NASA Langley Research Center Facilities Offer Unique National Capability

NASA Langley’s specialized research facilities enable the center to perform world-class research in aeronautics, atmospheric sciences and space technology. Langley’s wind tunnels allow engineers to conduct testing that encompasses the entire speed range from 0 mph to nearly Mach 25, or approximately 17,500 mph. Some of these tunnels are unique to the Nation, including the National Transonic Facility, the Transonic Dynamics Tunnel, the 8-Foot High Temperature Tunnel and the Supersonic Low Disturbance Tunnel. Other NASA Langley facilities support structures, materials, flight simulation and electronics research. These critical facilities contribute to the well-being of the American people, the national air transportation system and the U.S. economy.

**Langley Wind Tunnels**

National Transonic Facility
Transonic Dynamics Tunnel
14 x 22-Foot Subsonic Tunnel
16-Foot Transonic Tunnel
20-Foot Vertical Spin Tunnel
Unitary Plan Wind Tunnel (two test sections)
8-Foot High Temperature Tunnel
Low Turbulence Pressure Tunnel
22-Inch Mach 20 Helium Tunnel
31-Inch Mach 10 Tunnel
20-Inch Mach 6 CF4 Tunnel
20-Inch Mach 6 Tunnel
20-Inch Supersonic Wind Tunnel
18-Inch Mach 8 Quiet Tunnel
Basic Aerodynamics Research Tunnel
0.3-Meter Transonic Cryogenic Tunnel
Supersonic Low-Disturbance Tunnel
15-Inch Mach 6 High Temperature Tunnel
Arc-Heated Scramjet Test Facility
Combustion-Heated Scramjet Test Facility

F/A-18 E/F flutter clearance model in the NASA Langley Transonic Dynamics Tunnel.
Drop-test of a Lear Fan plane at NASA Langley’s Impact Dynamics Research Facility.

**Structures and Materials Facilities**
- Structures and Materials Laboratory
- Aircraft Landing Dynamics Facility
- Structural Dynamics Laboratory DTRL
- High Temperature Materials Laboratory
- Impact Dynamics Research Facility
- Nondestructive Evaluation Techniques Laboratory
- Thermal Structures Laboratory
- Composite Materials Laboratory
- Materials Research Laboratory
- Combined Loads Test Facility
- General Rotor Aeroelasticity Laboratory

**Flight Simulation Facilities**
- Advanced Civil Transport Simulator (ACTS)
- Differential Maneuvering Simulator (DMS)
- General Purpose Fighter Simulator (GPFS)
- Transport Systems Research Vehicle (TSRV)
- Visual Motion Simulator, 6 degrees of freedom

**Flight Electronics Facilities**
- Electromagnetics Research Facility
- Flight Electronics Laboratory
- High Intensity Radiated Fields Laboratory

**Acoustics Facilities**
- Acoustics Research Laboratory
- Jet Noise Laboratory
- Thermal Acoustics Fatigue Apparatus

**Scientific and General Purpose Computing Complex**
- Centralized Mass Storage Facility
- Data Visualization and Animation Laboratory
- Geometry Laboratory
- Electronic Photography Laboratory
- IBM RS-6000 Computer Cluster Facility