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

**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.