

# NASA Facts



National Aeronautics and  
Space Administration

**Langley Research Center**  
Hampton, Virginia 23681-0001

October 1999

FS-1999-10-20-LaRC

## 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.

### ***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***

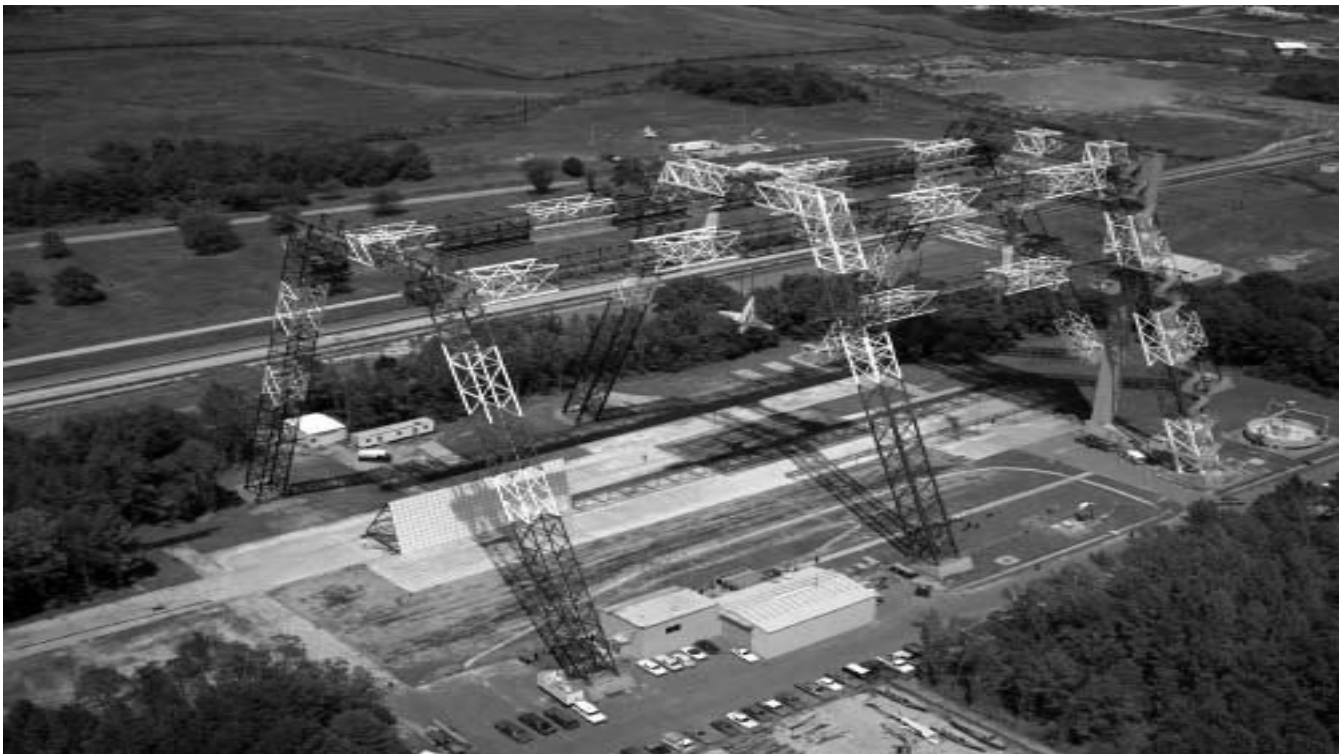
Electromagnetics Research Facility  
Flight Electronics Laboratory  
High Intensity Radiated Fields Laboratory

### ***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



Drop-test of a Lear Fan plane at NASA Langley's Impact Dynamics Research Facility.