NASA Human Integration Design Handbook (HIDH)
Revitalization of Space-Related Human Factors, Environmental, and Habitability 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

NASA Space Flight Human System Standard
- Volume 1: Cross-Health
  - This handbook was created as a companion document to the NASA Space Flight Human Systems Standard (SFHSS), NASA-STD-3001.
  - The SFHSS is a two-volume set of NASA Agency-level standards established by the Office of the Chief Health and Medical Officer.
  - Served as NASA’s first human factors standard.
  - Specified how to design systems to support human health, safety, and productivity during space flight.

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)

Human Integration Design Handbook (HIDH)
- 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 vehicle / habitat atmosphere including pressure, humidity, temperatures ... shall be controlled in a manner that yields a healthy comfortable environment of respiroble air to the crew.”

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 normal 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

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

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

WE INVITE YOUR PARTICIPATION!

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