

## Subject Index

### Aircraft Technology, Conventional, STOL/VTOL

#### Aerodynamics

- Hyperballistic Vehicle Dynamics A82-097  
 Calculations of Hypersonic Flows Over a Series of Indented Nosedips A82-039  
 Effect of Radial Fins on Base Drag of an Axisymmetric Body at Low Speeds A82-017

#### Aeroelasticity

- Dynamic Simulation through Analytic Extrapolation A82-032

#### Handling Qualities, Stability and Control

- Space Shuttle Orbiter Static Stability and Control Derivatives Obtained from Wind-Tunnel and Flight Tests A82-002

### Energy

#### Combustion

- Assessment of a Modular Ramjet Combustor Model A82-086

#### Lasers

- Concepts for, and Utility of, Future Space Central-Power Stations A82-020

#### Microwaves

- Tropospheric Effects of Satellite Power Systems A82-091

#### Photovoltaic Power

- SERT II 1979-1981 Tests: Ion Thruster Performance and Durability A82-049

#### Power Conditioning

- Simplified Power Supplies for Ion Thrusters A82-089

#### Solar Power Satellites

- Parasitic Current Losses Due to Solar-Electric Propulsion Generated Plasmas A82-026

#### Solar Thermal Power

- Tropospheric Effects of Satellite Power Systems A82-091

### Fluid Dynamics

#### Aeroacoustics

- Helmholtz Resonator Burners: Analysis for Response Function Measurements A82-038

#### Boundary-Layer Stability and Transition

- Mach 6 Experiments of Transition on a Cone at Angle of Attack A82-081  
 Shuttle Boundary-Layer Transition Due to Distributed Roughness and Surface Cooling A82-080

#### Computational Methods

- Analysis of Combustion in Recirculating Flow for Rocket Exhausts in Supersonic Streams A82-106

- Plasma Propagation Simulation Near an Electrically Propelled Spacecraft A82-088  
 Calculations of Hypersonic Flows Over a Series of Indented Nosedips A82-039  
 Three-Dimensional Hypersonic Laminar, Transitional, and/or Turbulent Shock-Layer Flows A82-016  
 Three-Dimensional Viscous Flowfield Computations in a Streamline Coordinate System A82-007

#### Jets, Wakes, and Viscid-Inviscid Flow Interactions

- Influence of Support Systems on the Aerodynamics of an Inclined Ogive Cylinder A82-043  
 Dynamic Simulation through Analytic Extrapolation A82-032  
 Effect of Radial Fins on Base Drag of an Axisymmetric Body at Low Speeds A82-017

#### Multiphase Flows

- Thermodynamics of Similar Particle-Laden Gas Flows in Convergent-Divergent Nozzles A82-074

#### Nonsteady Aerodynamics

- Analysis of Static and Dynamic Wind Tunnel Tests of the Shuttle Cable Trays A82-083  
 Unsteady Aerodynamics and Motions of the Pioneer Venus Probes A82-082  
 Aeroelastic Stability of Space Shuttle Protuberances A82-062  
 Dynamic Simulation through Analytic Extrapolation A82-032  
 Disturbance to the Launch of Fin-Stabilized Projectiles A82-005

#### Nozzle and Channel Flow

- Thermodynamics of Similar Particle-Laden Gas Flows in Convergent-Divergent Nozzles A82-074

#### Plasmadynamics and MHD

- Ion Thruster Charge-Exchange Plasma Flow A82-108  
 Plasma Propagation Simulation Near an Electrically Propelled Spacecraft A82-088  
 Fluid Model of Plasma Outside a Hollow Cathode Neutralizer A82-069  
 Ignitor Plug Operation in a Pulsed Plasma Thruster A82-051  
 New Type of Target for the Measurement of Impulse Bits of Pulsed Plasma Thrusters A82-050  
 SERT II 1979-1981 Tests: Plasma Thrust and Neutralizer Measurements A82-048

#### Rarefied Flows

- Ion Thruster Charge-Exchange Plasma Flow A82-108  
 Fluid Model of Plasma Outside a Hollow Cathode Neutralizer A82-069

#### Reactive Flows

- Analysis of Combustion in Recirculating Flow for Rocket Exhausts in Supersonic Streams A82-106

### Shock Waves and Detonations

- Gas Gun Study of Selected Buffers for Spall Fracture Reduction in Missile Materials A82-076  
 Experimental Investigation of Pressure Oscillations in a Side Dump Ramjet Combustor A82-008

#### Subsonic Flow

- Effect of Radial Fins on Base Drag of an Axisymmetric Body at Low Speeds A82-017

#### Supersonic and Hypersonic Flow

- Experimental Forces and Moments on Cone-Derived Waveriders for  $M = 3$  to 5 A82-111  
 Hyperballistic Vehicle Dynamics A82-097  
 Analysis of Static and Dynamic Wind Tunnel Tests of the Shuttle Cable Trays A82-083  
 Mach 6 Experiments of Transition on a Cone at Angle of Attack A82-081  
 Shuttle Boundary-Layer Transition Due to Distributed Roughness and Surface Cooling A82-080  
 An Experimental Study of Hypersonic Cavity Flow A82-040  
 Calculations of Hypersonic Flows Over a Series of Indented Nosedips A82-039  
 Three-Dimensional Hypersonic Laminar, Transitional, and/or Turbulent Shock-Layer Flows A82-016  
 Three-Dimensional Viscous Flowfield Computations in a Streamline Coordinate System A82-007  
 Transonic Flow  
 Subsonic and Transonic Roll Damping Measurements on Basic Finner A82-015  
 Viscous Nonboundary-Layer Flows  
 Three-Dimensional Hypersonic Laminar, Transitional, and/or Turbulent Shock-Layer Flows A82-016

### Interdisciplinary Topics

#### Aerospace Technology Utilization

- Worst Case Earth Charging Environment A82-092

#### Analytical and Numerical Methods

- Hyperballistic Vehicle Dynamics A82-097  
 Hovering Motion of a Friction-Driven Gyroscopic Mass A82-094  
 Analysis of Static and Dynamic Wind Tunnel Tests of the Shuttle Cable Trays A82-083  
 Measurement of Nutation Parameters for the Geostationary Telecommunication Satellite Sirio A82-019

#### Astrodynamics

- Improved Solution of Optimal Impulsive Fixed-Timed Rendezvous A82-100  
 Space Telescope Orbital Viewing Constraints A82-024  
 Orbit Selection for the Stanford Relativity Gyroscope Experiment A82-011

**Atmospheric and Space Sciences**

- Worst Case Earth Charging Environment  
A82-092
- Tropospheric Effects of Satellite Power Systems  
A82-091
- Hydrogen Chloride Measurements in the Space Shuttle Exhaust Cloud---First Launch, April 12, 1981  
A82-071
- Coronal Observations from the Solar Maximum Mission Satellite  
A82-067
- Maximum Re-entry Drag Deceleration Revisited  
A82-059
- Venusian Probes Subsonic Drag Determination from Flight Data  
A82-028
- Environmental Effects of Space Systems  
A82-003

**Celestial Mechanics**

- Orbit Selection for the Stanford Relativity Gyroscope Experiment  
A82-011

**Computer Communications, Information Processing and Software**

- Measurement of Nutation Parameters for the Geostationary Telecommunication Satellite Sirio  
A82-019

**Computer Science**

- Performance of the Hard X-Ray Imaging Spectrometer  
A82-047

**Computer Software**

- Computer Controlled Operation of Ultraviolet Spectrometer and Polarimeter on Solar Maximum Mission Satellite  
A82-037
- Measurement of Nutation Parameters for the Geostationary Telecommunication Satellite Sirio  
A82-019

**Research Facilities and Instrumentation**

- Design and Performance of the Solar Maximum Mission Hard X-Ray Burst Spectrometer  
A82-073
- Erosion Measurements on Quasisteady Magnetoplasmadynamic Thrusters  
A82-068
- Coronal Observations from the Solar Maximum Mission Satellite  
A82-067
- Initial Results of the Japanese Broadcast Satellite (BSE, "Yuri") Experiment  
A82-066

**Safety**

- Hydrogen Chloride Measurements in the Space Shuttle Exhaust Cloud---First Launch, April 12, 1981  
A82-071

**Satellite Communication Systems (including Terrestrial Stations)**

- Thermal Design of a Thermoelectrically Cooled Low-Noise Amplifier  
A82-079
- Initial Results of the Japanese Broadcast Satellite (BSE, "Yuri") Experiment  
A82-066

**Sensor Systems**

- Design and Performance of the Solar Maximum Mission Hard X-Ray Burst Spectrometer  
A82-073
- Performance of the Hard X-Ray Imaging Spectrometer  
A82-047

**Space Processing**

- Hydrogen Outgassing Considerations for an Orbiting Aluminum Molecular Shield  
A82-036

**State Estimation**

- Orbit Selection for the Stanford Relativity Gyroscope Experiment  
A82-011

**Launch Vehicle and Missile (LV/M) Technology****Aerodynamic Heating and Ablation**

- MX Missile Thermal Mapping and Surface Flow Results  
A82-042

**Aerodynamics**

- Experimental Forces and Moments on Cone-Derived Waveriders for  $M = 3$  to 5  
A82-111
- Analysis of Combustion in Recirculating Flow for Rocket Exhausts in Supersonic Streams  
A82-106
- Liftoff Ignition Overpressure--A Correlation  
A82-105
- Development of Analytical and Experimental Techniques for Determining Store Airload Distributions  
A82-096
- Evaluation of Component Buildup Methods for Missile Aerodynamic Predictions  
A82-095
- Aeroelastic Stability of Space Shuttle Protuberances  
A82-062
- Influence of Support Systems on the Aerodynamics of an Inclined Ogive Cylinder  
A82-043
- Sabot Design Optimization  
A82-041
- Experimental Aerodynamic Characteristics of Missiles with Square Cross Sections  
A82-033
- Comparison of Analytical and Experimental Supersonic Aerodynamic Characteristics of a Forward Control Missile  
A82-031
- Control Characteristics for Wrap-Around Fins on Cruise Missile Configurations  
A82-030
- Wing-Alone Aerodynamic Characteristics at High Angle of Attack  
A82-029
- Venusian Probes Subsonic Drag Determination from Flight Data  
A82-028
- Approximate Calculation of Aerodynamic Coefficients for Rotating Slender Bodies at 90 deg Incidence  
A82-014
- Aerodynamic Properties of an Advanced Indirect Fire System (AIFS) Projectile  
A82-006
- Disturbance to the Launch of Fin-Stabilized Projectiles  
A82-005

**Configurational Design**

- Evaluation of Component Buildup Methods for Missile Aerodynamic Predictions  
A82-095
- Advanced Rocket Propulsion Technology Assessment for Future Space Transportation  
A82-063
- Sabot Design Optimization  
A82-041
- Aerodynamic Properties of an Advanced Indirect Fire System (AIFS) Projectile  
A82-006

**Dynamics and Control**

- Subsonic and Transonic Roll Damping Measurements on Basic Finner  
A82-015
- Disturbance to the Launch of Fin-Stabilized Projectiles  
A82-005

**Launch Vehicle Systems**

- Liftoff Ignition Overpressure--A Correlation  
A82-105

- Advanced Rocket Propulsion Technology Assessment for Future Space Transportation  
A82-063
- Effect of Storable Propellants on Single-Stage Earth-to-Orbit Vehicles  
A82-058

**Missile Systems**

- Evaluation of Component Buildup Methods for Missile Aerodynamic Predictions  
A82-095
- Gas Gun Study of Selected Buffers for Spall Fracture Reduction in Missile Materials  
A82-076
- Aerodynamic Properties of an Advanced Indirect Fire System (AIFS) Projectile  
A82-006

**Propulsion and Propellant Systems**

- Thrust Imbalance of the Space Shuttle Solid Rocket Motors  
A82-104
- Lead Aliphatic Mono- and Dicarboxylates as Ballistic Modifiers  
A82-093
- Advanced Rocket Propulsion Technology Assessment for Future Space Transportation  
A82-063
- Effect of Storable Propellants on Single-Stage Earth-to-Orbit Vehicles  
A82-058
- Ideal Ramjet: Optimum  $M$  for Fuel Limit and Material Limit  
A82-057
- Development of Liquid Oxygen and Hydrogen Turbopumps for the LE-5 Rocket Engine  
A82-046
- Shuttle Subscale Ablative Nozzle Tests  
A82-022
- Advanced Space Motor Demonstration  
A82-010
- Ballistic Optimization of the Star Grain Configuration  
A82-009

**Structural Design (including Loads)**

- Structural Service Life Estimate for a Reduced Smoke Rocket Motor  
A82-107
- Development of Analytical and Experimental Techniques for Determining Store Airload Distributions  
A82-096
- Vibroacoustic Modeling for Space Shuttle Orbiter Thermal Protection System  
A82-053
- Elevated Temperature Structural Testing of Advanced Missiles  
A82-021

**Subsystem Design and Ground Support**

- Space Shuttle Solid Rocket Booster De-watering System  
A82-072

**Testing, Flight and Ground**

- Liftoff Ignition Overpressure--A Correlation  
A82-105
- Thrust Imbalance of the Space Shuttle Solid Rocket Motors  
A82-104
- Development of Analytical and Experimental Techniques for Determining Store Airload Distributions  
A82-096
- Integral Rocket/Ramjet Propulsion---Flight Data Correlation and Analysis Techniques  
A82-065
- MX Missile Thermal Mapping and Surface Flow Results  
A82-042
- Vandenberg Ground Support Equipment for the Space Shuttle  
A82-035
- Venusian Probes Subsonic Drag Determination from Flight Data  
A82-028
- Elevated Temperature Structural Testing of Advanced Missiles  
A82-021
- Subsonic and Transonic Roll Damping Measurements on Basic Finner  
A82-015
- Advanced Space Motor Demonstration  
A82-010

## Vibration

- Nonlinear Dynamic Phenomena in the Space Shuttle Thermal Protection System  
A82-054
- Vibroacoustic Modeling for Space Shuttle Orbiter Thermal Protection System  
A82-053

## Marine Technology

### Vessel Systems, Submerged and Surface

- Space Shuttle Solid Rocket Booster Dewatering System  
A82-072

## Propulsion

### Airbreathing Propulsion

- Assessment of a Modular Ramjet Combustor Model  
A82-086
- Integral Rocket/Ramjet Propulsion---Flight Data Correlation and Analysis Techniques  
A82-065
- Ignition and Combustion of Boron Particles and Clouds  
A82-061
- Ideal Ramjet: Optimum M for Fuel Limit and Material Limit  
A82-057

### Combustion and Combustor Designs

- Rotating Valve for Velocity-Coupled Combustion Response Measurements  
A82-087
- Assessment of a Modular Ramjet Combustor Model  
A82-086
- Ignition and Combustion of Boron Particles and Clouds  
A82-061
- Experimental Investigation of Pressure Oscillations in a Side Dump Ramjet Combustor  
A82-008

### Combustion Stability, Ignition, and Detonation

- Rotating Valve for Velocity-Coupled Combustion Response Measurements  
A82-087
- MDT-2A Teflon Pulsed Plasma Thruster  
A82-078
- Helmholtz Resonator Burners: Analysis for Response Function Measurements  
A82-038
- Experimental Investigation of Pressure Oscillations in a Side Dump Ramjet Combustor  
A82-008

### Electric and Advanced Space Propulsion

- Baffle Aperture Design Model for Electron Bombardment Thrusters  
A82-110
- Microwave Plasma Generational of Hydrogen Atoms for Rocket Propulsion  
A82-109
- Ion Thruster Charge-Exchange Plasma Flow  
A82-108
- Advanced Propulsion for Future Planetary Spacecraft  
A82-102
- Simplified Power Supplies for Ion Thrusters  
A82-089
- Plasma Propagation Simulation Near an Electrically Propelled Spacecraft  
A82-088
- MDT-2A Teflon Pulsed Plasma Thruster  
A82-078
- Fluid Model of Plasma Outside a Hollow Cathode Neutralizer  
A82-069
- Erosion Measurements on Quasisteady Magnetoplasmadynamic Thrusters  
A82-068
- An Optimization of the Formation of Negative Ions  
A82-056
- Performance of a Magnetic Multipole Line-Cusp Argon Ion Thruster  
A82-052
- Ignitor Plug Operation in a Pulsed Plasma Thruster  
A82-051

New Type of Target for the Measurement of Impulse Bits of Pulsed Plasma Thrusters  
A82-050

- SERT II 1979-1981 Tests: Ion Thruster Performance and Durability  
A82-049
- SERT II 1979-1981 Tests: Plasma Thrust and Neutralizer Measurements  
A82-048
- Results of the Mission Profile Life Test---First Test Segment: Thruster J1  
A82-045
- Magnetoelectrostatic Thruster Physical Geometry Tests  
A82-027
- Parasitic Current Losses Due to Solar-Electric Propulsion Generated Plasmas  
A82-026
- Interaction between the RIT 10 Exhaust and Negatively Charged Surfaces  
A82-025
- Concepts for, and Utility of, Future Space Central-Power Stations  
A82-020

### Engine Performance

- Integral Rocket/Ramjet Propulsion---Flight Data Correlation and Analysis Techniques  
A82-065
- Ideal Ramjet: Optimum M for Fuel Limit and Material Limit  
A82-057
- Performance of a Magnetic Multipole Line-Cusp Argon Ion Thruster  
A82-052
- Shuttle Subscale Ablative Nozzle Tests  
A82-022

### Environmental Effects

- Structural Service Life Estimate for a Reduced Smoke Rocket Motor  
A82-107
- Parametric Study of Acceleration Effects on Burning Rates of Metallized Solid Propellants  
A82-103
- Hydrogen Chloride Measurements in the Space Shuttle Exhaust Cloud---First Launch, April 12, 1981  
A82-071
- Interaction between the RIT 10 Exhaust and Negatively Charged Surfaces  
A82-025
- Environmental Effects of Space Systems  
A82-003

### Fuels and Propellants, Properties of

- Parametric Study of Acceleration Effects on Burning Rates of Metallized Solid Propellants  
A82-103
- Lead Aliphatic Mono- and Dicarboxylates as Ballistic Modifiers  
A82-093
- Rotating Valve for Velocity-Coupled Combustion Response Measurements  
A82-087
- Ignition and Combustion of Boron Particles and Clouds  
A82-061
- Ballistic Optimization of the Star Grain Configuration  
A82-009

### Liquid Rocket Engines and Missile Systems

- Space Shuttle Orbit Maneuvering Subsystem Performance Status Report  
A82-101
- Visible Emission from Space Shuttle Main Engine Mach Disks  
A82-077
- Evaluation of Bipropellant Pressurization Concepts for Spacecraft  
A82-064
- Effect of Storable Propellants on Single-Stage Earth-to-Orbit Vehicles  
A82-058
- Development of Liquid Oxygen and Hydrogen Turbopumps for the LE-5 Rocket Engine  
A82-046

### Nuclear Propulsion Systems

- Advanced Propulsion for Future Planetary Spacecraft  
A82-102

### Propulsion for Marine Application

- Space Shuttle Solid Rocket Booster Dewatering System  
A82-072

## Solid and Hybrid Rocket Engines

- Structural Service Life Estimate for a Reduced Smoke Rocket Motor  
A82-107
- Thrust Imbalance of the Space Shuttle Solid Rocket Motors  
A82-104
- Parametric Study of Acceleration Effects on Burning Rates of Metallized Solid Propellants  
A82-103
- Helmholtz Resonator Burners: Analysis for Response Function Measurements  
A82-038
- Shuttle Subscale Ablative Nozzle Tests  
A82-022
- Advanced Space Motor Demonstration  
A82-010

## Spacecraft Technology

### Attitude Determination

- Approximate Calculation of Aerodynamic Coefficients for Rotating Slender Bodies at 90 deg Incidence  
A82-014

### Configurational and Structural Design (including Loads)

- Accuracy Potentials for Large Space Antenna Reflectors with Passive Structure  
A82-044

### Data Sensing, Presentation, and Transmission

- Comparison of Shuttle Flight Pressure Data to Computational and Wind-Tunnel Results  
A82-084
- Design and Performance of the Solar Maximum Mission Hard X-Ray Burst Spectrometer  
A82-073
- Coronal Observations from the Solar Maximum Mission Satellite  
A82-067
- Performance of the Hard X-Ray Imaging Spectrometer  
A82-047
- Computer Controlled Operation of Ultraviolet Spectrometer and Polarimeter on Solar Maximum Mission Satellite  
A82-037

### Dynamics and Control

- Accuracy Potentials for Large Space Antenna Reflectors with Passive Structure  
A82-044

### Earth-Orbital Trajectories

- Improved Solution of Optimal Impulsive Fixed-Timed Rendezvous  
A82-100
- Synergetic Maneuvering of Winged Spacecraft for Orbital Plane Change  
A82-099
- Geodetic Latitude of a Point in Space  
A82-075
- Regularized Integration of Gravity-Perturbed Trajectories---A Numerical Efficiency Study  
A82-060
- Space Telescope Orbital Viewing Constraints  
A82-024
- Obtaining Geostationary Orbit from an Off-Nominal Low Transfer Orbit  
A82-013

### Electric Power

- Microwave Plasma Generational of Hydrogen Atoms for Rocket Propulsion  
A82-109
- Simplified Power Supplies for Ion Thrusters  
A82-089

### Entry Vehicle Aerodynamic Heating

- Entry Vehicle Performance in Low-Heat-Load Trajectories  
A82-098
- Shuttle Boundary-Layer Transition Due to Distributed Roughness and Surface Cooling  
A82-080

**Entry Vehicle Aerodynamics**

- Experimental Forces and Moments on Cone-Derived Waveriders for  $M = 3$  to 5  
A82-111
- An Experimental Study of Hypersonic Cav-ity Flow  
A82-040
- Approximate Calculation of Aerodynamic Coefficients for Rotating Slender Bodies at 90 deg Incidence  
A82-014
- Three-Dimensional Viscous Flowfield Computations in a Streamline Coordinate System  
A82-007

**Entry Vehicle Configuration Design**

- Entry Vehicle Performance in Low-Heat-Load Trajectories  
A82-098

**Entry Vehicle Dynamics and Control**

- Unsteady Aerodynamics and Motions of the Pioneer Venus Probes  
A82-082
- Maximum Re-entry Drag Deceleration Re-visited  
A82-059

**Entry Vehicle Mission Studies and Flight Mechanics**

- Synergetic Maneuvering of Winged Space-craft for Orbital Plane Change  
A82-099
- Entry Vehicle Performance in Low-Heat-Load Trajectories  
A82-098
- Maximum Re-entry Drag Deceleration Re-visited  
A82-059

**Entry Vehicle Structural Design**

- Multiwall TPS---An Emerging Concept  
A82-070

**Entry Vehicle Subsystems**

- Nonlinear Dynamic Phenomena in the Space Shuttle Thermal Protection System  
A82-054

**Entry Vehicle Testing, Flight and Ground**

- Comparison of Shuttle Flight Pressure Data to Computational and Wind-Tunnel Re-sults  
A82-084

**Entry Vehicles and Landers**

- Unsteady Aerodynamics and Motions of the Pioneer Venus Probes  
A82-082

**Lunar and Interplanetary Trajectories**

- Voyager 1 Saturn Targeting Strategy  
A82-012

**Mission Analysis**

- Advanced Propulsion for Future Planetary Spacecraft  
A82-102
- Space Telescope Orbital Viewing Constraints  
A82-024
- Orbital Phasings of Soviet Ocean Surveil-lance Satellites  
A82-023
- Obtaining Geostationary Orbit from an Off-Nominal Low Transfer Orbit  
A82-013

**Missions and Economics**

- Concepts for, and Utility of, Future Space Central-Power Stations  
A82-020

**Navigation, Guidance, and Flight-Path Control**

- Orbital Phasings of Soviet Ocean Surveil-lance Satellites  
A82-023

- Obtaining Geostationary Orbit from an Off-Nominal Low Transfer Orbit  
A82-013
- Nonlinear Dynamic Phenomena in the Space Shuttle Thermal Protection System  
A82-054

- Voyager 1 Saturn Targeting Strategy  
A82-012

**Propulsion Systems Integration**

- Space Shuttle Orbit Maneuvering Subsystem Performance Status Report  
A82-101
- The MARK-II Propulsion Module  
A82-085
- Evaluation of Bipropellant Pressurization Concepts for Spacecraft  
A82-064
- SERT II 1979-1981 Tests: Ion Thruster Performance and Durability  
A82-049
- SERT II 1979-1981 Tests: Plasma Thrust and Neutralizer Measurements  
A82-048
- Development of Liquid Oxygen and Hydro-gen Turbopumps for the LE-5 Rocket Engine  
A82-046

**Simulation**

- Geodetic Latitude of a Point in Space  
A82-075

**Systems**

- Worst Case Earth Charging Environment  
A82-092

**Temperature Control**

- Multiwall TPS---An Emerging Concept  
A82-070
- Thermal Management for Large Space Plat-forms  
A82-055
- Shutdown Characteristics of an Axial-Groove Liquid-Trap Heat-Pipe Thermal Diode  
A82-034
- OTS:Two Years of Thermal Control Expe-rience in Orbit  
A82-004

**Testing, Flight and Ground**

- Comparison of Shuttle Flight Pressure Data to Computational and Wind-Tunnel Re-sults  
A82-084
- Geodetic Latitude of a Point in Space  
A82-075
- Vandenberg Ground Support Equipment for the Space Shuttle  
A82-035

**Structural Mechanics and Materials****Aeroelasticity and Hydroelasticity**

- Aeroelastic Stability of Space Shuttle Pro-tuberances  
A82-062

**Materials, Properties of**

- Gas Gun Study of Selected Buffers for Spall Fracture Reduction in Missile Materials  
A82-076
- Hydrogen Outgassing Considerations for an Orbiting Aluminum Molecular Shield  
A82-036

**Structural Design**

- Multiwall TPS---An Emerging Concept  
A82-070
- Accuracy Potentials for Large Space Anten-na Reflectors with Passive Structure  
A82-044

**Structural Dynamics**

- Large Modal Survey Testing Using the Ibrahim Time Domain Identification Technique  
A82-090

**Structural Stability**

- Accuracy Potentials for Large Space Anten-na Reflectors with Passive Structure  
A82-044

**Structural Statics**

- Elevated Temperature Structural Testing of Advanced Missiles  
A82-021

**Thermal Stresses**

- Accuracy Potentials for Large Space Anten-na Reflectors with Passive Structure  
A82-044

**Thermophysics and Thermochemistry****Ablation, Pyrolysis, Thermal Decomposition and Degradation (including Refractories)**

- Thermal Decomposition Kinetics of Poly-butadiene Binders  
A82-018
- The Initial Development of Ablation Heat Protection, An Historical Perspective (His-tory of Key Technologies)  
A82-001

**Experimental Methods of Diagnostics**

- The Initial Development of Ablation Heat Protection, An Historical Perspective (His-tory of Key Technologies)  
A82-001

**Heat Conduction**

- The Initial Development of Ablation Heat Protection, An Historical Perspective (His-tory of Key Technologies)  
A82-001

**Heat Pipes**

- Shutdown Characteristics of an Axial-Groove Liquid-Trap Heat-Pipe Thermal Diode  
A82-034

**Radiation and Radiative Heat Transfer**

- Visible Emission from Space Shuttle Main Engine Mach Disks  
A82-077

**Thermal Control**

- Thermal Design of a Thermoelectrically Cooled Low-Noise Amplifier  
A82-079
- Thermal Management for Large Space Plat-forms  
A82-055
- OTS:Two Years of Thermal Control Expe-rience in Orbit  
A82-004

**Thermal Modeling and Analysis**

- Thermal Design of a Thermoelectrically Cooled Low-Noise Amplifier  
A82-079

**Thermochemistry and Chemical Kinetics**

- Microwave Plasma Generation of Hydro-gen Atoms for Rocket Propulsion  
A82-109
- Visible Emission from Space Shuttle Main Engine Mach Disks  
A82-077
- Thermal Decomposition Kinetics of Poly-butadiene Binders  
A82-018

**Thermophysical Properties of Matter**

- Ballistic Optimization of the Star Grain Configuration  
A82-009