck him on the head with stunning violence. He went crashing down into abysmal nothing.

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Nothing seemed different to Grant when he staggered to his feet again. He helped up the fallen Bob and revived him quickly. Together they floundered up the ladder and back into the control room.

“What happened?” Bob asked weakly; then he stared with dazed eyes through the rear port. “My God—*look!*”

Grant swung round, adjusting his mind to the incredible.

Always in space there is an eternal surrounding backdrop of stars and galaxies—but to rearward of the ship there was now nothing but dark. A darkness inconceivable, incapable of description. The total absence of all light. Blinder than the blind. It appeared to encompass the entire universe to the rearward of the vessel.

Grant stumbled to the front port and met the same scene again. Dark! Incredible, absolute dark . . . He met Bob’s wondering eyes.

“We’re—lost.” Grant sank down stupidly in his seat. “We did the very thing which you feared—exceeded the speed of light, the binding factor of the Universe. At the last moment we cut out the rearward tubes and thus achieved a constant acceleration, which apparently we still have——”

“But the stars!” Bob cried. “Where are they?”

“Gone—perhaps forever as far as we are concerned.” Grant’s voice was sombre. “Don’t you understand, man! Those stars behind us give no light because we must be moving faster than the light they send forth. Those that are in front send forth their light towards us, but faster than we can absorb it. There is therefore an invisible collision of light waves going on constantly in front of us, a warping of space itself, making it impossible for us to see anything.”

There was silence for a moment. The solitary spotlight still shone.

“I don’t get it,” Bob muttered finally. “According to the Fitzgerald Contraction a moving body at the speed of light becomes negative, a minus quantity. How is it we’re still

travelling?”

“Travelling, yes—but to where?” Grant looked outside again. “We’re in no part of the Universe which we can understand——” He got up and beat his fist vexedly against the port frame. “The Fitzgerald Contraction makes it that our ship, ourselves, everything, had to become minus-zero. Yet we still move—or at least we assume we are doing. With nothing relative outside by which to judge it’s hard to be certain of anything.”

He looked at the velocimeter. It was not at the end of the scale but at the beginning. In fact it was even *below* the beginning—two degrees under zero.

“Two thousand a second under zero,” Grant muttered. “If we were to read that in the normal forward way it would indicate 188,000 miles a second, two thousand faster than light—Bob!” He swung round to him. “*Were going backwards!*”

“What!”

“Look at that meter if you want proof! Fitzgerald’s Contraction *is* the ultimate of speed,” Grant went on tensely. “The faster one goes over that ultimate point the greater becomes the negative extension. Therefore it means, if one can grasp the paradox for a moment, a backward progress dating from the precise instant when the velocity of light was achieved. We can’t go forward any longer because we’ve crossed the deadline.”

Bob Anderson stared out on to the total void, wrestling with the problem.

“Yes, I begin to see,” he said slowly. Then he looked up. “Then how do we begin to get back?”

“We don’t,” Grant answered deliberately. “We can *never* get back! If everything inside this ship is retrogressing instead of progressing it means that the tubes would have to give out exhaust before they could start to fire! It means that to start them up we would have to stop them first *from* a point when they are in action, not dead still as they are now. The negative action of starting them up by first stopping them is impossible to conceive. Like trying to imagine a candle being lighted when it is dead out!”

“Like—like a movie film running backwards?”

“Like that, yes.”

“Then look, Grant, we must be getting younger!”

“We are.” Grant’s jaw tightened. “With every second we are flying further into this negative universe, undoing the work of the progress which ends at the deadline of light-velocity—and that reminds me! The *canthite*! I was trying to figure out why it had not exploded ere this. Obviously it cannot explode now. It is devolving, not evolving.”

He sank down in his seat again, brooding. Already he could feel queer mental changes, and with them strange physical alterations. Presently he looked at the switchboard. It was becoming something no longer understandable . . . Memory was slipping into the gulf.

“We’re breathing in carbon dioxide and breathing out oxygen,” Bob Anderson proclaimed at length, moving from the testing bench.

“We must be,” Grant acknowledged. He got up again and went restlessly to the port. Still the maddening, endless darkness met his eyes. With every second memories were slipping from his mind: there was a slow but definite return of suppleness to his limbs as years fled incomprehensibly.

Suddenly he turned, a remark dying on his lips. Bob Anderson was seated in his control chair, gripping its arms and staring into space. The years were also stripping from him, even as his—and Grant’s—uniform was becoming newer. Grant stood watching, stunned by the

marvel, as implacable law slowly straightened out the scars of injury from Bob Anderson's face and gave it the contours of a young man. Gradually his hair became blond.

One year—two years—three years . . . younger.

Grant passed a hand quickly over his eyes and looked again. The identity of Bob Anderson had slipped away and left—

“Slade Jackson!” Grant shouted suddenly. “*You are Slade Jackson!*”

He lunged forward suddenly, but with an adroit twist of youth, Bob Anderson twisted out of his seat and stood defensively by the wall.

“Wait a minute, Grant! Take it easy!” The voice, too, was quite different from that of Bob Anderson.

“Take it easy!” Grant shouted. “I’ve looked for you everywhere—always hoping and waiting! And we had to be flying beyond the deadline to get the truth!”

Almost without thinking he whipped his safety-knife from his belt and drove it straight for Anderson's—Jackson's—heart. Jackson only staggered a little, then he straightened. Grant withdrew the knife and looked stupidly at the spotless blade.

“No use, Grant,” Slade Jackson said calmly. “You can't kill me. Life is going backwards—not forwards. You can't avenge because the Fitzgerald Contraction won't let you.”

“You dirty swine!” Grant leapt forward and seized Jackson savagely by the throat, forcing him back into the control seat. “You killed my wife, stole all my technical information—*didn't* you? *Answer me!*”

“Yes, I did,” Jackson retorted, dragging himself free of the grip. “I didn't mean to murder, though. It was an accident. The information I stole enabled me to become a first mate aboard a spaceship. I was down and out, Grant: I had to steal the answers to technical questions in order to pass the examination and get a job quickly. Then I met with an accident. It ruined my face and crushed my chest. But it was also a golden opportunity. I realised when the surgeons had finished with me that my voice was different due to what they'd done inside my chest, and my face too was entirely altered by plastic surgery, leaving also a deep scar down one cheek. I had only to dye my hair to become a different person entirely. For all the law knew Slade Jackson had died somewhere in space. I became Bob Anderson, first mate. And at last I was assigned to work beside you.”

“You, a murderer, worked beside me! Why?” Grant demanded. “Since you killed my wife you could just as easily have killed me—many a time! Why didn't you?”

“I keep on telling you, I didn't murder deliberately! I worked beside you for one purpose only. I was waiting for the day when those various scientific inventions of yours would see fruit. I planned to steal them when that happened. Since we're in a spot right now I've no need to hold anything back . . . Yes, I intended to steal them. I believed, and rightly I think, that I could one day become scientific master of the System—at your expense. *That* was why I stayed beside you.”

Grant waited, his face drawn and hard.

“When I knew we were going to make for Pluto at a speed nearly equal to that of light I became worried,” Jackson continued. “I knew it was quite possible that the speed of light might be exceeded, mainly because the hairline is so slight. If that happened, I decided, events exactly similar to those which have come about would happen. Devolution instead of evolution. I'm not entirely a mug in scientific matters, Grant.

“I knew it was just possible that the years might fade from me like mist. That I had to prevent at all costs. I could not cry off from the trip because that would have stamped me as a



quitter and I'd have lost my job—and you. The only course, it seemed, was to sabotage things so that you could never reach the speed of light. I did not want to cripple *all* means of power, mark you: that would have spelled disaster since, without power, we'd have gone on hurtling through space at a fixed velocity until some powerful gravity field caught us and drew us to destruction. No; I had to *partly* cripple things . . . .”

Jackson paused and reflected, a cynical smile on his ever-younger face.

“I fixed the electric switch so that Dawson got killed. On Brogan's hammock I smeared *insite* poison. As you know it brings first madness and then death. I knew that he would be sweating heavily from working in the rockethold and that the poison would be absorbed through his open pores. I also put the time-bomb in the rocket-tube. I believed these things would produce a mutiny. It nearly worked, only Baxter proved more level-headed than the rest and kept order. In spite of all my efforts the speed of light *was* exceeded . . . . I believed, too, that if the speed of light were exceeded there would still be a way back to our own Universe, and that that way would take me back as a branded criminal. Now I know—there's *no way* back.”

Grant said slowly: “And you planned all this, knowing there was *canthite* aboard? If our speed had slowed up as you intended the stuff would have exploded.”

“There is no *canthite* aboard,” Jackson answered dryly. “I took it away the night before departure and substituted an identical parcel. It was that parcel which you saw on the morning of departure.”

Grant sat down slowly. Before his sombre gaze Jackson was sweeping backwards down the scale of time. Grant too realised how far he himself had gone.

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At length Jackson spoke. “Somehow, it's funny! You and me in an alien universe—bitter enemies—and neither of us can do a thing about it! You and me alone, with only the spirits of those who have died. Something else too, Grant. This ship is comparatively new. When it has retrogressed a certain distance it will fall in pieces—long before we have gone back to the moment of our births. Even if there is a way back we shan't have the time to discover it. We couldn't, either, because our minds are losing chunks of knowledge all the time. Knowledge accumulated through the years is just vanishing . . . .”

Grant gazed with steady, accusing eyes.

“I murdered by accident in the first place,” Jackson went on, “but later it was by design. The men below, I mean. They were just criminal scum, the whole damned bunch of 'em. I had no qualms about blotting them out . . . . You're not much better than I am, Grant. When you found out you tried to kill me.”

“And was prevented,” Grant said quietly, “for which I thank heaven——” He looked up quickly as there was a curious sound from the direction of the rocketholds.

“The ship's beginning to break up!” Jackson whispered, moistening his lips. Suddenly he got to his feet and went to the airlock. “Do I open it and get it over with?”

Grant shook his head slowly. “Give it a moment or two longer. Too much to face all at once.”

He turned and looked pensively at the instruments, then that odd sound came again from the rockethold. The vessel lurched violently, seemed to spin in a dizzy half-circle to the sudden blast of rocket tubes.

Jackson wheeled, dumbfounded, staring through the port on to a sky which had abruptly become powered with stars once more!

“Grant, we’re free!” he shouted hoarsely. “Look, man! The stars are back!”

He stopped dead. Grant, his face merciless, was holding a flame pistol steadily in his hand. For several moments he stood motionless, as also did Jackson. Both of them needed the respite to catch up on the adjustment to normal time and space dimensions again . . . . At last they had caught up on the years. Jackson’s face was again scarred; his voice had changed back; his hair was dark once more.

“Grant, what’s happened?” he whispered. He looked again through the port, to behold Pluto dead ahead.

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At last Grant spoke. “For your information, Jackson, I have played tag with a cosmic law to expose a murderer! You thought the police believed you dead—but they didn’t. They worked it out that Robert Anderson *could* be Slade Jackson, but they could not prove it. What was required was cast-iron evidence in sound and vision. That has now been obtained. During the time we were beyond the deadline you broke down and told everything because Time itself had stripped you bare. In this control room, hidden from you, are cameras and recorders. Everything was taken down!”

“No use at all!” Jackson shouted. “They were photographing and recording in a negative Time——”

“Which compensator instruments back on Earth will straighten out! Just as a chemical brings an otherwise invisible image into view on a photographic plate.” Then Grant continued calmly: “The moment you came under suspicion I ceased to refer to my progress with scientific inventions, so you could not learn anything. From then on I was determined to nail you. It may surprise you to know that I have exceeded the speed of light before now. I did it once with an old and very expert scientist who worked out the mathematics to get back to normal. After that—not possessing one tenth of his mathematical ability—I devised mechanical instruments to do it for me, on the lines of an electronic brain. These instruments were embodied in this ship. They accomplished automatically what a retrogressed brain could not even grapple with. They re-fired the rockets and catapulted us back into normal space-time. That was the noise we heard. It wasn’t a crack-up.”

“Then—then every bit of this was planned?” Jackson demanded.

“Every bit of it, yes, with the connivance of the Commanding Officer. He saw to it that this ship had the special mechanisms embodied in it: he also worked alongside the law when they suggested this means of forcing you into the open as a long-wanted murderer . . . . I used a bit of psychology in guessing that you’d probably get nerved when you knew the speed we’d have to move at to reach Pluto in time. The contact I had with you had shown me that you have a good scientific knowledge. You would, I figured, probably be afraid of exceeding the speed of light. You did many of the things we thought you would, Jackson. You say you even took away the *canthite*? All you actually took was the parcel the C.O. had delivered to me.”

“That was *canthite*!” Jackson snapped. “You said so yourself! I removed it and buried it in waste ground.”

Grant smiled crookedly. “You remember a bottle of fluid I brought on departure morning? *That* was the *canthite*, my misguided friend! I realised you knew little about it. The C.O. gave it to me secretly on departure morning. Up to the last moment it was safely tucked away in an underground vault. I guessed you might switch parcels, and you did . . . . You see, I knew you had done so the moment I looked in the storage-hold.”

“You damned well *couldn’t* have known!”

“But I did. The C.O.’s parcel was wrapped in *jitmus* paper which is ordinarily yellow, but locked in the darkness it would have turned bright blue through chemical reaction by the time we were ready to depart, a colour only noticeable in darkness. Since all night passed and there was no bright blue colour when I looked at the parcel in the darkness—remember I did that?—it was perfectly obvious a switch had been made. The crew, though they had access to the ship itself during the night had *not* got a key to the stronghold. Only you had that.”

“Then,” Jackson said slowly, “does this mean that *canthite* is not a genuine mutational substance?”

“Most certainly it is, only the speed of change is not nearly so rapid as you were led to believe. As to the rest, the Pluto assignment was quite genuine. There *is* trouble on Pluto and that *canthite* is desperately needed.”

“Normal speed would have sufficed?”

“Yes.” Grant shrugged his broad shoulders. “You walked right into the trap, Jackson. Now you can give me a hand to land this ship—unless you’re anxious to die without trial!”

Jackson obeyed, staring as he moved with hopeless eyes towards the fast approaching bulk of the ninth world. Behind his head the flame pistol pointed . . . inexorably.

[The end of *Reverse Action* by John Russell Fearn]