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DAYTON, Ohio, April 3, 1968 --- Louis I. Boehman at the University of Dayton has just received an Engineering Research Grant from the National Science Foundation. This grant is for initiating a nonlinear stability analysis of the laminar supersonic boundary layer.

The aim of this research will be to extend the theory of transition and turbulence to include laminar supersonic boundary layers. The location on a wing surface where the boundary layer begins to depart from a smooth laminar flow is called the transition point. The prediction and control of transition in laminar flow is an important engineering problem in the design of supersonic aircraft such as the F-111, YF-12A, and the supersonic transport; the flow downstream of the transition region is irregular and unsteady or turbulent and contributes to increased drag and heating of the aircraft.

No analytical techniques exist at present for predicting the location of the transition region or for predicting the effect of surface roughness, wing flutter, or pressure gradient on the location of the transition region. Dr. Boehman will try to fill this gap in the knowledge of aerodynamics.

Dr. Boehman joined the University of Dayton in August, 1966, and holds a joint appointment with the Research Institute and with the Department of Mechanical Engineering. He received a B.S. in Mechanical Engineering from the University in 1960 and a Ph.D. from the Illinois Institute of Technology in January, 1967.