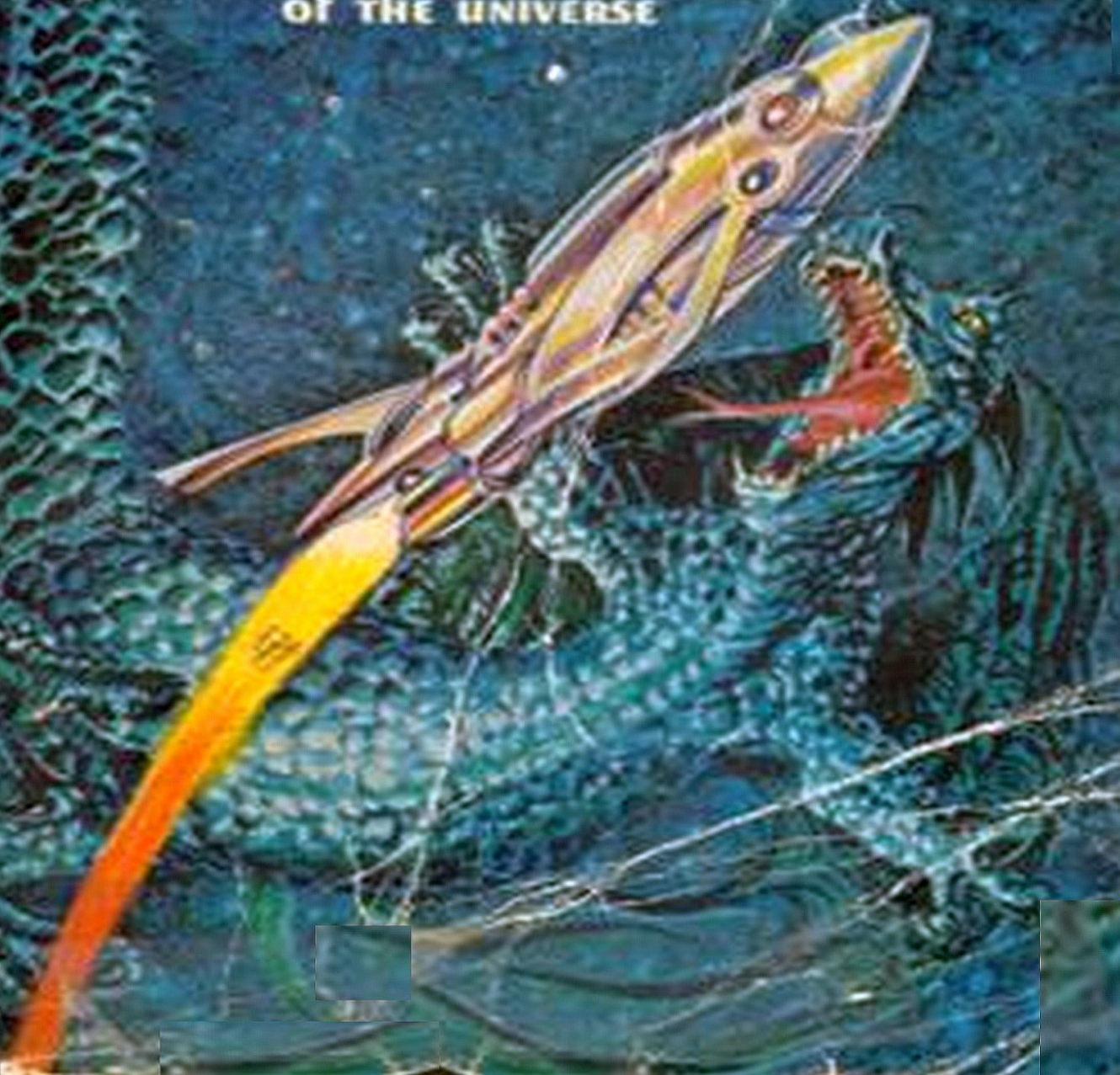


**JOHN W. CAMPBELL**

**INVADERS  
FROM THE  
INFINITE**

They sought the final secret  
of the universe





# ***INVADERS FROM THE INFINITE***

by **JOHN W. CAMPBELL**

*Cover by Gray Morrow*

## **GALAXIES IN THE BALANCE**

The famous scientific trio of Arcot, Wade and Morey, challenged by the most ruthless aliens in all the universes, blasted off on an intergalactic search for defenses against the invaders of Earth and all her allies.

World after world was visited, secret after secret unleashed, and turned to mighty weapons of intense force—and still the Thessian enemy seemed to grow in power and ferocity.

Mighty battles between huge space armadas were but skirmishes in the galactic war, as the invincible aliens savagely advanced and the Earth team hurled bolt after bolt of pure ravaging energy—until it appeared that the universe itself might end in one final flare of furious torrential power....

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# Chapter I

## INVADERS

Russ Evans, Pilot 3497, Rocket Squad Patrol 34, unsnapped his seat belt, and with a slight push floated "up" into the air inside the weightless ship. He stretched himself, and yawned broadly.

"Red, how soon do we eat?" he called.

"Shut up, you'll wake the others," replied a low voice from the rear of the swift little patrol ship. "See anything?"

"Several million stars," replied Evans in a lower voice. "And—" His tone became suddenly severe. "Assistant Murphy, remember your manners when addressing your superior officer. I've a mind to report you."

A flaming head of hair topping a grinning face poked around the edge of the door. "Lower your wavelength, lower your wavelength! You may think you're a sun, but you're just a planetoid. But what I'd like to know, Chief Pilot Russ Evans, is why they locate a ship in a forlorn, out of the way place like this—three-quarters of a billion miles, out of planetary plane. No ships ever come out here, no pirates, not a chance to help a wrecked ship. All we can do is sit here and watch the other fellows do the work."

"Which is exactly why we're here. Watch—and tell the other ships where to go, and when. Is that chow ready?" asked Russ looking at a small clock giving New York time.

"Uh—think she'll be on time? Come on an' eat."

Evans took one more look at the telectroscope screen, then snapped it off. A tiny, molecular towing unit in his hand, he pointed toward the door to the combined galley and lunch room, and glided in the wake of Murphy.

"How much fuel left?" he asked, as he glided into the dizzily spinning room. A cylindrical room, spinning at high speed, causing an artificial "weight" for the foods and materials in it, made eating of food a less difficult task.

Expertly, he maneuvered himself to the guide rail near the center of the room, and caught the spiral. Braking himself into motion, he soon glided down its length, and landed on his feet. He bent and flexed his muscles, waiting for the now-busied assistant to get to the floor and reply.

"They gave us two pounds extra. Lord only knows why. Must expect us to clean up on some fleet. That makes four pound rolls left, untouched, and two thirds of the original pound. We've been here fifteen days, and have six more to go. The main driving power rolls have about the same amount left, and three pound rolls in each reserve bin," replied Red, holding a curiously moving coffee pot that strove to adjust itself to rapidly changing air velocities as it neared the center of the room.

"Sounds like a fleet's power stock. Martian lead or the terrestrial isotope?" asked Evans, tasting warily a peculiar dish before him. "Say, this is energy food. I thought we didn't get any more till Saturday." The change from the energy-less, flavored pastes that made up the principal bulk of a space-pilot's diet, to prevent over-eating, when no energy was used in walking in the weightless ship, was indeed a welcome change.

"Uh-huh. I got hungry. Any objections?" grinned the Irishman.

"None!" replied Evans fervently, pitching in with a will.

Seated at the controls once more, he snapped the little switch that caused the screen to glow with flashing, swirling colors as the telectroscope apparatus came to life. A thousand tiny points of flame appeared scattered on a black field with a suddenness that made them seem to snap suddenly into being. Points, tiny dimensionless points of light, save one, a tiny disc of blue-white flame, old Sol from a distance of close to one billion miles, and under slight reverse magnification. The skillful hands at the controls were turning adjustments now, and that disc of flame seemed to leap toward him with a hundred light-speeds, growing to a disc as large as a dime in an instant, while the myriad points of the stars seemed to scatter like frightened chickens, fleeing from the growing sun, out of the screen. Other points, heretofore invisible, appeared, grew, and rushed away.

The sun shifted from the center of the screen, and a smaller reddish-green disc came into view—a planet, its atmosphere coloring the light that left it toward the red. It rushed nearer, grew larger. Earth spread as it took the

center of the screen. A world, a portion of a world, a continent, a fragment of a continent as the magnification increased, boundlessly it seemed.

Finally, New York spread across the screen; New York seen from the air, with a strange lack of perspective. The buildings did not seem all to slant toward some point, but to stand vertical, for, from a distance of a billion miles, the vision lines were practically parallel. Titanic shafts of glowing color in the early summer sun appeared; the hot rays from the sun, now only 82,500,000 miles away, shimmering on the colored metal walls.

The new Airlines Building, a mile and a half high, supported at various points by actual spaceship driving units, was a riot of shifting, rainbow hues. A new trick in construction had been used here, and Evans smiled at it. Arcot, inventor of the ship that carried him, had suggested it to Fuller, designer of that ship, and of that building. The colored beryllium metal of the wall had been ruled with 20,000 lines to the inch, mere scratches, but nevertheless a diffraction grating. The result was amazingly beautiful. The sunlight, split up to its rainbow colors, was reflected in millions of shifting tints.

In the air, supported by tiny packs strapped to their backs, thousands of people were moving, floating where they wished, in any direction, at any elevation. There were none of the helicopters of even five years ago, now. A molecular power suit was far more convenient, cost nothing to operate, and but \$50 to buy. Perfectly safe, requiring no skill, everyone owned them. To the watcher in space, they were mere moving, snaky lines of barely distinguishable dots that shivered and seemed to writhe in the refractions of the air. Passing over them, seeming to pass almost through them in this strange perspectiveless view, were the shadowy forms of giant space liners, titanic streamlined hulls. They were streamlined for no good reason, save that they looked faster and more graceful than the more efficient spherical freighters, just as passenger liners of two centuries earlier, with their steam engines, had carried four funnels and used two. A space liner spent so minute a portion of its journey in the atmosphere that it was really inefficient to streamline them.

"Won't be long!" muttered Russ, grinning cheerily at the familiar, sunlit city. His eyes darted to the chronometer beside him. The view seemed to be taken from a ship that was suddenly scudding across the heavens like a frightened

thing, as it ran across from Manhattan Island, followed the Hudson for a short way, then cut across into New Jersey, swinging over the great woodland area of Kittatiny Park, resting finally on the New Jersey suburb of New York nestled in the Kittatinies, Blairtown. Low apartment buildings, ten or twelve stories high, nestled in the waving green of trees in the old roadways. When ground traffic ceased, the streets had been torn up, and parkways substituted.

Quickly the view singled out a single apartment, and the great smooth roof was enlarged on the screen to the absolute maximum clarity, till further magnification simply resulted in worse stratospheric distortion. On the broad roof were white strips of some material, making a huge V followed by two I's. Russ watched, his hand on the control steadying the view under the Earth's complicated orbital motion, and rotation, further corrections for the ship's orbital motion making the job one requiring great skill. The view held the center with amazing clarity. Something seemed to be happening to the last of the I's. It crumpled suddenly, rolled in on itself and disappeared.

"She's there, and on time," grinned Russ happily.

He tried more magnification. Could he—

He was tired, terribly, suddenly tired. He took his hands from the viewplate controls, relaxed, and dropped off to sleep.

"What made me so tired—wonder—GOD!" He straightened with a jerk, and his hands flew to the controls. The view on the machine suddenly retreated, flew back with a velocity inconceivable. Earth dropped away from the ship with an apparent velocity a thousand times that of light; it was a tiny ball, a pinpoint, gone, the sun—a minute disc—gone—then the apparatus was flashing views into focus from the other side of the ship. The assistant did not reply. Evans' hands were growing ineffably heavy, his whole body yearned for sleep. Slowly, clumsily he pawed for a little stud. Somehow his hand found it, and the ship reeled suddenly, little jerks, as the code message was flung out in a beam of such tremendous power that the sheer radiation pressure made it noticeable. Earth would be notified. The system would be warned. But light, slow crawling thing, would take hours to cross the gulf of space, and radio travels no faster.

Half conscious, fighting for his faculties with all his will, the pilot turned to the screen. A ship! A strange, glistening thing streamlined to the nth degree,

every spare corner rounded till the resistance was at the irreducible minimum. But, in the great pilotport of the stranger, the patrol pilot saw faces, and gasped in surprise as he saw them! Terrible faces, blotched, contorted. Patches of white skin, patches of brown, patches of black, blotched and twisted across the faces. Long, lean faces, great wide flat foreheads above, skulls strangely squared, more box-like than man's rounded skull. The ears were large, pointed tips at the top. Their hair was a silky mane that extended low over the forehead, and ran back, spreading above the ears, and down the neck.

Then, as that emotion of surprise and astonishment weakened his will momentarily, oblivion came, with what seemed a fleeting instant of memories. His life seemed to flash before his mind in serried rank, a file of events, his childhood, his life, his marriage, his wife, an image of smiling comfort, then the years, images of great and near great men, his knowledge of history, pictures of great war of 2074, pictures of the attackers of the Black Star—then calm oblivion, quiet blankness.

The long, silent ship that had hovered near him turned, and pointed toward the pinhead of matter that glowed brilliantly in the flaming jewel box of the heavens. It was gone in an instant, rushing toward Sun and Earth at a speed that outraced the flying radio message, leaving the ship of the Guard Patrol behind, and leaving the Pilot as he leaves our story.



## Chapter II

### CANINE PEOPLE

"And that," said Arcot between puffs, "will certainly be a great boon to the Rocket Patrol, you must admit. They don't like dueling with these space-pirates using the molecular rays, and since molecular rays have such a tremendous commercial value, we can't prohibit the sale of ray apparatus. Now, if you will come into the 'workshop,' Fuller, I'll give a demonstration with friend Morey's help."

The four friends rose, Morey, Wade and Fuller following Arcot into his laboratory on the thirty-seventh floor of the Arcot Research Building. As they went, Arcot explained to Fuller the results and principles of the latest product of the ingenuity of the "Triumvirate," as Arcot, Morey and Wade had come to be called in the news dispatches.

"As you know, the molecular rays make all the molecules of any piece of matter they are turned upon move in the desired direction. Since they supply no new energy, but make the body they are turned upon supply its own, using the energy of its own random molecular motion of heat, they are practically impossible to stop. The energy necessary for molecular rays to take effect is so small that the usual type of filter lets enough of it pass. A ship equipped with filters is no better off when attacked than one without. The rays simply drove the front end into the rear, or *vice versa*, or tore it to pieces as the pirates desired. The Rocket Patrol could kill off the pirates, but they lost so many men in the process, it was a Pyrrhic victory.

"For some time Morey and I have been working on something to stop the rays. Obviously it can't be by means of any of the usual metallic energy absorption screens.

"We finally found a combination of rays, better frequencies, that did what we wanted. I have such an apparatus here. What we want you to do, of course, is the usual job of rearranging the stuff so that the apparatus can be made from

dies, and put into quantity production. As the Official Designer for the A.A.L. you ought to do that easily." Arcot grinned as Fuller looked in amazement at the apparatus Arcot had picked up from the bench in the "workshop."

"Don't get worried," laughed Morey, "that's got a lifting unit combined—just a plain ordinary molecular lift such as you see by the hundreds out there." Morey pointed through the great window where thousands of those lift units were carrying men, women and children through the air, lifting them hundreds, thousands of feet above the streets and through the doors of buildings.

"Here's an ordinary molecular pistol. I'm going to put the suit on, and rise about five feet off the floor. You can turn the pistol on me, and see what impression it makes on the suit."

Fuller took the molecular ray pistol, while Wade helped Arcot into the suit. He looked at the pistol dubiously, pointed it at a heavy casting of iron resting in one corner of the room, and turned the ray at low concentration, then pressed the trigger-button. The casting gave out a low, scrunching grind, and slid toward him with a lurch. Instantly he shut off the power. "This isn't any ordinary pistol. It's got seven or eight times the ordinary power!" he exclaimed.

"Oh yes, I forgot," Morey said. "Instead of the fuel battery that the early pistols used, this has a space-distortion power coil. This pistol has as much power as the usual A-39 power unit for commercial work."

By the time Morey had explained the changes to Fuller, Arcot had the suit on, and was floating five or six feet in the air, like a grotesque captive balloon. "Ready, Fuller?"

"I guess so, but I certainly hope that suit is all it is claimed to be. If it isn't—well I'd rather not commit murder."

"It'll work," said Arcot. "I'll bet my neck on that!" Suddenly he was surrounded by the faintest of auras, a strange, wavering blue light, like the hazy corona about a 400,000-volt power line. "Now try it."

Fuller pointed the pistol at the floating man and pushed the trigger. The brilliant blue beam of the molecular ray, and the low hum of the air, rushing

in the path of the director beam, stabbed out toward Arcot. The faint aura about him was suddenly intensified a million times till he floated in a ball of blue-white fire. Scarcely visible, the air about him blazed with bluish incandescence of ionization.

"Increase the power," suggested Morey. Fuller turned on more power. The blue halo was shot through with tiny violet sparks, the sharp odor of ozone in the air was stifling; the heat of wasted energy was making the room hotter. The power increased further, and the tiny sparks were waving streamers, that laced across the surface of the blue fire. Little jets of electric flame reached out along the beam of the ray now. Finally, as full power of the molecular ray was reached, the entire halo was buried under a mass of writhing sparks that seemed to leap up into the air above the man's head, wavering up to extinction. The room was unbearably hot, despite the molecular ray coolers absorbing the heat of the air, and blowing cooled air into the room.

Fuller snapped off the ray, and put the pistol on the table beside him. The halo died, and went out a moment later, and Arcot settled to the floor.

"This particular suit will stand up against anything the ordinary commercial sets will give. The system now: remember that the rays are short electrical waves. The easiest way to stop them is to interpose a wave of opposite phase, and cause interference. Fine, but try to get in tune with an unknown wave when it is moving in relation to your center of control. It is impossible to do it before you yourself have been rayed out of existence. We must use some system that will automatically, instantly be out of phase.

"The Hall effect would naturally tend to make the frequency of a wave through a resisting medium change, and lengthen. If we can send out a spherical wave front, and have it lengthen rapidly as it proceeds, we will have a wave front that is, at all points, different. Any entering wave would, sooner or later, meet a wave that was half a phase out, no matter what the motion was, nor what the frequency, as long as it lies within the comparatively narrow molecular wave band. What this apparatus, or ray screen, consists of, is a machine generating a spherical wave front of the nature of a molecular wave, but of just too great a frequency to do anything. A second part generates a condition in space, which opposes that wave. After traveling a certain distance, the wave has lengthened to molecular wave type, but is now

beyond the machine which generated it, and no longer affects it, or damages it. However, as it proceeds, it continues to lengthen, till eventually it reaches the length of infra-light, when the air quickly absorbs it, as it reaches one of the absorption bands for air molecular waves, and any molecular wave must find its half-wave complement somewhere in that wedge of waves. It does, and is at once choked off, its energy fighting the energy of the ray screen, of course. In the air, however, the screen is greatly helped by the fact that before the half-wave frequency is met in the ray-wedge, the molecular ray is buried in ions, leaving the ray screen little work to do.

"Now your job is to design the apparatus in a form that machines can make automatically. We tried doing it ourselves for the fun of it, but we couldn't see how we could make a machine that didn't need at least two humans to supervise."

"Well," grinned Fuller, "you have it all over me as scientists, but as economic workers—two human supervisors to make one product!"

"All right—we agree. But no, let's see you—Lord! What was that?" Morey started for the door on the run. The building was still trembling from the shock of a heavy blow, a blow that seemed much as though a machine had been wrecked on the armored roof, and a big machine at that. Arcot, a flying suit already on, was up in the air, and darting past Morey in an instant, streaking for the vertical shaft that would let him out to the roof. The molecular ray pistol was already in his hand, ready to pull any beams off unfortunate victims pinned under them.

In a moment he had flashed up through the seven stories, and out to the roof. A gigantic silvery machine rested there, streamlined to perfection, its hull dazzlingly beautiful in the sunlight. A door opened, and three tall, lean men stepped from it. Already people were collecting about the ship, flying up from below. Air patrolmen floated up in a minute, and seeing Arcot, held the crowd back.

The strange men were tall, eight feet or more in height. Great, round, soft brown eyes looked in curiosity at the towering multicolored buildings, at the people floating in the air, at the green trees and the blue sky, the yellowish sun.

Arcot looked at their strangely blotched and mottled heads, faces, arms and

hands. Their feet were very long and narrow, their legs long and thin. Their faces were kindly; the mottled skin, brown and white and black, seemed not to make them ugly. It was not a disfigurement; it seemed oddly familiar and natural in some reminiscent way.

"Lord, Arcot—queer specimens, yet they seem familiar!" said Morey in an undertone.

"They are. Their race is that of man's first and best friend, the dog! See the brown eyes? The typical teeth? The feet still show the traces of the dog's toe-step. Their nails, not flat like human ones but rounded? The mottled skin, the ears—look, one is advancing."

One of the strangers walked laboriously forward. A lighter world than Earth was evidently his home. His great brown eyes fixed themselves on Arcot's. Arcot watched them. They seemed to expand, grow larger; they seemed to fill all the sky. Hypnotism! He concentrated his mind, and the eyes suddenly contracted to the normal eyes of the stranger. The man reeled back, as Arcot's telepathic command to sleep came, stronger than his own will. The stranger's friends caught him, shook him, but he slept. One of the others looked at Arcot; his eyes seemed hurt, desperately pleading.

Arcot strode forward, and quickly brought the man out of the trance. He shook his head, smiled at Arcot, then, with desperate difficulty, he enunciated some words in English, terribly distorted.

"Ahy wizz tahk. Vokle kohds ron. Tahk by breen."

Distorted as it was, Arcot recognized the meaning without difficulty. "I wish (to) talk. Vocal cords wrong. Talk by brain." He switched to communication by the Venerian method, telepathically, but without hypnotism.

"Good enough. When you attempted to hypnotize me, I didn't know what you wanted. It is not necessary to hypnotize to carry on communication by the method of the second world of this system. What brings you to our system? From what system do you come? What do you wish to say?"

The other, not having learned the Venerian system, had great difficulty in communicating his thoughts, but Arcot learned that they had machines which would make it easier, and the terrestrial invited them into his laboratory, for the crowd was steadily growing.



The three returned to their ship for a moment, coming out with several peculiar headsets. Almost at once the ship started to rise, going up more and more swiftly, as the people cleared a way for it.

Then, in the tiniest fraction of a second, the ship was gone; it shrank to a point, and was invisible in the blue vault of the sky.

"Apparently they intend to stay a while," said Wade. "They are trusting souls, for their line of retreat is cut off. We naturally have no intention of harming them, but they can't know that."

"I'm not so sure," said Arcot. He turned to the apparent leader of the three and explained that there were several stories to descend, and stairs were harder than a flying unit. "Wrap your arms about my legs, when I rise above you, and hold on till your feet are on the floor again," he concluded.

The stranger walked a little closer to the edge of the shaft, and looked down. White bulbs illuminated its walls down its length to the ground. The man talked rapidly to his friends, looking with evident distaste at the shaft, and the tiny pack on Arcot's back. Finally, smiling, he evinced his willingness. Arcot rose, the man grasped his legs, and then both rose. Over the shaft, and down to his laboratory was the work of a moment.

Arcot led them into his "consultation room," where a number of comfortable chairs were arranged, facing each other. He seated them together, and his own friends facing them.

"Friends of another world," began Arcot, "we do not know your errand here, but you evidently have good reason for coming to this place. It is unlikely that your landing was the result of sheer chance. What brought you? How came you to this point?"

"It is difficult for me to reply. First we must be *en rapport*. Our system is not simple as yours, but more effective, for yours depends on thought ideas, not altogether universal. Place these on your heads, for only a moment. I must induce temporary hypnotic coma. Let one try first if you desire." The leader of the visitors held out one of the several headsets they had brought, caplike things, made of laminated metal apparently.

Arcot hesitated, then with a grin slipped it on.

"Relax," came a voice in Arcot's head, a low, droning voice, a voice of

command. "Sleep," it added. Arcot felt himself floating down an infinite shaft, on some superflying suit that did not pull at him with its straps, just floating down lightly, down and down and down. Suddenly he reached the bottom, and found to his surprise that it led directly into the room again! He was back. "You are awake. Speak!" came the voice.

Arcot shook himself, and looked about. A new voice spoke now, not the tonelessly melodious voice, but the voice of an individual, yet a mental voice. It was perfectly clear, and perfectly comprehensible. "We have traveled far to find you, and now we have business of the utmost import. Ask these others to let us treat them, for we must do what we can in the least possible time. I will explain when all can understand. I am Zezdon Fentes, First Student of Thought. He who sits on my right is Zezdon Afthen, and he beyond him, is Zezdon Inthel, of Physics and of Chemistry, respectively."

And now Arcot spoke to his friends.

"These men have something of the greatest importance to tell us, it seems. They want us all to hear, and they are in a hurry. The treatment isn't at all annoying. Try it. The man on the extreme right, as we face them, is Zezdon Fentes of Thought, Zezdon apparently meaning something like professor, or 'First Student of.' Those next him are Zezdon Afthen of Physics and Zezdon Inthel of Chemistry."

Zezdon Afthen offered them the headsets, and in a moment everyone present was wearing one. The process of putting them *en rapport* took very little time, and shortly all were able to communicate with ease.

"Friends of Earth, we must tell our strange story quickly for the benefit of your world as well as ours, and others, too. We cannot so much as annoy. We are helpless to combat them.

"Our world lies far out across the galaxy; even with incalculable velocity of the great swift thing that bore us, three long months have we traveled toward your distant worlds, hoping that at last the Invaders might meet their masters.

"We landed on this roof because we examined mentally the knowledge of a pilot of one of your patrol ships. His mind told us that here we would find the three greatest students of Science of this Solar System. So it was here we came for help.

"Our race has arisen," he continued, "as you have so surely determined from the race you call canines. It was artificially produced by the Ancient Masters when their hour of need had come. We have lost the great science of the Ancient Ones. But we have developed a different science, a science of the mind."

"Dogs are far more psychic than are men. They would naturally tend to develop such a civilization," said Arcot judiciously.