

Burks Arthu

"THE FIRST SHALL BE LAST"

Josh McNab and Skipper Parsons renew their fight in a race from Uranus to Pluto

about the change of status than Chief Engineer Josh McNab. The Arachne, first of the spider fleet of spaceships, first to use gravitic lines of force as a means of travel, had been turned into a freighter! Oldest of the line, it had been, in effect, relegated to the scrap heap. Never again would the belt promenade resound to the laughter of tourists to Mars and Uranus. Martin Caperton, the owl-eyed owner of the Caperton lines, had decided he could make more money with her by making her a freighter, victim of the whims of commerce.

The Arachne, hereatter, would be ruled by the dollar, the pound, the uranid, or whatever the medium of exchange was on a given planet, and would carry whatever cargo proved the most profitable. She had become, in effect, a tramp steamer of interplanetary space. And Josh McNab didn't like it. He had always liked to be where people were, even when they laughed at the Scotch bur in his voice.

There was just one thing that pleased him, made his new lot bearable: Captain Lee Parsons had been left in command of the Arachne! Captain Lee Parsons, who liked snappy uniforms, and enjoyed strutting his fine figure, showing his authority in front of the Now, he'd have to strut for McNab, if he strutted for anybody, and he knew exactly what McNab thought of him-so he probably would never strut again. Moreover, the Arachne carried a brand-new crew which had never heard of grand uniforms. Their clothing was greasy, disreputable, impossible and Parsons had given up, the first week, trying to make them comport themselves or dress like the crews of the streamlined passenger jobs.

McNab chuckled as he thought of the vast clouds of gloom that had hung over the Arachne ever since she had been turned into a freighter. Right after it happened, McNab heard Lee Parsons call Martin Caperton all the evil names he could think of—and McNab chuckled, remembering how often he, Parsons, had called McNab down for using even milder terms of abuse for the old Caperton skinflint.

The Arachne, approaching Uranus, was about to do her "somersault" and lower away for that planet. She had made a record run from the Earth, carrying cargo consisting of everything—almost literally—round the sun. Her cargo holds had been jammed. Her belt promenade, whereon so many passengers had traveled and walked in times past, had also been packed with junk. So had erstwhile staterooms. Caperton hadn't yet gone to the expense of ripping out the staterooms entirely.

It had been a real job, conning the Arachne along the lines of force from the Earth on her maiden freight run. For, built for passenger service, cargo had hitherto always been carried well below the belt promenade. Still, thanks to the spacemanship of Parsons—McNab gave the skipper that much credit—the trip had been a success. But that very fact made for additional gloom—because a record trip with a big payload, simply meant more and more of the same.

The "somersault" completed—that is, the Arachne having reversed ends, to land bottom-down on Uranus, instead of headforemost—McNab joined Parsons in the control room, in the nose of the

ship. He walked the circular staircase in the Tunnel—that bore through the middle of the two-hundred-and-fifty-foot-long Arachne, wherein the mainline helix spun, swallowing gravitic lines of force like spaghetti, and speeding along those same lines at miraculous speed, dragging the Arachne with it—and tried to pretend that she wasn't a freighter after all.

Without actually turning around, he could see, as from the back of his head, the different levels of the ship, clear back down to the cargo holds and the "bilge," or keel; back down to the accumulators storing electric power for spacial emergencies; the atom converters with their endless musical humming; back down to the oxygen and water tanks, air apparatus, all auxiliary functions—and the D.C. motor! There was something! Forty thousand horsepower, series wound, capable of revving up to 35,000! Josh McNab loved that motor, hated to leave it, even to bait the disgruntled captain.

He glanced at the mainline helix which wound around the rotor shaft—and looked away again. That helix and rotor were miracles he hadn't yet become accustomed to, despite his years of handling its functions. It was weird and unearthly. Of course—since by its magic the *Arachne* moved like a comet between the planets.

HE SIGHED, entered the control room at the top of the ship. Parsons, dressed in immaculate uniform—it was too soon in the freight service for him to let down any, McNab decided—turned a gloomy eye on his chief engineer.

"One kidding erack out of you, Mc-Nab," he said, "and I'll pin your ears back! Don't bother to tell me what you came to tell me. I know it as well as you do! We've made a record trip with our first load of freight but will that give us a break? Will old Caper-

ton, now, relent because we're good, and return the Arachne to passenger service, or give me one of those streamlined jobs? Nix! He'll just give us more of the same, until all of us together—you, me, and the Arachne—fall apart like the one-hoss shay!"

"Aye, sirrr!" said McNab. His gray eyes were wintry. The tufts of hair that thrust forth from his ears made him look like a grizzled porcupine. At fifty, Josh McNab was as hard as nails. Tough as they came, was McNab. And, privately, he thought Parsons a stuffed shirt—and not always privately, either!

"And did he make my lot any easier by leaving you as my chief? He did not!" Parsons was vastly aggrieved. "He transferred everybody else, but leaves me Josh McNab—the unintelligible Scotchman who's been in my hair all these years!"

"Th, day'll coom," said McNab quietly, "when ye'll ha nae hair. Skipper! Then ye maun worrit yousilf nae mair!"

"You've spent all these years, Mc-Nab," said Parsons, "razzing me. Some day I'm going to give you your comeuppance."

"My worrk is satisfactorry, sirr?"

"Yes, blast it! That's just the trouble! You keep just within the letter of the spacial law—but I can read those eyes of yours like a book. You despise me: I detest you!"

"Aye, sirr!" said McNab. Parsons decided not to press a question that occurred to him—whether McNab's affirmation had to do with his detestation of McNab, or McNab's of him. In all probability the latter was intended!

"And now, to cap it all," said Parsons, "we make a record trip and simply lower ourselves more deeply into the slough of our despond."

"Aye, sirrr! You engines worrrkit their best, this trrip, sirr!"

McNab's eyes were twinkling. Parsons gritted his teeth.

"Yes and you made sure of the rec-

ords trip, just to get my goat! You'd rather spend the rest of your active service in a freighter, than see me get a break!"

"Aye, sirr!" said Josh McNab.

Then both turned their attention to the helicopter tugs that were spearing out from Uranus to warp the Arachne into her landing stage on the surface of that planet. McNab always thrilled to that sight, though this time he had an idea the tugs would handle the Arachne as though, no longer a passenger liner, she were slightly soiled. McNab himself would never feel that way—the Arachne had been his home so long—because, after all, it wasn't the Arachne's fault that old Caperton was a miserly skinflint.

Still, McNab did miss the ladies, the laughing, joyous passengers. He wouldn't have minded having a flock of lovely young women around him right now, even if they did mimic his Scotch brogue!

At any rate they'd soon be in port, and McNab had a private date with himself, to slip around the nearest corner, and fill his gullet with the fieriest brew Uranus could offer. Maybe it would knock him for a loop, and he could forget the ignominy to which he had been reduced. Uranus hadn't been settled long, and its liquor was almost as raw as its pioneers. None of the planets had been settled very long. The first, as he recalled it, in 2020 A.D. No living man could recall that period, of course, but, as time went, it was just yesterday, and new generations in Uranus were just about now orienting themselves. They hadn't oriented their liquor at all. One drink of it—.

"And there'll be no boozing this trip McNab," said Parsons, as though he read the mind of his chief, "for no telling, we may have to leave for almost any place—even Pluto, for all I know—the minute we land and get unloaded. After all, McNab, we are the playthings of

chance, the victims of the whims of our slave master, Martin Caperton."

"Aye, the scut!" said McNab. Tentatively, he called Caperton a few names, in the presence of Parsons. Hitherto, when he had dared criticize the owner of the tremendous spider fleet that plied among the planets Parsons had always called him down for disrespect.

Now, however, Parsons leaned against the controls, looked at McNab, and said: "Get it it off your chest, McNab. You know more words than I do, all of them bad and expressive, and I'll nod to each vile name!"

For fully ten minutes, during which McNab didn't repeat himself once, or change the expression on his face, the chief blistered the far-distant Caperton with all the superlatives—backward—he could think of, and Parsons nodded. Thus, for the first time in memory of either the skipper and chief appeared to be in agreement.

URANUS-

Disgustedly Parsons and McNab, properly dressed for a brief sojourn on Uranus, left the egg-shaped Arachne. Regardless of warnings, McNab headed for the nearest liquor store, trying as he went to recall the name of the hardest liquor obtainable. Then he'd buy a big bottle, and down it all without taking a breath. Maybe it would even kill him, and his troubles would be over.

"Remember, McNab," said Parsons, "no liquor!"

"Aye, sirr!" said McNab, but he grinned and smacked his lips. After all, he wasn't aboard ship now, and Parsons couldn't boss him too much. He made the bar he had in mind, while Parsons headed for the office of the Caperton lines, Uranus branch, to report and ask for orders. Fearing there might be some, McNab named his poison, downed about five fingers of it—enough to make him think, almost instantly, that he had stepped off the Arachne

somewhere between worlds!—and waited for his head to quit wabbling long enough to let his lips connect with the bottle for another libation.

The bottle was yanked from his hand. He spun—almost going down—and stared into the blazing eyes of Parsons. For a moment he thought Parsons was going to brain him. But no—Skipper Parsons, the teetotaler, upended the bottle and took five fingers on his own account

He gasped, gulped, swallowed. His face got red, purple, and indigo. Then—

"Orders, McNab! Orders, and of a kind that only old Caperton would hand out. Where, my hairy-eared friend, do you think we go next—as soon as we get rid of the junk we brought here?"

"If I ken th' mon nichtly, sirrr," said McNab, hiccuping, "oor next port o' call'll be Pluto, because it's lang an' lang

frae Uranus!"

"Right the first time, McNab! It couldn't be farther away, and still within our reach. Pluto it is, and do you know what for? To take aboard something precious-Element 103 no less! A sniff of it costs enough to float the bond issue of Earth's biggest city. And, says Caperton, we proceed thence at once, at our best speed. Besides which, a rival company—Interplanetary Rocket Ship—has already started a ship from Earth to Pluto. Caperton says we're to beat the rocket ship there-first ship to arrive gets the gravy, meaning this Element 103—or not to bother to come back!"

McNab so far forgot discipline as to grab the bottle from Parsons, down another slug. Then Parsons snatched it back. The two wove out of the bar, hanging onto each other, and made the landing stage without mishap—except that they dropped the bottle and broke it.

Not until they were inside the Arachne did either note how friendly they had become in their mutual despair. Then they stood off and swore at each

other roundly, bitterly. All the while Uranian stevedores were working at top speed to free the *Arachne* of her cargo.

IT WAS DONE by the time McNab and Parsons began to feel the first ghastly terrific pangs of an Uranian hangover. Then Parsons, white of face, gave the command: "Cast off for Pluto!"

"Na, na, sirrr!" objected McNab. "Dinna ye ken whur she is in her orbit the noo? As fur fra here as she maun

be!"

"A straight line, McNab," said Persons, "is the shortest distance between two points."

"Aye, sirr! But nicht for aye th'

quickest!"

"Drive her full speed for Pluto!" reiterated Parsons. McNab shrugged, quitted the control room, entered the Tunnel. Already the Arachne was being pulled and hauled out of her berth by the helicopter tugs. In a matter of seconds, almost, none aboard the Arachne would be able to see Uranus for dust—which brought a pang to the heart of McNab, except that he had remembered to secrete a second bottle of Uranian brew on his person. Did he dare—

He did! He stepped back, opened the door, tossed the bottle to Parsons. After that he simply kept his Black Gang busy with the mainline helix, rotor, and D.C. motor, long enough to give the Uranian brew time to work. Then, quietly, he reëntered the control room.

Lee Parsons was standing upright, with a vacant stare in his eyes. McNab, studying him with a judicial eye, thought he had become as near a human statue as a man could. He shifted him away from the controls, and did a strange thing.

He shifted the Arachne off the main lines of gravitic force connecting Uranus and Pluto—and headed her directly along the mighty lines of force that led toward the blazing heart of the mighty Sun! Just how, one might have asked, did McNab expect to get to Pluto by setting a course for the Sun—which took him almost at right angles to the Uranus-Pluto course?

One result was instantly apparent: the Arachne's speed became dazzling. There were, really, no words to express how dazzling—without using similes comparable to comparative distances between planets, or—well, to express the difference between the speed they had been making toward Pluto, and the speed they were now making toward the Sun.

McNab glared at Parsons.

"Strong is th' brew o' Uranus!" he said. "Or ilse silf-pity ha unscrewitt

yon skipper's head!"

Now he grasped the skipper, lowered him-stiff as a board-to a cot, where Parsons began to snore. Then McNab, grim of face, went back into the Tunnel. He began his own working of miracles on the D.C. motor—and the acceleration of the Arachne picked up yet more. The Black Gang sweated under his command. The webwork throughout the Arachne—stress-bearing, mighty girders whose creaking was a language that McNab loved to hear, slanting out and through the great hull from the control room-protested at the strain. Mc-Nab knew, though, listening, that nothing interplanetary could wreck the Arachne.

He knew he must be well on the mad way to the Sun before the skipper snapped out of the wallop Uranian brew had handed him. Faster and faster grew the Sun before the Arachne. McNab chuckled. He had already pulled far enough away from the Uranus-Pluto force lines to make it unfeasible for Parsons to turn back—though the skipper was hardheaded and stubborn—

"McNAB!" The shriek ,filled with agony—perhaps of a bursting head—came crashed down the Tunnel. "Mc-

Nab, you double-crossing highbinder, what are you doing? Who told you to change course? Why are we heading toward the Sun?"

"Th' shartest destance, sirrr," said McNab, looking up at the savage face of the skipper, "isna the fastest. So, sirrr, when ye were oot like a licht, I changit th' coorse!"

"How the devil do you expect to reach Pluto by heading for the Sun? It's at right angles, or almost, to the right course. Get back on it, at once!"

"Aye, sirrr, if ye insist. But I'd e'en point oot, sirrr, that time losht ratairnin' would be fatal!"

"Then, when, and if, we get back, I'll report you. By heavens, I'll put you in irons, right now!"

"Aye, sirr!" said McNab, unperturbed. "Will ye notice, sirrr, th' grrrand speed we're makin'?" McNab's eyes were wickedly twinkling.

"And nobody but you can make her travel like that, eh? Well, I get it, all right, but it's insubordination, just the same."

"I dinna disobey, sirrr!" said McNab. Parsons, remembering, gulped and swallowed. After all, McNab, in the absence of instructions to the contrary—since the skipper had been pie-eyed—had changed course. If, in a later hearing for insubordination, it were brought out that Parsons had imbibed freely and too well, Caperton, who neither drank nor smoked, might—

Parsons shuddered at the prospect.

"All right, McNab. You don't know what you're doing. But get this straight: When we reach a point where a line drawn between us and Jupiter would pass midway between Earth and Sun, we swing onto the Jupiter force line, understand? I grant you that though the Sun's mass makes the lines of force between Uranus and the Sun terrifically powerful, you had no right to change course at any time!"

"Aye, sirrr!" said McNab, grinning.

The crew looked up at the arguers, a bit startled. McNab understood why. They were thinking, perhaps, what it would be like if they were unable to free themselves of the Sun's force lines, unable to decelerate—and were flung into the Sun's heart. Millions of miles away they would be shriveled into cinders too small to be felt in the human eye! They looked doubtfully at McNab.

"Dinna ye fret, bairns," he soothed them. "Yen skipper kens th' richt o'

things!"

If they remembered that they were traveling a route set by McNab, and not Skipper Parsons, they said nothing. But they worked even harder at their various tasks—and perspired like hippos, a fact which kept them all in a dither, considering the direction of their flight. McNab grinned.

The Black Gang was scattered like monkeys in the Tunnel. Keen eyes watched the mainline helix, searching for flaws, cracks, anything, however slight, which might impair the efficiency of the weird, miraculous gadget by which the *Arachne* traveled.

Parsons yelled to McNab again, commanding him into the control room. His face was white.

"You fool, McNab!" he said. "We haven't a chance. Just had word about the rocket ship. It's making record time. Her master is giving us the ha-ha for having the nerve to race against her. They, he says, are heading for their destination, not rocketing all around Robin Hood's barn to find the front door."

"Th' last laugh sirrr," said McNab softly, "micht coom fra deep i' th' belly!"

"Yes, but whose? Blast your officious eyes, McNab!"

"Aye, sirr! But dinna ye ken that th' rocket ship hasna reachit Pluto yet?"

"But she's approaching, about twenty times as fast as we are—for she travels nearly straight, while we gallivant off at all angles!" McNab shook his head. What ailed the skipper that he could not see McNab's purpose?

THE Arachne sped on . . . time passed. Space opened with a light-speed rush behind her—

"Now, McNab," said Parsons, "we're about right. Head for Jupiter, between the Earth and the Sun."

McNab did not move.

"Did you hear me, McNab? We're heading for Jupiter. Be ready to drive her when I've hooked onto Jupiter's lines of force!"

"Lines of foorce between Jupiter an' what, sirrr!"

Parsons' eyes bulged. He snapped a glance at McNab. Fury kept him mute for a moment. Then he exploded.

"See, you fool, what you've done? We're exactly nowhere! We can't head for Jupiter, and we're closer to the Sun now than we should be, and heading for the Earth sends us almost on our own back-track—a cockeyed zigzag—"

"Dinna ye think th' zigzag, sirrr, has its merits?"

"You mean, actually cut back, toward the Earth—while that rocket ship, unencumbered as we are by the necessity of following lines of force, approaches Pluto in a direct line?"

"Aye, sirrr, if one micht suggest-"

"We make a trace in space like a kid making hentracks with a pen on scratch paper—and we come as much nearer to Pluto as the kid would that made the tracks!"

"Aye, sirrr, but since there be na ither—"

Parsons swore. McNab watched him. Then he grinned—entirely inside himself, with approval. Having no choice, Parsons was making a swing through space, to contact the Sun-Earth force lines. McNab's reasoning was elemental—and only Parsons' stubbornness kept him from realizing it. But even as

he changed course, a light flashed on the signal panel over his head. Parsons flipped a button—and into the control room of the Arachne came the jeering voice of the skipper of the rocket ship headed outward for Pluto.

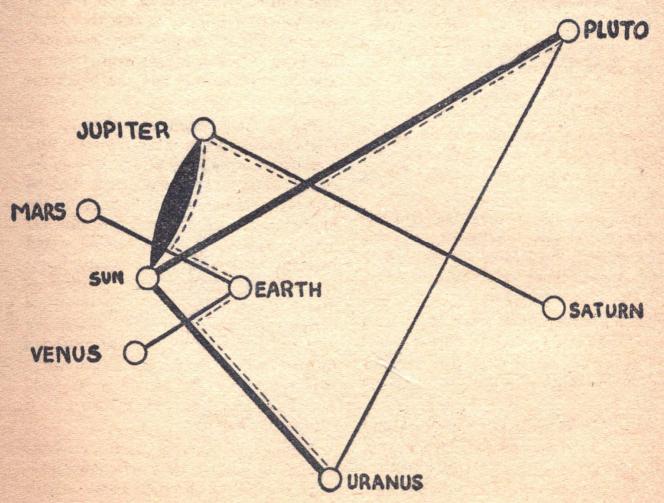
"When you get through playing tag with yourself, Parsons, how about trying to give us a race for Pluto?"

Purple with wrath, Parsons flipped the button, shutting out the hateful voice. The Arachne, on her new course, gathered speed again, piled it up, poured it on, and the D.C. motor revved up almost to her limit. Then Parsons, while McNab began to watch, started—rather thoughtfully—to chart the positions of the planets. McNab was sport enough not to grin when, craning his neck to see what the skipper did, he noted the result—which McNab himself had already worked out in his head, and on a chart of his own in his cabin.

McNab spoke softly. "Beggin' your parrdon, sirr, but there's one thing aboot the rockets that's nae so weel as they'd like. They must, by the nature o' things, discharge their rocket mass. It's ah fine they've got their powerr o' the atoms same as we—but they must throw off their rocket mass. There's a leemit, ye ken, to the speed yon rocket can make. She carries, when she starts, all the rocket mass she can have, and she throws it oot as she goes. She throws oot ah she can—an' yet ha' enough to halt her when she reaches Pluto—but there's iver that leemit. With the powerr o' the atoms, there's na leemit save only that o' the discharge mass.

"But, ye ken—we ha' na discharge mass. We canna go in the strraightes' line, we must follow the lines o' forrce that link the worrlds—but we ha' na feexed top speed."

Parsons looked at Josh McNab's leathery poker face and grunted. Then he looked at his position chart and narrowed his eyes. The chart looked much as McNab's had:



"PLUTO and Uranus," said Parsons speculatively, "are about as far apart as they could get. Uranus has mass, but Pluto's light. Those lines-some five billions of miles long-would be weak as a baby's breath. M times m over d squared—and d bein' damn near infinity, so far as those little m's go. But Uranus-Sun, now-with the Sun's allmighty M multiplyin' on top of the formula—aye, we've got a cable to haul on there. Then if we shunt off on the Earth-Venus lines—and cut across close round Earth to the Mars-Earth lines. we'll pick up the heaviest lines in all the System—the Jupiter-Sun lines—to haul us out again!"

"Pickin' up speed ivry inch o' the way," said McNab.

"You've got to cross though—reach the Pluto-Sun lines—"

"Dinna fergit this *ither* planet," said McNab, stabbing a blunt finger at the chart.

"Saturn? But how? We can change to the Jupiter-Saturn lines—strong lines between the two heaviest planets—if we go down to Jupiter itself."

"The moons, mon, the moons," snorted McNab.

"Get back to your Tunnel, McNab!" roared Skipper Parsons. "When I want you to plot my course for me, I'll let you know!

"It's your job to keep the Arachne going, not skipper her! And get this through your thick skull: I intended to follow this cockeyed route all along."

"Aye, sirrr!" said McNab, his eyes twinkling. He turned away, to go back to his duties as boss of the Black Gang.

"Before you go, McNab, listen while I tell off the skipper of that rocket ship!"

McNAB WAITED. Parsons spoke into the Interplanetary Communicator. McNab grinned as he watched him. Parsons was in the height of his glory.

As he talked he stood very straight. He pulled down the hem of his blouse, as McNab had seen him do a thousand times when he had strutted his stuff before admiring lady passengers. He waved his arms.

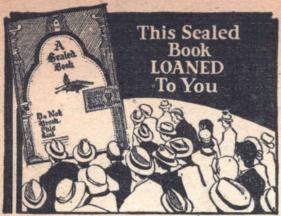
"Listen carefully, Folsom," he addressed the rocket-ship master. "I know more about routes between planets in five minutes than you'll learn all your life! You've got the fastest thing in space—but you haven't the brains to go with it! I'd like to make a bet with you, that while right now we can't seem to see you for dust, we'll beat you to Pluto. Not only that, but we'll continue to play tag with ourselves, as you suggested, and we'll snatch that Element 103 right out from under your noses! Long live Martin Caperton!"

"Th' teet-feested ole curmudgeon!" interjected McNab.

McNab pulled his forelock, his face empty of expression. How lucky, he told himself, sarcastically, that *Parsons* had figured out a way to beat the rocket ship to Pluto, despite the *Arachne's* handicap of having to start from Uranus. *after* the rocket ship had shot from the Earth!

But, a good engineer, whatever he might think, McNab settled down to help Parsons make a race of it. It had become so real to McNab now that he could look ahead, and tell almost to the minute when, as it were, the Arachne and the Comet—the rocket ship—would be racing neck and neck for Pluto. Right now, the rocket ship was heading as nearly straight for Pluto as orbits of various planets permitted, while the Arachne had to shuttle back and forth through the whole blasted firmament but at a speed that would have made the rocket ship look sick had they been racing side by side.

Anyhow, he thought, as the Arachne headed for Jupiter, they were edging toward the path of the rocket ship! They



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were creeping up on her. In his mind McNab estimated the time each ship would yet have to take to reach Pluto, and his heart hammered with excitement—with joy of competing in a race of centuries, of ages. Who could even hazard a guess when, if ever, two ships would have a mission like this, and find themselves at such widely separated starting points, with the planets in their orbits in relation to one another as they now just happened to be?

"Some day," thought McNab, ask th' skipper to join me in a game o' chess!"

For, at that, it was a chess game, with the Arachne and the rocket ship as the master pieces, the planets and the Sun as the pawns. A game of speed, played for stakes of stellar magnitude, against the backdrop of God's great firmament. The mites of humans in the Arachne and the Comet were almost gods at this moment, and would continue to be until the race had been run, the prize awarded.

THE Arachne headed for Mars, quitting the Venus-Earth lines of force, to hitch onto the Earth-Mars lines-following them until they converged with the Sun-Jupiter lines, which she followed to the very heart of Jupiter's mighty, tangled moon system. A dozen times she shifted lines till she caught the Jupiter-Saturn lines-along which she fairly screamed until there was nothing left for her to do but cut loose and head for Pluto, along the Sun-Pluto lines. But now, on these lines, the last lap, the Arachne was decelerating from her frightful maximum, reached as she reeled up the invisible strands of the mighty Jupiter-Saturn force lines.

- Four days out of Pluto-and some twenty-six days after the mad start from Uranus—the officers and crew of the Arachne let the spaceship travel her best, for a time untended, while they lined the plastic windows in the belt promenade to search the heavens for the Comet.

For the Arachne was overhauling her! McNab and the skipper were almost fighting at the Visi panel in the control room, trying to pick up the Comet, which was still ahead. McNab's whole body ached, as though he were pushing the Arachne forward with his own bone and muscle. The lines of Parsons' face were tense with strain.

"There she is, McNab!" he said finally. "And we're going to pass her in nothing flat. Listen, man, we'll beat her to Pluto by almost two days, at this rate!"

"Aye, sirr," said McNab, quietly, "at this rate!"

Parsons whirled on the man who always baited him, "What's the matter with you? After all I've done to outsmart and overhaul the Comet—which we'll pass in a few seconds—are you beginning to doubt that we'll beat her, after all?"

"I dinna ken, sirr!" said Josh. "But this I do ken: we pass her, aye, but will she pass us anon? We're decelerating, an' ha' been for half a billion miles, and will for the four days to coom. But the *Comet's* a rocket, driftin' slow now, maybe, but she'll hold that pace and do a' her slowin' in a day!"

"It'll be Hell if, after we pass her, we decelerate so much she passes us again! We'll be the laughingstock of the whole galaxy!" groaned Parsons.

"Aye, sirr. I ken thot, sirr, wherefore all th' speed I ha' bin—pardon, sirr, the speed you ha' bin—"

"If we fail, McNab," said Parsons, ominously, "after coming so close to winning, you may rest assured that I'll lay the blame where it belongs! Right on your head!"

"An' th' crrredit, sirrr?"

Parsons gasped, swallowed. Then, because he had to strut for somebody, if it were only his crew—and because to do so now made it unnecessary for him to

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give McNab an answer to his latest pointed question. Parsons spoke through the *Arachne's* address system, jubilation in his voice.

"We have passed the Comet, four days out of Pluto, twenty-six days out of Uranus! They have given us a good race, but they have lost. If you look closely, you will see the Comet. She seems to be traveling backward at top speed—"

McNAB DIDN'T even bother to look now. He was waiting to see what the skipper would do about things. The Comet had been passed, that's all McNab cared about. She was already a lost speck in space behind the Arachne. And Parsons was getting set to start bragging to, literally, the Universe, about what he had done.

Disgusted, McNab went to his cabin, and began to do some rough figuring on paper with a blunt pencil. What he discovered made him grin, even though his eyes were grave. After all, no matter who got the credit, he wanted the Arachne to win. And there was an excellent chance she might not.

With his figures in his fist, McNab went back to the skipper, to report that the finish of the race might well be a photo-finish—that even now, with the Arachne, perforce, decelerating, the Comet was beginning to pick up lost space.

McNab—though it might have been a mean thing to do—told the crew to keep a weather eye to the rear, and watch the Comet pick up on them again. The men gasped, swore—though they probably didn't understand what was happening: that the Arachne had passed the Comet at her, the Arachne's, top speed, while the Comet's speed would remain constant, and the Arachne was even now forced to decelerate. For the Comet could decelerate more rapidly—in less distance—than could the Arachne.

So the grim race continued. The Arachne, slowing down during agonizing hours of suspense, during which Parsons almost started to get gray of hair as well as of face—and snapped the head off McNab every time he opened his mouth—while the Comet regained lost space.

The Comet was just that—a comet in fact—overtaking the Arachne, when the helicopter tugs of Pluto came out to warp the Arachne in. For a wild, terrifying moment McNab thought that Parsons, mad with fear lest he lose the race at the last minute, was going to try for a landing without the tugs. That might well have been suicidal.

McNab settled that, instantly. Knowing Parsons' stubbornness, he settled it in the only way possible. He suggested that Parsons actually order the tugs to stand clear, and land without them!

"That, McNab," said Parsons savagely," is the worst piece of advice yet! And suicidal. Naturally I won't be so foolhardy!"

"Aye, sir," said McNab, not cracking a smile.

And so, with tugs working their fastest, and Parsons throwing fits all over the control room—and wondering if, maybe, the skippers of the tugs might not be in the pay of the opposition—the *Arachne* came to rest at her Plutonian landing stage.

And, by the grace of whatever gods guided the destinies of space fliers, the Comet was still afar off!

"I guess, McNab," said Parsons, preening his invisible feathers, "that I showed the *Comet* a thing or two about celestial navigation!"

WHEN, long later, with the precious Element 103 aboard, the Arachne made the trip homeward to the Earth, McNab was almost ready to commit murder before the landing. Parsons seemed to

have just one word in his vocabulary, which he kept going constantly when McNab was around.

The word was "I"!

Caperton himself met them at the landing stage, with a group of officials about him, and a sea of faces stretching away in all directions—the faces of people come to do homage to the hero of space who had sped such a cockeyed course through the heavens to Pluto from Uranus, to beat the crack Comet, and bring home the bacon. Caperton made a speech of welcome, then called. on Parsons for a few words.

McNab ground his teeth and listened.

"I saw right away, on Uranus," said Parsons pompously, "it was useless to head directly for Pluto. Too far from Uranus, therefore connected with it by weak lines of gravitic force. So, I headed straight for the Sun, following the most powerful lines available, until I converged—"

"I . . . I . . . I . . . I . Never a word of credit to anyone else," thought McNab. Parsons might at least have given some credit to the Black Gang, even if he did slight McNab himself. But after all, you probably had to let a schoolboy boast a bit.

"Those lines were plenty powerful, Jupiter being 317 times the mass of the

On and on, sickeningly, went the explanation. McNab caught snatches of it . . . "Saturn 94 times the mass of the Earth . . . Neptune 17 times



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the mass of the Earth . . . Pluto one and four tenths the mass of the Earth—"

How could he tell anyone-except, when he got the chance, Parsons himself—that Parsons had memorized the data he was spouting from a memorandum McNab had left lying on a desk in his cabin?

"I weesh," he said to himself, as he tried, with signal lack of success, to catch the eye of Parsons and freeze him to silence with a look, "I hadna writ it doon! Thin you skipper—th' scut! would be tongue-tied th' noo!"

There was one consolation for Mc-Nab, however, in that, with every word he spoke, Parsons hung the job of a captain-precious freight, maybe, but freight just the same-more tightly about his own neck. McNab had made sure of that! There was just one fly in the ointment: McNab would probably be his chief engineer to the end of time!

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