

Free as the photon gales, Grimes was still haunted by his genetic heritage!

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THE DUTCHMAN

I

GRIMES was packing his overnight bag without much enthusiasm.

"Do you have to go?" asked Sonya.

He replied rather testily, "I don't have to do anything. But the light-jammers have always been my ba-bies and I've always made a point of seeing them in and seeing them out."

"But Coldharbor Bay? And in midwinter? There are times, my dear, when I strongly suspect that I married a masochist."

"If only you were a sadist we'd live happily forever after," he re-torted. "And if you were a maso-chist you'd be coming with me to Port Ericson."

"Not bloody likely," she told him. "Why you couldn't have ar-ranged for your precious lightjam-mers to berth somewhere in what passes for the Tropics on this dismal planet is beyond my com-prehension."

"There were reasons," he said.

Yes, there were reasons, one of the most important being that a lightjammer is a potential super-bomb with a yield greatly in excess of that of the most devastating nu-clear fusion weapon. The essential guts of a star-sailer is the sphere of anti-matter, contraterrene iron, held suspended in vacuum by powerful magnetic fields. In theory there is no possibility that the anti-matter will ever come in contact with normal matter—but history has a long record of disasters giving dreadful proof that theory and practice do not always march hand in hand. The terminal port for the lightjammers, therefore, was located in a region of Lorn unin-habited save by a handful of fur trappers. It would have been at the South Pole itself but for the neces-sity for open water, relatively ice-free the year around, to afford landing facilities for the ships.

The first of these weird vessels, *Flying Cloud*, had been an experi-mental job designed to go a long way in a long time, but with a very low power consumption. The most important characteristic of anti-matter—apart from its terrifying explosive potential—is anti-mass. A ship with a sphere of contraterrene iron incorporated in her struc-ture is weightless and inertialess. With her sails spread to the photon gale she can attain an extremely high percentage of the velocity of light but cannot, of course, exceed it.

The crew of *Flying Cloud* had been, putting it mildly, a weird mob. Somehow they had become obsessed with the idea of turning the vessel into a real faster-than--light ship. (The conventional star-ship, proceeding under inertial drive and Mannschenn Drive, is not faster than light, strictly speaking; she makes light-years-long voyages in mere weeks by, as it has been put, going ahead in space while going astern in time.) This desirable end they attempted to achieve by means of a jury-rigged rocket drive, using home-made solid fuel, just to give *Flying Cloud* that extra nudge.

Fantastically, the idea worked, although it should not have. Not only did it work, but there were economically advantageous side effects. The lightjammer finished up a long way off course, plunging down to apparently inevitable destruction on Llanith, one of the planets of the anti-matter systems to the galactic west of the Rim Worlds. But a transposition of atomic charges had taken place. She now was anti-matter herself, whereas that contraterrene iron sphere was now normal matter.

Flying Cloud had landed on Llanith and had been welcomed by the people, human rather than merely humanoid, of that world. She had remained on Llanith until the Llanithian scientists and engineers had worked out just what had happened and why. (The attitude of the scientists at first had been that it couldn't possibly have happened.) Then, after modifications had been made to her control systems and the makeshift rocket replaced by a properly designed reaction drive, she had returned to Lorn, carrying not only a sample shipment of trade goods but passengers from the Llanithi Consortium.

And Rim Runners, the shipping line of the Rim Worlds Confederacy, had a new trade.

GRIMES sat in the forward cabin of the Rim Runners' atmosphere ferry that somebody had called—the name had stuck—the Commodore's Barge. He was not handling the controls himself. His old friend and shipmate Billy Williams, master of the deep-space tug *Rim Malemute*, was piloting. Grimes was admiring the scenery.

The landscape unrolling beneath the barge was spectacular enough but cold and forbidding. Lake Misere was well astern now and the craft was threading its way over and through the Great Barrens, skirting the higher, jagged, snow-capped peaks, its inertial drive snarling as Williams fought to maintain altitude in the vicious downdrafts. The big man cursed softly to himself.

Grimes said, "You would insist on coming along for the ride, Billy."

"I didn't think you'd make me drive, Skipper."

"Rank has its privileges."

"No need to rub it in. If it's all the same to you I'll take this little bitch down through the Blackall Pass. It's putting on distance, but I don't feel like risking the Valley of the Winds after what we've been getting already."

"As you've been saying, you're driving."

Williams brought the barge's head around to port, making for the entrance to the pass. The opening was black in the dark gray of the cliff face, a mere slit that seemed to widen as the aircraft came on to the correct line of approach. And then they were plunging through the gloomy, winding canyon—the tortuousness of which was an effective wind baffle, although the eddies at every bend made pilotage difficult. The echoes of the irregular beat of the inertial drive, bouncing back from the sheer granite walls, inhibited conversation.

They broke out at last into what passed for daylight in these high latitudes, under a sky which, on this side of the ranges, was thickly over-cast. Only to the northwest, just above the featureless horizon of the Nullarbor Plain, was there a break in the cloud cover, a smear of sullen crimson to mark the setting of the Lorn sun.

They flew steadily over the desolate tundra through the gathering darkness. The lights of Port Erikson came up at last, bright but cheerless. Beyond them Grimes could see the tiny moving sparks of white and red and green that must be the navigation lanterns of the small icebreaker that, in winter, was employed to keep Coldharbor Bay clear of floes and pack ice.

"Too bloody much seamanship about this job, Skipper," remarked Williams cheerfully.

"No such thing as too much seamanship," retorted Grimes huffily. He pulled the microphone of the VHF transceiver from its clip. "Aeronautical Superintendent to Port Erikson. Can you read me? Over."

"Loud and clear, Commodore. Loud and clear. Pass your message. Over."

"My ETA Port Erikson is ten minutes from now. Over."

"We're all ready and waiting for you, Commodore."

"What's the latest on *Pamir*?"

"ETA confirmed a few minutes ago. 2000 hours our time."

"Thank you, Port Erikson. Over and out."

Ahead was the scarlet blinker that marked the end of the airstrip. Williams maintained speed until the flashing light was almost directly beneath the barge, until it looked as though they must crash into the spaceport's control tower. With only seconds to spare he brought the aircraft to a shuddering halt by application of full reverse thrust, let her fall, checked her descent a moment before she hit the concrete.

Grimes decided to say nothing. After all, he himself was frequently guilty of such exhibitions and all

his life he had deplored the all-too--common *Don't do as I do, do as I say*, philosophy.

GRIMES and Williams waited in the control tower with Captain Rowse, the harbormaster. (In a normal spaceport his official title would have been port captain, but a normal spaceport does not run to a harbor, complete with wharfage and breakwaters.)

"She's showing up now," announced the radar operator.

"Thank you, Mr. Gorbels," said Rowse.

The VHF speaker came to life. "*Pamir* to Port Erikson, *Pamir* to Port Erikson. Am coming in. Over."

Grimes recognized the voice, of course. Listowel had been master of the experimental *Flying Cloud* and was now in command of *Pamir*. A good man, not easily panicked, one who would have been just as at home on the poop of a windjammer as in the control room of a space-ship.

The commodore moved so that he could look up through the transparent dome that roofed the control tower. Yes, there she was, her navigation lights bright sparks against the black overcast, white and ruby and emerald, masthead, port and starboard. (Her real masts were retracted, of course, and her sails furled. She was driving herself down through the atmosphere by negative dynamic lift, a dirigible airship rather than a spaceship.) Faintly Grimes could hear the throb of her airscrews, even above the thin whining of the wind that eddied about the tower.

The ship was lower now, visible through the windows that over-looked Coldharbor Bay. Grimes lifted borrowed night glasses to his eyes, ignoring the TV screen that presented the infrared picture. The slim, graceful length of her was clearly visible, picked out by the line of lighted ports. Down she came—down, down, slowly circling, until she was only meters above the dark, white-flecked waters of the bay. From her belly extended hoses, and Grimes knew that the thirsty centrifugal pumps would be sucking in ballast.

"*Pamir* waterborne," announced Listowel from the VHF speaker. "Am proceeding to berth. Over."

Grimes, Williams and Rowse shrugged themselves into heavy overcoats, put on fur-lined caps. The harbormaster led the way to the elevator that would take them down to ground level. They dropped rapidly to the base of the tower. Outside it was bitterly cold and the wind carried thin flurries of snow. Grimes wondered why some genius could not devise earflaps that would not inhibit hearing—his own prominent ears felt as though they were going to snap off at any moment. But during berthing operations it was essential to hear as well as to see what was going on.

The three men walked rapidly to the wharf, breasting the wind—little, fat Rowse in the lead, chunky Grimes and big, burly Williams a couple of steps in the rear. The shed lights were on now, as were the position-marker flashers. Beside each of the latter waited three linesmen, beating their arms across their chests in an endeavor to keep warm. The berthing master, electric megaphone in his gloved hand, was striding up and down energetically.

Pamir came in slowly and care-fully, almost hidden by the cloud of spray thrown up by the turbulence induced by her airscrews. She was accosting the wharf at a steep angle at first and then turned, so that she was parallel to the line of wharfage. The wind did the rest, so that it was hardly necessary for Listowel to use his line-throwers fore and aft. She fell gently alongside, with her off-shore screws swiveled to provide transverse thrust against the persistent pressure of the southerly.

She lay there, a great, gleaming torpedo shape, gently astir as the slight chop rolled her against the quietly protesting fenders. The hum of motors, the threshing of airscrews, suddenly ceased.

From an open window in his control room Listowel called, "Is this where you want me?"

"Make her fast as she is, Cap-tain," called the berthing master. "As she is," came the reply.

A few seconds later a side door opened and the brow extended from the wharf, stanchions coming erect and manropes tautening.

Grimes was first up the gangway. After all, as he had said to Sonya, the lightjammers were his babies.

LISTOWEL received the boarding party in his day cabin.

With him was Sandra Listowel, who was both his wife and his catering officer. Rim Runners did not, as a general rule, approve of wives traveling in their husband's ships in any capacity, but Sandra was one of the original *Flying Cloud* crew and had undergone training in that peculiar mixture of seamanship and airmanship required for the efficient handling of a lightjammer. Grimes often wondered if she had, over the years, become like so many of the wives of the old-time windjammer masters, a captain *de facto*—though he did not think that Ralph Listowel would allow such a situation to develop.

Captain Listowel had changed little over the years. When he rose to greet his visitors he towered over them. He had put on no weight and his closely cut hair was still dark, save for a touch of gray at the temples. And Sandra was as gorgeous as ever, a radiant blonde, not quite as slim as she had been but none the worse for that. Her severe, short-skirted, black uniform suited her.

Listowel produced a bottle and glasses. He said, "You might like to try this. You look as though you need warming up. It's something new. Our Llanithi friends acquired a taste for scotch and a local distiller thought he'd cash in on it. What he produced is not scotch. Even so, it's good. It might go well on Lorn and the other Rim Worlds."

Grimes sipped the clear, golden fluid experimentally, then enthusiastically. "Not bad at all." Then: "You'd better have some more yourself to soften the blow, Listowel."

"What blow, Commodore?"

"You've a very quick turn-around this time. As you know, *Herzogen Cecile* is tied up for repairs on Llanith—and I'd still like to know just how Captain Palmer got himself dismasted."

"I have his report with me, Commodore."

"Good. I'll read it later. And when *Lord of The Isles* comes in to Port Erikson she's being withdrawn for survey. Which leaves you and *Sea Witch* to cope." He grinned. "As they used to say back on Earth in the days of sail, 'Growl you may, but go you must.'"

"But we're still in the days of sail, Commodore," said Listowel. "And as one of the sailing ship poets said, 'All I ask is a tall ship and a star to steer her by.'"

"Very touching, Ralph, very touching," commented Sandra Listowel. "But I'm sure that the Chief Stewards of the ocean-going sailing ships had their problems, just as I have." She turned to Grimes. "Last time we were in Port Erikson, Commodore, we enjoyed our usual two weeks alongside—but even then we sailed without all our stores. How will it be this time?"

"Better," promised Grimes. "I'll light a fire under the tail of the Provodore Department back at Port Forlorn." He allowed Listowel to fill his glass. "Did you have a good trip, Captain?"

"Yes. Even so—"

"Even so what?"

"I think you might keep us informed, sir, of these other lightjammers, the experimental ones, cluttering up the route between Lorn and Llanith."

Grimes stared. "What are you talking about, Listowel?"

"We averted collision by the thickness of a coat of paint. Captain Palmer, in *Herzogen Cecile*, also had a close shave. His emergency alteration of course was so violent that it carried away his N and E masts with all their sails. He limped to Port Listowel on Llanith on S and W only."

"Why didn't he report it? The circumstances, I mean."

"He must have read your last circular, Commodore."

Grimes' prominent ears burned as he flushed angrily. But Listowel was right. He, Grimes, had written that circular under pressure from the Rim Worlds Admiralty—which body was, as he had put it, passing through a phase of acting like small boys playing at pirates. The fleet was out—or had been out or would be out—on deep space maneuvers. Masters and officers were reminded that the Carlotti bands were continually monitored by potentially hostile powers. Therefore no report of any sighting of Rim Worlds Navy warships was to be made over these channels, whatever the circumstances. And so forth.

"We are the only people with the Erikson-Charge-Reversing Drive," went on Listowel. "So we assumed that what we saw was an experimental warship. One of ours. Palmer assumed likewise."

Grimes made a major production of filling and lighting his pipe. He said through the swirling cloud of acrid blue smoke, "The Navy doesn't have any lightjammers, yet. They want some, just in case we ever

fail to see eye to eye with the Llanithi Consortium. But the first ships of the line, as they are to be called, are still on the drawing board."

Listowel murmured thoughtfully, "Nevertheless we saw something—and it as near as dammit hit us. What was it, Commodore?"

"You tell me," said Grimes. "I'm listening."

II

LISTOWEL was saying, "We were bowling along under a full press of sail and the Doppler Log was reading point eight nine seven, so it was nowhere near time to light the fire under our arse—" He coughed apologetically. "That, sir, is the expression we use for starting the reaction drive—"

"I gathered as much," said Grimes. "But go on."

"We were just finishing dinner in the main salon. I had Llawissen and his two wives—he's the new Llanithi trade commissioner, as you know—at my table. We were making the usual small talk when I noticed that the little red warning light in the chandelier had come on."

"Sounds very fancy," commented Williams.

"You should have done more time in passenger ships, Billy," Grimes told him. "That signal is to tell the master that he's wanted in control, but for something short of a full-scale emergency. Carry on, Captain."

"So I excused myself, but didn't leave the table in a hurry. Still, I lost no time in getting to the control room. Young Wallasey, the third mate, was O.O.W. He said, 'We've got company, sir.' I said, 'Impossible.' He pointed and said, 'Look.'

So I looked.

"We had company all right. She was out on the starboard beam, just clear of E topmast. She was only a light at first, a blueish glimmer, a star where we knew damn well no star should be, could be, hanging just above the distant mistiness of the Lens.

"Anything on the radar?" I asked.

"There wasn't—and these ships aren't fitted with Mass Proximity Indicators."

"No need for them," grunted Grimes, "unless you have Mann-chenn Drive."

"So—there was nothing on the radar, which is what made me think afterward that this vessel must have been an experimental warship. The light was getting brighter and brighter, suggesting that the ship—I had already decided that it must be a ship—was getting closer.

"I got the big mounted binoculars trained on it. After I got them focused I could make out details, although that fuzzy, greenish light didn't help any. Some sort of force field? But no matter. I'd say that it—she—wasn't as big as *Pamir* or any of the other commercial light-jammers. She had an odd sort of rig, too. Instead of having four masts arranged in a cruciform pattern she had three, in series. And the sails—what I could see of them—had reflective surfaces on both sides instead of on one side only, as is the case with ours.

"And she was getting too bloody close on a convergent course. That was obvious, radar or no radar. Wallasey was calling her, first on the Carlotti set and then on NST, but getting no reply. There wasn't time to break out the Morse lamp. Whoever dreamed that we'd need it in deep space?

"So I said to hell with this and altered course, turning my W sails edge on to the Llanith sun. It was only just in time. That bastard was so near that I could see a line of ports with what looked like the muzzles of weapons sticking out of them. If she'd opened fire I wouldn't be here to tell the tale."

"Nor would any of us," commented Sandra Listowel.

"And only you and the officer of the watch saw this—thing?" asked Grimes.

"I'm not in the habit of throwing tea parties in my control room during emergencies, Commodore."

"Sorry. And presumably Captain Palmer saw something similar?"

"He did."

"But finish your story, Captain. What happened next?"

"Nothing. As I've told you, I altered course. And when next I was able to snatch a glance out of the

ports she was gone. Like a snuffed candle, Wallasey told me."

Grimes grunted. He was thinking matters over. While he had discovered the anti-matter systems to the Galactic West he had never visited their worlds. And he had never sailed in the lightjammers—though these ships were his brain children. He could afford the time for a voyage to Llanith—although his best policy would be to make all arrangements for the conduct of affairs during his absence first and to inform Rim Runners' management afterward.

Not that this last mattered really. The Rim Worlds Navy would be interested in this story of alien light-jammers on the Lorn-Llanith trade route—and Grimes, as a Commodore of the Naval Reserve, had often in the past been called back to active duty to investigate strange occurrences. He had been called the Confederacy's odd-job man for reasons. And Sonya would be in this too—she still held her commission in the Intelligence Branch of the Federation Survey Service.

Grimes said to Rowse, "I'd like to borrow your office, Captain. I've a pile of telephoning to do. Oh, Captain Listowel, would you mind having accommodation ready for Mrs. Grimes and myself? We shall be making the next round trip with you."

"And what about me, Skipper?" asked Williams plaintively.

"I'm sorry, Bill, but there just aren't any senior masters kicking around loose at the moment. So, as of right now, you're appointed Port Forlorn astronomical superintendent, acting, temporary."

"Not unpaid?" demanded the big man.

"Not unpaid," agreed Grimes. Williams' manner brightened.

GRIMES called Admiral Kravitz first. The Officer Commanding Rim Worlds Navy was not pleased at being awakened from a sound sleep, but after he had listened to Grimes' story he was alert and businesslike. He glowered at Grimes from the telephone screen. "These reports. They're utterly fantastic. Can you trust these masters of yours? Couldn't they have been seeing things?"

"They saw something," said Grimes. "In the case of *Pamir*, the intruder was seen by Captain Listowel and his third officer, Mr. Wallasey. In the case of *Herzogen Cecile*, the chief and second officers were in the control room as well as Captain Palmer. All the stories tally, even to minor details."

"Is there any—ah—excessive drinking aboard your ships? Any addiction to hallucinogenic drugs?"

"No." Grimes' ears were reddening. He countered with: "Are you sure that the Navy hasn't any experimental lightjammers?"

"You know bloody well we haven't, Grimes. Oh, all right, all right. Have your free trip at the tax-payers' expense. Don't forget to send the bill for your fare in to the Rim Worlds Navy."

"And my commodore's pay and allowances, sir?"

"Take that up with the accounts department, Grimes. You know how to look after yourself. Call me again at a civilized hour tomorrow morning after you've got things organized."

"Good night."

Grimes allowed himself a small grin. He was in an if-I'm-up-every-body's-up mood. He called Sonya. She, too, exhibited extreme displeasure at being disturbed at, as she put it, a Jesusless hour. But her displeasure was replaced by enthusiasm. By the time the call was concluded she had decided what she would pack for herself and for Grimes and assured him that she would be at Port Erikson within twenty-four hours.

There was another call Grimes would have liked to have made, but unluckily Ken Mayhew, one of the few remaining psionic communication officers in the Rim Worlds, was not on Lorn. He was spending a long holiday on Francisco, of which planet his wife was a native. A good PCO, Grimes often said, was worth his weight in Carlotti transceivers—but not all PCOs were good and in the vast majority of interstellar ships the temperamental telepaths had been replaced by the time-space twisting Carlotti radio equipment. But a Carlotti transceiver could not read minds, was incapable of that practice, frowned upon by the Rhine Institute but exercised nonetheless and known variously as snooping and prying. If *Pamir* had carried a psionic radio officer much could have been learned about the strange lightjammer. As it was, nothing—apart from the details of her appearance—was known.

Grimes went to the guest bedroom that had been provided for him in the Port Erikson staff

accommodation block and settled down to read the reports—Listowel's as well as Palmer's. He would have liked to have discussed them with Rowse and Williams, but the port captain was organizing the round-the-clock stevedoring activities and Williams, who loved ships, was no doubt making a nuisance of himself to *Pamir's* officers.

The reports told Grimes little more than he had already learned from Captain Listowel's spoken account.

GRIMES and Sonya were guests in *Pamir's* control room when she sailed from Port Erikson at local noon, three days later. The southerly had persisted, had freshened and was holding the ship against the wharf. The pivoting airscrews would be hard put to it to provide sufficient transverse thrust to pull her out bodily from the berth. But the little icebreaker was also a tug and was given a forward towline by *Pamir*.

Mooring lines were let go fore and aft, were swiftly winched in-board. The pivoted offshore airscrews began to spin faster and faster, their whirling blades flickering into invisibility—but they were doing little more than holding the ship against the wind.

"Take her out, *Bustler*," ordered Listowel into his VHF microphone.

"Take her out, Captain," came the cheerful acknowledgment.

The towline grew taut, scattering a glittering spray in the thin sun-light. *Bustler's* diesels thumped noisily and black smoke shot from her squat funnel to be shredded by the stiff breeze. Grimes went to an open window on the port side of the control room, looked out and down. There was a gap now between the wharf fenders and the side of the ship forward, a gap that was slowly widening. But what was happening aft? What about the projecting venturi of the reaction drive, the after control surfaces? Wasn't there a possibility—a probability—of their fouling the wharf gantries? But Listowel, standing in the middle of his control room, didn't seem to be worrying about it. And, after all, the ship was his.

The stern was coming off, too, under the tug of the airscrews, although not so rapidly. There was clearance between the tail fins and the nearest wharf structure—not much, but enough. And then the port propellers, unpivoted, whirled into motion, giving headway and accentuating the swinging moment. *Pamir* turned to starboard slowly but determinedly, a white and green jumble of brash ice piling up along that side. She came around into the wind and the starboard screws pivoted as she turned, giving headway instead of lateral thrust.

Astern the distance between ship and wharf was widening rapidly.

"Let go, *Bustler*," ordered Listowel and then, to Grimes: "I'm always afraid that one day I'll forget and drag that poor little bitch with me all the way to Llanith."

"Is there any market there for used tugs or icebreakers?"

"Button her up, Mr. Wallasey," said Listowel.

The third officer pressed buttons. The wheelhouse windows slid shut.

And about time, Grimes thought, icy drafts had begun to eddy about the compartment.

"Dump ballast."

The ship lifted as the tons of water gushed out from her tanks, rising faster and faster, stemming the wind, until Coldharbor Bay, directly beneath her, seemed a puddle beside which a child had set a huddle of toy buildings—until far to the south the Ice Barrier, a coldly gleaming wall of pearly white, lifted over the black sea horizon.

She lifted like a rocket, but without noise and without crushing acceleration effects. She soared into the clear sky, the color of which deepened from blue to purple, to black. Below her the planet was no longer a vast, spread-out map—it was a globe, with seas and continents half glimpsed through the swirling cloud formations, with the dark shadow of the terminator drifting slowly across it from the west.

The chief officer came into the control room to report all secured for space. Other reports came over the intercom. Listowel acknowledged them and then, smiling, turned to his guests. "Well, Commodore and Mrs. Grimes, how do you like it so far?"

"I envy you, Listowel. You've a fine ship and you know how to handle her."

"Thank you, Commodore." He said to the third officer, "Make the usual warning, Mr. Wallasey." Then, to Grimes: "Seats and seat belts, sir. I have to swing her to the right heading now."

The maneuver was routine enough in any interstellar ship, the turning of a vessel about her axes until she was lined up with the target star. Somewhere amidships the big, directional gyroscopes grumbled, hummed and then whined, and centrifugal force gave the illusion of off-center gravity. The great globe that was Lorn seemed to fall away and to one side, and its sun drifted aft. Ahead now was only the blackness of intergalactic space, although the misty Lens was swimming slowly into view through the side ports. Then, coming gradually toward the center of the cartwheel sights, appeared the distant cluster of bright sparks that were the anti-matter stars. The gyroscopes slowed almost to a stop, grumbling, as Captain Listowel made the last fine adjustments. They halted at last.

The master looked up from his sighting telescope, murmured, "She'll do." Both hands went to the console before him. He said, "Look out through the side ports and aft, Commodore. This is worth watching."

It was.

From the control room—which, like the bridge of a sea-going ship or the conning tower of a sub-marine, was a superstructure—there was a good view astern. Grimes could see the engine pods, four to a side, their now motionless four-bladed airscrews gleaming in the harsh sunlight. He could see the stubs of three of the masts—W to port, N on the centerline and E to starboard. S, of course, was beneath the hull and not visible, except in the periscope screen. But those stubs were stubs no longer. They were elongating, extending, stretching like impossibly fast growing, straight-stemmed trees. And as they grew they sprouted branches, foliage—the yards and the sails. The royals at the head of each mast were fully spread before the process of telescopic elongation was completed.

There was disorientation then, visual confusion, upset balance as the star wind filled the sails. What had been up was up no longer. Aft was still aft, but it was also "down." Chairs swung in their gimbals, as did some of the instruments. Other equipment was cunningly designed so that it could be used from almost any angle.

Grimes realized what was happening but, twisting his body awkwardly in the chair, still stared in fascination aft and down through the polarized glass of the viewports. He had seen the sail plan of this ship, of course, had helped to draw it up; but this was the first time he had watched a lightjammer actually making sail. He mentally recited the names of the courses. He had insisted the old nomenclature be used. Northsail, lower topsail, upper topsail, topgallant, royal...

He turned away at last, asked, "Do you usually make sail all in one operation, Captain?"

Listowel laughed. "Only when I have guests in the control room."

Sonya laughed, too. "John would prefer to see all hands out in space-suits, clambering in the rigging like monkeys."

"The good old days, eh?" Listowel unsnapped his seat belt. "Roll and go. Hell or Llanith in ninety days—and the sun's over the yardarm."

Grimes took one last look at that splendid suit of sails, black against the glare of the Lorn sun, before he got up to follow Listowel and Sonya from the control room. He realized that he would have to get his spacelegs back. In this inertialess ship, in spite of the already fantastic acceleration, the distinction between up and down was a matter of faith rather than of knowledge.

THEY enjoyed their drinks—more of the Llanithian whisky—in Listowel's comfortable day room, where Sandra joined them.

"How are the customers?" her husband asked her.

"There's only one this trip," she told him. She flashed a smile at the guests. "I don't count the commodore and Mrs. Grimes as real passengers."

"Who is it?" asked Grimes. "Anybody I know—or should know?"

"Perhaps you should know her, sir. She's a missionary."

"Why wasn't I warned?" demanded Listowel.

"I'm warning you now, Ralph." "What's her name? What nut cult is she trying to peddle?"

"She's the Reverend Madam Swithin. Rather an old dear, actually. She's a missionary for the United Primitive Spiritualist Church."

"And she thinks she'll be able to convert the Llanithi?"

"She'll probably convert some of them. After all, given the right conditions you can convert anybody to anything."

"But United Primitive Spiritualism—" muttered Listowel disgustedly.

"They have something," Sonya told him. "I've had some odd experiences and so has John."

"I only hope she's not at my table," said the master.

"Where else could I put her, Ralph? After all, she is a person of some importance in her church. I couldn't put her with the junior officers."

"I'm sorry about this, Commodore," Listowel said.

"Don't worry, Captain. We'll survive somehow," Grimes told him.

THE Reverend Madam Swithin was, as Sandra had said, rather an old dear, but the sort of old dear whose idea of conversation is asking endless questions. Yet it could be said in her favor that she enjoyed the excellent food prepared by Sandra and served by the efficient stewardess and that she did not belong to one of those sects that regard alcoholic beverages as sinful. It took her some little time to get things sorted out, however. She knew that a commodore is superior to a captain and so assumed that Grimes was master of *Pamir*. She asked him why he wasn't wearing uniform. Then she asked why *Pamir* wasn't named according the general Rim Runners principle, with the "Rim" prefix.

Grimes told her, "In these vessels we've tried to revive the names of the old sailing ships, the Terran windjammers. Unluckily most, if not all, of the most famous names are being used by Trans-Galactic Clippers—*Thermopylae* and *Cutty Sark* and so on."

"Are Trans-Galactic Clippers lightjammers like this one, Commodore?"

"No, Madam Swithin. But the original clippers were very fast sailing ships and long after sail had vanished from the seas the name 'clipper' was still being used by the operators of other forms of transport—road services, airlines and so forth. One of the first little ships to fly to Earth's moon was called *Yankee Clipper*."

"How interesting, Commodore. The usage gives one a sense of continuity, don't you think? And now, Captain, when do you think you're getting this clipper of yours to Llanith?"

"ETA is just three weeks subjective from now."

"You said 'Hell or Llanith in ninety days'," Sonya reminded him.

"Ninety days objective," He told her. "But only three weeks as we shall live them, Mrs. Grimes."

"And is there really any danger of the ship's getting wrecked? Not that I'm frightened, of course. I know that there is no death."

Sandra joined them at the table, bringing coffee. "Don't worry, Madam Swithin. That 'Hell or Llanith' is just an expression that Captain Listowel picked up from a book about the famous windjammers. There was a captain on the trade between England and Australia who used to say, 'Hell or Melbourne in ninety days!'"

"And as I was saying, dear, such a sense of continuity. So fascinating to think that you sailing ship captains are reincarnations of the old sailing ship captains. The wheel has come full circle and you have been reborn—"

Listowel was beginning to squirm uncomfortably in his chair. The junior officers at their tables—obviously listening—were starting to look amused. Grimes endeavoured to steer the conversation on to a fresh tack.

"And when, Captain," he asked, "do you start the reaction drive?"

"A week from now, Commodore, as soon as we have point nine recurring on the Doppler Log. Then we have a week of full acceleration and FTL flight. Then we have to decelerate. And then, all being well, we're there."

All being well, thought Grimes. But if all is well, I shall have made this trip for nothing.

III

SHE was a fine ship, this *Pamir*, *LI* and most efficiently run—but, to one accustomed to a conventional starship, uncannily quiet. Grimes missed the incessant, noisy, arrhythmic hammering of the inertial drive, the continuous thin, high keening of the Mannschenn Drive. Here the only mechanical noises were the occasional sobbing of a pump, the soft susurrus of the forced ventilation.

On she drove, running free before the photon gale. The Rim Stars astern were ruddily dim—the suns of the Llanithi Consortium blazed intensely blue ahead. And on the beam, mast and sails in black silhouettes against it, glowed the great Lens of the Galaxy, unaffected by either red or blue shift.

The needle of the Doppler Log, after its initial rapid jump, crept slowly around its dial. *Point eight, point eight five, point eight seven five.* . . Grimes tried to imagine what the ship must look like to an outside observer, tried to visualize the compression along the fore and aft line. But to see her at all that mythical outside observer would have to be in another ship traveling in the same direction at the same speed—and then, of course, he would observe nothing abnormal.

And what would happen if *Pamir* hit something—even only a small piece of cosmic debris—at this fantastic velocity? So far the lightjammers had been lucky but what if their luck suddenly ran out? The question, as far as her crew was concerned, was purely academic. They would never know what hit them—although after weeks or months or years the brief flare would be visible in the night skies of Lorn and Llanith.

At last came the time for the final acceleration—and the reversal of atomic charges. Again Grimes and Sonya were guests in the control room, watching with fascination. Listowel explained, "This isn't half as bad as that moment when the temporal precession field of the Mannschenn Drive is initiated. Oh, you'll feel something. We all do. Just a microsecond of tension and, at the same time—as the charges are reversed—what we call a scrambled spectrum. But there's none of the dithering about in and on alternate time tracks that we experienced when we first discovered the effect."

"Just as well," grunted Grimes. "Alternate time tracks are among my pet allergies."

Listowel was watching the log screen, which gave him far finer readings than the dial, to six places of decimals. Grimes and Sonya watched, too.

999993. . . The crimson numerals glowed brightly. 999994 . . . 999995 ... The 6 was a long time coming up. . . Ah, here it was. 999997 . . . 999998. . . There was another long delay. Then the final 9 appeared briefly but flickered back to 8.

"Go, you bitch, go," Listowel was whispering.

999999. . .

"It's holding, sir," whispered one of the officers.

"I have to be sure... Now!"

After the long days of quiet sailing the screaming roar of the rocket drive, carried by and through the metal structure of the ship, was startlingly loud. There should have been brutal acceleration, but there was not. There was not physical sense of acceleration. Yet Grimes felt as though he, personally, were striving to lift some impossibly heavy weight. He felt as though he were pressing against some thin yet enormously tough film that stubbornly refused to break.

Then it burst.

There was real acceleration now, driving him down into the padding of his chair. He was dimly aware that Listowel—a strange Listowel, who looked like a photographic negative, whose shorts-and-shirt uniform was black instead of the regulation white, whose face had become oddly negroid—was doing things, explaining as his hands moved over the console. His voice, normally light, was a deep, grumbling bass. "Have to pivot the sails, Commodore. Edge on, or we'll be taken aback—"

Suddenly things snapped back to normal.

Color and sound were as they should be and the acceleration had eased to a fairly comfortable one gravity. Grimes took mental stock of himself. Yes, he was still Commodore John Grimes of the Rim Worlds Naval Reserve, astronomical superintendent of Rim Runners. And he was still aboard *Pamir*. He turned to look at his wife, who smiled back at him rather shakily. And Sonya was still Sonya. So far so good.

And the log screen?

Blue numerals now—1.000459 ... 1.000460 . . . The final 1 flashed up and then, in steady succession: 2, 3, 4, 5. . .

All my years in deep space, thought Grimes, and this is the first time I've really traveled faster than light. . .

"SO WE are all anti-matter now, Captain?" asked the Reverend Madam Swithin that evening at dinner. She did not wait for a reply, but went on, "But what about our souls, our essential es-sences?"

"I'm afraid, madam, that that's rather outside my province," re-plied Listowel.

"And what do you think, Com-modore?"

Grimes grunted through a mouthful of steak.

"But the Llanithi have souls," the missionary went on. "Otherwise I should not be traveling to their worlds."

A rather uncomfortable silence was broken by Sonya. "Tell me, Madam Swithin—do you ever, in your seances, establish communica-tion with the departed spirits of non-human entities?"

"Frequently, Mrs. Grimes. One of our mediums has as her control a Shaara princess, who last enjoyed material existence five hundred standard years ago. And recently, during a service in our church in Port Farewell, a spirit spoke through the officiating medium and said he was—that he had been, rather—a people's marshal on Llanith. What is a people's mar-shal, Captain?"

"It's roughly equivalent to a po-lice commissioner on our worlds, madam," replied Listowel.

Sonya sipped from her wine glass, then asked, "One thing has always rather puzzled me, Madam Swithin. One of the doctrines of your church is reincarnation. How does that fit in with that large number of disembodied spirits who are always present at your seances to say their pieces?"

The motherly little woman smiled sweetly at Sonya. "There is reincarnation, as we believe—as we know—Mrs. Grimes. But the soul is not reincarnated into a new body immediately after its release from the old one. In the case of ordinary people the delay is not a long one. It is the extraordinary people, the out-standing personalities, who often have to wait for centuries, or until a suitable vehicle for their rare psy-ches has become available—"

"In other words," said Grimes, who was becoming interested, "until the genes and chromosomes have been suitably shuffled and dealt."

"What a good way of putting it, Commodore. I must remember that." She looked at Grimes as though she were viewing him as a potential and valuable convert—which, Grimes realized, he could be. *Why can't I keep my big mouth shut?* he asked himself. "You will agree, Commodore, that a special sort of character is required for the captain of a ship?"

Grimes made a noncommittal sound.

"And that an even more special kind of character is required for the captain of a sailing ship—"

"I did," admitted Grimes cau-tiously, "bear certain qualities in mind when I appointed the masters and officers to these lightjam-mers—and not all of those I se-lected passed the rather rigorous training."

Listowel muttered something about bumbling around in blimps over the Great Barrens, but subsided when Grimes glared at him.

"And how many lightjammers does your company operate, Com-modore?"

"At the moment, four. *Pamir, Herzogen Cecile, Lord of the Isles* and *Sea Witch*. As the trade ex-pands we shall require more ton-nage, of course. *Preussen* and *Garthpool* are on the drawing boards. And the Rim Worlds Navy has the plans for at least three sailing warships."

"Four ships. And five more some time in the future. But what of the thousands of sailing captains who must have lived in the days when their vessels were the only long-dis-tance transport on Earth? Many of those souls must still be waiting for reincarnation."

"One of my ancestors might be among them," said Grimes.

"Really, Commodore?"

"Yes. He was a Barbary Corsair—but before that he was master of an English ship in the Mediterranean trade. A forced convert to Islam who decided to play along and do as well for him-self as

possible—"

"Are you sure that he was never reincarnated, John?" asked Sonya. "Some of the less savory episodes in your past haven't been far short of piracy."

"I might be able to find out for you, Commodore," said Madam Swithin eagerly. "I am more of an administrator than a medium, but I do have powers—"

"Thank you," Grimes told her. "But I think I'd rather not know."

PAMIR drove on, no longer scudding before the photon gale but riding the thunder of her rocket drive. Ahead was an impossible star cluster—the suns of the Llanithi Consortium blue-blazing, the Rim Suns sullenly smoldering embers. Astern was—nothing. On she drove, outrunning light, until the time came for deceleration.

The reaction drive was shut down and, at his controls, Listowel care-fully pivoted his sails. Northsail, eastsail, southsail and westsail he turned, trimming them so that the radiance from the Llanithi stars was striking their reflecting sur-faces at an oblique angle. Grimes, watching the Doppler Log screen, saw the numerals change from 25.111111 to 25.111110, to 25.111109...

All four lower courses were now exerting full braking effect and the lower topsails were trimmed, squared. 23.768212... 23.768000... 23.759133... Upper topsails next. 19.373811... Topgallantsails... The log was winding down rapidly and ahead one of those vividly blue stars was a star no longer, was beginning to show an appreciable disk. Now the royals. 12.343433... 11.300001... 10.452552... 8.325252... 5.000000... 2.688963...

So far there was no sensation. The ship was inertialess, her struc-ture and crew protected from the forces that should have exploded them through the darkness and emptiness in a blazing flare of energy.

1.492981...1.205288... 1.200438...

1.113764... 1.000009...

The countdown was slowing.

1.000008... 7... 6... 5... 4... 3... 2... 3... 2... 1... 2... 1...

1.000000...

As when the light barrier had been broken, there was the feeling of unbearable tension. Something snapped suddenly. The stars ahead diminished in number, although those remaining were still blue. Astern, dim and distant, the Rim Stars reappeared.

And the figures in the screen were now in red light: 999999... 999998... 999997...

"Sir." Willoughby, the chief of-ficer was pointing. Out to star-board, just abaft the beam, was a star where no star should or could be — a point of greenish radiance that steadily brightened.

"Captain! Commodore!" It was Madam Swithin's voice. What the hell was she doing in the control room?

"Mr. Wallasey," said Listowel to his third officer, "please escort this lady down to her cabin."

"But, Captain," cried the missionary, "this is most important."

"So is that," he said, pointing. "I've no time to spare for—"

"That," she interrupted him, "is what is important."

"Mr. Wallasey—" began Listowel.

"Let her stay," said Sonya sharply. It was more of an order than a request. "Let her stay."

The young officer looked uncer-tainly at his Captain, at the com-modore, at the commodore's wife. He looked again, questioningly, toward Listowel. But the master's full attention was on the strange light. It was closing on a converging course. And there was something solid, or apparently solid, in the center of that glowing circle of blue-green mist. A ship? Grimes had found a pair of binoculars, had them to his eyes.

Yes, a ship.

MADAM SWITHIN was speaking again, but the voice was not her own. It was male and had a strange, guttural accent. And the language was one that Grimes did not understand, although it seemed to be of Terran origin. German? No, he decided. Although there were similarities.

"Who are you?" Sonya was asking. "Speak so that we may understand."

"I can not rest. I must not rest. Effer. To sail der seas vas I con-demned, for all eternity, vhereffer and vhenegger dere are ships—"

The seas? wondered Grimes. *But space is a sea...*

He could make out the hull now through his glasses—high-pooed, with a tall forecastle. He could see the line of black-gaping gunports and the three masts with the square sails at fore and main, the staysails and the spritsail, the lateen sail at the mizzen...

This was no lightjammer.

"Kapitan!" that deep, urgent voice was commanding, "Star-board der helm! Starboard der helm!"

But an alteration of course to starboard would make a collision between *Pamir* and this apparition inevitable.

"Kapitan! Starboard der helm!"

And in the old days when the helm, the tiller, had been put to starboard both rudder and ship had turned to port, Grimes remembered from his reading. Even after the in-vention and introduction of the ship's wheel those topsy-turvey steering orders had persisted for quite a long while.

In the old days, the days of the windjammers...

And hadn't there been a legend about a Captain Van... What was his name? A Dutchman?

He laughed softly. "A ghost," he murmured. "A ghost."

Listowel laughed with him. "A bloody Rim Ghost. I should have known. I've heard enough about them. Phantom ships from al-ternate universes--"

"Kapitan! For der tuff of Gott, starboard!"

Listowel laughed again, con-temptuously, "That thing can't hurt us. I'll not risk my spars and sails, my ship, for a silly, blown-away phantasm!"

A spurt of orange flame leaped from the archaic ship's forward gunport, followed by billowing dirty white smoke. The Dutchman had fired a warning shot.

"Listowel, bring her around Co port at once," ordered Grimes.

"I'm not running from a ghost ship with ghost cannon, Commo-dore."

"Bring her around, damn you!" "And you can't order me in my own control room—"

"Legally I can't—but I do order you." Had Grimes known how to handle the lightjammer he would have tried to push the younger man from the controls. But he did not know. The only thing in his mind that could be of value in this situa-tion was his memory of the old sailors' tales.

"Kapitan! Starboard der helm!" It was a despairing cry in that strange male voice from the lips of the medium.

"He's warning us, Listowel!" cried Grimes. "The old legends--you've read them. I've seen your bookshelf. The appearance of the Flying Dutchman before disaster... The ships Vanderdecken were saved from disaster by a ghost ship's warning! Come to port, Captain! Bring her around to port!"

Realization dawned on Listowel's face. With a muttered oath he drop-ped his hands to the console. He worked fast now that it was almost too late—with desperate urgency. He trimmed the east sails, not bo-thering about precise angles, bringing all five of the great vanes around as fast as the trimming motors would let him, presenting their light-absorptive surfaces to the ra-diation of the Llanith sun. *Pamir* lurched as she fell off to port. The mast whipped violently and the royal was ripped from its yards, flapped ahead and away from the ship like a bat into hell. But the rest held as the ship pivoted about her short axis.

And Grimes, looking out to star-board, saw the Dutchman vanish like a snuffed candle—but not be-fore he had glimpsed the tall figure on the poop, his long beard stream-ing in the wind (here, in inter-stellar space, where there were no winds but the star winds!), his right arm raised in a gesture of farewell.

"Well," muttered Listowel shak-ily. "Well—" Then: "Is it all right for us to resume course, Commodore?"

"I—I suppose so," replied Grimes. In a stronger voice he said, "I shall ground the lightjammers until a thorough survey has been made of this sector of space. There was something there. Something we just missed."

On the deck where she had fallen, where Sonya was supporting her head and shoulders, Madam Swithin began to stir. Her eyes opened, stared around her. "Where am I? What happened? How did I get here? I came all over queer and I don't remember any more—"

"Everything is all right," Sonya told her.

"Thank you, dear. Thank you. I shall be feeling better in a couple of jiffs. But I'd be ever so grateful if somebody could bring me a nice cup of—" The expression faded from her plump face and her eyes went vacant. That strange male voice—although now little more than a dying whisper—finished the sentence.

"—Holland gin," it said.