

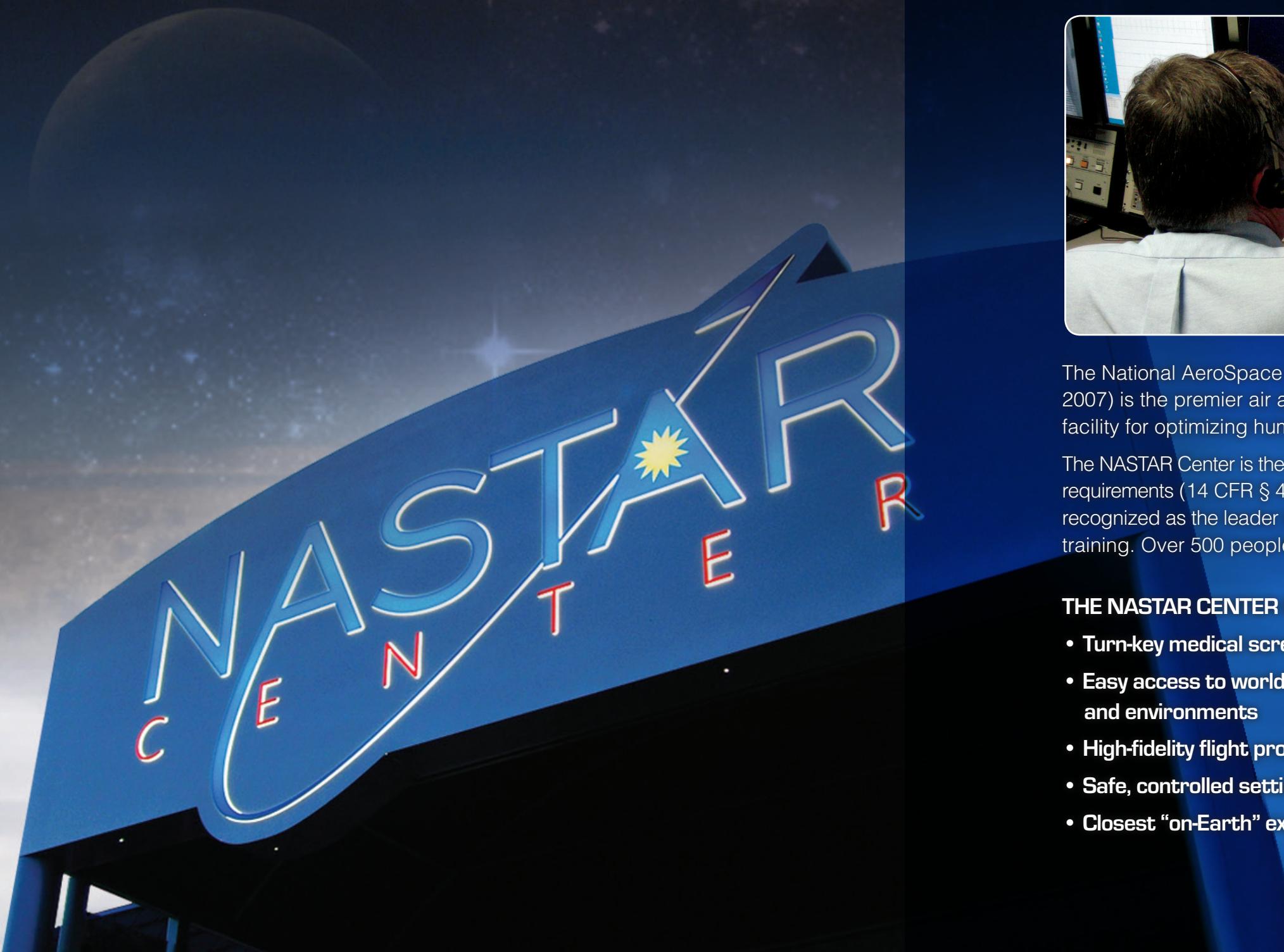
SPACE TRAINING & RESEARCH



NASTAR®
C E N T E R

THE NASTAR CENTER

The National AeroSpace Training & Research Center



The National AeroSpace Training And Research (NASTAR) Center (est. 2007) is the premier air and space training, research, and educational facility for optimizing human performance in extreme environments.

The NASTAR Center is the first FAA-approved center that meets the training requirements (14 CFR § 460.5) for commercial human spaceflight and recognized as the leader in development and delivery of commercial space training. Over 500 people have trained for Space at The NASTAR Center.

THE NASTAR CENTER PROVIDES

- Turn-key medical screening, training and research & test services
- Easy access to world-class flight simulation equipment and environments
- High-fidelity flight profile modeling & simulation capability
- Safe, controlled setting supports medical & flight data collection
- Closest “on-Earth” experience to actual space flight

SPACE TRAINING

PUBLIC

INTRODUCTION TO SPACE

This ½-day course provides fun, interactive activities and hands-on overviews of space, culminating in an actual simulated Astronaut spaceflight experience.

PASSENGERS

BASIC SUBORBITAL SPACE TRAINING

This 2-day foundational course provides spaceflight participants with the core knowledge and skills needed to be safe, confident, and capable in space.

ADVANCED SPACE TRAINING

This 2-day course provides enhanced knowledge and training including emergency preparedness and safety beyond basic space training.

SPACE PAYLOAD SPECIALIST TRAINING

This 1-day specialty course is aimed at researchers interested in understanding how to efficiently design, plan, and conduct experiments in space.

SPACE SUITS AND SYSTEMS TRAINING

This 1-day specialty course is conducted with a space suit manufacturer to learn how to don/doff, use, and operate protective life support equipment.

PILOTS AND CREW

SPACE PILOT TRAINING PROGRAM

This 4-day customizable program provides space pilots with the knowledge and skills necessary to maintain safety of the vehicle and the passengers during flight. Course components include: Launch and Reentry G-Force, Situational Awareness, Spatial Disorientation, Upset Prevention and Recovery Training, Hypobaric (High Altitude) and Rapid Decompression Training, and Land/Water Egress and Survival Training.



Extreme G-force accelerations during space launch and reentry can easily overwhelm unprepared participants. The NASTAR Center's Space Training Programs are **FAA-approved** to prepare individuals for these rigors of space. Featuring comprehensive knowledge, personal skill technique development, and full simulated space flight exposures,

**OUR STAFF WILL HELP YOU MAXIMIZE YOUR
ONCE-IN-A-LIFETIME
SPACE FLIGHT ADVENTURE.**

RESEARCH & TESTING

The NASTAR Center offers flexible access to our cutting-edge simulation equipment and expert staff for a variety of research and test needs. Cockpits, flight profile development (nominal and off-nominal), and medical and flight data capture are supported. Rapid-turnaround internal Institutional Review Board (IRB) is available for human subject research projects.

RESEARCH AREAS

- Human Factors & Human Systems Interaction
- Learning & Training Methodologies
- Stress, Cognition & Human Performance
- Sensory Physiology & Motion Perception



MEDICAL DATA AVAILABLE

- ECG (12 lead)
- Heart Rate or Pulse
- Galvanic Skin Response
- Blood Pressure
- Respiration Pneumograph
- Infrared (IR) CCTV
- Multi-Channel Audio



GYROFLIGHT

4+2 motion-platform aircraft simulator is used to test/train for a full range of physiological flight effects. Cockpits and flight profiles can be configured to replicate specific aircraft.



PHOENIX CENTRIFUGE

High performance human centrifuge replicates characteristics of air/space craft. Features interchangeable cockpit modules and programmable flight profiles.



GYROLAB

Multi-axes centrifuge-based device used to teach upset prevention & recovery and spatial disorientation for pilots to feel what it's like to recover an out of control aircraft.



LAND/WATER SYSTEM

Configurable water trainer used to practice emergency water landing, ditching, and abort techniques for a variety of land and water-based scenarios.



ALTITUDE CHAMBER

Used to recognize hypoxia (lack of oxygen) from increasing altitude and to simulate rapid decompression (R/D) from sudden loss of cabin pressure.



ADVANCED DISASTER MANAGEMENT SIMULATOR (ADMS)

Ground disaster operations and emergency rescue virtual reality training system used to train and execute disaster scenarios.



HYPERBARIC CHAMBERS

Used in the treatment of wounds, burns, skin grafts and is approved by the Food and Drug Administration (FDA) for 13 different conditions.



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