

# The Nothing Equation

Tom Godwin

The cruiser vanished back into hyperspace and he was alone in the observation bubble, ten thousand light-years beyond the galaxy's outermost sun. He looked out the windows at the gigantic sea of emptiness around him and wondered again what the danger had been that had so terrified the men before him.

Of one thing he was already certain; he would find that nothing was waiting outside the bubble to kill him. The first bubble attendant had committed suicide and the second was a mindless maniac on the Earthbound cruiser but it must have been something inside the bubble that had caused it. Or else they had imagined it all.

He went across the small room, his magnetized soles loud on the thin metal floor in the bubble's silence. He sat down in the single chair, his weight very slight in the feeble artificial gravity, and reviewed the known facts.

The bubble was a project of Earth's Galactic Observation Bureau, positioned there to gather data from observations that could not be made from within the galaxy. Since metallic mass affected the hypersensitive instruments the bubble had been made as small and light as possible. It was for that reason that it could accommodate only one attendant.

The Bureau had selected Horne as the bubble's first attendant and the cruiser left him there for his six months' period of duty. When it made its scheduled return with his replacement he was found dead from a tremendous overdose of sleeping pills. On the table was his daily-report log and his last entry, made three months before:

I haven't attended to the instruments for a long time because it hates us and doesn't want us here. It hates me the most of all and keeps trying to get into the bubble to kill me. I can hear it whenever I stop and listen and I know it won't be long. I'm afraid of it and I want to be asleep when it comes. But I'll have to make it soon because I have only twenty sleeping pills left and if—

The sentence was never finished. According to the temperature recording instruments in the bubble his body ceased radiating heat that same night.

The bubble was cleaned, fumigated, and inspected inside and out. No sign of any inimical entity or force could be found.

Silverman was Horne's replacement. When the cruiser returned six months later bringing him, Green, to be Silverman's replacement, Silverman was completely insane. He babbled about something that had been waiting outside the bubble to kill him but his nearest to a rational statement was to say once, when asked for the hundredth time what he had seen:

"Nothing—you can't really see it. But you feel it watching you and you hear it trying to get in to kill you. One time I bumped the wall and—for God's sake—take me away from it—take me back to Earth ..."

Then he had tried to hide under the captain's desk and the ship's doctor had led him away.

The bubble was minutely examined again and the cruiser employed every detector device it possessed to search surrounding space for light-years in all directions. Nothing was found.

When it was time for the new replacement to be transferred to the bubble he reported to Captain McDowell.

"Everything is ready, Green," McDowell said. "You are the next one." His shaggy gray eyebrows met in a scowl. "It would be better if they would let me select the replacement instead of them."

He flushed with a touch of resentment and said, "The Bureau found my intelligence and initiative of thought satisfactory."

"I know—the characteristics you don't need. What they ought to have is somebody like one of my engine room roustabouts, too ignorant to get scared and too dumb to go nuts. Then we could get a sane report six months from now instead of the ravings of a maniac."

"I suggest," he said stiffly, "that you reserve judgement until that time comes, sir."

And that was all he knew about the danger, real or imaginary, that had driven two men into insanity. He would have six months in which to find the answer. Six months minus— He looked at the chronometer and saw that twenty minutes had passed since he left the cruiser. Somehow, it seemed much longer ...

He moved to light a cigarette and his metal soles scraped the floor with the same startling loudness he had noticed before. The bubble was as silent as a tomb.

It was not much larger than a tomb; a sphere eighteen feet in diameter, made of thin sheet

steel and criss-crossed outside with narrow reinforcing girders to keep the internal air pressure from rupturing it. The floor under him was six feet up from the sphere's bottom and the space beneath held the air regenerator and waste converter units, the storage batteries and the food cabinets. The compartment in which he sat contained chair, table, a narrow cot, banks of dials, a remote-control panel for operating the instruments mounted outside the hull, a microfilm projector, and a pair of exerciser springs attached to one wall. That was all.

There was no means of communication since a hyperspace communicator would have affected the delicate instruments with its radiations but there was a small microfilm library to go with the projector so that he should be able to pass away the time pleasantly enough.

But it was not the fear of boredom that was behind the apprehension he could already feel touching at his mind. It had not been boredom that had turned Horne into a suicide and Silverman into—

Something cracked sharply behind him, like a gunshot in the stillness, and he leaped to his feet, whirling to face it.

It was only a metal reel of data tape that had dropped out of the spectrum analyzer into the storage tray.

His heart was thumping fast and his attempt to laugh at his nervousness sounded hollow and mirthless. Something inside or outside the bubble had driven two men insane with its threat and now that he was irrevocably exiled in the bubble, himself, he could no longer dismiss their fear as products of their imagination. Both of them had been rational, intelligent men, as carefully selected by the Observation Bureau as he had been.

He set in to search the bubble, overlooking nothing. When he crawled down into the lower compartment he hesitated then opened the longest blade of his knife before searching among the dark recesses down there. He found nothing, not even a speck of dust.

Back in his chair again he began to doubt his first conviction. Perhaps there really had been some kind of an invisible force or entity outside the bubble. Both Horne and Silverman had said that "it" had tried to get in to kill them.

They had been very definite about that part.

There were six windows around the bubble's walls, set there to enable the attendant to see all the outside-mounted instruments and dials. He went to them to look out, one by one,

and from all of them he saw the same vast emptiness that surrounded him. The galaxy—his galaxy—was so far away that its stars were like dust. In the other directions the empty gulf was so wide that galaxies and clusters of galaxies were tiny, feeble specks of light shining across it.

All around him was a void so huge that galaxies were only specks in it....

Who could know what forces or dangers might be waiting out there?

A light blinked, reminding him it was time to attend to his duties. The job required an hour and he was nervous and not yet hungry when he had finished. He went to the exerciser springs on the wall and performed a work-out that left him tired and sweating but which, at least, gave him a small appetite.

The day passed, and the next. He made another search of the bubble's interior with the same results as before. He felt almost sure, then, that there was nothing in the bubble with him. He established a routine of work, pastime and sleep that made the first week pass fairly comfortably but for the gnawing worry in his mind that something invisible was lurking just outside the windows.

Then one day he accidentally kicked the wall with his metal shoe tip.

It made a sound like that from kicking a tight-stretched section of tin and it seemed to him it gave a little from the impact, as tin would do. He realized for the first time how thin it was—how deadly, dangerously thin.

According to the specifications he had read it was only one-sixteenth of an inch thick. It was as thin as cardboard.

He sat down with pencil and paper and began calculating. The bubble had a surface area of 146,500 square inches and the internal air pressure was fourteen pounds to the square inch. Which meant that the thin metal skin contained a total pressure of 2,051,000 pounds.

Two million pounds.

The bubble in which he sat was a bomb, waiting to explode the instant any section of the thin metal weakened.

It was supposed to be an alloy so extremely strong that it had a high safety factor but he could not believe that any metal so thin could be so strong. It was all right for engineers sitting safely on Earth to speak of high safety factors but his life depended upon the fragile wall not cracking. It made a lot of difference.

The next day he thought he felt the hook to which the exerciser spring was attached crack loose from where it was welded to the wall. He inspected the base of the hook closely and there seemed to be a fine, hairline fracture appearing around it.

He held his ear to it, listening for any sound of a leak. It was not leaking yet but it could commence doing so at any time. He looked out the windows at the illimitable void that was waiting to absorb his pitiful little supply of air and he thought of the days he had hauled and jerked at the springs with all his strength, not realizing the damage he was doing.

There was a sick feeling in his stomach for the rest of the day and he returned again and again to examine the hairline around the hook.

The next day he discovered an even more serious threat: the thin skin of the bubble had been spot-welded to the outside reinforcing girders.

Such welding often created hard, brittle spots that would soon crystallize from continued movement—and there was a slight temperature difference in the bubble between his working and sleeping hours that would daily produce a contraction and expansion of the skin. Especially when he used the little cooking burner.

He quit using the burner for any purpose and began a daily inspection of every square inch of the bubble's walls, marking with white chalk all the welding spots that appeared to be definitely weakened. Each day he found more to mark and soon the little white circles were scattered across the walls wherever he looked.

When he was not working at examining the walls he could feel the windows watching him, like staring eyes. Out of self defense he would have to go to them and stare back at the emptiness.

Space was alien; coldly, deadly, alien. He was a tiny spark of life in a hostile sea of Nothing and there was no one to help him. The Nothing outside was waiting day and night for the most infinitesimal leak or crack in the walls; the Nothing that had been waiting out there since time without beginning and would wait for time without end.

Sometimes he would touch his finger to the wall and think, Death is out there, only one-sixteenth of an inch away. His first fears became a black and terrible conviction: the bubble could not continue to resist the attack for long. It had already lasted longer than it should

have. Two million pounds of pressure wanted out and all the sucking Nothing of intergalactic space wanted in. And only a thin skin of metal, rotten with brittle welding spots, stood between them.

It wanted in—the Nothing wanted in. He knew, then, that Horne and Silverman had not been insane. It wanted in and someday it would get in. When it did it would explode him and jerk out his guts and lungs. Not until that happened, not until the Nothing filled the bubble and enclosed his hideous, turned-inside-out body would it ever be content ...

He had long since quit wearing the magnetized shoes, afraid the vibration of them would weaken the bubble still more. And he began noticing sections where the bubble did not seem to be perfectly concave, as though the rolling mill had pressed the metal too thin in places and it was swelling out like an over-inflated balloon.

He could not remember when he had last attended to the instruments. Nothing was important but the danger that surrounded him. He knew the danger was rapidly increasing because whenever he pressed his ear to the wall he could hear the almost inaudible tickings and vibrations as the bubble's skin contracted or expanded and the Nothing tapped and searched with its empty fingers for a flaw or crack that it could tear into a leak.

But the windows were far the worst, with the Nothing staring in at him day and night. There was no escape from it. He could feel it watching him, malignant and gloating, even when he hid his eyes in his hands.

The time came when he could stand it no longer. The cot had a blanket and he used that together with all his spare clothes to make a tent stretching from the table to the first instrument panel. When he crawled under it he found that the lower half of one window could still see him. He used the clothes he was wearing to finish the job and it was much better then, hiding there in the concealing darkness where the Nothing could not see him.

He did not mind going naked—the temperature regulators in the bubble never let it get too cold.

He had no conception of time from then on. He emerged only when necessary to bring more food into his tent. He could still hear the Nothing tapping and sucking in its ceaseless search for a flaw and he made such emergencies as brief as possible, wishing that he did not have to come out at all. Maybe if he could hide in his tent for a long time and never make a sound it would get tired and go away ...

Sometimes he thought of the cruiser and wished they would come for him but most of the

time he thought of the thing that was outside, trying to get in to kill him. When the strain became too great he would draw himself up in the position he had once occupied in his mother's womb and pretend he had never left Earth. It was easier there.

But always, before very long, the bubble would tick or whisper and he would freeze in terror, thinking, This time it's coming in ...

Then one day, suddenly, two men were peering under his tent at him.

One of them said, "My God—again!" and he wondered what he meant. But they were very nice to him and helped him put on his clothes. Later, in the cruiser, everything was hazy and they kept asking him what he was afraid of.

"What was it—what did you find?"

He tried hard to think so he could explain it. "It was—it was Nothing."

"What were you and Horne and Silverman afraid of—what was it?" the voice demanded insistently.

"I told you," he said. "Nothing."

They stared at him and the haziness cleared a little as he saw they did not understand. He wanted them to believe him because what he told them was so very true.

"It wanted to kill us. Please—can't you believe me? It was waiting outside the bubble to kill us."

But they kept staring and he knew they didn't believe him. They didn't want to believe him ...

Everything turned hazy again and he started to cry. He was glad when the doctor took his hand to lead him away ...

The bubble was carefully inspected, inside and out, and nothing was found. When it was time for Green's replacement to be transferred to it Larkin reported to Captain McDowell.

"Everything is ready, Larkin," McDowell said. "You're the next one. I wish we knew what the danger is." He scowled. "I still think one of my roustabouts from the engine room might give us a sane report six months from now instead of the babblings we'll get from you."

He felt his face flush and he said stiffly, "I suggest, sir, that you not jump to conclusions until that time comes."

The cruiser vanished back into hyperspace and he was alone inside the observation bubble, ten thousand light-years beyond the galaxy's outermost sun. He looked out the windows at the gigantic sea of emptiness around him and wondered again what the danger had been that had so terrified the men before him.

Of one thing he was already certain; he would find that nothing was waiting outside the bubble to kill him ...

Downloaded from [www.libraryofshortstories.com](http://www.libraryofshortstories.com)

This work is in the public domain of Australia. Please check your local copyright laws if you live elsewhere.