THE U.S. NAVY sets *Another* NEW WORLD'S SPEED RECORD

MCDONNELL

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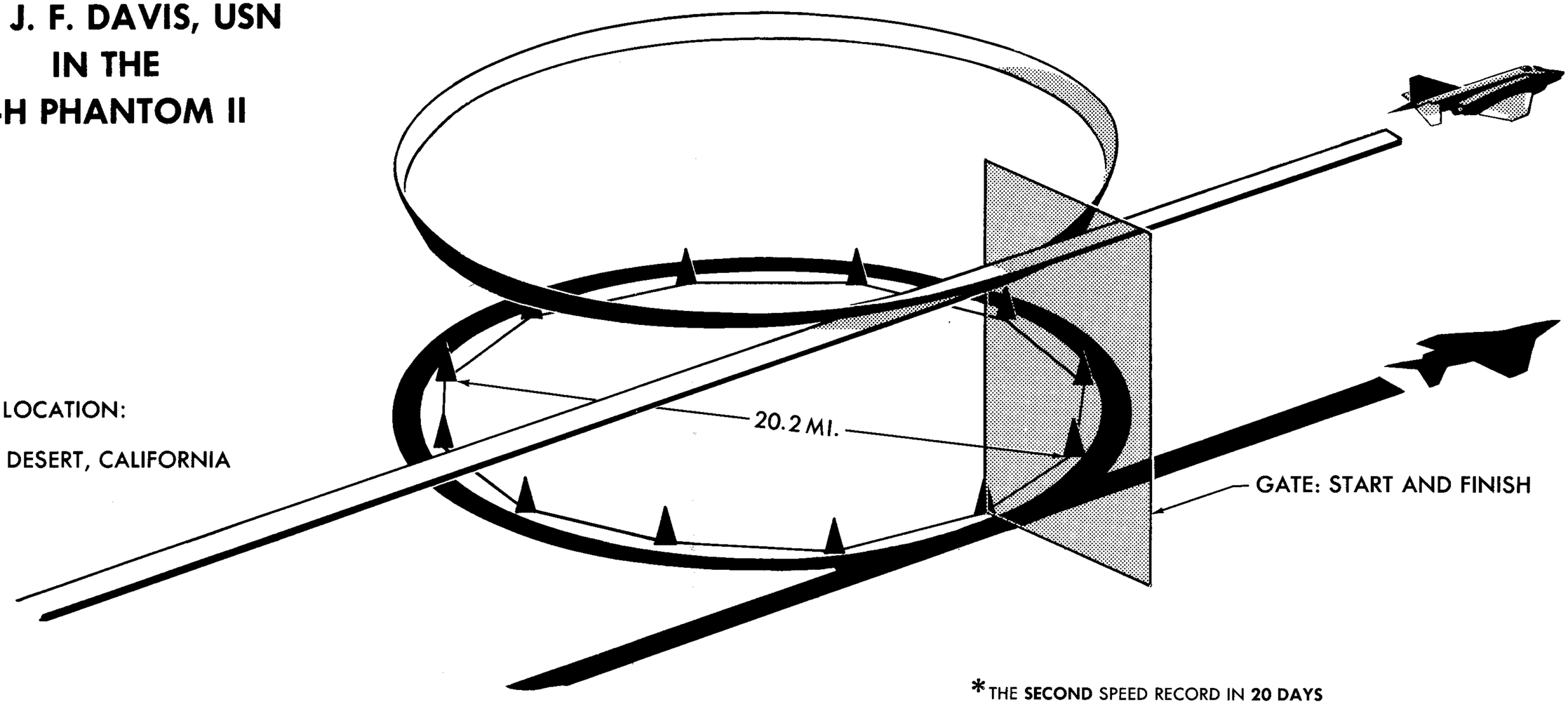
AIRCRAFT

4 OCTOBER 1960

*Another NEW WORLD'S RECORD: 1390.21 MPH
FOR THE
100-KILOMETER CLOSED COURSE

Established **25 September 1960** by

CDR J. F. DAVIS, USN
IN THE
F4H PHANTOM II



COURSE LOCATION:

MOJAVE DESERT, CALIFORNIA

*THE **SECOND** SPEED RECORD IN **20 DAYS** FOR THE U.S. NAVY AND THE MCDONNELL F4H PHANTOM II.

THE FIRST: 1216.78 MPH FOR THE 500 KM TRIANGULAR CLOSED COURSE.

HOW IT WAS DONE

The 100 kilometer closed course is laid out as a 12-point circle approximately 20.2 miles in diameter. However the 100 km distance is measured in straight lines between points—or pylons—therefore the actual circular distance around the pylons is 102 kilometers. Perhaps in the old days of low and slow airplanes, straight courses could be flown between the pylons, but at today's high speeds, just maintaining a constant circle of only 102 kilometers circumference represents a severe test of a plane's maneuverability and its pilot's skill! The F4H, in setting the new World's Record, averaged about 70° of bank and 3g's all the way around the turn!

Commander Davis flew the course at approximately 46,000 feet and was of necessity guided by radar—and impelled to skillful flying—in order that he might neither "cut" a pylon nor fly too wide a circle. Federation Aeronautique Internationale rules require that the course be entered from a level or climbing straightaway of at least 1000 meters. Actually, Commander Davis entered the course from a climbing, wings-level straightaway of something like *100 miles*—he used this distance for accelerating to course entry speed at the optimum altitude. Immediately upon entering the course, he of course rolled into a steep bank, in this case to the left, and maintained the relatively tight turn for 360°, rolling again to the wings-level position at the finish.

The F4H completed the circle in 2 minutes and 40.9 seconds, therefore it was credited with the speed of 1390.21 mph for the 100 km course. However, in flying *outside* a circle that was 102 kilometers in circumference to begin with, the F4H flew an *actual* distance of about *104.9* kilometers, thus its true speed was approximately *1459* mph (Mach 2.24)—which is not a bad speed to average through a tight 360° turn! It is of interest to note too that speed bleedoff during the tight turn—Mach 2.31 to Mach 2.21—was very slight.

The F4H used was a test airplane that was specially equipped with a Pre-Compressor Cooling installation—that is, water was sprayed into the engine inlets at speeds above Mach 2 in order to keep engine inlet air temperatures down and thereby provide an increase in available thrust. The present installaton is for initial research and development only and has not been optimized for a production installation.

Commander Davis's new record eclipses the previous official mark of 1167.35 mph established in December 1959 by Air Force Brigadier General Joseph H. Moore in an F-105, and a presently-pending but as yet unofficial mark of 1298.7 mph established in May 1960 by a Russian T-405.

START

MACH 2.31
45,000 FT.

FINISH

MACH 2.21
47,000 FT.

START TO FINISH: 2 MINS. 40.9 SECS.

COMMANDER JOHN FRANKLIN DAVIS
UNITED STATES NAVY

Pilot of the F4H Phantom II on its record-breaking 100-kilometer run was Commander J. F. "Jeff" Davis, United States Navy.

Commander Davis was born in Chicago on May 4, 1921. Appointed to the U. S. Naval Academy in 1940, Commander Davis graduated as an Ensign in June of 1943 and was assigned to sea duty aboard the USS New York. In 1945 Commander Davis entered flight training, and in January 1946 won his wings and designation as a Naval Aviator. Following a tour of duty with Fighting Squadron ONE-B (VF-1B - later redesignated VF-21), Commander Davis served for three years as a flight instructor—one year of this as an exchange pilot with the U. S. Air Force. In October of 1951 Commander Davis joined Air Development Squadron FIVE, and in January 1953 transferred to Fighting Squadron 191, which operated in the Korean area during the hostilities there. In 1954 Commander Davis took the test pilot training course at Naval Air Test Center, Patuxent River, Maryland, then served there as a test pilot with the Service Test Division until May of 1957. He next served as Commanding Officer of Fighting Squadron 174, following which, during the first half of 1959, he attended the Armed Forces Staff College at Norfolk, Virginia. Since July of 1959 Commander Davis has been stationed in Washington D. C. and assigned to the Bureau of Naval Weapons, where he now serves as Project Officer for the F4H Phantom II.

Commander Davis is married to the former Lois Pittman of Winnetka, Illinois and is the father of six children.

THE NAVY'S WINNING COMBINATION

COMMANDER "JEFF" DAVIS

AND

THE MCDONNELL F4H PHANTOM II