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National Advisory Committee for Aeronautics

Scott Crossfield, 32-year-old NACA research pilot and research scientist, made aeronautical history on Friday when he reached a speed of more than 1320 miles per hour in the Douglas D-558-II Skyrocket. Disclosure of the speed which for the first time reached the aviation milestone of Mach 2 (twice the speed of sound) was withheld until records from the precision instruments he carried on the flight could be developed and checked for accuracy, the National Advisory Committee for Aeronautics (America's aviation research establishment) explained.

Crossfield's flight was made, beginning at 12.01 p.m., Friday afternoon. Nearly an hour earlier the supersonic, swept-wing research airplane was taken aloft by a Boeing B-29 "mother airplane". The takeoff was made from the paved runway on the edge of the Dry Lake at Edwards Air Force Base, where the NACA maintains its High Speed Flight Research Station.

The "better than 2" flight was the latest speed advance by Crossfield in a carefully planned program of research using the D-558-II which began two years ago. Attainment of the higher speeds was only incidental. Only last week, it had been confirmed that on October 14 he had flown the Skyrocket 1272 mph, until Friday the world's fastest speed.

The Skyrocket, designed and built by Douglas, was financed by the Navy. It is one of several research airplanes which the Air Force and the Navy have procurred in a cooperative endeavor, in which the nation's aircraft industry and the NACA have worked as partners. All flights by the research airplanes are made from Edwards Air Force Base.

First of the aircraft to gain national attention was the Bell X-1 in which Major Charles E. Yeager, USAF, made the first supersonic flight on October 14, 1947. The Skyrocket in August, 1951, was flown 1238 mph by Douglas Test Pilot William Bridgeman, and since then Crossfield has been carrying on aerodynamic investigations at progressively higher speeds.

On Friday's flight, the Skyrocket was carried to a height of about 32,000 feet before being released. Chase airplanes, piloted by Air Force pilots, flew alongside the mother ship to check priming of the rocket engine, built by Reaction Motors, Inc., prior to the drop.

Immediately after the drop, Crossfield "fired-up" the powerful four-barrel rocket engine, and pointed his tiny airplane steeply upwards. Although the altitude at which he made his greatest speed was not stated, it was confirmed as having been made at a height "in excess of 60,000 feet."

The actual speed and Mach number of Crossfield's flight were 1327 mph and M = 2.01.

(The speed of sound varies with temperature. At a "standard temperature" of 60°F, the speed of sound is approximately 760 mph. At -67°F, supersonic speed is only 660 mph.)

"At least 40 men deserve to share in any credit which is attached to this flight," Crossfield said of Friday's achievement, "I guess maybe I should increase that figure to include every man and woman at the NACA's High Speed Flight Research Station - they all had a part in the preparation and the carrying out of the research flight."

The 32 year old scientist-pilot was born in Berkeley, California, October 2, 1921. After attending schools in California and Washington, he began his engineering training at the University of Washington in 1940. The second world war interrupted his engineering studies, which he resumed in 1946. Crossfield received his bachelor of science degree in aeronautical engineering from the University of Washington in 1949. In the following year he obtained the degree of master of science in aeronautical science from the university.

The NACA research pilot's military service began in 1942 when he enlisted in the U. S. Navy at Sand Point Naval Air Station, Seattle, Washington. He received flight training there and at the Naval Air Station, Corpus Christi, Texas, being commissioned Ensign in 1943. After serving as a fighter type instructor and maintenance officer in naval aviation squadrons in 1943 and 1944, Crossfield spent six months overseas although he did not see combat. He was

honorably discharged with the rank of lieutenant in 1945, having accumulated more than 2000 flying hours in single-engine Naval aircraft types.

As an aeronautical scientist, Crossfield worked as a wind-tunnel computer, operator and chief operator at the University of Washington Aeronautical Laboratory from 1947 to 1949. His wind-tunnel experience included work on a number of fighter airplanes and the Boeing B-47 six-jet bomber.

Crossfield joined the National Advisory Committee for Aeronautics as an aeronautical research pilot in June, 1950. Since then he has flown a wide variety of aircraft types ranging from jet fighters to multi-engined bombers and including helicopters.

In high-speed flight research, he has flown the major portion of the NACA research flights accomplished with the Douglas D-558-II, the delta-wing Consolidated-Vultee XF-92A and the Northrop Aircraft X-4 airplanes. He has also flown the other research airplanes in the NACA's stable of advanced aircraft - the Bell X-1 and X-5, and the Douglas D-558-I. He has co-authored several scientific reports based on his aeronautical research flight work.

He lives in Lancaster, California, near Edwards Air Force Base, with his wife, Alice Virginia, and three children, Becky, Thomas Scott, and Paul Stanley.

The new research flight record established by the NACA test pilot differs from the recent series of speed records established by Air Force and Navy pilots in flights with current fighter type aircraft. The Federation Aeronautique Internationale (FAI), an organization which recognizes airplane performance records, requires that such record attempts must be made under specified conditions as to altitude, direction and number of trips across a measured course. Official timing is also required if the record is to be recognized as official.

Research airplanes are specially designed for research work and are not suitable for record attempts under the FAI requirements.