



Space Environments Testing Management Office

Condition and Health Assessments

Wei Hu
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Summary

NASA Space Environments Testing Management Office (SETMO)

<https://www.nasa.gov/offices/setmo>

- Overview and contents

Capability Components Condition and Health Assessments

- Assessment approach overview
- Items to consider



SETMO Overview

Provides leadership, oversight, and management of NASA's shared capability assets

Ensures availability and readiness

Supports NASA and national mission needs

Prioritizes investment and centralized management

Enables strategic investment decisions to replace, modify, or demolish assets based on need



Technical Capabilities Managed by SETMO

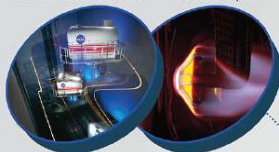
High Enthalpy	Arc jet facilities study how high temperatures and vehicle velocities affect rockets and spacecraft as they exit and enter atmospheres on Earth and other planetary bodies in the solar system
Flight Simulation	Fixed and motion research simulators model flight handling and control characteristics to aid in the development and design of improvements to current and next-generation aircraft and spacecraft
Space Environments	Large-scale and other uniquely purposed chambers replicate extreme environments to certify performance of spacecraft, structures, components and instrumentation
External Radiation	Research laboratories evaluate human and machine protections against high-energy radiation



Space Environments Testing Management Office Test Facilities



Ames Research Center
Mountain View, California
Vertical Motion Simulator Arc Jet Complex



Armstrong Test Facility
Sandusky, Ohio
Space Environments Complex



Glenn Research Center
Cleveland, Ohio
Thermal Vacuum Facility 5 Thermal Vacuum Facility 6



Goddard Space Flight Center
Greenbelt, Maryland
Spacecraft Magnetic Test Facility



Armstrong Flight Research Center
Palmdale, California

Jet Propulsion Laboratory
Pasadena, California
25-Foot Space Simulator



Johnson Space Center
Houston, Texas
Thermal Vacuum Chamber A Thermal Vacuum Chamber B



White Sands Test Facility
Las Cruces, New Mexico

Michoud Assembly Facility
New Orleans, Louisiana

Kennedy Space Center
Merritt Island, Florida

Stennis Space Center
Bay St. Louis, Mississippi

NASA Headquarters
Washington, D.C.

Wallops Flight Facility
Wallops Island, Virginia

Langley Research Center
Hampton, Virginia
Cockpit Motion Facility



Marshall Space Flight Center
Huntsville, Alabama
X-Ray and Cryogenic Facility



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www.nasa.gov

SETMO Manages over 170 capability components across the Agency

Tier 1 – Comprised of 11 ground test capability components across 5 NASA Centers.

Tier 2 – Encompasses over 43 ground test capability components across 9 NASA Centers.

Other – SETMO tracks an additional 120+ assets and components across all NASA Centers.



NASA SETMO Condition and Health Assessment Approach Overview

- Review the current conditions and health of our capability components
- Identify maintenance and repair needs (areas of focus)
- Review current operation processes and identify opportunities to optimize
- Review the operational workforce and identify skill mix issues
- Perform an estimated re-build/replacement value



Items to consider

- Define and understand the assessment requirements.
- Ensure the assessment team have the right mix of expertise.
- Prepare and gather background info ahead of time.
- Have knowledgeable personnel available during site visit.
- Utilize photos and videos for the site visit.
- Recommend the assessment team is independent.



Questions ?