SUPERCritical WING CONTRACT

Hampton, Virginia - The National Aeronautics and Space Administration has awarded a contract for the construction of a new aircraft wing that could substantially improve the performance and efficiency of future aircraft, particularly commercial jet transports.

The wing, called the NASA supercritical wing, will be flight tested by NASA's Flight Research Center, Edwards, Calif.

A $1.8 million fixed-price contract was awarded to North American-Rockwell Corp., Los Angeles Division, for construction of the wing. Upon completion, it will be delivered to NASA's Flight Research Center where it will be mounted on a modified Navy F-8 jet aircraft.

The wing was developed at NASA's Langley Research Center, Hampton, Va., as a result of studies conducted by Dr. Richard T. Whitcomb during the past several years. The wing utilizes an airfoil shape with a flat top and a rear edge curved downward, as opposed to the curved top and sloped rear section of conventional wings.

Langley wind tunnel tests indicate that the new airfoil shape could allow highly efficient cruise flight close to the speed of sound, or nearly 660 mph at an altitude of 45,000 feet. The primary purpose of the flight tests is to explore the operational potential of the supercritical wing.

By permitting substantial increases in cruise speeds without increases in power, the new wing might significantly reduce the operational costs...
of subsonic transport flights. The possible commercial advantages include faster travel, lower fuel consumption and costs, increased operational range or increased payloads.

The experimental wing will be shaped to simulate one applicable for a commercial jet transport.