

tained by the tower show a considerably higher scattering in comparison to the flight data. The reason is that the Morane system eliminates uniform gusts and smoothes turbulence because the wind profile is obtained by integrating the shear gradient, while the tower measures the actual wind speed. Furthermore, attention should be given to the fact that the wind profile cannot be measured by both systems during the same time. The sensing devices of the meteorological tower are fixed at a platform that is moved at a vertical speed of not more than 0.5 m/s. In spite of all, the measurements are in fairly good agreement and confidence in the results achieved by the simple airborne system is strengthened.

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Errata

A Possible Causative Flow Mechanism for Body Rock

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IT is erroneously stated that all tail surfaces had been removed, together with the wing, when the body rock motion was observed.¹ In reality, the fin was not removed. This does not change anything in regard to the causative mechanism described. However, it probably means that in a dynamic subscale test, the amplification of the body rock mechanism provided by the fin is needed to overcome the mechanical roll damping present in the test.

References

¹Chambers, J. R., Private communication of unpublished experimental results, July 16, 1982.

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Forty years ago in the early 1940s the advent of high-performance military aircraft that could reach transonic speeds in a dive led to a concentration of research effort, experimental and theoretical, in transonic flow. For a variety of reasons, fundamental progress was slow until the availability of large computers in the late 1960s initiated the present resurgence of interest in the topic. Since that time, prediction methods have developed rapidly and, together with the impetus given by the fuel shortage and the high cost of fuel to the evolution of energy-efficient aircraft, have led to major advances in the understanding of the physical nature of transonic flow. In spite of this growth in knowledge, no book has appeared that treats the advances of the past decade, even in the limited field of steady-state flows. A major feature of the present book is the balance in presentation between theory and numerical analyses on the one hand and the case studies of application to practical aerodynamic design problems in the aviation industry on the other.

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