JOURNAL OF SPACECRAFT AND ROCKETS
Vol. 44, No. 6, November–December 2007

2007 *Journal of Spacecraft and Rockets* Index

How to Use the Index

In the Subject Index, pages 1331–1336, each technical paper is listed under a maximum of three appropriate headings. Note the locating number in boldface type preceding each paper title, and use that number to find the paper in the Chronological Index. The Author Index, pages 1337–1338, lists all authors associated with a given technical paper. The locating numbers are identical to those in the Subject Index. The Chronological Index, pages 1339–1343, also lists all papers by their locating numbers. This listing contains titles, authors and their affiliations, and volume, issue number, and page where the paper appeared. It also gives the AIAA paper number, if any, on which the article was based. Comments, Replies, and Errata are listed directly beneath the paper to which they refer. If the paper to which they refer was published prior to 2007, that paper also will appear in both the Subject and Chronological Indexes. Authors of Comments also are listed in the Author Index.

Subject Index

AIRCRAFT TECHNOLOGY, CONVENTIONAL, STOL/VTOL

Aerodynamics

A07-034 In-Flight Subsonic Lift and Drag Characteristics Unique to Blunt-Based Lifting Reentry Vehicles
A07-090 Wind-Tunnel Results of the B-52B with the X-43A Stack
A07-061 Experimental Evaluation of a High Fineness Ratio Body with Drag Brakes
A07-129 Assessment of Wind Tunnel and Computational Fluid Dynamics Transonic Base Pressure Using Flight Data

Aerospace Plane

A07-107 Initial Sizing and Reentry Trajectory Design Methodologies for Dual-Mode-Propulsion Reusable Aerospace Vehicles
A07-042 Nonlinear Longitudinal Dynamical Model of an Air-Breathing Hypersonic Vehicle

Configuration Design

A07-048 Experimental Investigations of an Avionics Cooling System for Aerospace Vehicle

Flight Mechanics

A07-030 Algorithm for Missile Detection from Radar Data
A07-029 Heliocentric Solar Sail Orbit Transfers with Locally Optimal Control Laws

Flow Control

A07-065 Numerical Studies of Magnetohydrodynamic Flow Control Considering Real Wall Electrical Conductivity
A07-105 Numerical Investigation of Transitional Supersonic Base Flows with Flow Control

Noise

A07-062 Identification of Overpressure Sources at Launch Vehicle Liftoff Using an Inverse Method
A07-016 Chamber Core Structures for Fairing Acoustic Mitigation

Performance

A07-034 In-Flight Subsonic Lift and Drag Characteristics Unique to Blunt-Based Lifting Reentry Vehicles

Structural Materials

A07-130 Polymer Nanostructured Materials for Propulsion Systems
A07-079 Advanced Self-Deployable Structures for Space Applications

Testing, Flight and Ground

A07-129 Assessment of Wind Tunnel and Computational Fluid Dynamics Transonic Base Pressure Using Flight Data

COMPUTING, INFORMATION, AND COMMUNICATION

Avionics Systems

A07-037 Determination of Atmospheric Densities from Reentry Flight Data

ENERGY

Batteries

A07-095 Thermal Design and Analysis of a Battery Module for a Remote Sensing Satellite

Flywheels

A07-097 Sizing/Optimization of a Small Satellite Energy Storage and Attitude Control System

FLUID DYNAMICS

Aeroacoustics

A07-062 Identification of Overpressure Sources at Launch Vehicle Liftoff Using an Inverse Method

Boundary Layers and Heat Transfer-Turbulent

A07-135 Assessment of Two Low-Reynolds-Number *k-e* Models in Turbulent Boundary Layers with Surface Roughness

Computational Fluid Dynamics

A07-135 Assessment of Two Low-Reynolds-Number *k-e* Models in Turbulent Boundary Layers with Surface Roughness
A07-004 CFD Contribution to the Aerodynamic Data Set of the Vega Launcher
A07-061 Experimental Evaluation of a High Fineness Ratio Body with Drag Brakes
A07-105 Numerical Investigation of Transitional Supersonic Base Flows with Flow Control
A07-089 Computational Analysis of Automated Transfer Vehicle Reentry Flow and Explosion Assessment
A07-063 Plume Impingement Analysis for Aeolus Spacecraft and Gas/Surface Interaction Models
A07-005 Centered and Upwind Multigrid Turbulent Flow Simulations of Launch Vehicle Configurations
A07-038 Engine Thrust Effects on Rocket Aerodynamic Characteristics at High Angle of Attack

Hypersonic Flow

A07-088 Aerothermodynamic Optimization of Reentry Heat Shield Shapes for a Crew Exploration Vehicle
A07-037 Determination of Atmospheric Densities from Reentry Flight Data
A07-128 Gas-Kinetic Scheme for Continuum and Near-Continuum Hypersonic Flows
A07-108 Aerogravity Assist Maneuvers: Coupled Trajectory and Vehicle Shape Optimization

Inlet, Nozzle, Diffuser, and Channel Flows

A07-040 Analysis of Increased Compression Through Area Constriction on Ejector-Rocket Performance

Jets, Wakes, and Viscid-Inviscid Flow Interactions

A07-039 Characteristics of a Central Bleed Jet in Supersonic Axisymmetric Base Flow

Multiphase Flows

A07-091 Thermal Gauging and Rebalancing of Propellant in Multiple Tank Satellites

Plasmadynamics and MHD

A07-065 Numerical Studies of Magnetohydrodynamic Flow Control Considering Real Wall Electrical Conductivity

Rarefied Flows

A07-128 Gas-Kinetic Scheme for Continuum and Near-Continuum Hypersonic Flows

A07-137 Collisionless Gas Expanding into Vacuum
A07-033 Direct Simulation Monte Carlo Simulations of Ballute Aerothermodynamics Under Hypersonic Rarefied Conditions
A07-063 Plume Impingement Analysis for Aeolus Spacecraft and Gas/Surface Interaction Models
A07-064 Theoretical and Numerical Study of Free Molecular-Flow Problems
A07-127 Aeroheating Analysis for the Mars Reconnaissance Orbiter with Comparison to Flight Data

Reacting Flows and Combustion

A07-066 Heat Flux Measurements for a GO_2/GH_2 Single-Element, Shear Injector

Separated Flows

A07-039 Characteristics of a Central Bleed Jet in Supersonic Axisymmetric Base Flow
A07-104 Flow Oscillation Characteristics in Conical Cavity with Multiple Disks
A07-061 Experimental Evaluation of a High Fineness Ratio Body with Drag Brakes
A07-129 Assessment of Wind Tunnel and Computational Fluid Dynamics Transonic Base Pressure Using Flight Data

Subsonic Flow

A07-034 In-Flight Subsonic Lift and Drag Characteristics Unique to Blunt-Based Lifting Reentry Vehicles
A07-135 Assessment of Two Low-Reynolds-Number *k-e* Models in Turbulent Boundary Layers with Surface Roughness

Supersonic Flow

A07-033 Direct Simulation Monte Carlo Simulations of Ballute Aerothermodynamics Under Hypersonic Rarefied Conditions
A07-008 Force Measurement in a Ludwieg Tube Tunnel
A07-039 Characteristics of a Central Bleed Jet in Supersonic Axisymmetric Base Flow
A07-104 Flow Oscillation Characteristics in Conical Cavity with Multiple Disks
A07-105 Numerical Investigation of Transitional Supersonic Base Flows with Flow Control

Transonic Flow

A07-005 Centered and Upwind Multigrid Turbulent Flow Simulations of Launch Vehicle Configurations

Unsteady Flows

A07-008 Force Measurement in a Ludwieg Tube Tunnel

GUIDANCE, CONTROL, AND DYNAMICS TECHNOLOGY

Aircraft Dynamics

A07-042 Nonlinear Longitudinal Dynamical Model of an Air-Breathing Hypersonic Vehicle

Aircraft Stability and Control

A07-042 Nonlinear Longitudinal Dynamical Model of an Air-Breathing Hypersonic Vehicle

Astrodynamics

A07-069 Earth–Moon Triangular Libration Point Spacecraft Formations
A07-120 Application of Accelerometer Data to Atmospheric Modeling During Mars Aerobraking Operations
A07-092 Improved Corrections Process for Constrained Trajectory Design in the *n*-Body Problem
A07-101 Building Interplanetary Trajectories with Multiple Gravity-Assisted Maneuvers
A07-117 Storm-Time Equatorial Density Enhancements Observed by CHAMP and GRACE
A07-075 Performance Comparison of Stochastic Search Algorithms on the Interplanetary Gravity-Assist Trajectory Problem
A07-027 Coast-Arc Orbit Stability During Spiral-Down Trajectories About Irregularly Shaped Bodies
A07-024 Optimal Reconfiguration of Satellites in Formation
A07-070 Autonomous Formation Flying for the PRISMA Mission
A07-051 *N*-Impulse Orbit Transfer Using Genetic Algorithms
A07-043 Sigma Point Filtering for Sequential Orbit Estimation and Prediction
A07-124 Comparison of TIMED Satellite Drag with Solar EUV Experiment (SEE) Measurements

Autonomous Vehicles

A07-017 Laboratory Experimentation of Autonomous Spacecraft Approach and Docking to a Collaborative Target
A07-093 Navigating the Road to Autonomous Orbital Rendezvous

Control System Design

A07-098 Quasi-Static Optics-Based Surface Control of an In-Plane Actuated Membrane Mirror
A07-084 Solar-Sail Attitude Control Design for a Flight Validation Mission
A07-057 Thrust Vector Control Analysis and Design for Solar-Sail Spacecraft

Control System Effectors

A07-097 Sizing/Optimization of a Small Satellite Energy Storage and Attitude Control System

Dynamics

A07-092 Improved Corrections Process for Constrained Trajectory Design in the *n*-Body Problem
A07-110 Passive Stability Design for Solar Sail on Displaced Orbits

Flight Mechanics

A07-106 Analytic Model of Catastrophic Yaw
A07-120 Application of Accelerometer Data to Atmospheric Modeling During Mars Aerobraking Operations
A07-035 Mars Exploration Entry, Descent, and Landing Challenges
A07-029 Heliocentric Solar Sail Orbit Transfers with Locally Optimal Control Laws

Launch Vehicle Guidance and Control

A07-028 Enhancement in Optimal Multiple-Burn Trajectory Computation by Switching Function Analysis

Missile Dynamics

A07-106 Analytic Model of Catastrophic Yaw

Missile Guidance and Control

A07-030 Algorithm for Missile Detection from Radar Data

Navigation

A07-120 Application of Accelerometer Data to Atmospheric Modeling During Mars Aerobraking Operations
A07-093 Navigating the Road to Autonomous Orbital Rendezvous

Optimization Techniques

A07-110 Passive Stability Design for Solar Sail on Displaced Orbits
A07-024 Optimal Reconfiguration of Satellites in Formation
A07-027 Coast-Arc Orbit Stability During Spiral-Down Trajectories About Irregularly Shaped Bodies
A07-075 Performance Comparison of Stochastic Search Algorithms on the Interplanetary Gravity-Assist Trajectory Problem
A07-071 Efficient and Accurate Evolutionary Multi-Objective Optimization Paradigms for Satellite Constellation Design
A07-109 Interplanetary Mission Design Using Differential Evolution

Robotics

A07-017 Laboratory Experimentation of Autonomous Spacecraft Approach and Docking to a Collaborative Target
A07-022 Formation and Attitude Control for Rotational Tethered Satellite Clusters

Spacecraft Dynamics

A07-022 Formation and Attitude Control for Rotational Tethered Satellite Clusters
A07-013 High-Fidelity Gravity Offloading System for Free–Free Vibration Testing
A07-031 Nonlinear Control of a Double Pendulum Electrodynamic Tether System
A07-069 Earth–Moon Triangular Libration Point Spacecraft Formations
A07-092 Improved Corrections Process for Constrained Trajectory Design in the *n*-Body Problem
A07-123 Drag Sail for End-of-Life Disposal from Low Earth Orbit
A07-119 Atmospheric Density During the Aerobraking of Mars Odyssey from Radio Tracking Data
A07-125 Density and Winds in the Thermosphere Deduced from Accelerometer Data
A07-068 Dynamics and Control of Rotating Tethered Satellite Systems
A07-045 Parametric Study of Deployment of Tethered Satellite Systems
A07-057 Thrust Vector Control Analysis and Design for Solar-Sail Spacecraft
A07-084 Solar-Sail Attitude Control Design for a Flight Validation Mission
A07-126 Neutral Density Measurements from the Gravity Recovery and Climate Experiment Accelerometers

Spacecraft Guidance and Control

A07-036 Minimum-Fuel Powered Descent for Mars Pinpoint Landing
A07-070 Autonomous Formation Flying for the PRISMA Mission
A07-122 Mars Thermospheric Winds from Mars Global Surveyor and Mars Odyssey Accelerometers
A07-078 Impact of Optical Degradation on Solar Sail Mission Performance

A07-072 Mars Sample Return: Testing the Last Meter of Rendezvous and Sample Capture
A07-017 Laboratory Experimentation of Autonomous Spacecraft Approach and Docking to a Collaborative Target
A07-093 Navigating the Road to Autonomous Orbital Rendezvous
A07-031 Nonlinear Control of a Double Pendulum Electrodynamic Tether System
A07-028 Enhancement in Optimal Multiple-Burn Trajectory Computation by Switching Function Analysis
A07-022 Formation and Attitude Control for Rotational Tethered Satellite Clusters

State Estimation

A07-025 Identification of Tethered Satellites with Mixed Observational Data
A07-077 HAMSAT-1 Precise Orbit Determination System and Performance
A07-026 Orbit Determination Using the Geomagnetic Field Measurement via the Unscented Kalman Filter

Structural Control

A07-068 Dynamics and Control of Rotating Tethered Satellite Systems

System Identification

A07-074 Correlation and Error Metrics for Plant Identification of On-Orbit Space Structures

Trajectory Optimization

A07-041 Comparison of Hydrogen and Hydrocarbon-Fueled Scramjet Engines for Orbital Insertion
A07-046 Satellite Formation Mission Optimization with a Multi-Impulse Design
A07-028 Enhancement in Optimal Multiple-Burn Trajectory Computation by Switching Function Analysis
A07-103 Approximate Trajectories for Thermal Protection System Flight Tests Mission Design
A07-036 Minimum-Fuel Powered Descent for Mars Pinpoint Landing
A07-051 *N*-Impulse Orbit Transfer Using Genetic Algorithms
A07-109 Interplanetary Mission Design Using Differential Evolution
A07-024 Optimal Reconfiguration of Satellites in Formation
A07-080 Solar Sail Kinetic Energy Impactor Trajectory Optimization for an Asteroid-Deflection Mission
A07-052 Optimizing Trajectories for Suborbital Human Spaceflight
A07-108 Aerogravity Assist Maneuvers: Coupled Trajectory and Vehicle Shape Optimization

INTERDISCIPLINARY TOPICS

Aerospace Management

A07-133 Aerobraking Cost and Risk Decisions

Analytical and Numerical Methods

A07-053 Finite Element Modeling of Sail Deformation Under Solar Radiation Pressure

Atmospheric and Space Sciences

A07-121 Zonal Wind Calculations from Mars Global Surveyor Accelerometer and Rate Data
A07-122 Mars Thermospheric Winds from Mars Global Surveyor and Mars Odyssey Accelerometers
A07-118 Satellite Drag Variability at Earth, Mars, and Venus due to Solar Rotation
A07-125 Density and Winds in the Thermosphere Deduced from Accelerometer Data
A07-119 Atmospheric Density During the Aerobraking of Mars Odyssey from Radio Tracking Data
A07-094 Time-Resolved *I*-Band Photometry of Calibration Spheres and NaK Droplets
A07-124 Comparison of TIMED Satellite Drag with Solar EUV Experiment (SEE) Measurements
A07-126 Neutral Density Measurements from the Gravity Recovery and Climate Experiment Accelerometers

Environmental Effects

A07-078 Impact of Optical Degradation on Solar Sail Mission Performance
A07-010 Outgassing Measurements Combined with Vacuum Ultraviolet Illumination of the Deposited Materials

Multidisciplinary Design Optimization

A07-012 Multidisciplinary Design Optimization of Space Plane Considering Rigid Body Characteristics
A07-015 Spare Parts Requirements for Space Missions with Reconfigurability and Commonality
A07-088 Aerothermodynamic Optimization of Reentry Heat Shield Shapes for a Crew Exploration Vehicle
A07-071 Efficient and Accurate Evolutionary Multi-Objective Optimization Paradigms for Satellite Constellation Design
A07-100 Estimating Spare Parts Requirements with Commonality and Redundancy
A07-112 Hammersley Sampling and Support-Vector-Regression-Driven Launch Vehicle Design
A07-097 Sizing/Optimization of a Small Satellite Energy Storage and Attitude Control System
A07-108 Aerogravity Assist Maneuvers: Coupled Trajectory and Vehicle Shape Optimization

Reliability, Maintainability, and Logistics Support

A07-100 Estimating Spare Parts Requirements with Commonality and Redundancy
A07-099 On-Orbit Servicing: A New Value Proposition for Satellite Design and Operation
A07-018 Experimental Investigation of Solder Joint Defect Formation and Mitigation in Reduced-Gravity Environments

Sensor Systems

A07-136 Measurement of In-Plane Motion of Thin-Film Structures Using Videogrammetry

LAUNCH VEHICLE AND MISSILE (LV/M) TECHNOLOGY

Aerodynamics

A07-005 Centered and Upwind Multigrid Turbulent Flow Simulations of Launch Vehicle Configurations
A07-003 Experimental Study on Aerodynamic Characteristics of Telescopic Aerospikes with Multiple Disks
A07-004 CFD Contribution to the Aerodynamic Data Set of the Vega Launcher
A07-104 Flow Oscillation Characteristics in Conical Cavity with Multiple Disks
A07-090 Wind-Tunnel Results of the B-52B with the X-43A Stack
A07-006 Simulation and Analyses of Stage Separation of Two-Stage Reusable Launch Vehicles
A07-038 Engine Thrust Effects on Rocket Aerodynamic Characteristics at High Angle of Attack

Configuration Design

A07-107 Initial Sizing and Reentry Trajectory Design Methodologies for Dual-Mode-Propulsion Reusable Aerospace Vehicles
A07-067 Weight Growth Study of Reusable Launch Vehicle Systems

Launch Vehicle and Sounding Rocket Systems

A07-067 Weight Growth Study of Reusable Launch Vehicle Systems
A07-115 Noise Transmission Studies of an Advanced Grid-Stiffened Composite Fairing

Missile Systems

A07-007 Hypersonic Missile Performance and Sensitivity Analysis

Propulsion and Propellant Systems

A07-050 Evaluation of Dynamic Burn Rate from the Extinction Compliance of Solid Rocket Motors

Simulation

A07-038 Engine Thrust Effects on Rocket Aerodynamic Characteristics at High Angle of Attack
A07-006 Simulation and Analyses of Stage Separation of Two-Stage Reusable Launch Vehicles
A07-062 Identification of Overpressure Sources at Launch Vehicle Liftoff Using an Inverse Method

Structural Design (Including Loads)

A07-016 Chamber Core Structures for Fairing Acoustic Mitigation

Subsystem Design and Ground Support

A07-018 Experimental Investigation of Solder Joint Defect Formation and Mitigation in Reduced-Gravity Environments

Testing, Flight and Ground

A07-008 Force Measurement in a Ludwieg Tube Tunnel
A07-090 Wind-Tunnel Results of the B-52B with the X-43A Stack

Thermal Protection Systems

A07-002 Calculation of Stagnation-Point Heating Rates Associated with Stardust Vehicle
A07-065 Numerical Studies of Magnetohydrodynamic Flow Control Considering Real Wall Electrical Conductivity
A07-103 Approximate Trajectories for Thermal Protection System Flight Tests Mission Design

Trajectories and Tracking Systems

A07-077 HAMSAT-1 Precise Orbit Determination System and Performance

A07-030 Algorithm for Missile Detection from Radar Data
A07-006 Simulation and Analyses of Stage Separation of Two-Stage Reusable Launch Vehicles

PROPULSION

Advanced Space Propulsion

A07-080 Solar Sail Kinetic Energy Impactor Trajectory Optimization for an Asteroid-Deflection Mission
A07-066 Heat Flux Measurements for a GO_2/GH_2 Single-Element, Shear Injector
A07-086 Solar Sail Scalability and a "Truly Scalable" Architecture: The Space Tow
A07-110 Passive Stability Design for Solar Sail on Displaced Orbits
A07-083 Validation of a Scalable Solar Sailcraft System
A07-081 Solar Sail Structural Characterization Test Program
A07-058 Solar Sail Topology Variations Due to On-Orbit Thermal Effects

Airbreathing Propulsion

A07-041 Comparison of Hydrogen and Hydrocarbon-Fueled Scramjet Engines for Orbital Insertion
A07-007 Hypersonic Missile Performance and Sensitivity Analysis

Combined-Cycle Engines

A07-040 Analysis of Increased Compression Through Area Constriction on Ejector-Rocket Performance

Ducted Rocket Engines

A07-040 Analysis of Increased Compression Through Area Constriction on Ejector-Rocket Performance

Electric Propulsion

A07-064 Theoretical and Numerical Study of Free Molecular-Flow Problems
A07-044 Evaluation of Solar Electric Propulsion Technologies for Discovery-Class Missions
A07-111 End-to-End Analysis of Solar-Electric-Propulsion Earth Orbit Raising for Interplanetary Missions
A07-137 Collisionless Gas Expanding into Vacuum

Hypersonic Propulsion

A07-067 Weight Growth Study of Reusable Launch Vehicle Systems

Ignition

A07-089 Computational Analysis of Automated Transfer Vehicle Reentry Flow and Explosion Assessment

Liquid Rocket Engines

A07-066 Heat Flux Measurements for a GO_2/GH_2 Single-Element, Shear Injector
A07-132 Reaction Motors (Thiokol) Family of Packaged Liquid Rocket Engines

Micro Propulsion and Power

A07-137 Collisionless Gas Expanding into Vacuum

Solid Rocket Motors

A07-130 Polymer Nanostructured Materials for Propulsion Systems
A07-050 Evaluation of Dynamic Burn Rate from the Extinction Compliance of Solid Rocket Motors

Transient Combustion

A07-050 Evaluation of Dynamic Burn Rate from the Extinction Compliance of Solid Rocket Motors

REAL-TIME SYSTEMS

Robotic Systems

A07-073 Bioinspired Drill for Planetary Sampling: Literature Survey, Conceptual Design, and Feasibility Study

SPACE TECHNOLOGY

Aerobraking Configurations/ Aerothermodynamics

A07-037 Determination of Atmospheric Densities from Reentry Flight Data
A07-001 Survey of Ballute Technology for Aerocapture
A07-123 Drag Sail for End-of-Life Disposal from Low Earth Orbit
A07-089 Computational Analysis of Automated Transfer Vehicle Reentry Flow and Explosion Assessment
A07-088 Aerothermodynamic Optimization of Reentry Heat Shield Shapes for a Crew Exploration Vehicle
A07-127 Aeroheating Analysis for the Mars Reconnaissance Orbiter with Comparison to Flight Data

Aerobraking Flight Mechanics

A07-121 Zonal Wind Calculations from Mars Global Surveyor Accelerometer and Rate Data
A07-123 Drag Sail for End-of-Life Disposal from Low Earth Orbit
A07-119 Atmospheric Density During the Aerobraking of Mars Odyssey from Radio Tracking Data
A07-122 Mars Thermospheric Winds from Mars Global Surveyor and Mars Odyssey Accelerometers
A07-133 Aerobraking Cost and Risk Decisions
A07-001 Survey of Ballute Technology for Aerocapture

Global Positioning System

A07-023 Single Antenna Attitude Algorithm for Nonuniform Antenna Gain Patterns
A07-070 Autonomous Formation Flying for the PRISMA Mission

Humans in Space/Life Support Systems, EVA

A07-052 Optimizing Trajectories for Suborbital Human Spaceflight

International Space Station

A07-009 Chemical Characterization and Thermal Stressing Studies of Perfluorohexane Fluids for Space-Based Applications

Landers

A07-036 Minimum-Fuel Powered Descent for Mars Pinpoint Landing
A07-035 Mars Exploration Entry, Descent, and Landing Challenges
A07-049 Thermal Design and Analysis of the Mars Exploration Rover Surface Impact Airbags

Mission Design and Analysis

A07-046 Satellite Formation Mission Optimization with a Multi-Impulse Design
A07-015 Spare Parts Requirements for Space Missions with Reconfigurability and Commonality
A07-134 Very-Small-Satellite Design for Distributed Space Missions
A07-021 Human Exploration of Mars via Earth–Mars Semicyclers
A07-131 Tradeoff Performance of Hybrid Low-Thrust Propulsion System
A07-101 Building Interplanetary Trajectories with Multiple Gravity-Assisted Maneuvers
A07-103 Approximate Trajectories for Thermal Protection System Flight Tests Mission Design
A07-078 Impact of Optical Degradation on Solar Sail Mission Performance
A07-071 Efficient and Accurate Evolutionary Multi-Objective Optimization Paradigms for Satellite Constellation Design
A07-077 HAMSAT-1 Precise Orbit Determination System and Performance
A07-045 Parametric Study of Deployment of Tethered Satellite Systems
A07-051 *N*-Impulse Orbit Transfer Using Genetic Algorithms
A07-076 Example Impact of Nonuniform Acceleration Fields on Liquids in Spacecraft
A07-109 Interplanetary Mission Design Using Differential Evolution
A07-099 On-Orbit Servicing: A New Value Proposition for Satellite Design and Operation
A07-111 End-to-End Analysis of Solar-Electric-Propulsion Earth Orbit Raising for Interplanetary Missions
A07-026 Orbit Determination Using the Geomagnetic Field Measurement via the Unscented Kalman Filter
A07-052 Optimizing Trajectories for Suborbital Human Spaceflight
A07-082 GeoSail: An Elegant Solar Sail Demonstration Mission
A07-080 Solar Sail Kinetic Energy Impactor Trajectory Optimization for an Asteroid-Deflection Mission
A07-087 Microsolar Sails for Earth Magnetotail Monitoring
A07-085 Solar-Sail-Based Stopover Cyclers for Cargo Transportation Missions

Mission Trajectories (Earth and Interplanetary)

A07-085 Solar-Sail-Based Stopover Cyclers for Cargo Transportation Missions
A07-075 Performance Comparison of Stochastic Search Algorithms on the Interplanetary Gravity-Assist Trajectory Problem
A07-020 Entry System Options for Human Return from the Moon and Mars
A07-027 Coast-Arc Orbit Stability During Spiral-Down Trajectories About Irregularly Shaped Bodies
A07-107 Initial Sizing and Reentry Trajectory Design Methodologies for Dual-Mode-Propulsion Reusable Aerospace Vehicles

A07-101 Building Interplanetary Trajectories with Multiple Gravity-Assisted Maneuvers
A07-131 Tradeoff Performance of Hybrid Low-Thrust Propulsion System
A07-021 Human Exploration of Mars via Earth–Mars Semicyclers
A07-046 Satellite Formation Mission Optimization with a Multi-Impulse Design
A07-069 Earth–Moon Triangular Libration Point Spacecraft Formations

Space Experiments

A07-073 Bioinspired Drill for Planetary Sampling: Literature Survey, Conceptual Design, and Feasibility Study
A07-072 Mars Sample Return: Testing the Last Meter of Rendezvous and Sample Capture
A07-096 Design and Testing of a Space Mechanism for Tether Deployment
A07-009 Chemical Characterization and Thermal Stressing Studies of Perfluorohexane Fluids for Space-Based Applications

Space Processing

A07-015 Spare Parts Requirements for Space Missions with Reconfigurability and Commonality

Space Systems

A07-073 Bioinspired Drill for Planetary Sampling: Literature Survey, Conceptual Design, and Feasibility Study
A07-035 Mars Exploration Entry, Descent, and Landing Challenges
A07-025 Identification of Tethered Satellites with Mixed Observational Data
A07-134 Very-Small-Satellite Design for Distributed Space Missions
A07-133 Aerobraking Cost and Risk Decisions
A07-020 Entry System Options for Human Return from the Moon and Mars
A07-087 Microsolar Sails for Earth Magnetotail Monitoring
A07-096 Design and Testing of a Space Mechanism for Tether Deployment
A07-045 Parametric Study of Deployment of Tethered Satellite Systems
A07-068 Dynamics and Control of Rotating Tethered Satellite Systems
A07-084 Solar-Sail Attitude Control Design for a Flight Validation Mission
A07-099 On-Orbit Servicing: A New Value Proposition for Satellite Design and Operation
A07-076 Example Impact of Nonuniform Acceleration Fields on Liquids in Spacecraft

Spacecraft Attitude Determination

A07-023 Single Antenna Attitude Algorithm for Nonuniform Antenna Gain Patterns

Spacecraft Contamination/Sterilization

A07-010 Outgassing Measurements Combined with Vacuum Ultraviolet Illumination of the Deposited Materials

Spacecraft Data Sensing, Processing, and Transmission

A07-032 Evaluation of Characteristic and Degree of Wrinkles in Space Membrane Structures

Spacecraft Power

A07-091 Thermal Gauging and Rebalancing of Propellant in Multiple Tank Satellites

Spacecraft Propulsion System Integration

A07-076 Example Impact of Nonuniform Acceleration Fields on Liquids in Spacecraft
A07-044 Evaluation of Solar Electric Propulsion Technologies for Discovery-Class Missions
A07-083 Validation of a Scalable Solar Sailcraft System
A07-131 Tradeoff Performance of Hybrid Low-Thrust Propulsion System

Spacecraft Sensor Systems

A07-134 Very-Small-Satellite Design for Distributed Space Missions
A07-023 Single Antenna Attitude Algorithm for Nonuniform Antenna Gain Patterns
A07-014 Configuration for Propellant Gauging in Satellites

Spacecraft Structural Configuration, Design, and Analysis

A07-053 Finite Element Modeling of Sail Deformation Under Solar Radiation Pressure
A07-056 Modeling of Triangular Lattice Space Structures with Curved Battens
A07-086 Solar Sail Scalability and a "Truly Scalable" Architecture: The Space Tow
A07-060 Geometrically Nonlinear Shell Analysis of Wrinkled Thin-Film Membranes with Stress Concentrations
A07-054 Experimental and Numerical Correlation of Gravity Sag In Solar-Sail-Quality Membranes
A07-011 Shape Memory Alloy Deployment of Membrane Mirrors for Spaceborne Telescopes
A07-019 Finite Element Modeling and Analysis of Large Pretensioned Space Structures
A07-114 Optimized Gore/Seam Cable Actuated Shape Control of Gossamer Membrane Reflectors
A07-055 Slender Solar Sail Booms: Finite Element Analysis

Spacecraft Test and Evaluation

A07-072 Mars Sample Return: Testing the Last Meter of Rendezvous and Sample Capture
A07-081 Solar Sail Structural Characterization Test Program
A07-013 High-Fidelity Gravity Offloading System for Free–Free Vibration Testing
A07-113 System Approach to Performance Verification of the Planck Cryogenic Spacecraft

Spacecraft Thermal Management

A07-113 System Approach to Performance Verification of the Planck Cryogenic Spacecraft
A07-095 Thermal Design and Analysis of a Battery Module for a Remote Sensing Satellite
A07-047 Comparison of Polyethylene and Polyimide as a Fluence Monitor of Atomic Oxygen
A07-009 Chemical Characterization and Thermal Stressing Studies of Perfluorohexane Fluids for Space-Based Applications

STRUCTURAL MECHANICS AND MATERIALS

Flexible and Active Structures

A07-016 Chamber Core Structures for Fairing Acoustic Mitigation
A07-032 Evaluation of Characteristic and Degree of Wrinkles in Space Membrane Structures
A07-060 Geometrically Nonlinear Shell Analysis of Wrinkled Thin-Film Membranes with Stress Concentrations
A07-059 Simplified Computational Models for Shear Compliant Borders in Solar Sails
A07-098 Quasi-Static Optics-Based Surface Control of an In-Plane Actuated Membrane Mirror
A07-116 Experimentally Validated Model of a Membrane Strip with Multiple Actuators
A07-136 Measurement of In-Plane Motion of Thin-Film Structures Using Videogrammetry
A07-054 Experimental and Numerical Correlation of Gravity Sag In Solar-Sail-Quality Membranes
A07-013 High-Fidelity Gravity Offloading System for Free–Free Vibration Testing
A07-011 Shape Memory Alloy Deployment of Membrane Mirrors for Spaceborne Telescopes
A07-114 Optimized Gore/Seam Cable Actuated Shape Control of Gossamer Membrane Reflectors

Materials Structural Properties

A07-011 Shape Memory Alloy Deployment of Membrane Mirrors for Spaceborne Telescopes
A07-079 Advanced Self-Deployable Structures for Space Applications

Structural Composite Materials

A07-079 Advanced Self-Deployable Structures for Space Applications
A07-130 Polymer Nanostructured Materials for Propulsion Systems

Structural Design

A07-086 Solar Sail Scalability and a "Truly Scalable" Architecture: The Space Tow

Structural Durability (Including Fatigue, Fracture, and Environmental Degradation)

A07-047 Comparison of Polyethylene and Polyimide as a Fluence Monitor of Atomic Oxygen

Structural Dynamics and Characterization

A07-081 Solar Sail Structural Characterization Test Program
A07-074 Correlation and Error Metrics for Plant Identification of On-Orbit Space Structures
A07-115 Noise Transmission Studies of an Advanced Grid-Stiffened Composite Fairing

Structural Finite Elements

A07-056 Modeling of Triangular Lattice Space Structures with Curved Battens
A07-053 Finite Element Modeling of Sail Deformation Under Solar Radiation Pressure
A07-060 Geometrically Nonlinear Shell Analysis of Wrinkled Thin-Film Membranes with Stress Concentrations
A07-059 Simplified Computational Models for Shear Compliant Borders in Solar Sails
A07-019 Finite Element Modeling and Analysis of Large Pretensioned Space Structures
A07-116 Experimentally Validated Model of a Membrane Strip with Multiple Actuators
A07-055 Slender Solar Sail Booms: Finite Element Analysis

Structural Modeling

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Structural Optimization

A07-114 Optimized Gore/Seam Cable Actuated Shape Control of Gossamer Membrane Reflectors

Structural Stability

A07-055 Slender Solar Sail Booms: Finite Element Analysis

Thermal Effects

A07-058 Solar Sail Topology Variations Due to On-Orbit Thermal Effects

THERMOPHYSICS AND HEAT TRANSFER

Ablation, Pyrolysis, Thermal Decomposition and Degradation

A07-002 Calculation of Stagnation-Point Heating Rates Associated with Stardust Vehicle

Aerothermodynamics/Thermal Protection

A07-127 Aeroheating Analysis for the Mars Reconnaissance Orbiter with Comparison to Flight Data
A07-102 Radiative Heating Methodology for the Huygens Probe
A07-063 Plume Impingement Analysis for Aeolus Spacecraft and Gas/Surface Interaction Models

Cryogenics

A07-064 Theoretical and Numerical Study of Free Molecular-Flow Problems
A07-113 System Approach to Performance Verification of the Planck Cryogenic Spacecraft

Electronics Cooling

A07-048 Experimental Investigations of an Avionics Cooling System for Aerospace Vehicle

Heat Pipes

A07-048 Experimental Investigations of an Avionics Cooling System for Aerospace Vehicle

Radiation in Participating Media

A07-102 Radiative Heating Methodology for the Huygens Probe
A07-002 Calculation of Stagnation-Point Heating Rates Associated with Stardust Vehicle

Thermal Control

A07-095 Thermal Design and Analysis of a Battery Module for a Remote Sensing Satellite

Thermal Modeling and Analysis

A07-058 Solar Sail Topology Variations Due to On-Orbit Thermal Effects
A07-091 Thermal Gauging and Rebalancing of Propellant in Multiple Tank Satellites

Thermochemistry and Chemical Kinetics

A07-102 Radiative Heating Methodology for the Huygens Probe