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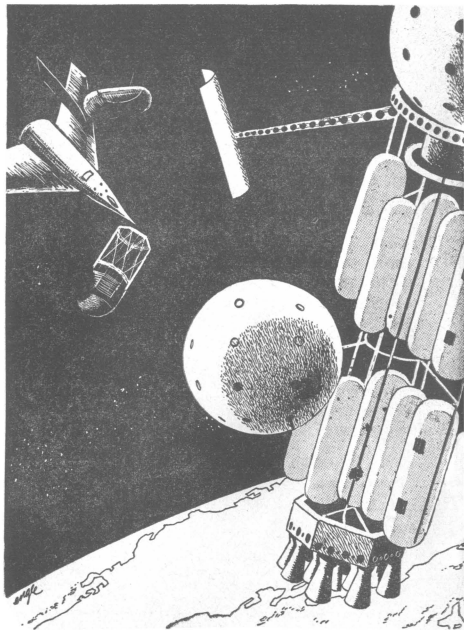
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THE OTHER SIDE OF THE Sky

6 Stories of the Space Stations

by ARTHUR C. CLARKE



The International Geophysical Year opens soon. The launching of the first artificial Earth satellite is, of course, only one of many IGY projects, but it is the one dearest to the hearts of science fiction writers and readers. In these stories, Arthur C. Clarke—scientist, explorer, lecturer and writer—follows the probable steps between the unmanned “basketball” satellite and the first moon trip. The first three follow; the final three will appear in our next issue. The set is an Infinity-plus feature—and our personal salute to the IGY!



The OTHER Side of the Sky
No. 3

Take a DEEP Breath



A LONG TIME AGO I discovered that people who've never left Earth have certain fixed ideas about conditions in space. Everyone "knows," for example, that a man dies instantly and horribly when exposed to the vacuum that exists beyond the atmosphere. You'll find numerous gory descriptions of exploded space-travelers in the popular literature, and I won't spoil your appetite by repeating them here. Many of those tales, indeed, are basically true. I've pulled men back through the airlock who were very poor advertisements for spaceflight.

Yet, at the same time, there are exceptions to every rule—even this one. I should know, for I learned it the hard way.

We were on the last stages of building Communications Satellite Two; all the main units had been joined together, the living quarters had been pressurized, and the station had been given the slow spin around its axis that had restored the unfamiliar sensation of weight. I say "slow," but at its rim our two-hundred-foot-diameter wheel was turning at thirty miles an hour. We had, of course, no sense of motion, but the centrifugal force caused by this spin gave us about half

the weight we would have possessed on Earth. That was enough to stop things from drifting around, yet not enough to make us feel uncomfortably sluggish after our weeks with no weight at all.

Four of us were sleeping in the small cylindrical cabin known as Bunkhouse No. 6 on the night that it happened. The bunkhouse was at the very rim of the station; if you imagine a bicycle wheel, with a string of sausages replacing the tire, you have a good idea of the layout. Bunkhouse No. 6 was one of these sausages, and we were slumbering peacefully inside it.

I was awakened by a sudden jolt that was not violent enough to cause me alarm, but which did make me sit up and wonder what had happened. Anything unusual in a space station demands instant attention, so I reached for the intercom switch by my bed. "Hello, Central," I called. "What was that?"

There was no reply; the line was dead.

Now thoroughly alarmed, I jumped out of bed—and had an even bigger shock. *There was no gravity.* I shot up to the ceiling before I was able to grab a stanchion and bring myself to a

halt, at the cost of a sprained wrist.

It was impossible that the entire station had suddenly stopped rotating. There was only one answer; the failure of the intercom and, as I quickly discovered, of the lighting circuit as well, forced us to face the appalling truth. We were no longer part of the station; our little cabin had somehow come adrift, and had been slung off into space like a raindrop falling on a spinning flywheel.

There were no windows through which we could look out, but we were not in complete darkness, for the battery-powered emergency lights had come on. All the main air-vents had closed automatically when the pressure dropped. For the time being we could live in our own private atmosphere, even though it was not being renewed. Unfortunately, a steady whistling told us that the air we did have was escaping through a leak somewhere in the cabin.

THERE was no way of telling what had happened to the rest of the station. For all we knew, the whole structure might have come to pieces, and all our colleagues might be dead or in the same predicament as ourselves—drifting through space in leaking cans of air. Our one slim hope was that we were the only

castaways, that the rest of the station was intact and had been able to send a rescue team to find us. After all, we were receding at no more than thirty miles an hour, and one of the rocket scooters could catch us up in minutes.

It actually took an hour, though without the evidence of my watch I should never have believed that it was so short a time. We were now gasping for breath, and the gauge on our single emergency oxygen tank had dropped to one division above zero.

The banging on the wall seemed like a signal from another world. We banged back vigorously, and a moment later a muffled voice called to us through the wall. Someone outside was lying with his space-suit helmet pressed against the metal, and his shouted words were reaching us by direct conduction. Not as clear as radio—but it worked.

The oxygen gauge crept slowly down to zero while we had our council of war. We would be dead before we could be towed back to the station; yet the rescue ship was only a few feet away from us, with its airlock already open. Our little problem was to cross that few feet—*without* spacesuits.

We made our plans carefully, rehearsing our actions in the full

knowledge that there could be no repeat performance. Then we each took a deep, final swig of oxygen, flushing out our lungs. When we were all ready, I banged on the wall to give the signal to our friends waiting outside.

There was a series of short, staccato raps as the power tools got to work on the thin hull. We clung tightly to the stanchions, as far away as possible from the point of entry, knowing just what would happen. When it came, it was so sudden that the mind couldn't record the sequence of events. The cabin seemed to explode, and a great wind tugged at me. The last trace of air gushed from my lungs, through my already-opened mouth. And then—utter silence, and the stars shining through the gaping hole that led to life.

Believe me, I didn't stop to analyze my sensations. I think—though I can never be sure that it wasn't imagination—that my eyes were smarting and there was a tingling feeling all over my body. And I felt very cold, perhaps because evaporation was already starting from my skin.

The only thing I can be certain of is that uncanny silence. It is never completely quiet in a space station, for there is always

the sound of machinery or air-pumps. But this was the absolute silence of the empty void, where there is no trace of air to carry sound.

Almost at once we launched ourselves out through the shattered wall, into the full blast of the sun. I was instantly blinded—but that didn't matter, as the **men** waiting in spacesuits grabbed me as soon as I emerged and hustled me into the airlock. And there, sound slowly returned as the air rushed in, and we remembered we could breathe again. The entire rescue, they told us later, had lasted just twenty seconds. . . .

Well, we were the founder-members of the Vacuum-Breather's Club. Since then, at least a dozen other men have done the same thing, in similar emergencies. The record time in space is now two minutes; after that, the blood begins to form bubbles as it boils at body temperature, and those bubbles soon get to the heart.

In my case, there was only one after-effect. For maybe a quarter of a minute I had been exposed to *real* sunlight, not the feeble stuff that filters down through the atmosphere of Earth. Breathing space didn't hurt me at all—but I got the worst dose of sunburn I've ever had in my life.