

Modeling Programs Increase Aircraft Design Safety

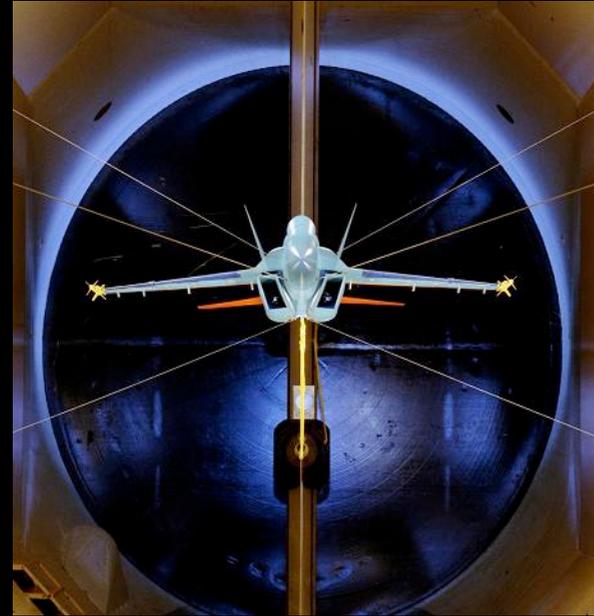


Dryden Flight Research Center

ZONA Technology **Scottsdale, Arizona**

NASA Technology

- ◆ When certain airliners mysteriously crashed in the 1950s, NASA and partners investigated
- ◆ The culprit was flutter, or aerodynamic forces that act on wings and cause them to vibrate
- ◆ Today, aircraft designers must take flutter into account, and most test designs in wind tunnels



Partnership

- ◆ Through the Small Business Innovation Research (SBIR) program, ZONA partnered with Dryden to develop aeroelastic modeling software
- ◆ The partnership continued with a Phase II Small Business Technology Transfer (STTR) project to develop Dry Wind Tunnel (DWT) technology
- ◆ The Air Force now partners with ZONA for special flutter-related projects

Benefits

- ◆ The ZONA Online Flutter Estimator is a software tool that can predict flutter for various aircraft designs and help test these designs safely
- ◆ ZONA's software and DWT innovates and advances flutter testing without using traditional wind tunnels, which require a lot of resources, time, and personnel to operate