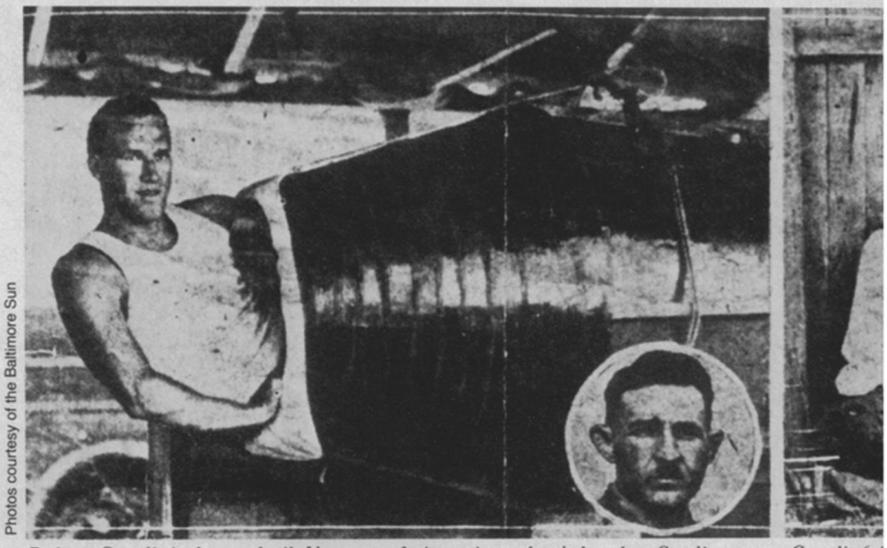
SEMICENTENNIAL: Baltimore-to-V

The Pioneer Venus 2 mission is to be launched early in August, carrying a cluster of probes to penetrate the atmosphere of Venus all the way to the ground. The probes will not be the first space hardware to try for the cloudy planet's surface — several Soviet Venera landers are already there. But were even they the first to make the attempt? The wonderful account that follows is a first-hand reminiscence of what seems to have been a truly pioneering Venus venture. It first appeared in the Sept. 21, 1969, Sun Magazine of the Baltimore Sun newspaper, and describes an attempt that preceded the scheduled Pioneer Venus 2 launching — right to the month — by half a century.
— Jonathan Eberhart



Photos courtesy of the Baltimore Sun

Robert Condit in home-built Venus craft; inset is author's brother Sterling. *Condit (ri*

BY HARRY B. UHLER

Three amateur scientists — my brother Sterling, Robert Condit and I — fired a rocket on an August day in Baltimore in 1928.

Our launch pad was a sidewalk on Morling avenue. Our spacecraft was a 24-foot, bullet-shaped rocket made out of angle iron and sailcloth, with 50 gallons of gasoline for fuel and eight steel pipes for rocket tubes.

We weren't kids. I was in my early 30's and married, making $50 a week as a stone mason. Sterling, my brother, was three years younger, earning $1.25 an hour as a carpenter. The youngest member of the trio was Robert Condit, not long out of Poly, and he was a mathematical wizard.

Our feelings were typical of the times. Only the year before, Charles A. Lindbergh had flown alone across the Atlantic. Like all other Americans, we were as proud of him then as we are today of the astronauts who walked on the moon. If a man like Lindbergh had the courage to lead the way at the risk of his life, we thought, other men should have the courage to follow.

Across the street from my home on Morling avenue, Ed Wise let us set up shop in his empty two-car garage. We paid for machinery and materials as we could afford to, out of our hard earned salaries, and we put close to $5,000 into the project before we were through.

We knew where we wanted to go. Venus. Mars was too far, and we figured the moon was a burned out planet and not worth seeing.

The spacecraft framework was made out of angle iron ribs, bolted into shape. Over this we stretched several layers of sailcloth, and we impregnated it with a varnish that hardened to form an air-tight shell as brittle as glass. The nose section unscrewed, and that's the way a man had to get in and out. There was room in there for only one man, and Condit was the man.

We knew about living in the vacuum of space. Inside the ship there was a big tank of oxygen, and Condit planned to turn the valve on it and let out enough to breathe as he needed it. We knew we'd have to work out a supply of concentrated food tablets, because Condit sure wasn't going to have time to do any cooking. And water. Kegs or tanks of it would take up too much room, so we lined the whole ship interior with 1½-inch pipes. That provided a storage place for water, and also gave the ship a layer of insulation.

Then we threw in a couple flashlights and a first aid kit, and that was it.

There were two glass portholes, so Condit could look around during the ride. There wasn't any way to steer the ship. We figured to hit Venus by taking careful aim at blast-off. In the nose cone was a 25-foot silk parachute Condit could push out to let the ship down easy when he entered the gravity pull of Venus.

Inside the ship was an air compressor run by a gasoline motor. The compressor sprayed vaporized gasoline into the eight steel pipes that were our rocket tubes. A sparkplug in each tube, attached to a battery in the ship, kept the vapor burning.

We estimated that if we could get the ship off the ground, and traveling at 25,000 miles an hour, it would pull out of the earth's gravity about 40 miles up and coast right on over to Venus.

People came from all over town to see our ship, which we kept hanging from the garage roof, and to see us. Practically everyone thought we were crazy. My wife did, too. Wherever we went, people would recognize us, yell "Swoooooosh!" and point to the sky.

There were details we hadn't quite worked out. Was there water to drink and food to eat on Venus? We figured Condit would find that out when he got there, and come right back if there wasn't any. How to take off and get back home again? Something else for Condit to figure out for himself. We didn't bother setting up any sort of a radio hook-up, figuring that Condit would tell us all about it when he got back.

It took us eight months to build the ship, and there were details that could have stood improvement, but we didn't want to wait any longer. We loaded up the pipes with water and the

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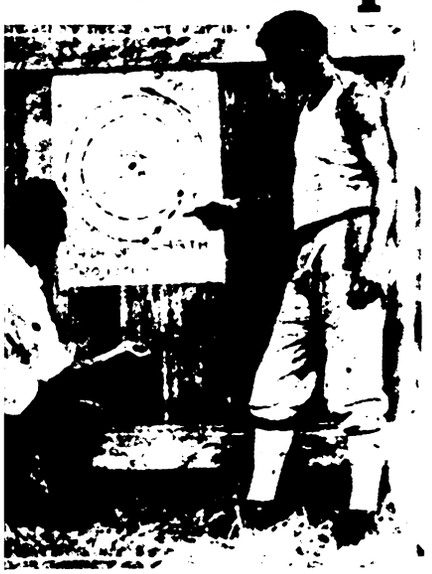

ght) and friend work on trajectory analysis.

fuel tanks with gasoline. We moved the ship outside the garage and set her up on the sidewalk.

Condit crawled in, screwed the nose cone back tight, started up the compressor motor, and threw the switch that activated the sparkplugs.

I never saw so much fire in my life. Big blooms of red flame boiled out around the spacecraft, and big clouds of black smoke rolled up into the sky. Traffic couldn't get by because of the fire. Pretty soon we had quite a few spectators.

Condit had just wanted to take her up maybe a quarter of a mile or so, let her hang there in the air until he got the feel of her, then lower down to load up with more gasoline for the real trip.

He gave the rocket pipes more and more gas, and finally threw the throttle wide open. He made a lot more fire and smoke than before, but the ship wouldn't lift. He kept on trying until he ran out of gas.

The test firing showed us we couldn't get a ship into space without helping it along with a booster rocket, and we estimated that would cost another $10,000 at least. So we gave it up. Our wives were against the whole deal, anyway.

Condit came back in a few weeks, loaded the rocket on a truck, and hauled it off to Florida.

I never saw him again, but I expect he did real well for himself somewhere. He was a mathematical genius.

BOOKS

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BEYOND THE MOON — Paolo Maffei, translated by D. J. K. O'Connell — MIT Pr, 1978, 377 p., illus., $12.50. This book is the story of a voyage in space that starts from the moon and continues as far as the greatest distances that can be reached by exploration or thought. It presents our present knowledge of the universe in a readable style for the intelligent layman. A translation of the sixth edition (1977) of *Al Di La 'Della Luna* published in Italy.

COAL RESOURCES, CHARACTERISTICS AND OWNERSHIP IN THE U.S.A. — Robert Noyes, Ed. — Noyes, 1978, 346 p., illus., $45. Coal currently occupies less than 18 percent of the nation's energy market. Based on federally funded studies, this book presents an accurate picture of U.S. coal reserves, the nature and composition of the coal and of the land and minerals ownership.

THE CREATIVE ENGINEER: The Art of Inventing — Winston E. Kock — Plenum Pub, 1978, 385 p., illus., $25. Examines the ways in which a number of important new technologies came into being from 1909 to 1949 and reviews the characteristic traits of the inventors who created these technologies. Ways are suggested that could, according to the author, enable young and old alike to become more creative.

DIABETES WITHOUT FEAR — Joseph I. Goodman with W. Watts Biggers — Arbor Hse, 1978, 198 p., $8.95. The various fears and anxieties which preoccupy the diabetic and the diabetic's family are discussed by a diabetes specialist. All sides of the problems are presented from a scientific standpoint with practical advice and "how-to" information in order to help the patient lead a normal life.

ENERGY USE IN THE UNITED STATES BY STATE AND REGION: A Statistical Compendium of 1972 Consumption, Prices and Expenditures — Irving Hoch — Resources for the Future (Johns Hopkins), 1978, 737 p., paper, $15.

547 EASY WAYS TO SAVE ENERGY IN YOUR HOME — Roger Albright — Garden Way Pub, 1978, 124 p., drawings by Penny Lee, paper, $4.95. A smattering of old-fashioned common sense, practical energy-saving ideas written in simple, down-to-earth, easy-to-follow language.

GETTING WELL AGAIN: A Step-by-Step, Self-Help Guide to Overcoming Cancer for Patients and their Families — O. Carl Simonton et al — J P Tarcher (St. Martin), 1978, 268 p., $8.95. A radiation oncologist and a psychotherapist describe how an individual's reaction to stress and other emotional factors may have contributed to the onset and progress of cancer, and give detailed instructions to help patients recognize and deal with these elements in their lives.

HUNTED MAMMALS OF THE SEA — Robert M. McClung — Morrow, 1978, 191 p., drawing by William Downey, $7.95. Tells in simple language the history, characteristics, habitats and behavior of eight sea-mammal groups, and outlines steps that must be taken if these endangered species are to survive.

THE SEA AGAINST HUNGER — C.P. Idyll — TY Crowell, rev. ed., 1978, 222p., illus., paper, $6.95. Looks at mankind's chance of avoiding widespread hunger by increasing the use of food from the sea.

. . . Middle age

136 nonpatients on a number of emotional measures. They found consistently that nonpatients experienced a considerably higher "sense of self" and acceptance of their adult roles than did patients.

"Whether a patient is depressed, schizophrenic or neurotic, he or she is at risk for a feeling of loss of the importance of the sense of self at 44-60 years of age," the researchers report. "This loss is consistent with difficulty in surmounting the difficulties of the midlife transition, which occurs at about age 40. . . . Patients who do not master the challenges of this period may experience an increasing sense of failure and loss of self-esteem in later years."

Somewhat consistent with Rubin's results was the finding that nonpatients underwent a general decrease in concern about their children over the years and were able to successfully "loosen the ties" with them following separation. Among the patients, however, "the ability ... to allow their children to separate was impaired," say the researchers. Nonpatients after age 50 also showed an increased concern for the welfare of their parents. This responsiveness was not seen among the patients.

The data on the process of middle age are still rather haphazard and preliminary, most scientists concede. While cause and effect relationships do appear to exist, it is still not certain that the research will spawn a picture of well-defined and structured midlife development "stages" — along the lines of the strict developmental models of children.

But a picture is emerging, and behavioral scientists believe whatever insights they can develop might help a significant number of persons better cope with the transition from child to geriatric. □