

LV/M System and Component Ground Testing

Aeroballistics of a terminally corrected spinning projectile (TCSP).
Frank J. Regan and Jack Smith 733

LV/M Trajectories

Artillery shell drift at high angles of fire. W.Z. Collings and R.F. Lieske 169
Circular earth orbits attainable with fixed two-impulse expendable tug. Richard F. Porter (EN) 638

Launch Vehicle Systems (including Ground Support)**Missile Systems**

Determination of nonsymmetric aerodynamics of re-entry missiles.
Robert J. Lusardi, John D. Nicolaides, and Charles W. Ingram 193
Low-altitude roll behavior of entry vehicles with mass asymmetries.
W.J. Bootle (EN) 574
Model reduction of a nonlinear rocket control system. M.H. Liu and K.W. Han (EN) 786
Use of pattern recognition to validate test data. R.A. Hughes, D.M. Campbell, and K. Chew (SYN) 577
Velocity of bodies powered by rapidly discharged cold-gas thrusters.
M.D. Bennett (EN) 254

Tracking Systems

Target state estimation in an ECM environment. J.E. Kain and D.J. Yost 492

PROPULSION**Airbreathing Propulsion, Subsonic and Supersonic**

Insulation requirements for liquid-fueled ramjets with superalloy motor cases. Asa K. Fulton and Jose I. Gonzalez (EN) 443

Combustion in Gases

Rocket performance prediction technique. J.H. Morgenthaler and W.R. Stepien 199

Combustion in Heterogeneous Media

Combustion of nitramine propellants. Norman S. Cohen and Channon F. Price 608
Exponent breaks in composite solid propellants. Robert L. Glick (EN) 185
Port size effects on the combustion of PVC plastisol-O₂ (gas) system. A.K. Chatterjee, R.S. Mate, and P.C. Joshi (EN) 699

Combustion Stability, Ignition, and Detonation

Hot-particle ignition of double-base propellants. K.M. Siddiqui and I.E. Smith 655
Methods for determining characteristics of acoustic waves in rocket motors. H.B. Mathes and E.W. Price 39
Recent occurrences of combustion instability in solid rocket motors--An overview. A.L. Karnesky and S. E. Colucci 33

Electric and Advanced Space Propulsion

Design and operational aspects of all-electric thruster control systems for geostationary satellites. Marshall H. Kaplan 682
Feasibility study of developing toroidal tanks for a spinning spacecraft. J.E. Anderson, D.A. Fester, and D.W. Dugan 334
Optimum exhaust velocity for laser-driven rockets. W.E. Moeckel (EN) 700
Optimum orbital control using solar radiation pressure. S.K. Shrivastava and C.K. Rajasingh (EN) 502
Prototype north-south stationkeeping ion thruster. W.D. Ramsey and E.L. James (EN) 441
Reliability simulation for solar electric propulsion missions. Paul O. Chelson and Ernest N. Costogoe (EN) 784
SERT II spacecraft thruster restart, 1974. William R. Kerslake and Robert C. Finke (EN) 780
Survey of electric propulsion capability. Kenn E. Clark (SA) 641

Fuels and Propellants, Properties of

Combustion of nitramine propellants. Norman S. Cohen and Channon F. Price 608

Solid inclusion stress gage in composite propellant charges. H.J. Buswell, D.R. Moore, and A. Owens 465
Theoretical performance of polyvinyl chloride plastisol propellants: A comparative study. S. Krishnan and Tarit K. Bose (EN) 187
Velocity of bodies powered by rapidly discharged cold-gas thrusters. M.D. Bennett (EN) 254

Liquid Rocket Engines

Comment on "Definition of specific impulse." Alfred Africano (TC) 576
Completely electroformed lightweight thrust chamber. Albert Seidel (EN) 381
Mechanistic model for analysis of pulse-mode engine operation. W.T. Webber and R.J. Hoffman 113
Space shuttle reaction control subsystem propellant acquisition technology. Dale A. Fester, Ralph N. Eberhardt, and James R. Tegtart 705
Space storable propellant acquisition system. James R. Tegtart and Dale A. Fester 544
Transient rotordynamic analysis for the space-shuttle main-engine high-pressure oxygen turbopump. Dara W. Childs (SYN) 3

Rocket Engine Testing

Development of test motors for advanced controllable propellants. D.C. Sayles 174
Methods for determining characteristics of acoustic waves in rocket motors. H.B. Mathes and E.W. Price 39

Solid and Hybrid Rocket Engines

Circular earth orbits attainable with fixed two-impulse expendable tug. Richard F. Porter (EN) 638
Comment on "Definition of specific impulse." Alfred Africano (TC) 576
Design of neutral burning star grains. S. Krishnan (EN) 60
Development of test motors for advanced controllable propellants. D.C. Sayles 174
Hot-particle ignition of double-base propellants. K.M. Siddiqui and I.E. Smith 665
Kinetic reaction rates for consumption of pyrolytic graphite by combustion gases. J.W. Schaefer, H. Tong, and R.J. Bedard 552
Port size effects on the combustion of PVC PLASTISOL-O₂ (gas) system. A.K. Chatterjee, R.S. Mate, and P.C. Joshi (EN) 699
Recent occurrences of combustion instability in solid rocket motors--an overview. A.L. Karnesky and S.E. Colucci 33
Reduction of solid data when pressure-time history is nonneutral. Robert L. Glick (EN) 383
Solid inclusion stress gage in composite propellant charges. H.J. Buswell, D.R. Moore, and A. Owens 465
Solid motor aft closure insulation erosion. E. Stampfl and E.M. Landsbaum 599
Theoretical performance of polyvinyl chloride plastisol propellants: A comparative study. S. Krishnan and Tarit K. Bose (EN) 187

SPACECRAFT TECHNOLOGY**Data Sensing and Presentation or Transmission Systems**

Attitude time-series estimator for rectification of spaceborne imagery. R.H. Caron and K.W. Simon 27
Geometric theory of horizon scanners. Bertrand T. Fang (EN) 776
Mariner 10 star photography. T.E. Thorpe (EN) 314

Earth-Orbital Trajectories

Drag coefficients for astronomical observatory satellites. Richard R. Williams 74
-- Drag coefficients for astronomical observatory satellites. Richard R. Williams (EER) 320
Economical scheme for estimating orbital lifetimes. Luigi L. Perini (SYN) 323
Optimal intersatellite transfers for on-orbit servicing missions. E.H. Fallin 111 (EN) 565

Earth Satellite Systems, Unmanned

Bounds for the solar scatter angle observed from earth orbit. Donald L. Hitzl (SYN) 257
Drag coefficients for astronomical observatory satellites. Richard R. Williams 74