NASA Human Integration Design Handbook (HIDH)

Revitalization of Space-Related Human Factors, Environmental, and Habitation Data and Design Guidance

STANDARDS

NASA-STD-3000
- Served as NASA's first human factors standard
- Specified how to design systems to support human health, safety, and productivity during space flight
- Was written primarily for the International Space Station

Handbook Chapters include:
- Anthropometry And Biomechanics
- Human Performance Capabilities
- Natural And Induced Environments
- Architecture
- User Interfaces
- Hardware And Equipment
- Facility Management
- Health Management
- Extra-Vehicular Activity (EVA)

HANDBOOK

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- Provides guidance and data to aid vehicle / habitat designers in human-system integration
- Aids requirements writers in development of human-system integration requirements from SFHSS Standards

PROGRAM-SPECIFIC REQUIREMENTS

EXAMPLE:
- “The system shall maintain the atmospheric temperature within the range of 18 ºC (64.4 ºF) to 27 ºC (80.6 ºF) during all nominal flight operations, excluding suited operations, ascent, entry, landing, and post landing.”

EXAMPLE:
- Data on temperature effects on human physiology and performance
- Guidance for limits and implementation based on expertise, lessons learned

USER INTERFACE

NASA Space Flight Human System Standard

- Updates crew health and performance standards to apply to all future systems with human crews (spacecraft, landers, habitats, rovers, EVA suits, etc.)
- Requires that program specific requirements be derived from the standard with guidance from the HIDH

EXAMPLE:
- “The vehicle / habitat atmosphere including pressure, humidity, temperature...shall be controlled in a manner that yields a healthy comfortable environment of respirable air for the crew”

Handbook expansion and maintenance is planned to assure its retention as a resource for human spaceflight.

WE INVITE YOUR PARTICIPATION!

NASA-JSC HIDH development team has finalized the format and began developing section with subject matter experts. Handbook expansion and maintenance is planned to assure its retention as a resource for human spaceflight.

If you are interested in participating in the writing, reviewing, enhancing of this document, contact any of the below:
Ken Stroud 281.483.5098, Lynn Pickett 281.483.6689, Barry Tillman 281.483.7131

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