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# CONTACT



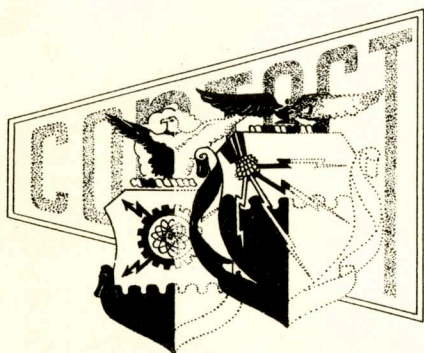
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## 24 hours in SPACE SHIP....

Making a trip one-third of the way to the Moon is easy these days. Just ask Airman Dalton F. Smith, Jr. of Randolph Air Force Base. Airman Smith recently made this journey (on the ground) in the unique Space Cabin Simulator at the Air Force School of Aviation Medicine.

It was the first time a test subject had spent 24 hours in the hermetically sealed cabin—one-third of the time it would take a space ship with a cabin of the same kind to cover the distance to the Moon.

Dr. Hubertus Strughold, head of the Department of Space Medicine at the School, and an internationally known authority on medical conditions of space flight, ordered the apparatus two years ago, at about the time that Air Force Maj. Arthur Murray and other pilots were setting fantastic new altitude records in the rocket-powered X-1A.

Roughly the size and shape of a furnace, the Simulator is designed to produce experimentally the same climatic conditions that a flyer would meet in the sealed cabin of a rocket ship in space.

At 17 miles, the height that Major Murray reached, the flyer already is in space, so far as these conditions are concerned. But test pilots like Murray so far have spent only a minute or two at such altitudes, encased in bulky flying suits and protective gear.

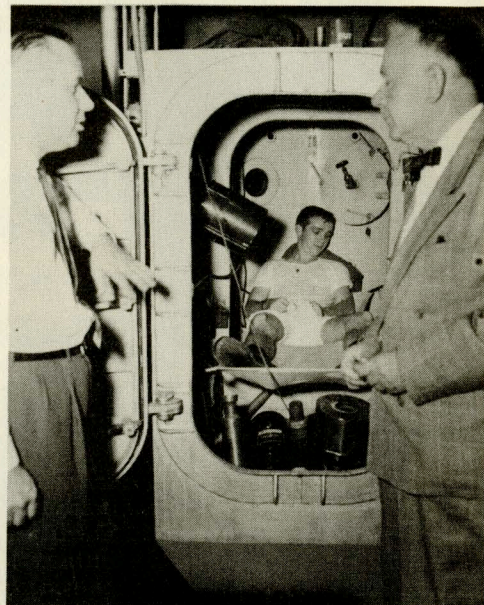
For prolonged flights into space—as in a manned earth satellite for research, or on a visit to the Moon—a sealed cabin like the one that Airman Smith tried out is necessary, to provide the air and pressure the body needs to live, and to remove carbon dioxide, heat, and excess moisture produced by the body itself.

The Space Cabin Simulator does exactly that. Closed off completely from the outside air, it supplies its own oxygen, removes waste products by chemical means, and recirculates body moisture to cool and condition the cabin, at the same time purifying it for drinking water.

Until Airman Smith's "flight," no one had tried the sealed cabin for more than a few hours at a time. Exhaustive tests were needed to determine the exact balance of conditions that would make the miniature climate inside both comfortable and effective for the occupant.

Wearing shorts and a T-shirt (no special clothing is required by a space pilot in a sealed cabin) Airman Smith climbed into the tiny chamber one afternoon at 3 o'clock. Except that he could talk on the intercom-system to physicians monitoring the experiment, he was to be shut off from the world for the next 24 hours as completely as if he had in fact been 80,000 miles away in space.

Two assistants of Dr. Strughold kept watch through the thick glass ports and tended the instruments that recorded the subject's pulse and respiration and the



Airman Smith getting ready for "space ship" trip.

temperature and other factors in the cabin.

Dr. James G. Gaume, a wartime flight surgeon from Byron, Okla., who later practiced medicine for some years in Ellinwood, Kans., manned the earphones and observed the young airman through the ports. Capt. Emanuel M. Roth, a 26-year-old medical officer from Boston, Mass., kept his eye on the instruments.

The flight was not entirely without incident. At 9 o'clock in the morning, after 18 hours in the chamber, while Smith was dozing in his cubicle, he accidentally disconnected the carbon dioxide absorber.

Dr. Roth saw his pulse and respiration begin to rise, and a gradual increase in the carbon dioxide level within the cabin.

Dr. Gaume called the dozing airman on the intercom: "Smitty! Connect the CO<sub>2</sub> absorber!"

The distant voice of the space traveler replied: "It's connected, sir."

"Check it, Smitty."

The boy reached down sleepily, found the broken connection, and refastened it. His pulse and breathing returned to normal as the toxic gas around him was absorbed again.

Thus ended the first voyage into space that pilots like Major Murray may embark on in earnest within the next decade.