

Air Force Flight Test Center

MOMENTS IN FLIGHT TEST HISTORY...

Prelude

APRIL 1958

To commemorate the Air Force Flight Test Center, which was established June 25, 1951, the AFFTC History Office recalled some of the milestones in flight that took place here during the last half century.

Flying Saucers At Edwards?

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It is easy to see how the Avrocar has sparked flying saucer rumors to this day.

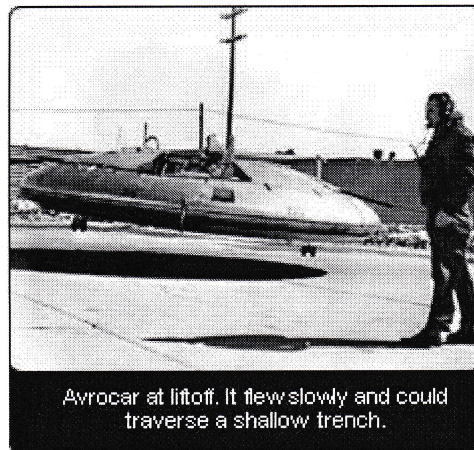
The Air Force Flight Test Center (AFFTC) has always attracted a lot of attention from the general public. Mostly this is because of widespread interest in some of the Center's high-tech programs, its remote location, and the glamour attached to our more exotic aircraft and their pilots. The "gee whiz" potential of Edwards Air Force Base has always been high.

Unfortunately, this can sometimes lead to unrealistic ideas about what we do here.

Edwards has received numerous inquiries during the past 50 years about "lens-shaped" or "lenticular" aircraft supposedly tested here in great secrecy at one time or another, sometimes hidden away in underground hangars. The Flying Saucer phenomenon has never really gone away.

In fact, there once really was a grain of truth in all this. The early 1950s saw immense interest in vertical takeoff and landing (VTOL) aircraft in the aviation community. A.V. Roe [AVRO] Aircraft Ltd., a small Canadian firm near Toronto, began design studies based on a futuristic concept: utilizing the Coanda effect of efficient hot-gas ducting to power a VTOL aircraft that could take off vertically, cruise for long distances just above the ground, and then zoom to high speeds at high altitudes. The U.S.

Department of Defense grew very interested in the project just as Canada was ready to abandon it, and contracted with AVRO to finish the research. The Air Force took control of the project in 1958, redesignated it the WS 606A, and directed AVRO to build a pair of concept demonstration vehicles. The company's design team promised a craft with an astonishing and unlikely performance envelope. It would be able to serve as a "flying jeep" and reconnaissance vehicle for the U.S. Army, and at the same time function as a



Avrocar at liftoff. It flew slowly and could traverse a shallow trench.

Edwards Air Force Base
CALIFORNIA

high-speed interceptor for the Air Force.

The experimental "Avrocar" that was to demonstrate all these wonders proved to be a saucer-shaped craft some 18 feet in diameter and a little over five feet high. Three diminutive Continental J69 turbojet engines drove a large central "turborotor" fan that sucked air in from above and vented it through annular ducts on the underside. There were two canopy-topped cockpits for the pilot and an observer.



The first Avrocar vehicle went to NASA's Ames research center for wind tunnel tests. An AFFTC team traveled to Canada in April 1960 to evaluate the second vehicle, now designated the VZ-9AV. Both teams soon came to the same dismal conclusions: the Avrocar could fly no higher than three feet above the ground; it was unstable, underpowered and tended to ingest debris blown up by its own fan. At the top of the ground effect air cushion, the vehicle wobbled dangerously in a manner that the team called

"hubcapping." The radical research vehicle had, in effect, been transformed into a hovercraft, and not a particularly useful one. The program was canceled, probably wisely, in 1961.

For the record, then, the Avrocar never got above three feet AGL and it never whizzed through Edwards skies. It was a research dead end and engendered no follow-on types. Instead, 43 years later, we are left with two tiny saucers rusting in museum restoration shops and there are no disc-shaped vehicles filling the skies.

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