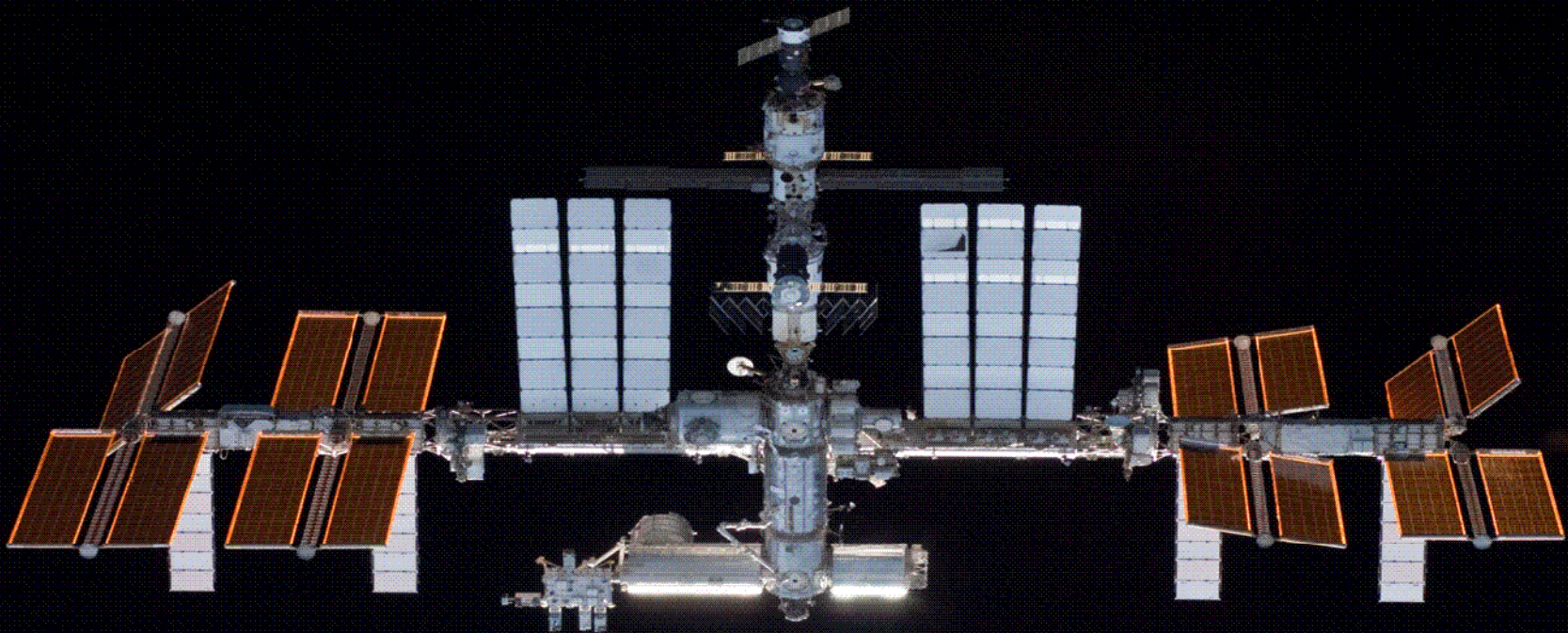


International Space Station Post-Flight Crew Comment Data



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ISS Crew Debrief Overview

Post-flight, the ISS Program schedules a series of intensive interviews (debriefs) with the returning crewmembers in order to determine individual observations and concerns relating to each of their experiences while working and living on-board the International Space Station.

- ~20-25 specialized topic debriefs conducted after each Expedition
- Typically range from ~30 minutes to 2 hours long
- Address issues associated with a specific system, hardware, architecture, habitability, etc.

Crew Debrief Topics

- Caution & Warning Alarms
- HAM Radio
- Public Affairs & Education
- Crew Provisions-Consumables
- Stowage
- Planning
- Photo/TV
- CHeCS CMS (exercise)
- FCE/FCS (crew hardware)
- Ops LAN (computers)
- Food
- Debriefs are conducted with US & Russian crewmembers
- Topics vary per Expedition
- US Payloads
- ESA Payloads
- JAXA Payloads
- Logistics & Maintenance
- Medical Ops
- Safety/Emergency Ops
- Training (US & IP)
- Habitability & Human Factors
- ODF (Procedures)
- Robotics
- Environmental Systems
- EVA
- Increment/Post Mission

Collection of Debrief Data

The Flight Crew Integration (FCI) Operational Habitability (OpsHab) team participates in the ISS post-expedition debrief process. They collect, identify and analyze the human-related data from each of the scheduled ISS crew debriefs

- Conduct crew debrief for Habitability & Human Factors
- Collect data from all other US crew debriefs
- Verify the accuracy of captured data
- Comply with legal requirements for handling human data
- Store data in secure SQL platform database

Storage and Manipulation of Debrief Data

- Comprehensive data set from Expedition 1 to Present contained in the “*FCI ISS Life Sciences Crew Comment Database*”
- Comments de-identified to preserve crew privacy
- Comments categorized by generic topic and then sub-categorized as appropriate
 - EX: Architecture
 - » Topology
 - » Human Translation
 - » Anthropometry

Storage and Manipulation of Debrief Data

- Restricted access to the sensitive ‘raw’ comments
- FCI Human Factors experts analyze data and generate summary reports
 - Advanced “Google” search & SQL reporting capability
- NASA Astronaut Office reviews and approves all reports prior to distribution and posting to the FCI Crew Comments SharePoint site
- Request for access to approved reports is granted on a case-by-case basis

Existing Data Summary Reports

- Reports on the below topics are available:
 - Habitable Volume
 - Waste and Hygiene
 - Labeling
 - Robotics
 - Procedures
 - Planning
 - Human Computer Interaction
 - EVA, Hardware, GFE
 - CHeCS
 - Acoustics
 - Training
 - Tools
 - MPLM
 - Galley, Food and Dining
 - Communications
 - Architecture
 - Restraints & Mobility Aids
 - Water Sampling
 - Sleep Stations
 - Stowage
 - Soyuz
 - Exercise

Crew Comments SharePoint Site – Access granted to NASA & contractor employees with an NDC account

The screenshot shows a SharePoint site interface. The top navigation bar includes 'Home - FCI ISS Life Sciences Crew Comments Database' and 'Windows Internet Explorer'. The main content area is titled 'FCI ISS Life Sciences Crew Comments Database' and features a left-hand navigation pane with categories like Documents, Lists, Pictures, Discussions, Sites, and People and Groups. The main content area is divided into several sections:

- Approved Data Summaries:** A list of document titles including 'Habitable Volume', 'Waste and Hygiene', 'Leakage', 'Robotics', 'Procedures', 'Planning', and 'Human/Computer Interactions'.
- Lessons Learned Documents:** A table with columns for 'Form', 'Title', and 'File Size'. It lists various lessons learned documents, such as 'ISS 20 Lessons Learned' (502 KB), 'ISS 19 Lessons Learned' (513 KB), 'ISS Lessons Learned' (505 KB), 'ISS 107 & 17100 Lessons Learned' (240 KB), 'ISS Lessons Learned' (522 KB), 'ISS Lessons Learned' (528 KB), 'ISS 4-24-25 Lessons Learned' (267 KB), 'ISS 18 Lessons Learned' (518 KB), 'ISS 17 Lessons Learned' (523 KB), and 'ISS Lessons Learned' (528 KB).
- Announcements:** A section with a heading and a sub-heading, followed by a list of announcements.
- Contact Information:** A section with a heading and a sub-heading, followed by a list of contact information.
- Presentations:** A section with a heading and a sub-heading, followed by a list of presentations.
- NASA News:** A section with a heading and a sub-heading, followed by a list of news items, including 'NASA Breaking News', 'NASA TV Airs Second European Cargo (Orb) Flight To Space Station', 'NASA Television Plans Live Coverage of the Shuttle Endeavour's Second Orbital European Research Partnership', 'NASA TV Airs Second European Cargo (Orb) Flight To Space Station', 'NASA Television Plans Live Coverage of the Shuttle Endeavour's Second Orbital European Research Partnership', 'NASA TV Airs Second European Cargo (Orb) Flight To Space Station', 'NASA Television Plans Live Coverage of the Shuttle Endeavour's Second Orbital European Research Partnership', 'NASA TV Airs Second European Cargo (Orb) Flight To Space Station', 'NASA Television Plans Live Coverage of the Shuttle Endeavour's Second Orbital European Research Partnership'.

SharePoint site is now accessible via the OB
Homepage:
[http://iss-
www.jsc.nasa.gov/nwo/vh1/home/web/PostFlightCrewComments.
shtm](http://iss-www.jsc.nasa.gov/nwo/vh1/home/web/PostFlightCrewComments.shtm)

Data Applications

- NASA Applications
 - Training
 - » Identified top issues, corrective measures being implemented
 - Information for governing boards and panels (operations integration, safety)
 - Hardware
 - » Crew Quarters design and development
 - » Waste & Hygiene Compartment design and development
 - » Medical hardware
 - Software
 - » OSTPV Integrated Viewer development(crew timeline)

Data Applications



- NASA Applications (con't)
 - Procedures
 - » Identifying /resolving issues; i.e. Caution and Warning desensitization
 - » Developing new procedures/Optimization of existing procedures
 - Requirements Development & Lessons Learned Application
 - » Constellation & Orion, HSIR, Standards & Handbook, etc.
 - Preventative Maintenance
 - » Crew time reductions for maintenance
 - » More robust hardware and system designs
- Research Applications
 - ISS Analogs (ISTAR)
 - COTS

Significance

- Provides the most complete and searchable archive of ISS crew debrief data in existence (over 35,000 comments)
- Provides a valuable resource for current and future spaceflight programs
 - Design and development of vehicles, systems, and flight hardware
 - Aids in development of requirements, procedures, and processes
 - Lessons Learned for the entire life of ISS

Summary

- Our goal is to:
 - Increase awareness that a comprehensive, searchable ISS crew debrief data repository exists
 - Increase use of ISS post-flight crew comments data within the ISS program and beyond
- Contact information and request form:
 - Susan Schuh (susan.v.schuh@nasa.gov), FCI Operational Habitability Team Lead, 281.483.7487