

# Ares Projects Office Progress Update

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## Presentation Abstract

NASA's Vision for Exploration requires a safe, reliable, affordable launch infrastructure capable of replacing the Space Shuttle for low Earth orbit transportation, as well as supporting the goal of returning humans to the moon. This presentation provides an overview of NASA's Constellation program and the Ares I and Ares V launch vehicles, including accomplishments and future work.

National Aeronautics and Space Administration



# Ares Projects Office Progress Update

*Teresa Vanhooser*

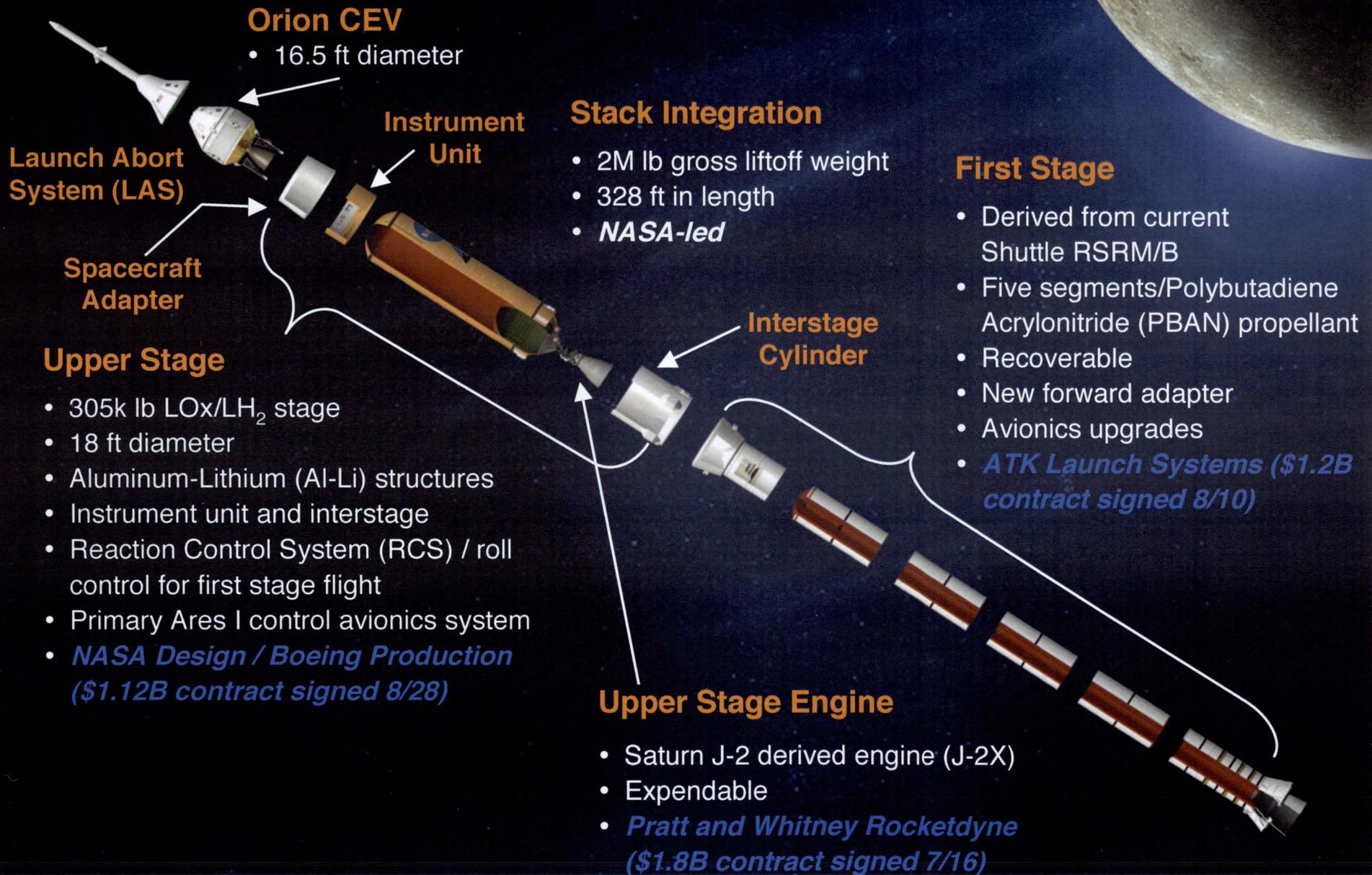
*Deputy Director, Ares Projects Office*

# Today's Journey

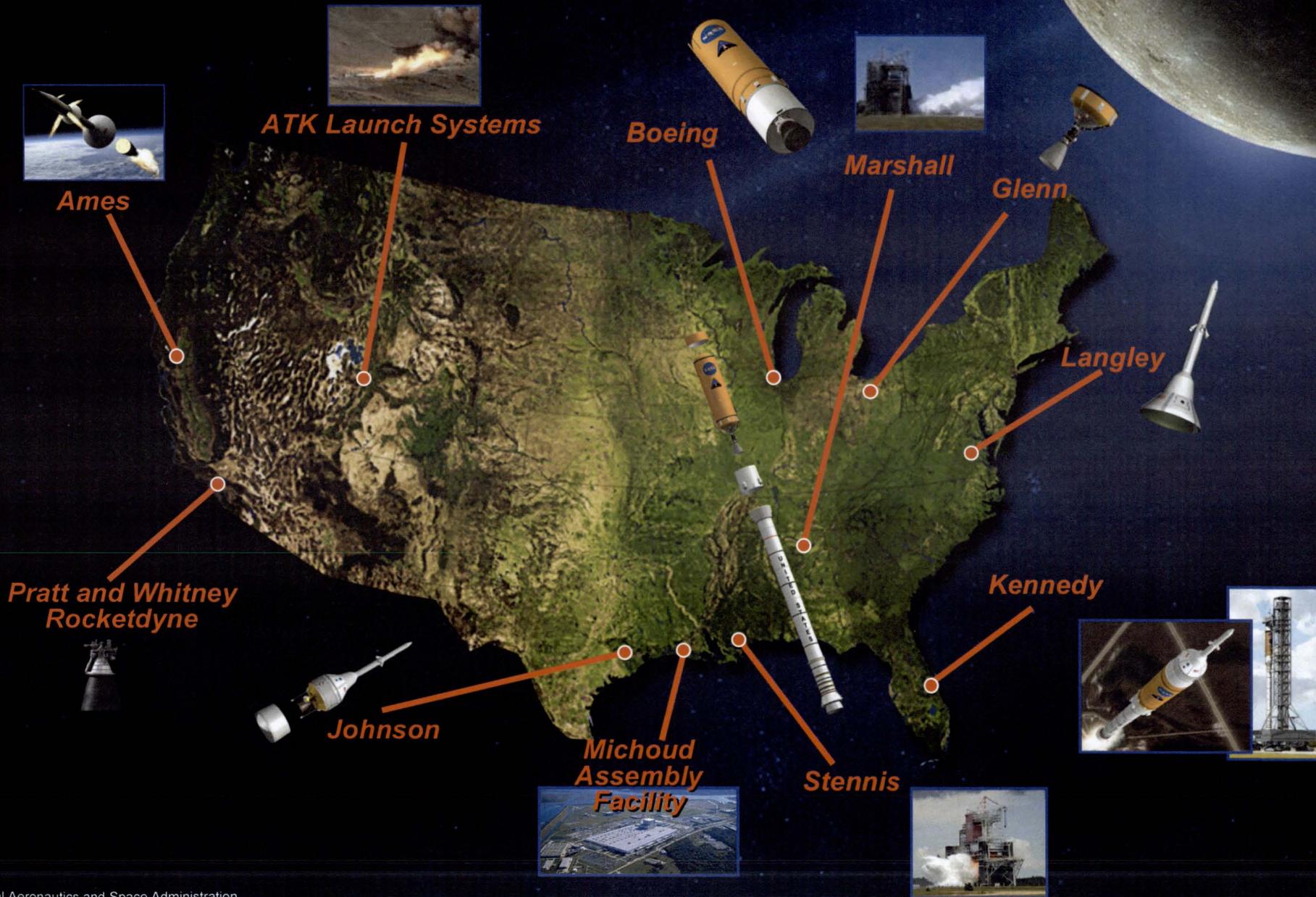


- ◆ **Where We Are**
- ◆ **A Nationwide Partnership**
- ◆ **Ares I Progress Since System Requirements Review**
  - Vehicle Integration
  - First Stage
  - Upper Stage
  - Upper Stage Engine
- ◆ **The Challenges Ahead**

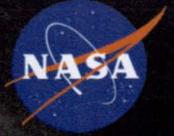
# Over \$4B in New Procurements



# A Nationwide Partnership



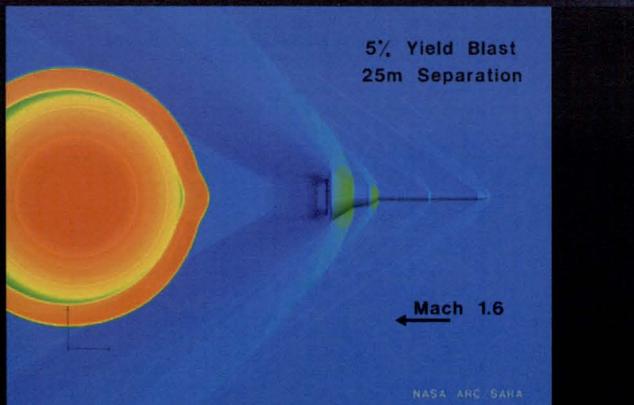
# Vehicle Integration



**LAS Mock-up**



**MSFC Systems Integration Lab**



**Abort Simulations**



**2,500+ Wind Tunnel Tests**

# First Stage



SRM Test Firing



Nozzle Actuator Tests

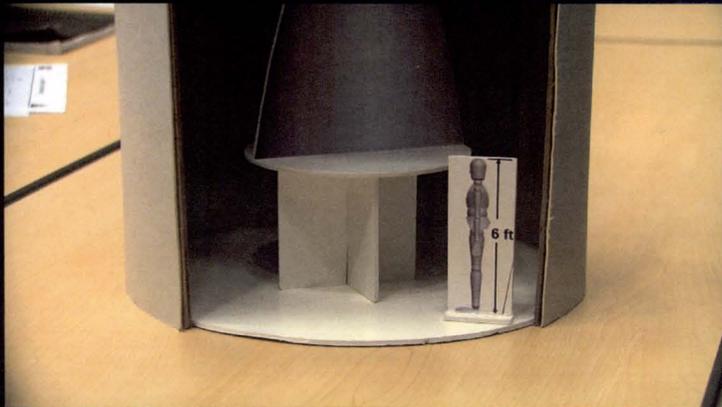
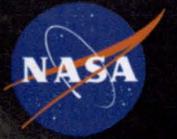


New SRM Insulation

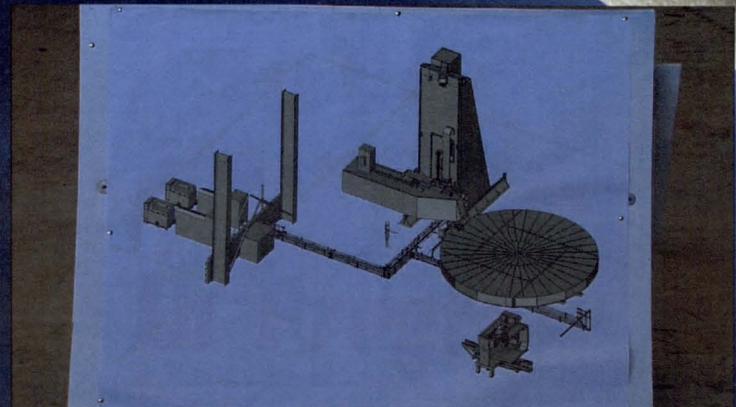


Parachute Drop Test

# Upper Stage



**Full-scale Interstage Mock-up**



**Friction Stir Weld Facility**



**Confidence Panel Evaluation**



**Saturn IVB Vent Relief Valve  
Disassembly**

# Upper Stage Engine



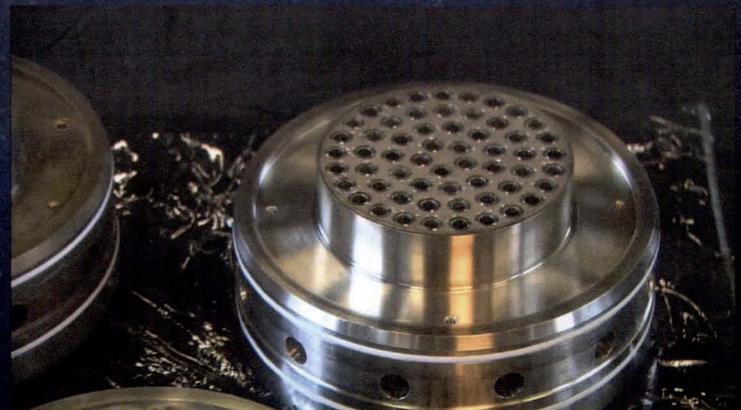
**LOX Inducer Testing**



**Cold-flow Nozzle Side Loads Testing**



**Powerpack Disassembly/Installation**

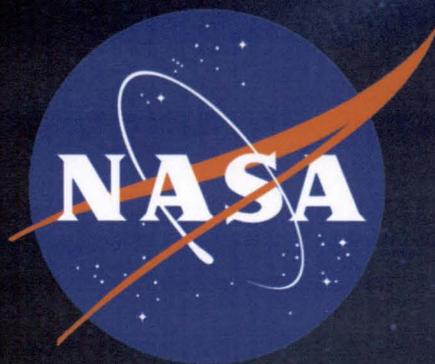


**Subscale Injector Testing**

# The Challenges Ahead



- ◆ **The Latest Milestone: System Definition Review**
  - Kick-off conducted September 10
  - Standing Review Board participation
  - Review board for final dispositions scheduled for October
- ◆ **Instrument Unit contract award**
  - Scheduled for the December 2007 time frame
- ◆ **Preliminary Design Review**
  - Currently slated for mid-2008
- ◆ **Ares I-X Test Flight**
  - On track for April 2009 launch
  - Ground vibration testing ongoing
  - Hardware fabrication underway



[www.nasa.gov/ares](http://www.nasa.gov/ares)