



Flight Test Results from the
Rake Airflow Gage Experiment
on the F-15B Airplane

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By -

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 36 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. The Rake Airflow Gage Experiment involves a flow-field survey rake that was flown on the Propulsion Flight Test Fixture at the NASA Dryden Flight Research Center using the Dryden F-15B research test bed airplane. The objective of this flight test was to ascertain the flow-field angularity, local Mach number profile, total pressure distortion, and dynamic pressure at the aerodynamic interface plane of the Channeled Centerbody Inlet Experiment. This new mixed-compression, supersonic inlet is planned for flight test in the near term. Knowledge of the flow-field characteristics at this location underneath the airplane is essential to flight test planning and computational modeling of the new inlet, and it is also applicable for future propulsion systems research that may use the Propulsion Flight Test Fixture. This report describes the flight test preparation and execution, and the local flow-field properties calculated from pressure measurements of the rake. Data from the two Rake Airflow Gage Experiment research flights demonstrate that the F-15B airplane, flying at a free-stream Mach number of 1.65 and a pressure altitude of 40,000 ft, would achieve the desired local...



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