

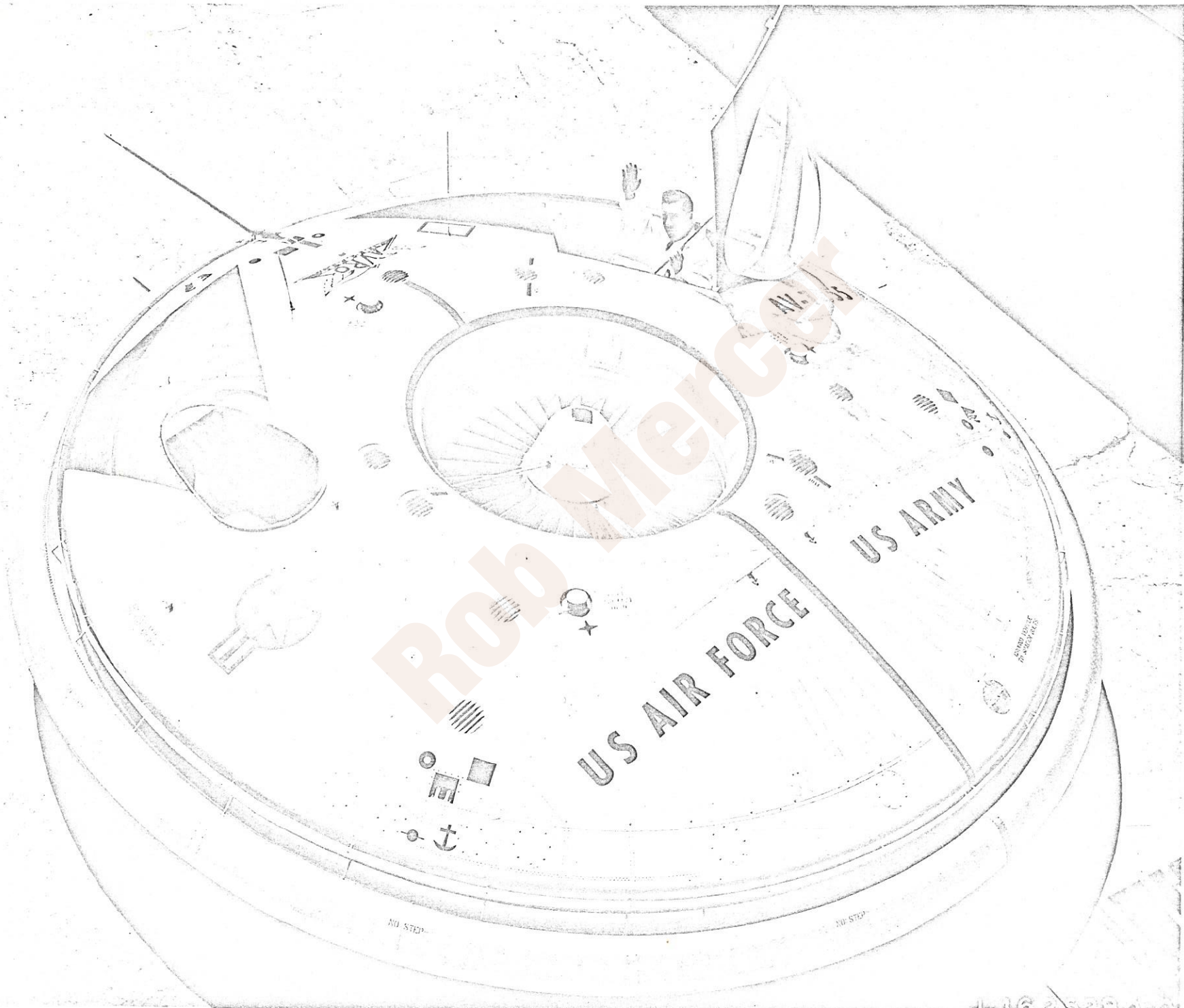
### THE AVROCAR

The Army and Air Force sponsored a program with AVRO Aircraft, Ltd., of Canada, to develop a vertical take-off and landing (VTOL) research vehicle known later as AVROCAR.

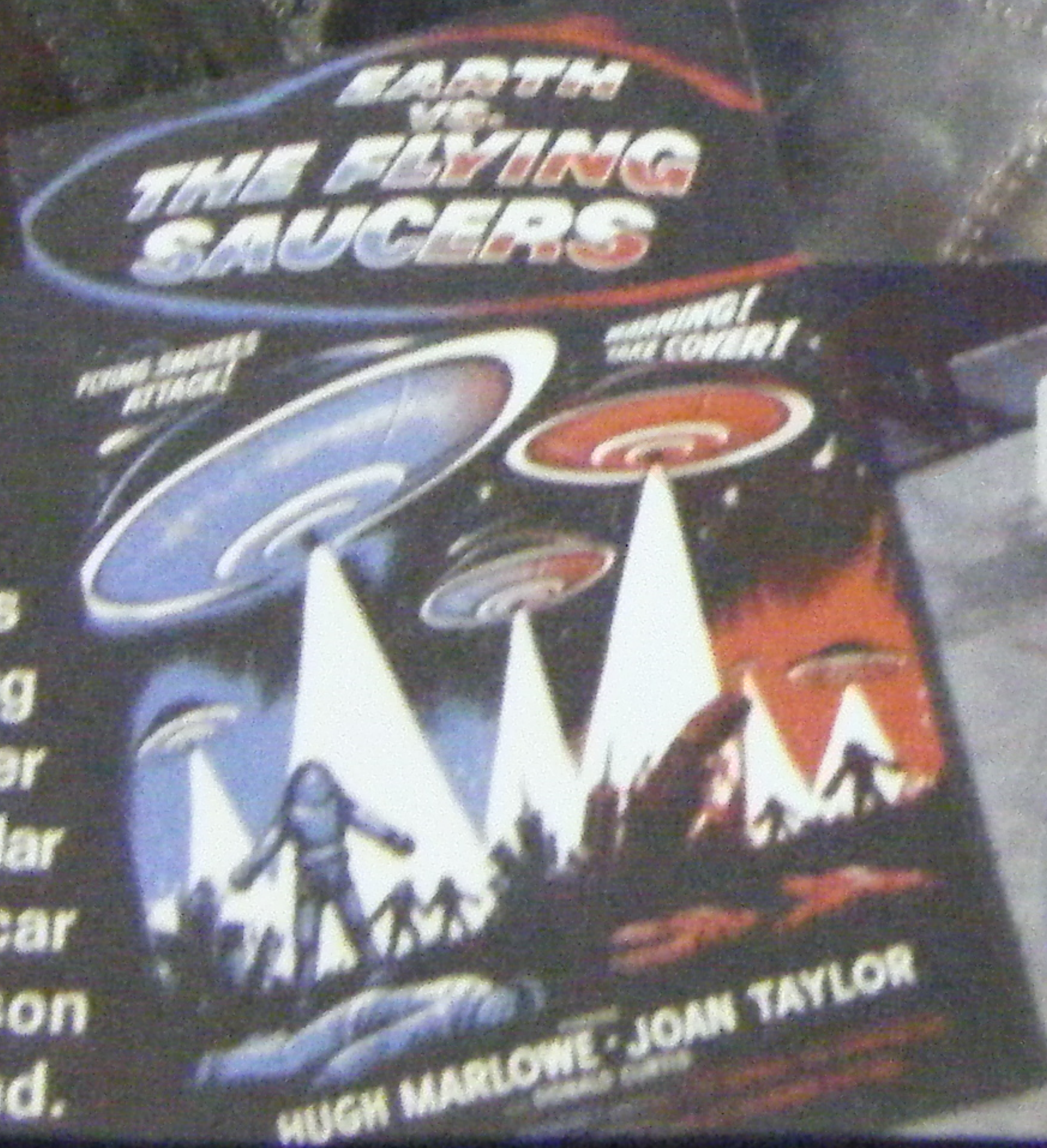
It was designed to explore the then new scientific and technical approach to vertical take-off and landing. The research vehicle was to operate within the ground cushion principle, riding on air, and after obtaining minimum velocity to function as an aircraft supported by aerodynamic forces generated by its forward motion. It was to have a hovering capability as do other vehicles which make use of the ground cushion phenomenon. There was hope it would have a higher performance than other types employing this principle. The circular design resulted from a desire to utilize the ducted fan principle. Two were built.

The final phase of this contract was completed in December 1961. The AVROCAR had not been able to perform as had been desired. Instability above an altitude of four feet was so dangerous that final tests were made with the AVROCAR in a tethered condition. It was determined that there could be no military application due to the instability of the vehicle.

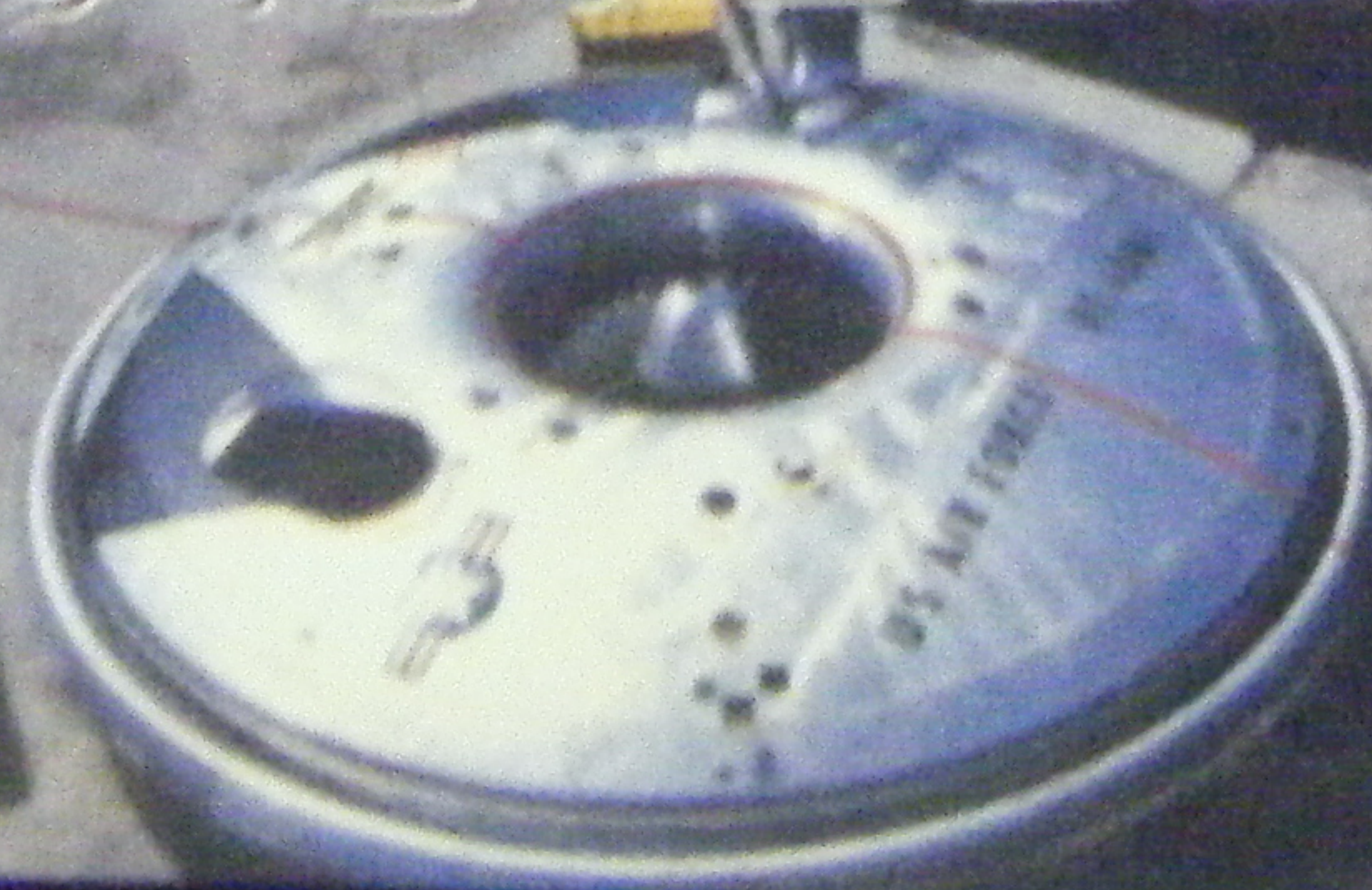
DeHavilland Aircraft of Canada, Ltd. later bought the physical plant of AVRO Aircraft, not including the two AVROCAR3. One of the two has been stripped of usable parts and scrapped. The other, now located at the Ames Research Center, National Aeronautics and Space Administration, Moffett Naval Air Station, California, has been donated to the Smithsonian Institution to which it will be transported at some future date.



Science fiction movies in the 1950s often featured "flying saucers" from outer space, and the circular shape of the Avrocar invited a comparison in the public's mind.



## Avro Canada VZ-9AV Avrocar



The Avrocar was the result of a Canadian effort to develop a supersonic, vertical takeoff and landing (VTOL) fighter-bomber in the early 1950s. However, its circular shape gave it the appearance of a "flying saucer" out of science fiction of the period.

A.V. Roe (Avro) Aircraft Limited (later Avro Canada) based its design concept for the Avrocar on the exhaust from turbojet engines to drive a "turborotor" which produced thrust. By directing this thrust downward, the turborotor would create a cushion of air (also known as "ground effect") upon which the aircraft would float at low altitude. When the thrust was directed toward the rear, the aircraft would accelerate and gain altitude. In 1952, the Canadian government approved the project but dropped the project in 1954.

Overhead view of the Avrocar



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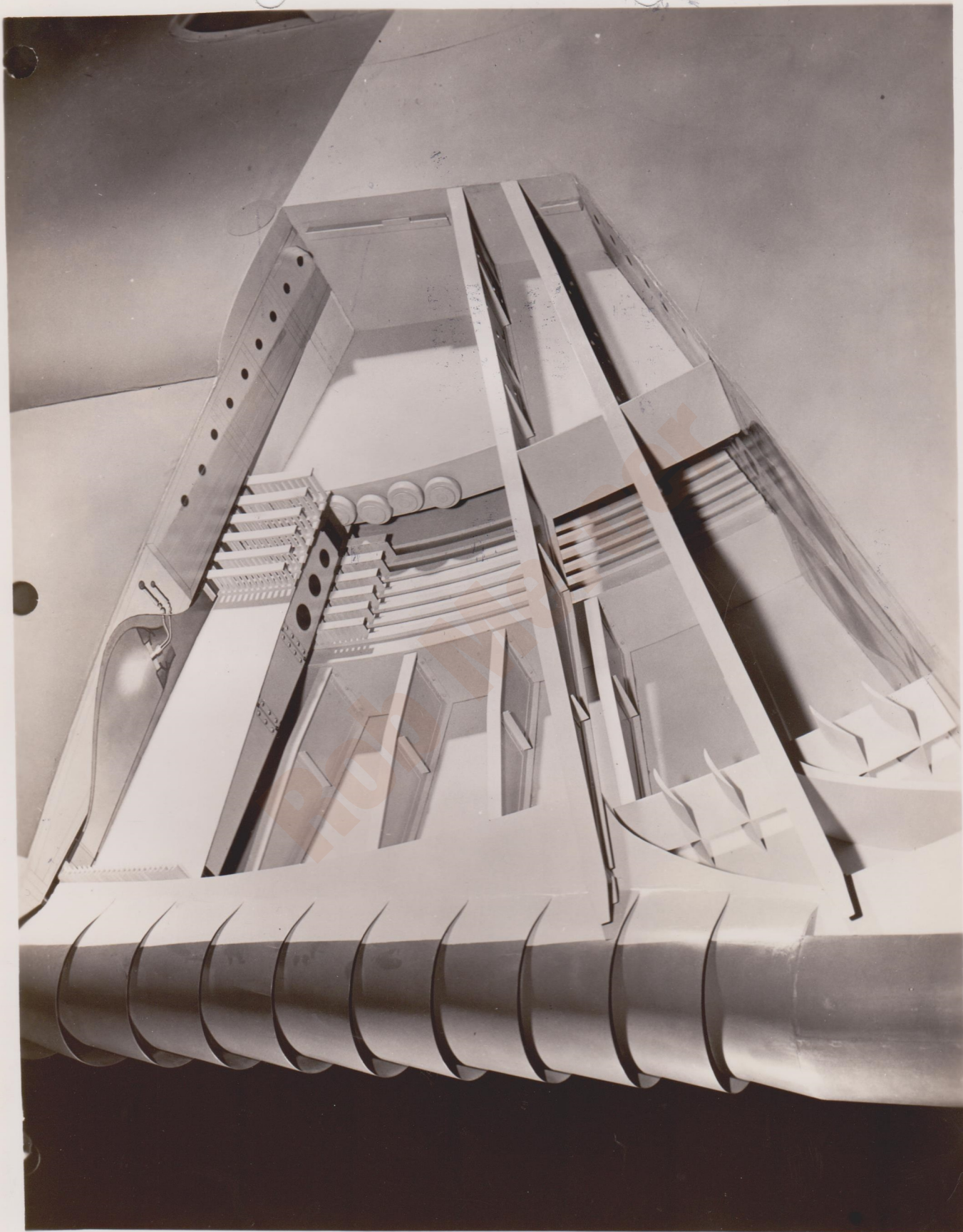
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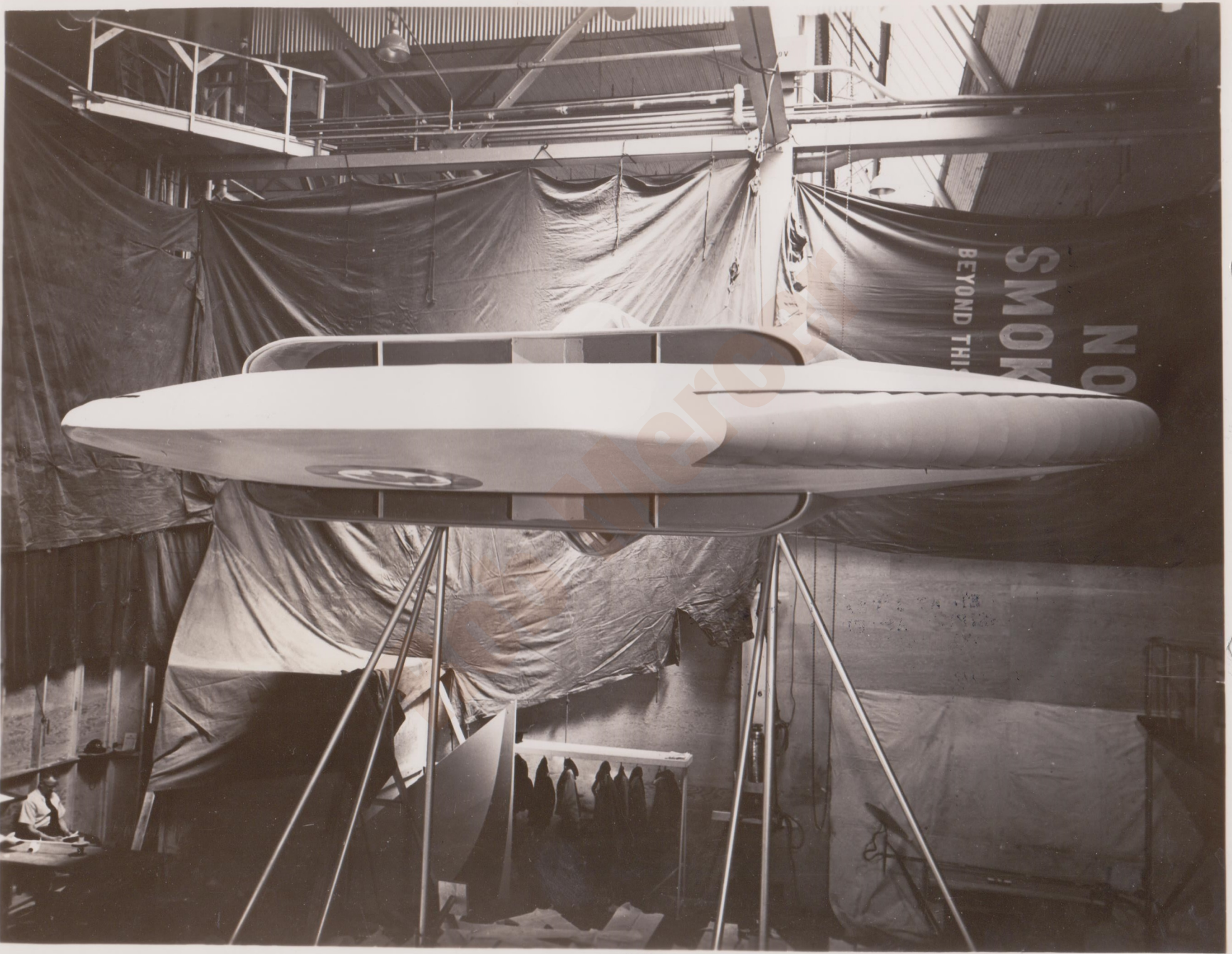
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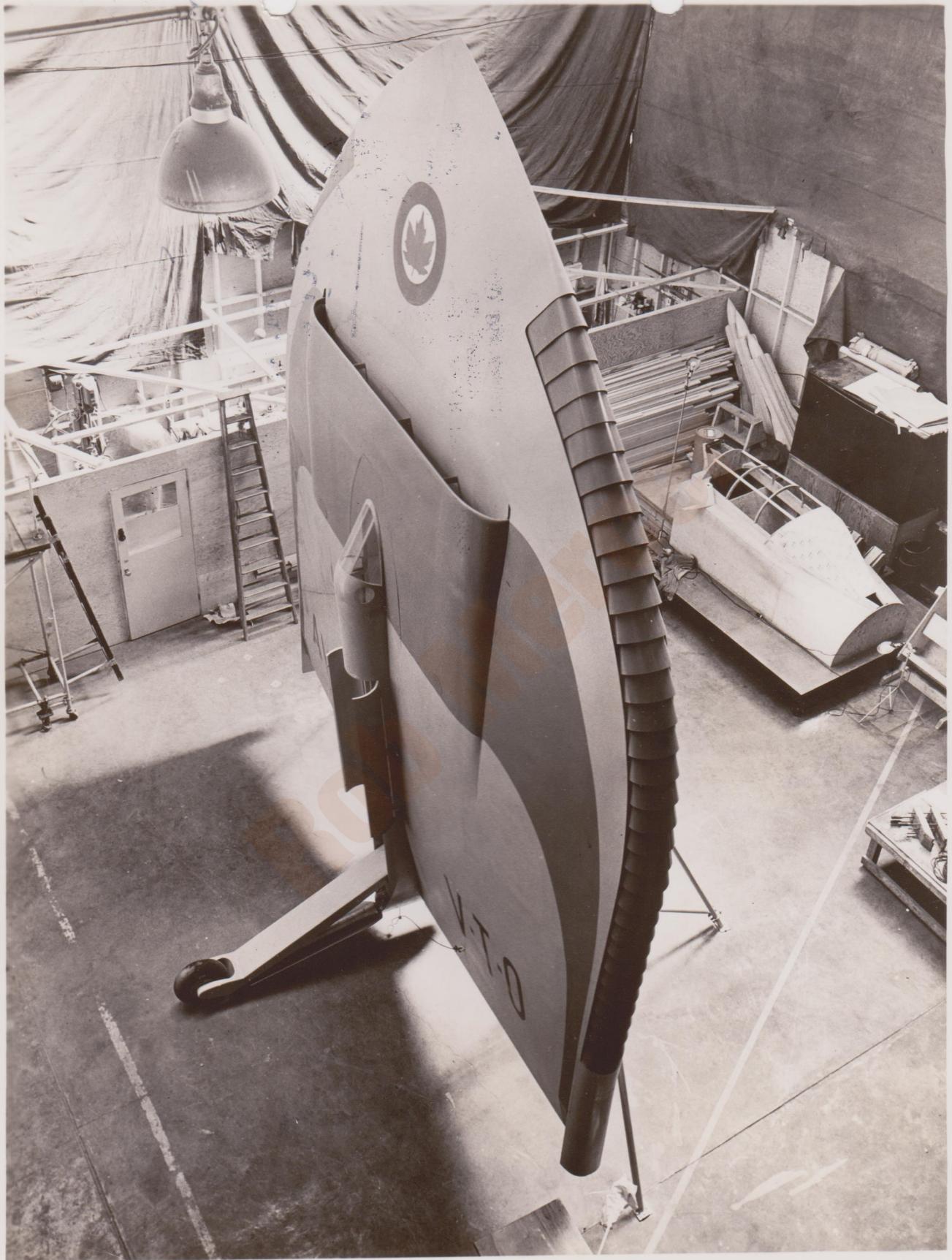
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