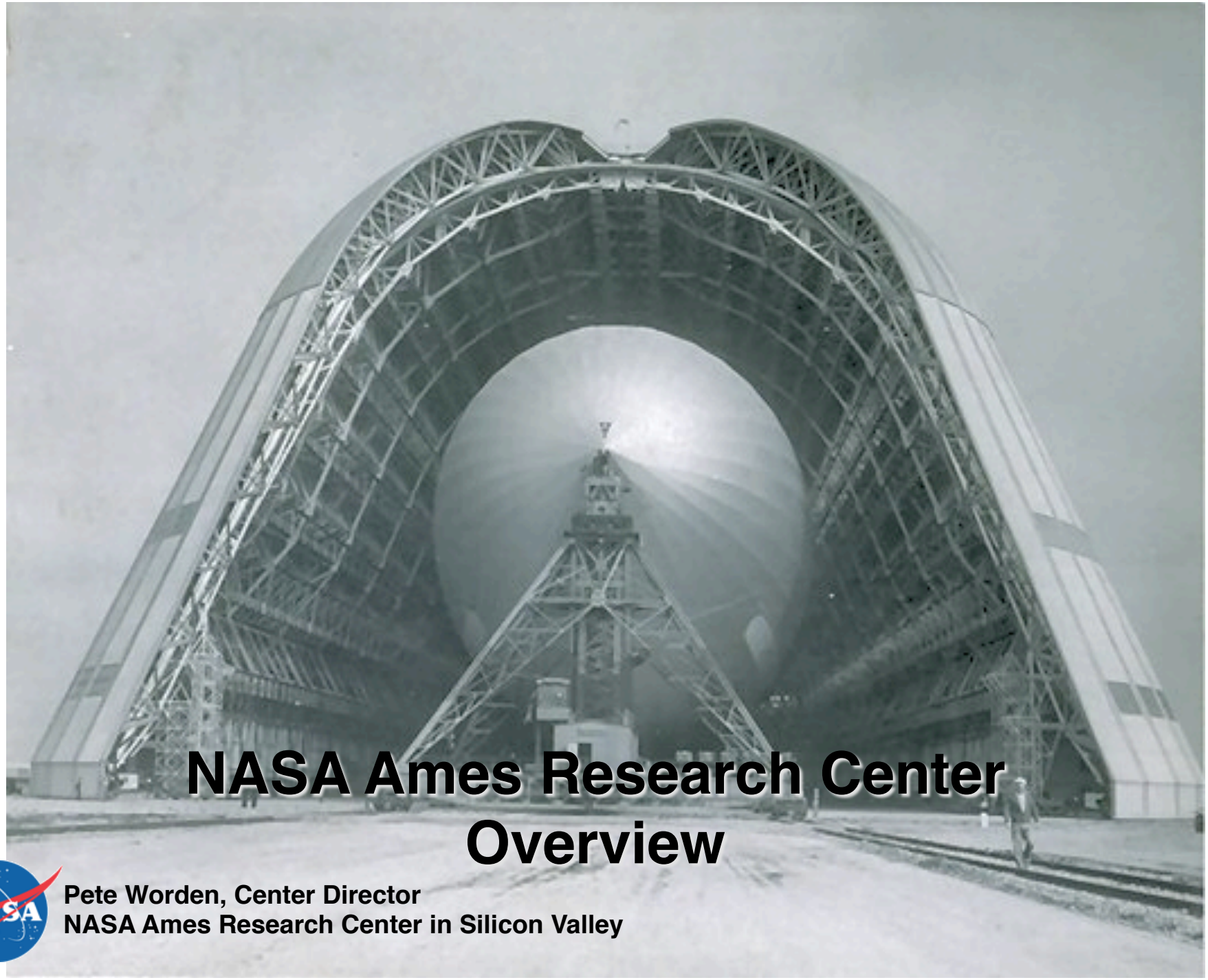


NASA Ames Research Center Overview

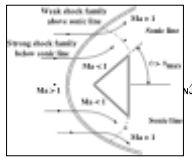
Pete Worden, Center Director
NASA Ames Research Center in Silicon Valley

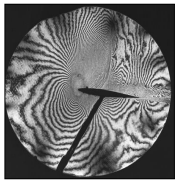
Ames Research Center
in Silicon Valley

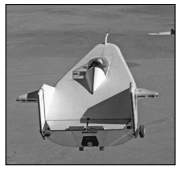
Seven Decades of Innovation

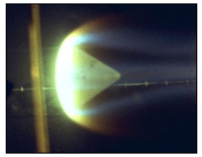
Tektites

Flight Simulator


Blunt Body Concept


Transonic Flow

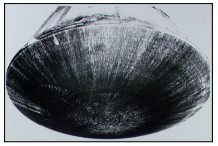

Lifting Body

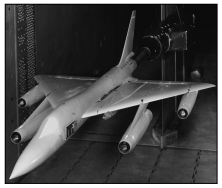

Apollo Heat Shield Tests

Swept-Back/Wing

Flight Research

Life Sciences Research


Apollo Re-Entry Shape

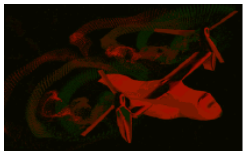

Conical Camber

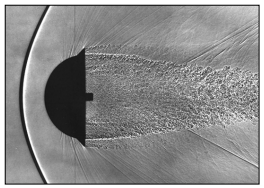
1940

1950

Arcjet Research

1960


CFD


Hypervelocity Free Flight

Pioneer

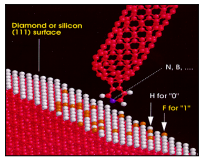
Pioneer Venus

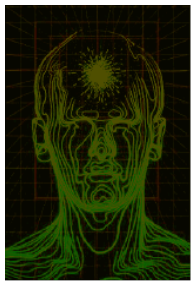
Viking

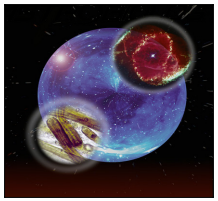
1970

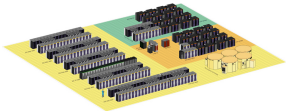
80x120 Wind Tunnel

1980


Nanotechnology

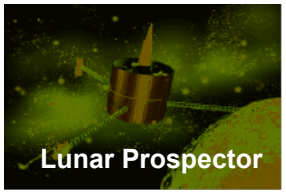

Human Centered Computing


Astrobiology Institute


One of the World's Fastest Operational Supercomputers

1990

NASA Research Park

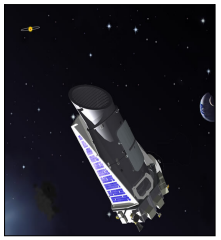


2000

NASA Lunar Science Institute

2010

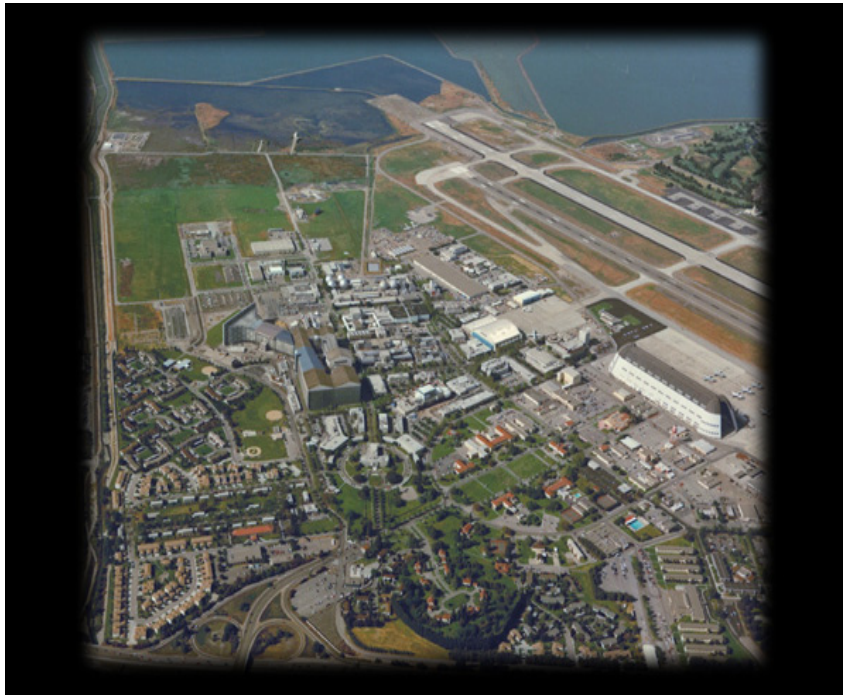
SOFIA


Kepler

LCROSS

LADEE

Ames Today

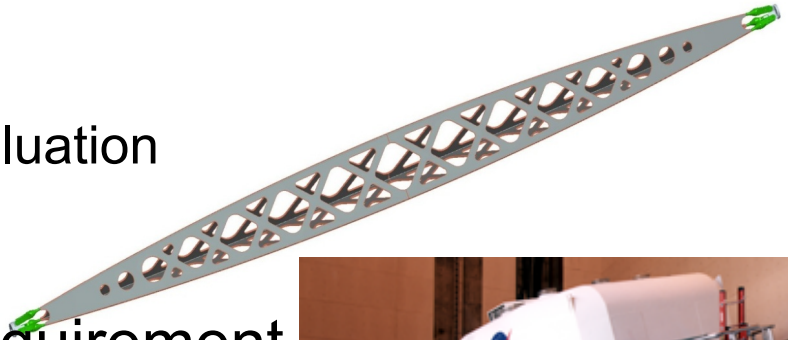


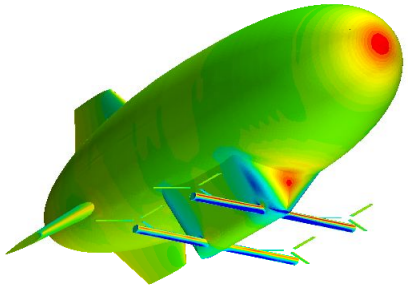
- 3170 employees
- ~ $824M + annual revenue
  (including reimbursable)

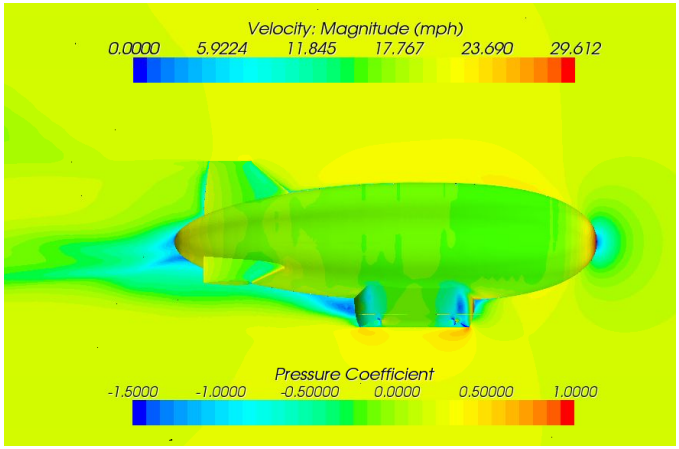
- Aeronautics & Aviation
  - NextGen Airspace Systems
  - Fundamental Aeronautics
  - Aviation Safety
  - Green Aviation
- Science
  - Space, Earth, Biological Sciences
  - Astrobiology, Lunar Science
- Exploration Systems
  - Exploration Technology Development
  - Thermal Protection Systems
  - Supercomputing
  - Projects and Missions Management
- Small Satellites
- Innovation, Education, & Entrepreneurial Collaborations
  - NASA Research Park

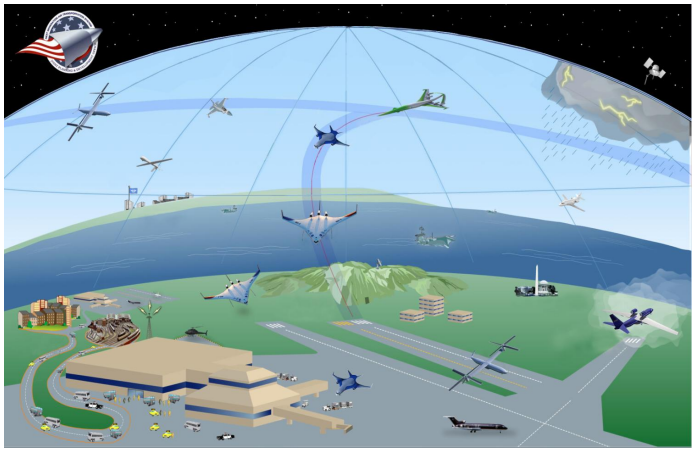
Ames Capabilities for Airship Development

- Structures and Materials
  - Computational models and test evaluation
- Flight Control Systems
- Handling Quality Design and Requirement
- Aerodynamics Analysis and Modeling
- Autonomous Operations
- Airspace Integration



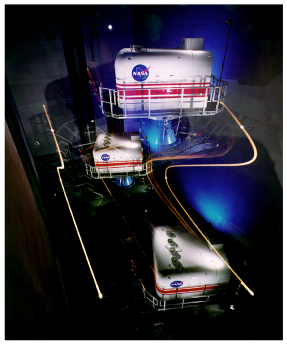






Current Active Facilities, 2009

National Full Scale Aerodynamic Complex, 80x120 Wind Tunnel



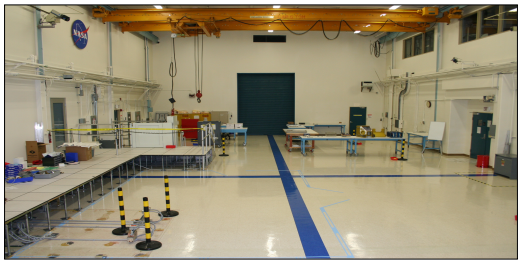
Vertical Motion Simulator

Small Spacecraft Development Facility

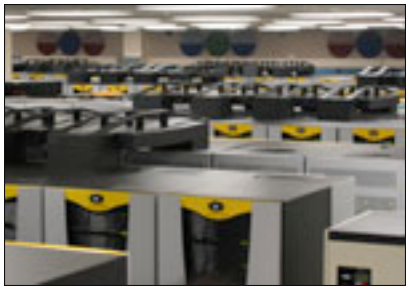
Unitary Plan Wind Tunnel

SOFIA

Machine Shops

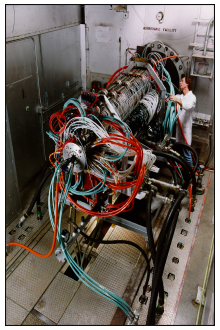


Small Satellite Lab



Columbia Super Computer

Ballistic Range



Arc Jets

Image copyright Dariusz Jezewski

Airfield and Hangars

Current Partnerships & Future Opportunities

- Rigid Aeroshell Variable Buoyancy (RAVB) Technology Demonstration Vehicle
- Airship Venture
- eGreen Technologies

Opportunities:

- State of Alaska
- LEMV
- NAVSEA