

SHUTTLE SERIES**JACK C. BOYKIN DOCUMENTS SHUTTLE/CENTAUR, PRIS MATERIALS**

This subseries contains materials related to the Shuttle/Centaur integration project for high orbit and interplanetary missions. This project was cancelled in the mid 1980's, so the majority of the documents on Shuttle/Centaur date from 1983-1986. The Payload Remote Integration System (PRIS) was built to support Orbiter/Centaur Phase II and Phase III verification tests by providing a transparent interface between the Test Operations Control Center and the remotely located Centaur/Centaur simulator. These materials date from 1984-1985. The provenance of these documents is Jack C. Boykin, who worked in the Shuttle Avionics Office during this time period. Most of the materials, therefore, deal with the software development and integration of the Shuttle/Centaur project. This collection should be used together with the Shuttle/Centaur and Vandenberg Launch Site (VLS) collection, since the S/C materials there date from 1980-1984 and were compiled by a different shuttle division. The collection originally arrived as a number of labeled folders interspersed with loose papers and documents. The chronological arrangement of the collection was chosen for organizational purposes. A number of materials were culled due to duplicate copies. This included some volumes of STS 83-1036, which can be found in its entirety in the S/C and VLS collection. A sizeable number of Shuttle/Centaur Functional Requirements Documents (FRD's) were found throughout the collection. These have been grouped together and arranged chronologically in boxes 10-11.

Inventory

SubHeading:	Box Number: 01	
	STS 81-0060 Avionics Fault-Tolerance Review Report-Sequencing Application Redundancy Management (RM)	February 1981
	Software Safety Analysis of the Remote Manipulator System	April 30, 1982
	Letter to Boykin from Sylvia Goday Software Design Concern Report	August 31, 1983
	Review Documentation memo	December 13, 1983
	Shuttle / Centaur Project Schedule and Status Summary	December 1983
	SDR RID's Orbiter / Shuttle	January 11, 1984
	Materials from Orbiter / Centaur Avionics SDR	January 11-13, 1984
	RID's, other materials relating to CDR of STS / Centaur (Level II)	January 16, 1984
	Shuttle / Centaur Level II/III CDR Information Handout	January 16-20, 1984
	Centaur G-Prime Technical Description - A High-Performance Upper Stage for the NASA Space Transportation System	January 23, 1984
	Shuttle / Centaur Level II CDR	January 26, 1984
SubHeading:	Box Number: 02	
	SDR Sequencing Charts	January 1984
	Sequencing BU Charts	January 1984
	JSC Flight Ops Concerns and Questions	February 21, 1984
	CASE Software PDR materials	February 22, 1984
	Control Unit (CU) Computer Allocated Baseline (Software) PDR (materials inserted)	February 22, 1984
	Centaur Avionic Support Equipment Software PDR (notes and other materials included)	February 22, 1984
	Minutes of CISS Software Integration Board meeting, February 23, 1984	March 8, 1984
	STS-13 SSME Hydraulics Issues	March-April 1984
	Centaur CSIB's	March-June 1984

	Shuttle / Centaur S/W Peer Review Activities	April-May 1984
	Centaur G Technical Description-A High-Performance Upper Stage for Use in the Space Transportation System	May 4, 1984
	Minutes of the CISS Software Integration Board, March 30, 1984	May 10, 1984
	RID memo	May 10, 1984
	Centaur Operations Working Group meeting	May 30-31, 1984
	Deletion of Star Scanner from Centaur-G	May 31-July 5, 1984
SubHeading:	Box Number: 03	
	Shuttle / Centaur Software Peer Review (other materials inserted)	May 1984
	Additional PSP Commands (memo)	June 1, 1984
	A Study of the Feasibility of Alternate Attitude Update Techniques for Shuttle/Centaur	June 11, 1984
	Orbiter Software Change Request-RCS XFeed MCA Optimization	June 13, 1984
	PRCBD's (3)	June 26, 1984
	Minutes related to Shuttle/Centaur meetings	June 27, 1984 - January 1
	STS 84-0382 Avionics Subsystem Analysis Status Report	July 1, 1984
	CDR's - OV-99 and OV-104 Modifications...(teleconference)	July 3, 1984
	Software Assurance Analysis Report for the Events Control System	August 1, 1984
	Centaur State Vector Transfer/Fine Align S/W-Technique	August 21, 1984
SubHeading:	Box Number: 04	
	PRIS Test Preparation Sheet 0003	August 28, 1984
	Payload Remote Integration System (PRIS) PDR data, notes, etc.	August-October 1984
	WTR Ascent Performance	September 10, 1984
	Various Level III CDR's	September-October 1984
	Support Instrumentation Requirements Document, Revision 1 - STS Centaur Upper Stage (Free-Flight Phase)	October 1, 1984
	STS 84-0382-1 Avionics Subsystem Analysis Status Report	October 1, 1984
	Blueprints - Payload Datalink Console	October 8-13, 1984
	STS 84-0512 Critical Item Development Specification for PRIS	October 15, 1984
	PRIS Technical Presentation	October 16, 1984
	Materials related to Shuttle/Centaur G Level III/IV CDR (were contained in envelope, included)	October 23-25, 1984
	Software Requirements and Design	October 23-25, 1984
SubHeading:	Box Number: 05	
	CPOCC to Spacecraft POCC Interface Capabilities Guide	October 1984
	Shuttle / Centaur Mission Operations Review (memo)	November 1, 1984
	Shuttle / Centaur Vent System Design Briefing to NASA Headquarters	November 5, 1984
	STS-62A Flight Readiness Review (FRF) Test Plan/Requirements Review	November 27, 1984

	Level II SIR	
	Level II Change Request, Update JSC-07700	November 30, 1984
	Shuttle/Centaur Program Contingency Ground Operations Plan	November 1984
	Shuttle/Centaur Project Operation and Maintenance Documentation Plan	November 1984
	Shuttle/Centaur Software Development Schedules	December 1, 1984
	NASA Pre-OMR Review Centaur H2 Vent Issue	December 4, 1984
	Various schematics	December 5, 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 84-0591 v. 1 - Overview	December 10, 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 84-0591 v. 2 - Integrated Avionics	December 10, 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 84-0591 v. 7 - Safety, ICD's, Ground Systems, and Integration Hardware	December 10, 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Materials relating to Shuttle/Centaur G Level II CDR	December 10-14, 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Shuttle/Centaur G Level II CDR	December 10-14, 1984
SubHeading:	Box Number: 06	
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Various RID Summary and Control Logs	December 10-14, 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Materials related to Shuttle/Centaur Level II CDR	December 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 84-0655 Orbiter / Centaur Flight Critical MDM Phase I Interface Verification Test Report	December 1984
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Various documents on Shuttle / Centaur	January 8-9, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Post CDR Level II S/W Review	January 8-9, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Sail Centaur Configuration and Test Plan	January 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	PRIS CDR documents	February 12-13, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Software Assurance Analysis Report for Return to Launch Site, Abort-Once-Around and Abort-to-Orbit Systems	February 28, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	PRIS Integration Documentation (various STS documents with comments)	February-June 1985
SubHeading:	Box Number: 07	
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Primary Avionics Software System Program Release Notice	March 12, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	PRIS IDD's/ICD's (15 photographs, micro schedule)	June 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 84-0512 Critical Item Development-Specification for PRIS	July 19, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 85-0341 System Test Plan for PRIS	August 2, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	RID - Incomplete APCS Abort CMD Requirements	August 16, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 85-0342 Acceptance Test Procedure (PRIS)	September 12, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Documents related to PRIS CDR (Includes STS 85-0053 with notes, PRIS micro schedule)	September 24, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Sail PRIS TCP's	October 31 - November 8,
SubHeading:	Box Number: 08	

SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS 85-0575 PRIS System Manual/User's Guide	November 11, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	IBM 017C Test Reports (I)-017C Performance Report-Centaur/RTLS to KSC	December 17, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	IBM 017C Test Reports (II)-017C Performance Test Report	December 17, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	IBM 017C Test Reports (III)-Centaur Capability Test Report (with comments)	December 17, 1985
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Operation and Maintenance Instruction (OMI) documents (3 documents)	January 10, 1986
SubHeading:	Box Number: 09	
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Various Test and Checkout Procedures (TCP's)	April 1986
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Various Shuttle/Centaur Match Mate materials (I)	June 1986
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Various Shuttle/Centaur Match Mate materials (II)	June 1986
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	RTG Assessment Papers	n/d
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	STS/Centaur Mission Training Plan for NASA Missions	n/d
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Centaur Payload Operations Control Center (CPOCC) and Associated Sites Required for the Processing and Operation of Centaur G	n/d
SHUTTLE/CENTAUR G LEVEL II CRITICAL DESIGN REVIEW	Miscellaneous material	n/d
SubHeading:	Box Number: 10	
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC-241-1-0100 CISS/DCU Operating System	September 7, 1983
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-0105 CISS/DCU Downlink Interrupt Processor Module	September 7, 1983
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 223-1 Pneumatic Actuation Valve Control System	October 6, 1983
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 224-1 Purge System	October 12, 1983
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 2211-1 Deployment Adapter Rotation System	December 7, 1983
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-0102 CISS DCU Power-On Interrupt Processor Module	December 19, 1983
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-0103 CISS DCU Power-Off Interrupt Processor Module	December 19, 1983
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-0104 CISS DCU Real Time Interrupt Processor Module	January 10, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-0107 CISS DCU Memory Dump (#159)	February 21, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 221-2 Computer (CU) Software Requirements for Helium Supply System (HSS)	April 13, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-0112 CISS DCU Terminal Count Tenant Program	June 5, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 228-1 CU Computer Software Requirements for Propellant Tank Automatic Pressure Control System (APCS) and Propellant Fill/Drain	June 14, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 2211-2 Deployment Adapter Rotation System CU Software Control Requirements (Baseline)	June 22, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-2-003 through SC 241-2-007; SC 241-2-009; SC 241-2-011; SC 241- 2-013 through SC 241-2-014	June 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 141-2-0105 Centaur DCU Downlink Interrupt Processor Module	July 12, 1984

SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 224-2 Purge System CU Software Control Requirements (Baseline)	August 2, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 212-1 Case Control System	August 8, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 223-2 Pneumatic Actuated Valve Control System: Pressure Control; CU Software Control Requirements (Baseline)	August 8, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-0111 CISS DCU Preflight Operating System	August 14, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 241-1-2100 CISS DCU Interrupt-Check Tenant Module	August 28, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 141-2-0101 Centaur DCU Uplink Interrupt Processor Module	August 29, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 323-3 Liquid Oxygen Tanking CCLS Software Requirements	August 30, 1984
SubHeading:	Box Number: 11	
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 323-4 Liquid Hydrogen Tanking CCLS Software Requirements	August 30, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 321-2 CCLS Software Requirements for Charging and Venting Centaur and CISS Helium Bottles	September 17, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 141-2-0300 Orbiter Uplink Message Processor	September 26, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 2210-1 Computer Software Functions Required for GSE and Airborne Fluid Systems and Mechanisms	October 3, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 141-2-0700 RF System Test	October 10, 1984
SHUTTLE/CENTAUR FUNCTIONAL REQUIREMENTS DOCUMENTS	SC 141-2-2500 Vehicle Telemetry	October 29, 1984