

Tollmien-Schlichting Waves

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Examples of Tollmien-Schlichting waves (T-S waves) in a laminar boundary layer.

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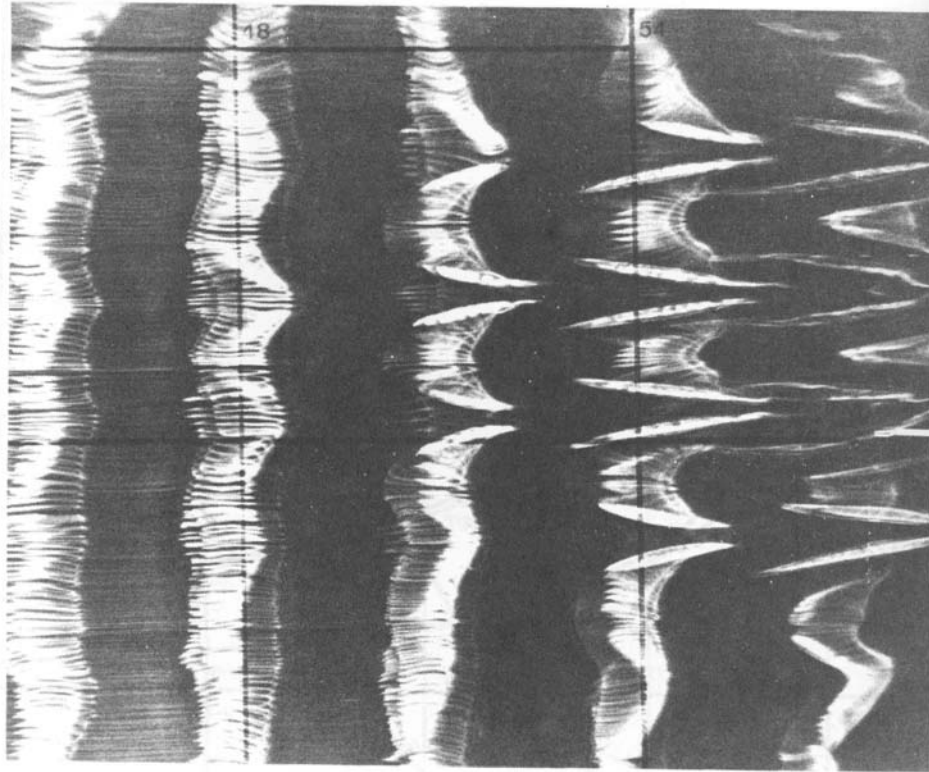


Figure 22.9 Plan view of smoke visualization of TS waves in a Blasius boundary layer. Photograph courtesy of A. Thomas, Lockheed-Georgia Co. Flow is left to right. Note the development of three-dimensional secondary instabilities. See Thomas (1983).

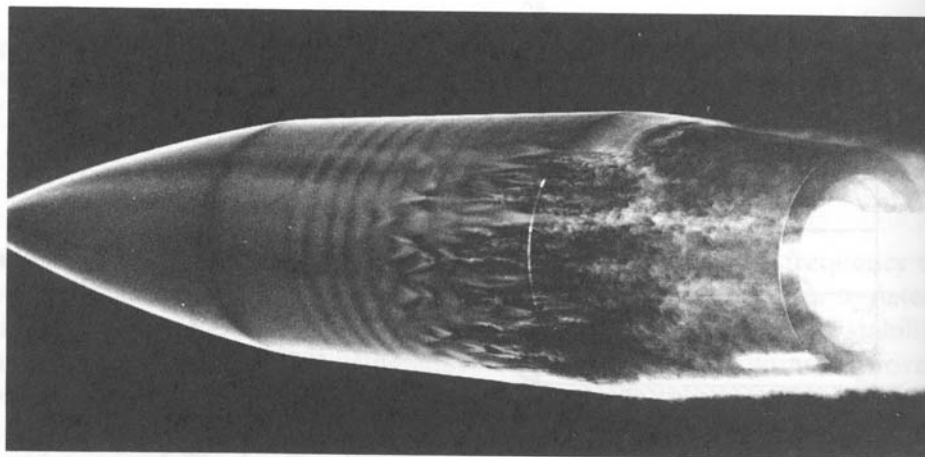


Figure 22.10 Smoke in the flow over a cylindrical body shows natural transition. The TS waves (light-dark bands) form Λ shapes that ultimately break down. Photograph courtesy of T. J. Mueller and R. C. Nelson, University of Notre Dame. Reprinted with permission.

From: Panton, R. L., *Incompressible Flow, Ed. 2*, John Wiley & Sons, Inc., 1996, p. 726.