

FINDING AID FOR THE LAWRENCE D. GUY PAPERS 1950-1978 (#2017-0005)

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Descriptive Summary

Repository (049): University Archives

Collection # (099): 2017-0005

Title (245): Lawrence D. Guy Papers

Creator (100/110): Guy, Lawrence D.

Inclusive Dates: 1950-1978

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Biographical/Historical Note (545)

Lawrence D. Guy was born and raised in Winfield, Kansas. Education at Kansas University was interrupted by World War II. Underwent Army Aviation Cadet training and was commissioned in March 1944. Served as Photo Recon Pilot in Europe until May 1945. Mr. Guy received a B.S. degree in Aeronautical Engineering from Kansas University in June 1947. He worked as Design Engineer with Chance-Vought Aircraft, Connecticut for one year. Mr. Guy Entered duty with NASA at Langley Research Center (LaRC) in 1948.

Early work was concerned with supersonic aircraft control effectiveness and became Supervisor of the Langley 9-by-12 inch Supersonic Blowdown Tunnel in 1953. Mr. Guy received his Masters degree from the University of Virginia in 1956. He was later responsible for research planning

and development of dynamic model testing techniques for the Transonic Dynamics Tunnel. He was transferred to the Structures Research Division in 1959 as Assistant Head of the Aero-Thermal Facilities Branch with responsibility for direction of research programs. As Assistant Head of the Structural Mechanics Branch, his primary responsibilities were in planning research programs in the field of aerothermoelasticity, for the 9-by6 Foot Thermal Structures Tunnel and the 8-Foot High Temperature Structures Tunnel. Based on information contained in Mr. Guy's files, it seemed he was very much involved in the analysis and studies at the causes of Panel Flutter in aircraft/space vehicle caused by the loads and dynamics of the atmosphere during subsonic and supersonic travel.

Programs and projects that Mr. Guy worked on throughout his career included; Atlas-Centaur Program, Voyager Project, Scout Program, Dyna-Soar Project, X-15 Project, Eagle Air Missile Program, Space Shuttle Program and Orbiter Experiment (OEX) System, Viking Program, and analysis in relation to atmospheric reentry for planetary vehicles such as the Mars Entry vehicles. Early on in the Space Shuttle Program, Mr. Guy worked on supporting analysis in the areas of aerothermodynamics, loads and structures and Vehicle Flight Control.

Early in his career, Mr. Guy was author of many technical papers and reports for the National Advisory Committee for Aeronautics (NACA) and later on as NACA became the National Aeronautics and Space Administration (NASA). His career spanned from 1948 through 1978.

Scope and Content (520)

This collection represents material Mr. Lawrence D. Guy gathered from his personal work files while employed by the US Government at the NASA Langley Research Center (LaRC) and Johnson Space Center. The focus of this collection includes vast mathematical analysis in support of Aerodynamic and Aerothermal design of general aviation aircraft's as well as space vehicles such as the Shuttle and planetary probes.

Arrangement (351)

Organized in 13 boxes, arranged in 13 series with each of those sorted chronologically. The contents of Box 13 are Technical Reports, Manuals, Working Papers published by NACA/NASA throughout his career and which are applicable to his primary responsibilities.

Index Terms (6xx):

Personal Names

Lawrence D. Guy

Corporate Names

National Advisory Committee for Aeronautics (NACA)
National Aeronautics and Space Administration (NASA)
Langley Research Center (LaRC)
Johnson Space Center (JSC)

Subjects

Panel Flutter Analysis and Testing at Subsonic and Supersonic Speeds
Aircraft Stability and Loads/Dynamics Testing
Wind Tunnel Requirements and Testing
Space Shuttle Program
Planetary Probes (Viking, Voyager, Mars Landers)
Atlas-Centaur Program
Dyna-Soar Program
SCOUT Project
X-15 Aircraft
Attached Inflatable Decelerator (AID) Project

Document Types

Technical Papers/Reports

Memos

Design Criteria Documents

Mathematical Analysis

Graphs/Data Tables

Presentations

Personal Papers

NACA/NASA Working Papers, Technical Manual, Notes, Reports and Research Memorandum

Places

Langley Research Center (LaRC) in Langley, Virginia

Johnson Space Center (JSC) in Houston, Texas

Items Separated

Information related to personnel job descriptions, promotion recommendations, and Golf Tournament Information.

Inventory

| Box | Folder | Title | Date |
|-----|--------|--|---------------|
| | | Series I: Panel Flutter Analysis, Aerodynamic and Aerothermoelastic Testing, Wind Tunnel Testing, | |
| 1 | 1 | Memos to Associate Director, various organizations and topics related to Aerodynamic Testing and work done by the Structures Research Division at Langley. | 1950 - 1959 |
| 1 | 2 | Technical References (memos, reports, manuals) related to Aerodynamic Testing. | 1951 - 1957 |
| 1 | 3 | Technical Analysis of Drag Effects on Fences on swept back wings at Transonic and Supersonic Speeds | January 1950 |
| 1 | 4 | Technical Analysis of Hinge Moment design of 2.5 aspect ratio wing | January 1950 |
| 1 | 5 | Technical Analysis of Aerodynamic design of two nozzles for Mach number 1.4 and 1.6 | 1950 |
| 1 | 6 | Technical Report on Design Support for Optical Hinge Moment measurements tests | 1951 |
| 1 | 7 | Technical Paper on Investigation of Body Shape at Supersonic Speeds | February 1951 |
| 1 | 8 | Mathematical Analysis of Plate Equations | |
| 1 | 9 | Technical Paper on Similarity Laws for Aerothermoelastic Testing | |
| 1 | 10 | Technical References on Heat Transfer and Blunt Body Analysis | |
| 1 | 11 | Technical Paper on Development of Governing Equations for Orthotropic Plates | |
| 1 | 12 | Technical Paper on Use of Fences in Modifying Control Hinge Moment Characteristics at Supersonic Speeds | 1952 |
| | | | |
| | | | |
| 2 | 1 | Technical Analysis on Tunnel Structures – Nozzle Block calculations | 1952 |
| 2 | 2 | Technical Paper on Aircraft External Stores and Nacelles | 1953 |
| 2 | 3 | Mathematical Analysis on Boundary Correction | August, 1953 |

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|---|----|--|---------------|
| 2 | 4 | Technical Memo on Laboratory Guide for the Classification of NACA Research Information | December 1953 |
| 2 | 5 | Table Data on 9-by-12 inch Supersonic Blowdown Tunnel | February 1954 |
| 2 | 6 | Coupling Equations for Flutter Panel Analysis | November 1955 |
| 2 | 7 | Hypersonic Calculations of Nozzle Expansion Wind Tunnel testing | June 1956 |
| 2 | 8 | Mathematical Analysis on Conical Flow Fields Problems with 20 degree Cone and Load Distribution on Wings | October 1956 |
| 2 | 9 | Mathematical Analysis and Data Correlation against Tunnel Test Data | August 1957 |
| 2 | 10 | Technical Paper on Method of Obtaining Uncoupled Frequencies from Coupled Frequencies | August 1957 |
| 2 | 11 | Mathematical Analysis on Lateral Beam Vibration | December 1957 |
| 2 | 12 | Technical Paper on Power Spectral Analysis Methods – Response to Aircraft Gust Loads | February 1958 |
| 2 | 13 | Analysis on Moving Horizontal Tail Flutter | June 1958 |
| 2 | 14 | Technical Paper on NASA Transonic Dynamics Wind Tunnel | January 1959 |
| 2 | 15 | Recommended Research Topics for Langley Research Center (LaRC) Structures Research Division | 1959 |
| 2 | 16 | Mathematical Analysis of Eagle Aluminum Flutter Model | May 1959 |
| | | | |
| | | | |
| 3 | 1 | Technical Paper on Airstream Oscillator for Transonic Dynamics Wind Tunnel Testing | March 1959 |
| 3 | 2 | Mathematical Analysis on Aircraft Panel Flutter Vibration | 1960 |
| 3 | 3 | Memos for Aerothermal Facility Branch Files | 1960 |
| 3 | 4 | Technical Paper for Proposal of Recoverable Structures and Materials Research Satellites | February 1960 |
| 3 | 5 | Research Program to the NASA Research Advisory Committee on Structural Design | March 1960 |
| 3 | 6 | Technical Paper on Panel Flutter | April 1960 |
| 3 | 7 | Technical Paper on One Dimension Fluid Flow | April 1960 |
| 3 | 8 | Technical Paper on Radiation Heat Shields for Bodies and Leading Edges | April 1960 |
| 3 | 9 | Technical References on Wing Flutter | August 1960 |
| 3 | 10 | Research Program Relative to Langley Supersonic Transport | August 1960 |
| 3 | 11 | Technical Paper on Research related to Panel Flutter | December 1960 |
| 3 | 12 | Presentation on Effects of Aerodynamic Heating on Panel Flutter | April 1961 |
| 3 | 13 | Technical Manual on Proposal for a Test Program on Aerothermoelastic Similarity Laws | April 1961 |
| 3 | 14 | Research Programs to NASA Advisory Committee on Missile and Space Vehicle Structures | August 1961 |
| 3 | 15 | Symposium on Aerothermoelasticity | October 1961 |
| 3 | 16 | Technical Manual on Flutter of Simply Supported Rectangular Panels in a Supersonic Flow | 1962 |
| 3 | 17 | Technical Manual on Two-Dimensional Panel Flutter – I. Clamped Panel and II. Simply Supported Panel | 1962 |

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| 3 | 18 | Technical Paper on Flutter of Skin Panels of Hypersonic and Reentry Vehicles | |
| 3 | 19 | Technical Manual on Torsional Vibration of a Cantilever Plate Subjected to Thermal Stresses | 1962 |
| | | | |
| 4 | 1 | Mathematical Analysis on Panel Flutter Damping | 1962 |
| 4 | 2 | Technical Manual on Flutter of Wings Subjected to Aerodynamic Heating | 1962 |
| 4 | 3 | Technical Paper on Application of the Method of Finite Differences in the Determination of Thermal Stresses and their Effects on the Modes and Frequencies of Plates | May 1962 |
| 4 | 4 | Technical Paper on Experimental Pressures and Heat Transfer Coefficients Associated with Sinusoidal Protuberances in a Mach 3 Turbulent Boundary Layer | October 1962 |
| 4 | 5 | Review of Research Program of the Aerothermal Facility Branch Applicable to Hypersonic Air-Breathing Vehicle Systems | October 1962 |
| 4 | 6 | Technical Paper on A Critical Review of Experiment and Theory for Flutter of Aerodynamically Heated Panel | October 1962 |
| 4 | 7 | Technical Paper presented to AIA on Flutter of Heated Panels | December 1962 |
| 4 | 8 | Mathematical Analysis on Piston Theory and Supersonic Sources | 1963 |
| 4 | 9 | Testing of Hypersonic Panel Flutter | 1963 |
| 4 | 10 | Technical Manual on Analysis of the Flutter of Flat Rectangular Panel on the Basis of Exact Three-Dimensional Linearized Supersonic Potential Flow | January 1963 |
| 4 | 11 | Technical Paper on Investigation of Experimental Turbulent Heat-Transfer Coefficients Associated with Sinusoidal Protuberances on a Flat Plate | March 1963 |
| 4 | 12 | Technical Paper on Panel Flutter related to SST | July 19563 |
| 4 | 13 | Technical Manual on Some Recent Developments in Flutter of Flat Panel | April 1964 |
| 4 | 14 | Memos on NASA Panel Flutter Research Program | April 1964 |
| 4 | 15 | Technical Manual – NASA Panel Flutter (NASA SP-8004) | July 1964 |
| 4 | 16 | Technical Paper on NASA Design Criteria for NASA Vehicles – Panel Flutter | July 1964 |
| 4 | 17 | Technical Memo on Supercooled Water Impingement n Supersonic Aircraft in Flight | September 1964 |
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| | | | |
| 5 | 1 | Technical Papers on Aerodynamic Heating, Aerodynamic Forces, Two Degree of Freedom, Potential Energy and Flutter | 1964 |
| 5 | 2 | Mathematical Analysis on Panel Buckling | 1965 |
| 5 | 3 | Technical Manual on Flutter of a Simply Supported Panel Subjected to a Nonlinear Temperature Distribution and Supersonic Flow | January 1965 |
| 5 | 4 | Technical Paper on Tension Shell Structures for Low Density Entry Vehicles (presented to AIAA 2 nd Annual Meeting) | July 1965 |

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| 5 | 5 | Technical Paper on Flutter Analysis | 1966 |
| 5 | 6 | Bibliography on Panel Flutter | 1966 |
| 5 | 7 | Technical Paper on Reply to McDonnell Aircraft Corporation on Panel Flutter Survey Questionnaire | 1966 |
| 5 | 8 | Technical Paper on Aerodynamic Loads – 2 Degree of Freedom Rigid Body Equations | 1966 |
| 5 | 9 | Technical Paper on Nonlinear Panel Flutter and Aeroelastic Stability of Orthotropic Panels in Supersonic Flow | May 1968 |
| 5 | 10 | Technical Report of The Unpowered Rotor: A Lifting Decelerator for Spacecraft Recovery (AIAA Paper #68-969) | September 1968 |
| 5 | 11 | Technical Manual on Flutter Design Charts for Stressed Isotropic Panels | April 1969 |
| 5 | 12 | Technical Paper on Fracture Mechanics | 1970 |
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| 6 | 1 | Revision of Design Criteria Monograph on Panel Flutter | 1970 |
| 6 | 2 | Technical Report on Fatigue and Fracture Mechanics (AIAA Paper # 70-512) | April 1970 |
| 6 | 3 | Technical Manual on Fracture Control of Metallic Pressure Vessels (NASA SP-8040) | May 1970 |
| 6 | 4 | Technical Paper on Evaluation of the Benefits of the Free-Wing Principle for Light General Aviation Aircraft “Floating Wings” | 1971 |
| 6 | 5 | Technical Manual on Structural Design Criteria Applicable to a Space Shuttle (NASA SP-8057) | January 1971 |
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| | | Series II: Technical Support to the Voyager Spacecraft Program | |
| 6 | 6 | Planetary Missions Technology Steering Committee Meetings | August 1965 |
| 6 | 7 | Technical Paper on Preliminary Amplifying Information on Voyager Capsule Mode Review | August 1965 |
| 6 | 8 | Technical Paper on Ames Research Center Tasks in Support of the Voyager Program | December 1965 |
| 6 | 9 | Technical Paper on LaRC Comment on JPL Proposed Task #8 – Proof Testing of Complete Heat Shield and Structural Designs for Entry Capsules by use of Scale Models in Wind Tunnel | February 1966 |
| 6 | 10 | LaRC Support to JPL Task Order #2 – Support Configuration Effects on Capsule Design | March 1966 |
| 6 | 11 | LaRC Voyager Program Status | August 1966 |
| 6 | 12 | Memo on Voyager Master Agreement Contract (No. NAS1-554 with Aeronutronic) | September 1966 |
| 6 | 13 | Voyager Project Progress Report No. 19 | September 1966 |
| 6 | 14 | Technical Report on Voyager Capsule Bus Study at LaRC | November 1966 |
| 6 | 15 | Technical Report on Langley Responsibilities for Voyager Capsule Bus Mission Studies | December 1966 |
| 6 | 16 | Technical Presentation on Voyager Entry Capsule Study by JPL | January 1967 |
| 6 | 17 | Langley Support of Voyager Capsule Phase B Studies | January 1967 |

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| 6 | 18 | Request for Proposal AR-38152 Fabrication and Structural Development of 19-Foot Diameter Aeroshell | February 1967 |
| 6 | 19 | LaRC Revisions to JPL Document SE002BB002-2A21 – 1973 Voyager Capsule Systems Constraints and Requirements Document (Dated 11/1/1966) | February 1967 |
| 6 | 20 | LaRC Program for Voyager Capsule Technology Development and Support | March 1967 |
| 6 | 21 | Voyager Project Level Guidelines | April 1967 |
| 6 | 22 | Voyager Decelerator Technology | April 1967 |
| 6 | 23 | Tec1967hncial Paper on Proposed Programs for Decelerator Committee | |
| 6 | 24 | LaRC Voyager Support Funding Requirements for FY68-69 | May 1967 |
| 6 | 25 | LaRC List of Completed and Prospective Publications Generated in Support of Voyager | September 1967 |
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| | | Series III: Technical Support to the X-15 Supersonic Aircraft Program | |
| 7 | 1 | Mathematical Analysis on the X-15 Tail Testing at AMES | November 1959 |
| 7 | 2 | Technical Report on the Preliminary Results of Panel Flutter Tests of the X-15 Lower All-Movable Vertical Stabilizer | June 1960 |
| 7 | 3 | Mathematical Analysis of the X-15 Vertical Stabilizer Analysis | September 1960 |
| 7 | 4 | Technical Report of the X-15 Side Fairing Analysis | September 1960 |
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| | | Series IV: Technical Support to the Dyna-Soar Program | |
| 7 | 5 | Technical Report of the Boeing Company Skin Panel Flutter Test, Refine I Analysis. Reference AD-375D-4, SPO #184, Contract #AF33(657)-7132 from test conducted at Ames Research Center from 1/29/1962 to 2/14/1962 | January 1962 |
| 7 | 6 | Technical Report on the Dyna-Soar Glider Panel Flutter Test Results | March 1962 |
| 7 | 7 | Technical Paper for Dyna-Soar Symposium – “Abstract – Effects of Thermal Stress and Flow Angularity on the Flutter of Orthotropic Panels” | May 1962 |
| 7 | 8 | Technical Report of the Boeing Company Transonic Panel Flutter Test, Refine Hot, Part I for test conducted at Ames Research Center from 6/18-29/1962 | June 1962 |
| 7 | 9 | Technical Report of the Dyna-Soar Structural Integrity Program – Structural Environments Development Testing and Vibration and Shock Environment Tests | June 1962 |
| 7 | 10 | Technical Paper on the Dyna-Soar Wind Tunnel Planning Meeting at Ames Research Center | July 1962 |
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| | | Series V: Technical Support to the SCOUT Program | |
| 7 | 11 | Technical Paper on the Lifting Payload – 9x6 TST test Model | May 1961 |

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| 7 | 12 | Technical Paper on Technique for Testing Full-Scale Missile Airframe in the 9x6 Foot Thermal Structures Tunnel | January 1962 |
| 7 | 13 | Technical Paper on the Establishment of an Ad-Hoc SCOUT Design, Environment and Quality Control Review Committee | December 1963 |
| 7 | 14 | Technical Paper on the Ad-Hoc Committee Review of the SCOUT Design, Environment and Quality Control | March 1964 |
| 7 | 15 | Technical Paper on the Ad-Hoc SCOUT Review Committee on Recommendations for Insuring the Structural Integrity of the SCOUT Vehicle | March 1964 |
| 7 | 16 | Technical Report on the Ad-Hoc SCOUT Review Committee Review of Recommendations | May 1964 |
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| | | Series VI: Technical Support to the Atlas Centaur Program | |
| 7 | 17 | Mathematical Analysis of the Cover Arrestor/Deceleration Analysis | September 1961 |
| 7 | 18 | Technical Report on the Interstage Adapter Wind Tunnel Tests | July 1961 |
| 7 | 19 | Technical Report on the Test Requirements Report of the Centaur Interstage Adapter Wind Tunnel Test Model 55-XSM-65D | January 1962 |
| 7 | 20 | Mathematical Analysis of the Interstage Adapter Panel Analysis Wind Tunnel Test | October 1962 |
| 7 | 21 | Technical Paper on the Study of the Centaur Standard Shroud | 1971 |
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| | | Series VII: Technical Support to Other Programs | |
| 7 | 22 | Technical Analysis of the Design and Fabrication of Airborne Stores using Attached Inflatable Decelerator (Edgewood Arsenal) | 1969 |
| 7 | 23 | Technical Analysis of the Bell Helicopter OH-58A Tail Boom Failure during Autorotation Landings (Tail Boom Vibration) | 1972 |
| 7 | 24 | Technical Reports to the American Helicopter Society (AHS) Structures and Materials Committee Guidelines | December 1972 |
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| | | Series VIII: Technical Support to the Planetary/Mars Entry Capsule/Decelerator Program | |
| 8 | 1 | Technical Report on the Evaluation of Configuration Changes on Optimum Structural Designs for Mars Entry Capsule | |
| 8 | 2 | Conference on Mars Entry and Landing Studies | |
| 8 | 3 | Research on the Analysis of Ablative Structures | 1961/1962 |
| 8 | 4 | Technical Analysis on the Mars Entry Probe Analysis | 1963 |
| 8 | 5 | Technical Reports on the Mars Atmospheric Probe Panels | 1964 |
| 8 | 6 | Technical Presentation on the Deceleration of Entry Vehicles in Low Density Atmospheres | October 1964 |
| 8 | 7 | Request for Proposal (RFP) for L-5295 Comparative Studies of Conceptual Design and Qualifications | 1965 |

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| | | Procedures for a Mars Probe/Lander | |
| 8 | 8 | Technical Report on Mars Entry Capsule Structures | 1965 |
| 8 | 9 | Technical Paper on Tension Shell Structures for Low Density Entry Vehicles | 1965 |
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| | | Series IX: Technical Support to the Mars Entry Capsule and Entry Decelerators Program | |
| 9 | 1 | Technical Paper on Small Flight Project for Supersonic Planetary Entry Decelerator Program (SPED) | 1967 |
| 9 | 2 | Technical Manual on a Summary of Supersonic Decelerators with Emphasis on Problem Areas in Aerodynamics and Structures | January 1967 |
| 9 | 3 | Technical Paper on the Supersonic Planetary Entry Decelerator (SPED) Program | April 1967 |
| 9 | 4 | Technical Paper on the Attached Inflatable Decelerator (AID) | 1968 |
| 9 | 5 | Technical Report on the Attached Inflatable Decelerator Systems Proposed Test Program | 1968 |
| 9 | 6 | Technical Paper on Space Vehicle Structures Program Review (Aeroshells for Planetary Entry) | March 1968 |
| 9 | 7 | Technical Manual on the Investigation of an Attached Inflatable Decelerator System for Drag Augmentation of the Voyager Entry Capsule at Supersonic Speeds (AEDC-TR-68-71) | April 1968 |
| 9 | 8 | Technical Presentation to Provide the Mars Mission Project Office with a Summary of Mars Entry Capsule Design Methodology Developed on the NASA Master Agreement Contract | July 1968 |
| 9 | 9 | Technical Paper on Summary of the Development Status of Attached Inflatable Decelerator | September 1968 |
| 9 | 10 | Technical Manuals on Investigation of an Inflatable Decelerator Attached to a 120-Degree Conical Entry Capsule at Mach Numbers from 2.55 to 4.40 (AEDC-TR-68-227) | October 1968 |
| 9 | 11 | Technical Manual of The Tension String Structure of an Entry Vehicle | |
| 9 | 12 | Technical Manual of Aerodynamic Deceleration Systems for Space Missions | October 1968 |
| 9 | 13 | Technical Analysis of Aeroshell Design/Weights Analysis | 1968 |
| 9 | 14 | Technical Analysis of Attached Inflatable Decelerator Model Fabrication | 1969 |
| 9 | 15 | Technical Paper on Small Flight Project – Attached Inflatable Decelerator Experiment (AIDEX) | 1969 |
| 9 | 16 | Technical Manual on Investigation of an Attached Inflatable Decelerator with Mechanically Deployed Inlets at Mach Numbers from 2.25 to 4.75 (AEDC-TR-69-132) | June 1969 |
| 9 | 17 | Technical Manual on Aerodynamic Characteristics of Ballutes and Disk-Gap-Band Parachutes at Mach Numbers from 1.8 to 3.7 (AEDC-TR-69-245) | November 1969 |
| 9 | 18 | Technical Manual on the Use of an Attached Inflatable Decelerator for Store Delivery from High Speed Aircraft from Low Altitude | April 1970 |

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| 9 | 19 | Technical Manual for Attached Inflatable Decelerator Performance Evaluation and Mission-Applicable Study | October 1970 |
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| | | Series X: Technical Support to the Viking Project | |
| 10 | 1 | Technical Analysis on Structural Analysis and Optimization of Viking Lander Capsule Aeroshell and Structure | 1969 |
| 10 | 2 | Technical Paper on Viking Lander Aeroshell Design and Fabrication Guidelines/Analysis | 1971 |
| 10 | 3 | Technical Paper on Viking Project Fracture Mechanics Design Application for Pressure Vessels | 1971 |
| 10 | 4 | Technical Paper On Viking Project Pressure Vessel Design and Testing Guidelines | 1971 |
| 10 | 5 | Technical Paper on The Use of Fracture Mechanics in Viking Pressure Vessel Design | April 1971 |
| 10 | 6 | Technical Report on Failure Analysis of Viking Orbiter Propellant Tank During Proof Test | 1972 |
| 10 | 7 | Viking Project Working Schedules and Reports | August 1974 |
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| | | Series XI: Technical Support to the Space Shuttle Program | |
| 11 | 1 | Technical Paper on Space Shuttle Structural Design Technology | August 1970 |
| 11 | 2 | Technical Paper on Space Shuttle Working Groups – Propulsion and Advanced Avionics | 1973 |
| 11 | 3 | Technical Paper on Space Shuttle Program Management Review | 1973 |
| 11 | 4 | Technical Paper on Space Shuttle Program Orbiter Ferry Operations | 1973 |
| 11 | 5 | Technical Paper on Space Shuttle Program Range Safety Requirements | February 1973 |
| 11 | 6 | Technical Report on October Spaceflight Mission Readiness Schedules | February 1973 |
| 11 | 7 | Technical Paper on Space Transportation System – System Technology Steering Committee | May 1973 |
| 11 | 8 | Technical Paper on Manned Space Technology Office | August 1973 |
| 11 | 9 | Technical Reports on Orbiter Project Office Weekly Activity Reports | September 1973 |
| 11 | 10 | Technical Report on Visit to External Tank (ET) Facilities | September 1973 |
| 11 | 11 | Technical Paper on Space Shuttle Program Management Council | October 1973 |
| 11 | 12 | AIAA Technical Paper on Shuttle Sonic Boom – Technology and Predictions (AIAA Paper #73-1039) | October 1973 |
| 11 | 13 | Technical Report on Space Transportation System Second Meeting of the Technology Steering Committee | October 1973 |
| 11 | 14 | Technical Report of the Space Shuttle Program Office Weekly Reports | November 1973 |
| 11 | 15 | Technical Reports on the Ad-Hoc Committee for Orbiter Hypersonic Aerodynamics | 1974 |
| 11 | 16 | Technical Report on Space Shuttle Program Aerodynamic Flight Test Program | 1974 |

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| 11 | 17 | Technical Paper on Langley Shuttle Aerodynamics Operational Activities | May 1974 |
| 11 | 18 | Technical Paper on Space Shuttle Program OAST Technology Programs | 1975 |
| 11 | 19 | Technical Papers on LaRC (Langley Research Center) Memos to JSC on Space Shuttle Support | 1975 |
| 11 | 20 | Technical Reports on Aerodynamics Performance Panel | 1975 |
| 11 | 21 | Technical Reports on Ascent Flight Control And Structures Integration Panel | 1975 |
| 11 | 22 | Technical Reports on Shuttle Aeroelasticity Subpanel | 1975 |
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| 12 | 1 | Technical Papers on Langley Development Support to Space Shuttle Systems Integration | April 1975 |
| 12 | 2 | Technical Paper on Space Shuttle Wind-Tunnel Testing Program | December 1975 |
| 12 | 3 | Technical Presentation on Ames Research Center Infrared Astronomy Shuttle Payloads | March 1976 |
| 12 | 4 | Technical Paper on Ames Research Center Space Shuttle Technology Development Program | April 1976 |
| 12 | 5 | Technical Paper on Space Shuttle Models Wind Tunnel Testing | 1977 |
| 12 | 6 | Technical Paper on Shuttle OEX Program Aerothermodynamics Test Recommendations on Boundary Layer Transition and Body Flap Flow | 1978 |
| 12 | 7 | Technical Presentation on OEX (Orbiter Experiments) Status Report – Presentation to the Director | January 1978 |
| 12 | 8 | Technical Report on Orbiter Project Schedules and Status Summary | October 1978 |
| 12 | 9 | Technical Paper on Thermal Structures System – Hypersonic Vehicle Design | October 1978 |
| 12 | 10 | Technical Papers on Shuttle OEX Program Thermal Structures for Space Transportation System | October 1978 |
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| | | | |
| | | Series XII: Closed Information (Personal in Nature) | |
| 12 | 11 | NACA – Telephone Directory for Langley Aeronautical Laboratory | July 9, 1954 |
| 12 | 12 | Training Program, Personnel Recommendations for Promotion, Personal Information | |
| 12 | 13 | 19-Foot Tunnel Annual Open Golf Tournament | 1954 |
| 12 | 14 | ASEE-NASS Summer Institutes for Engineering Teaches | 1964 |
| 12 | 15 | Evaluation For Dr. Chin | 1961 |
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| | | Series XIII: NASA Contractor Reports | |
| 13 | | NASA CR-766 The Flutter of Towed Rigid Decelerators | May 1967 |
| 13 | | NASA CR-777 The Flutter of Flexible, Towed Tension Shells | May 1967 |
| 13 | | NASA CR-1365 Synthesis of Optimum Structural Designs for Conical and Tension Shell Mars Entry | August 1969 |

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| | | Capsules | |
| 13 | | NASA CR-1414 Evaluation of Configuration Changes on Optimum Structural Designs for a Mars Entry Capsule | August 1969 |
| 13 | | NASA CR-1424 Structural Optimization of Sandwich and Ring-Stiffened 120 Degree Conical Shells Subjected to External Pressure | August 1969 |
| 13 | | NASA CR-1574 Supersonic Flutter of A Thermally Stresses Flat Plate with Edge Stiffeners | May 1970 |
| 13 | | NASA CR-1721 A Study of Panel Flutter with the Exact Method of Zeydel | December 1979 |
| 13 | | NASA CR-1837 An Experimental Investigation on High Amplitude Panel Flutter | May 1971 |
| 13 | | NASA CR-2662 A Numerically Efficient Finite Element Hydroelastic Analysis | April 1976 |
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| | | Series XIII: NASA Technical Reports | |
| 13 | | NASA TR R-39 The Phenomenon of Change in Buckle Pattern in Elastic Structures | 1959 |
| 13 | | NASA TR R-256 Flutter Analysis of Flat Rectangular Panels Based on Three-Dimensional Supersonic Unsteady Potential Flow | February 1967 |
| 13 | | NASA TR R-330 Experimental and Analytical Investigation of the Flutter of Flat Build-Up Panels Under Streamwise Inplane Load | February 1970 |
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| | | Series XIII: National Advisory Committee for Aeronautics (NACA) Reports | |
| 13 | | Report 927 Appreciation and Prediction of Flying Qualities | 1949 |
| 13 | | Report 1041 Equations and Charts for the Rapid Estimation of Hinge-Moment and Effectiveness Parameters for Trailing-Edge Controls Having Leading and Trailing Edges Swept Ahead of the Mach Lines | 1951 |
| 13 | | Report 1135 Equations, Tables and Charts for Compressible Flow | 1953 |
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| | | Series XIII: NACA Research Memorandum and NASA Technical Reports | |
| 13 | | NACA RM L53G10a Investigation of Wing Flutter at Transonic Speeds for Six Systematically Varied Wing Plan Forms | August 1953 |
| 13 | | NACA RM L56L14a Investigation of Transonic Flutter Characteristics of Thin 10 Degree Sweptback Wing Having an Aspect Ratio of 4 and a Taper Ratio of 0.6 | February 1957 |
| 13 | | NACA RM L8K17a Control Effectiveness and Hinge-Moment Measurements at a Mach Number of 1.9 of a Nose Flap and Trailing-Edge Flap on a Highly Tapered Low-Aspect-Ration Wing | January 1949 |
| 13 | | NACA RM L55B15 Effects of a Detached Tab on the Hinge-Moment and Effectiveness Characteristics of an Unswept Trailing-Edge Control on a 60 Degree Delta | April 1955 |

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| | | Wing at Mach Numbers from 0.75 to 1.96 | |
| 13 | | NACA RM L9H26 Control Effectiveness and Hinge-Moment Characteristics of a Tip Control Surface on a Low-Aspect-Ratio Pointed Wing at a Mach Number of 1.9 | October 1949 |
| 13 | | NACA RM L9H05 Control Effectiveness Load and Hinge-Moment Characteristics of a Tip Control Surface on a Delta Wing at a Mach Number of 1.9 | October 1949 |
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