

SHUTTLE SERIES

SPACELAB SAFETY REVIEWS

This collection contains 4 linear feet of documents resulting from the safety review process conducted for Spacelabs 1, 2, 3, and D-1. The documents were donated to the History Office by Robert J. Wren of the Engineering Directorate, Systems Engineering Division, Systems Engineering and Integration Office. Mr. Wren has been a member of the Payload Safety Review Panel since 1984. The panel is responsible for assessing the integrated payload/ground support equipment (GSE) safety analyses performed by various payload organizations. The results of the safety analyses are recorded in a safety assessment report and presented to the panel in accordance with the requirements cited in NSTS 1700.7 and KHB 1700.7. (Additional guidelines on the safety process are found in NSTS 13830, Implementation Procedure for NSTS Payloads, System Safety Requirements.) The payload/GSE includes all individual elements of the payload/GSE developed for and by the payload organization, the interfaces among those elements, and any NASA-provided or NSTS-provided equipment physically mounted on the payload. This collection dates from March 19, 1982 to February 6, 1986 and includes safety assessment reports, memoranda, review data packages, presentations, minutes of meetings, action items, comments, closures, compliance data packages, and certifications. The material is arranged chronologically within each mission subgroup. For more information on Spacelab see Spacelab Correspondence, Spacelab Design Reviews, Spacelab Reports, and the Bilstein Collection. Normally there are 4 safety reviews. Phase 0 is held during the concept phase; phase I about the time of the preliminary design review; phase II about the time of the critical design review; and phase III completed 30 days prior to delivery of the payload at the launch site.

Inventory

SubHeading:	Box Number: 1	
SPACELAB 1	Payload Hazard Report (for Payload SL-1-ES 013 through 1ES 031)	March 19 - April 8, 1982
SPACELAB 1	Spacelab 1 Safety Compliance Data Phase III Volume 1 NASA Experiments 1NS100/006/007	April 12, 1982
SPACELAB 1	Spacelab 1 Phase III Safety Assessment Reports (1ES 020 through 1ES 031) SPICE	May 10 - 20, 1982
SubHeading:	Box Number: 2	
SPACELAB 1	Experiment Safety Package Cover Sheets (for Spacelab Mission 1 Phase III with hazard titles, remarks, disposition)	July 30 - August 25, 1982
SPACELAB 1	SL-1 (Spacelab Payload Mission 1) Phase III Safety Review Part 2 (safety data for review to be held October 19-21, 1982)	September 3, 1982
SPACELAB 1	Additional Data for SL-1 Phase III Safety Review (for review to be held October 19-21, 1982)	September 24, 1982
SPACELAB 1	Postponement of SL-1 Phase III Safety Review (distribution list & memo only)	October 15, 1982
SPACELAB 1	Submittal of ESA/SPICE Action Item Responses from Phase III Safety Review (held on May 20, 1982)	January 10 - November 10,
SPACELAB 1	Phase 3 Safety Review Action Closure (for action item 1ES 332, leak proof, overheating precautions)	November 10, 1982
SPACELAB 1	Action Closure (submittal of closures of open hazard reports for Phase 3 safety review)	May 5, 1983
SPACELAB 1	Action Closure (submittal of closures of open hazard reports of 1ES 300 for Phase 3 safety review)	May 6, 1983
SPACELAB 1	Delta Phase III Safety Review for SL-1 (Spacelab-1) (safety review data package for review to be held June 1-2, 1983)	May 17, 1983
SubHeading:	Box Number: 3	
SPACELAB 2	Waiver 3-1 for Spacelab 2 PDP	April 11, 1983

	(Plasma Diagnostic Package) EGF (Electrical Grapple Fixture)	
SPACELAB 2	SL-2 Payload Phase III Safety Compliance Data Volume I (with cover memo, for safety review to be held August 15-16, 1984)	April - July 1984
SPACELAB 2	SL-2 Payload Phase III Hazard Analysis Volume II (for safety review to be held August 15-16, 1984)	April 1984
SPACELAB 2	SL-2 Payload Phase III Hazard Analysis Volume III (for safety review to be held August 15-16, 1984)	April 1984
SPACELAB 2	SL-2 Payload Phase III Hazard Analysis Volume IV (for safety review to be held August 15-16, 1984)	April 1984
SPACELAB 2	SL-2 Payload Phase III Hazard Analysis Volume V (for safety review to be held August 15-16, 1984)	April 1984
SubHeading:	Box Number: 4	
SPACELAB 2	2-Way Memo on Spacelab 2 Cryogen Storage Tank Payload Safety Noncompliance Report (with attachments)	August 2, 1984
SPACELAB 2	2-Way Memo on SL-2 Collision Avoidance (with attachments)	August 7, 1984
SPACELAB 2	2-Way Memo on Spacelab-2, Experiment No. 13 Cryogen Storage Tank (with attachments)	August 9, 1984
SPACELAB 2	2-Way Memo on SL-2 Phase III Safety Review (with attachments)	August 10, 1984
SPACELAB 2	Spacelab 2 Mission Payload Phase 3 Safety Review (payload layout & experiment descriptions presentation by Robert E. Lake)	August 14, 1984
SPACELAB 2	Change Pages Revision A SL-2 Phase III Safety Report	August 1984
SPACELAB 2	Minutes of the Spacelab Payload Mission 2 Phase III Safety Review (held August 15, 1984)	October 26, 1984
SPACELAB 2	Action Item Listing and Responses (from SL-2 Phase III Safety Review held August 15, 1984)	July 1981 - December 1984
SPACELAB 2	Spacelab 2 Safety Noncompliance Reports SL2-5, SL2-13-2, & SL2-13-1 (memo without attachments)	April 29, 1985
SPACELAB 2	Delta Phase III Safety Review for Spacelab-2 (data package for June 6, 1985 safety review)	May 8, 1985
SPACELAB 2	2-Way Memo on SL-2 Phase III, Delta Report (from EP5/Bragg to ER2/Wren with attached comments from May 28, 1985 meeting)	May 29, 1985
SPACELAB 2	Spacelab 2 Change Pages E for the (DELTA) Phase III Review	June 6, 1985
SPACELAB 2	Space Transportation System Payload Safety Review Panel Meeting (comments on SL-2 Delta Phase III Experiments)	June 6, 1985
SPACELAB 2	Safety Certification of SL (Spacelab)-2 for STS 51-F (memo & certification)	July 8, 1985
SPACELAB 2	Minutes of Spacelab-2 Delta Phase III Safety Review	July 16, 1985
SubHeading:	Box Number: 5	
SPACELAB 3	Phase III Safety Review for SL-3 (data package for review to be held August 22-23, 1984)	June 19, 1984
SPACELAB 3	2-Way Memo on Spacelab-3 Phase III Safety Review 8/22/84 (with attached	August 20, 1984

	review comments)	
SPACELAB 3	MDTSCO Spacelab 3/SL-3 Payload Interface Hazard Analysis (presentation by M. Connolly)	August 1984
SPACELAB 3	Safety Verification Test Procedure Revision B (with cover memos)	November 2 - 14, 1984
SPACELAB 3	Spacelab 3 Safety Review, Closure of Hazard Reports and Action Items	November 15, 1984
SPACELAB 3	Spacelab 3 Safety Review Closure of Hazard Reports and Action Items	November 19, 1984
SPACELAB 3	SL-3 Integrated Payload Phase III Hazard Analyses and Safety Compliance Data Final Edition (NAS8-32712 WBS 75.10 Teledyne Brown Engineering)	March 1985
SubHeading:	Box Number: 6	
SPACELAB D1	Kayser Threde GMBH MEDEA, Spacelab D1, Payload Element MEDEA, Safety Data Package MEDEA-Flight Operations-Phase I Doc. No. D1-MD-RP-003-KT Issue 1	March 1983
SPACELAB D1	SL-D1 (German Spacelab Mission D-1) Hazard Report Reference Documents (Phase I)	April 18, 1984
SPACELAB D1	SL-D1 (German Spacelab Mission D1) Werkstofflabor, FPM (Fluid Physics Module) Facility, and FPM Experiment (Phase II)	December 19, 1984
SPACELAB D1	Phase III Safety Review for SL-D1 (Spacelab Payload Mission D1) (data packages for NEXPA-BW and NAVEX for April 10-12, 1985 review)	February 25, 1985
SPACELAB D1	Phase III Safety Review for SL-D1 Process Chamber, MEDEA, and D1-System (data packages for subject elements for April 10-12, 1985 review)	March 6, 1985
SubHeading:	Box Number: 7	
SPACELAB D1	Phase III Safety Review for SL-D1 Elements MPE (Mission Peculiar Equipment), WL (Werkstofflabor), BIORACK Experiments and BIORACK Facility (data packages for subject elements for April 10-12, 1985 review)	March 12, 1985
SPACELAB D1	Phase III Safety Review for SL-D1 VS (Vestibular Sled) (data package for subject element for April 10-12, 1985 review)	March 13, 1985
SPACELAB D1	Spacelab D1 Fracture Control Plan for D1-USS Structural Elements (with ES5 memo objecting to flaw detection by visual inspection)	March 20, 1985
SPACELAB D1	Fluid Physics Module Hazard Reports Used for Spacelab-1 and Referenced in Spacelab D1 Fluid Physics Module Safety Data	June 1983 - April 1985
SPACELAB D1	2-Way Memos on Phase III Safety Review for SL-D1 Elements (no attachments)	April 4 - 10, 1985
SPACELAB D1	Phase III Safety Review for Spacelab Mission D1 (presentations at April 10-11, 1985 review)	April 10 - 11, 1985
SPACELAB D1	Phase III Safety Review for SL-D1 Add-on Experiments (data packages for July 9, 1985 panel members' review)	June 7, 1985
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SPACELAB D1	Additional Data for Phase III Safety Review for SL-D1 Add-on Experiments (data packages for July 9, 1985 panel members' review)	June 21, 1985

SPACELAB D1	Spacelab Mission D-1 Payload Element VS Hazard Analysis of the Caloric Stimulation Assembly SEP-TN-1-14 Issue 3	June 14 - 21, 1985
SPACELAB D1	Demonstration Experiment "Absorbive Tether" (by Dr. W. Ockels, ESA) On First German Spacelab Mission D1, Safety Assessment	June 21, 1985
SPACELAB D1	Demonstration Experiment "Magnetic Alignment" (by Dr. R. Furrer, DFVLR) on First German Spacelab Mission D1, Safety Assessment	June 25, 1985
SPACELAB D1	Demonstration Experiment "Spring Oscillations" (by Dr. R. Furrer, DFVLR) on First German Spacelab Mission D1, Safety Assessment	June 25, 1985
SPACELAB D1	Spacelab Mission D1 Payload Element MEDEA Safety Compliance Data Package- Supplement-Flight Operations-Phase III D1-MD-RP-014-KT Issue 1	July 24, 1985
SPACELAB D1	Minutes of the Spacelab D-1 Add-on and Demonstration Experiments Phase III Safety Review (held July 9, 1985)	July 31, 1985
SPACELAB D1	Minutes of the Spacelab D-1 Phase III Safety Review (held April 10-12, 1985)	August 26, 1985
SPACELAB D1	Minutes of S/L D-1 Meeting (Safety Working Group Meeting held August 8-9, 1985)	September 9, 1985
SPACELAB D1	Spacelab D-1 Phase III Safety Review Data Package for the Werkstofflabor-Mirror Heating Facility (MHF) Experiments D1-WL-SP-101-DS	July 8 - September 12, 19
SPACELAB D1	Memos on D1 Safety Issue - Polyurethane Foam, Nomex Fabric Used on D-1 Mission, & D-1 Sled Seat Cushion Flammability	October 1985 - February 1

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