

Index of Papers Published in Journal of Spacecraft and Rockets

Volume 2—January through December 1965

Issue	Pages
January-February	1-128
March-April	129-288
May-June	289-480
July-August	481-640
September-October	641-832
November-December	833-1024

EN, TC, and SA indicate Engineering Note, Technical Comment, and Survey Article, respectively.

AUTHORS

Abrams, Gerald (see Court, Arnold)
 Abramson, H. Norman and Garza, Luis R. Liquid frequencies and damping in compartmented cylindrical tanks (EN)..... 453
 Adelberg, Marvin and Greenberg, Allen A. Conductive paper analog design of a pellet motor retention system (EN)..... 970
 Adkins, Charles Noel. Rocket design for a specified trajectory..... 249
 Albright, G. (see Frankel, G.)
 Alexander, R. V. (see Gray, J. S.)
 Alper, J. R. Analysis of pendulum damper for satellite wobble damping..... 50
 Anderson, James Z. (see Chao, George T. Y.)
 Anderson, M. M. (see Lindberg, R. G.)
 Anderson, Thomas P. (see Bass, Robert R.)
 Angelino, Gianfranco. Supersonic turbines in space power applications (EN)..... 609
 Atkins, Harry L. (see Fried, Erwin)
 Austin, Fred. Torsional dynamics of an axially symmetric, two-body, flexibly connected rotating space station (EN)..... 626
 —Nonlinear dynamics of a free rotating flexibly-connected double-mass space station..... 901
 Averell, J. (see Lundholm, J. G., Jr.)
 Axelrod, I. (see Frankel, G.)
 Bachofer, B. T. and Seaman, L. T. One-arc-second simulator for orbiting astronomical observatory (EN)..... 260
 —Man-in-the-loop space station navigation and control simulation (EN)..... 1003
 Badal, David L. (see Kalt, Sherwin)
 Balent, Richard L. (see Kutschenreuter, Paul H., Jr.)
 Barber, Edward A., Jr. An experimental investigation of stagnation-point injection..... 770
 Barker, L. Keith and Queijo, M. J. Thrust vector orientation in pilot-controlled lunar landings (EN)..... 816
 Barnett, Ralph L. and Hermann, Paul C. Proof testing in design with brittle materials..... 956
 Barr, F. A. and Montgomery, T. S. High-temperature inorganic adhesives for electromagnetic applications (EN)..... 263
 Barr, T. A., Jr. and Mayo, R. F. A "spark-plug" starter for arc plasma generators (EN)..... 808
 Bass, Robert R. and Anderson, Thomas P. Lorentz drag: an engineering approximation (EN)..... 810
 Bastress, E. Karl. Interior ballistics of spinning solid-propellant rockets (EN)..... 455
 Baxter, A. N. Application of jet pumping to liquid injection thrust vector control (EN)..... 272
 Baxter, W. G. (see Van Houten, Robert)
 Belsterling, Charles A. An analog computer for the skyscreen system of missile range instrumentation (EN)..... 619
 Bennett, Willard H. (see Swain, David W.)
 Bert, Charles W. (see Weaver, Robert T.)
 Besco, Robert O. Handling qualities criteria for manned spacecraft attitude-control systems (EN)..... 628
 Bizjak, Frank (see Stai, Donald F.)
 Blackmon, J. B. Collection of liquid propellants in zero gravity with electric fields..... 391
 Bohannon, William M. Signal loss vs antenna pointing error (EN)..... 461
 Boxenhorn, Burton. Dynamic response of a gyrostatized platform using a digital accelerometer during erection..... 187
 Breshears, Robert R. Spacecraft propulsion requirements for lunar missions..... 25
 Breuer, D. W. and Southerland, W. R. Jet-damping effects: theory and experiment (EN)..... 638
 Briar, Herman P. (see Majerus, John N.)
 Brogan, J. J. A simple numerical solution for heat conduction in a solid with a receding surface (EN)..... 112
 Browne, T. P. (see Taback, H. J.)
 Brown, M. J. Long-time room temperature tensile creep tests of 2014-T6 aluminum alloy used in Titan II (EN)..... 603

Buckingham, A. G., Lim, Y. C., and Miller, J. A. Orbit position control using solar pressure..... 863
 Campbell, George S. Spike penetration dynamics (EN)..... 457
 Campbell, M. E. A celestial orientation system based on star pattern recognition (EN)..... 962
 Candell, Lloyd M. Incident lunar emission on orbiting surfaces (EN)..... 964
 Cannon, Robert H., Jr. and Eppler, Walter G., Jr. Vector reticle, control action display in manual control of space vehicle attitude..... 172
 Caplinger, E. (see Eilenberg, S. L.)
 Cardullo, Mario W. Simplified equations for determining propulsion system specific impulse (EN)..... 108
 —Erratum: "Simplified equations for determining propulsion system specific impulse" (TC)..... 640
 Carey, Lee. Pressure-fed liquid rocket payload potential (EN)..... 121
 Carter, John P. (see Perlmutter, Lawrence D.)
 Casey, John P. (see Grimes, James H., Jr.)
 Cassano, Anthony J. Radiation received from earth by a synchronous meteorological satellite..... 912
 Cato, Glenn. Measurement of free-air properties from onboard a large launch vehicle..... 304
 —Meteorological instrumentation for the boosted-Arcas rocket probe (EN)..... 463
 Cavoti, Carlos R. Optimization of multistage processes..... 94
 Cegielski, J. M. (see Landau, Z. H.)
 Chao, B. T. and Wedekind, G. L. Similarity criteria for thermal modeling of spacecraft..... 146
 Chao, George T. Y., Jacobsen, John A., and Anderson, James Z. Reply by author to I. M. Grinberg and M. H. McLaughlin (TC)..... 283
 Chappée, James H. and Smith, George B., Jr. Manrating considerations in the design and operation of hard vacuum chambers (EN)..... 965
 Chen, Shih-Yuan. Influences of small differences in ballistic coefficient on satellite station keeping (EN)..... 594
 Chiarappa, Daniel J. and Nelson, Kaye F. An analysis of the Vertistat gravity gradient satellite orientation..... 167
 Christman, D. R. (see Gehring, J. W.)
 Chu, Hugh N. Addendum: "Application of Biot's variational method to convective heating of a slab" (TC)..... 283
 —Reply by author to T. J. Lardner (TC)..... 480
 —and Seader, J. D. Transient heating analysis of porous solid in which fluid flows (EN)..... 984
 Cohen, C. B. (see Spielberg, I. N.)
 Coleal, William A. A variance study of rocket clusters for large launch vehicles (EN)..... 989
 Coneybear, J. Frank and Kroeger, Henry R. Three-fourths T_{max} rule for minimum-area space radiators (EN)..... 98
 —(see Kroeger, Henry R.)
 Copeland, Alan B., Covert, Eugene E., and Tilton, E. L., III. Measured aerodynamic characteristics of a cone-cylinder-cone model with base separation at $M = 4.8$ (EN)..... 998
 Couchman, C., III (see Thiruvengadam, A.)
 Court, Arnold and Abrams, Gerald. Atmospheric density variations with latitude and season (EN)..... 472
 Coutinho, John de S. Whither reliability? (SA)..... 2
 Covert, Eugene E. (see Copeland, Alan B.)
 Cunningham, T. H. M. (see Rubins, P. M.)
 Daley, H. L. (see Eilenberg, S. L.)
 D'Anna, Phillip J. A combined system concept for control of the meteoroid hazard to space vehicles..... 33
 Davis, Arthur L. Comments on "Evaporation of electroplated cadmium in high vacuum" (TC)..... 1015
 Day, E. E. (see Taback, H. J.)
 Dean, L. E., Keith, R. C., Sumner, T. L., and Taylor, M. V. Ignition and combustion of aluminum in small-scale liquid rocket engines..... 753
 De Buono, G. J. (see Lindberg, R. G.)
 Denzel, J. A. and Thodos, George. Thermal vaporization for recovery of water from urine (EN)..... 460
 Dershin, Harvey. Forces due to gaseous slot jet boundary-layer interaction (EN)..... 597
 Dharmarajan, Sangiah (see Wilson, Paul E.)

- Dicken, G. M. and Thacher, J. H. Shear-strain measurement in solid-propellant rocket motors. 765
- Dickerson, Robert A. and Schuman, Merlin D. Rate of aerodynamic atomization of droplets (EN). 99
- DiGiorgio, James (see Testaguzza, Louis)
- Douglass, John B. (see Goldbaum, George C.)
- Dubrow, B., Guth, E. D., and Wong, M. W. Ballistics of solid propellants during thrust modulation (EN). 256
- Edelbaum, T. N. (see Fimple, W. R.)
- Eilenberg, S. L., Caplinger, E., Daley, H. L., Perel, J., and Seitz, W. Design and performance of sastrugion optical systems (EN). 982
- Elkind, Sidney. A radiation-cooled nuclear rocket nozzle for long firing durations. 353
- Ellis, T. R. (see Levine, P.)
- Eppler, Walter G., Jr. (see Cannon, Robert H., Jr.)
- Ergin, E. I. and Wheeler, P. C. Magnetic attitude control of a spinning satellite. 846
- Ericsson, Lars-Eric and Reding, J. Peter. Analysis of flow separation effects on the dynamics of a large space booster. 481
- Every, Richard L. and Thieme, James O. Liquid oxygen and liquid methane mixtures as rocket monopropellants (EN). 787
- Fager, John A. Development of titanium alloy for lightweight LH₂ tankage. 369
- Farrow, K. L. Multiple rocket firing unit for altitude testing (EN). 119
- Fenn, Raymond W., Jr., Glass, Richard A., Needham, Robert A., and Steinberg, Morris A. Beryllium-aluminum alloys. 87
- Fimple, W. R. and Edelbaum, T. N. Applications of SNAP-50 class powerplants to selected unmanned electric propulsion missions. 669
- Finch, Thomas W. Aerodynamic braking trajectories for Mars orbit attainment. 497
- Fio Rito, R. J. Ablatively cooled pulse rocket engine design. 758
- Fischell, Robert E. and Wilson, Louis. Spacecraft application of subliming materials. 376
- Fisher, E. E. Gyro pendulum as a vertical reference for a rotating platform (EN). 618
- Forrester, A. T. (see Worlock, R. M.)
- Francis, W. Leon. Experimental heat-transfer study of shock impingement on fins in hypersonic flow (EN). 630
- Frankel, G., Albright, G., and Axelrod, I. Manned chamber testing of the Apollo prototype space suit (EN). 822
- Frazine, D. F. Design of a total radiation thermopile detector (EN). 636
- French, Francis W. and Hansen, Kent F. Radiation shielding requirements for manned satellites. 931
- French, Kenneth E. Parachute-and-retrorocket landing system for vertical descent (EN). 797
- Fried, Erwin and Atkins, Harry L. Interface thermal conductance in a vacuum (EN). 591
- Friedman, G. I. (see Isserow, S.)
- Friedman, Paul A. (see Kenny, Richard J.)
- Friedman, Robert F. and Reed, Jack. Ballistic-missile research with Athena. 781
- Frind, Gerhard. An ablation-type plasma generator (EN). 458
- Galloway, A. J. (see Wadleigh, K. H.)
- Galman, Barry A. Separation of satellites in near-circular orbits by circumferential impulse (EN). 477
- Gandel, M. G. and Kinsey, R. H. Heat dissipation of primary and secondary batteries (EN). 996
- Garza, Luis R. (see Abramson, H. Norman)
- Gates, C. R. and Gordon, H. J. Planetary approach guidance. 160
- Gause, R. L. (see McKannan, E. C.)
- Gaz, James (see Kafka, Paul G.)
- Gehring, J. W., Christman, D. R., and McMillan, A. R. Experimental studies concerning the meteoroid hazard to aerospace materials and structures. 731
- Geideman, William A., Jr. and Muller, Kurt. Development status of low-power arc-jet engines. 718
- Georgiev, S. (see Levine, P.)
- Gerard, George. Energy dissipating structures: a structures-materials-design synthesis. 951
- Glass, Richard A. (see Fenn, Raymond W., Jr.)
- Glover, Louis S. Effects on roll rate of mass and aerodynamic asymmetries for ballistic re-entry bodies. 220
- Goldbaum, George C. and Douglass, John B. Design of a versatile liquid-fluorine/liquid-hydrogen upper stage. 570
- Golub, Gerald. Need for a variable burning-rate solid propellant (EN). 593
- Gordon, E. (see Moore, L. C.)
- Gordon, H. I. (see Gates, C. R.)
- Gordon, Robert L. An orbital gyrocompass heading reference for satellite vehicles. 851
- Gray, J. S. and Alexander, R. V. Cost and weight optimization for multistage rockets. 80
- Greenberg, Allen A. (see Adelberg, Marvin)
- Greiner, Leonard. Further comments on correlations for shifting rocket thrust (EN). 612
- Grey, Jerry (see Nelson, Seymour T.)
- Griese, R. (see Tick, S. J.)
- Grimes, James H., Jr. and Casey, John J. Influence of ablation on the dynamics of slender re-entry configurations (EN). 106
- Grinberg, Ira M. and McLaughlin, Michael H. Comment on "Transient surface temperatures in rocket nozzles" (TC). 282
- Gronich, S. (see Kramer, E. L.)
- Grover, Kenneth C. (see Kurkowski, Richard L.)
- Guth, E. D. (see Dubrow, B.)
- Gutman, Alfred S. Gravity-gradient stabilization for a spinning satellite with despun line of sight. 584
- Haig, Chester R. and Perlmutter, Lawrence D. Use of lateral maneuver to extend the period of daylight landings from orbit (EN). 1000
- Hankey, Wilbur L., Jr. (see Hooks, Lawrence E.)
- Hanley, G. M. and Lyon, F. J. Spacecraft heat-protection requirements for Mars aerodynamic braking. 508
- Hansen, Kent F. (see French, Francis W.)
- (see Little, Winston W., Jr.)
- Harden, Darrel G. (see Haws, Jimmy L.)
- Harding, C. F. Manned vehicles as solids with translating particles: I (EN). 465
- Topology and kinematics of a complex rigid system (EN). 789
- Harshbarger, John H. Determination of requirements for television displays. 1108
- Hassan, H. A. Comment on "Rocket motor with electric acceleration in the throat" (TC). 1013
- Havner, Kerry S. Finite-difference solution of two variable thermal and mechanical deformation problems. 542
- Haws, Jimmy L. and Harden, Darrel G. Thermodynamic properties of hydrazine (EN). 972
- Hawthorne, H. W. (see Lascody, D. N.)
- Hearne, L. F. (see Shapland, D. J.)
- Hempel, Peter R. (see Tschauner, Johann F. A.)
- Hendel, Frank J. and Mulligan, J. C. Refrigeration in space by the fluidized technique (EN). 616
- Hermann, Paul C. (see Barnett, Ralph L.)
- Herzl, George G. Pointing error in passively stabilized spacecraft caused by thermal bending. 416
- Hidde, L. G. (see Karig, H. E.)
- Hoffman, Jerome. Relativistic and classical Doppler electronic tracking accuracies. 55
- Hollstein, J. H. Jet tab thrust vector control. 927
- Hooks, Lawrence E. and Hankey, Wilbur L., Jr. Leading surface optimization criteria for orbital lifting re-entry craft. 516
- Hoshide, Robert K. (see Wong, George S.)
- Hovey, Robert W. Cork thermal protection design data for aerospace vehicle ascent flight. 300
- Hoyer, S. (see Lundholm, J. G., Jr.)
- Hrycak, P. Large thermal deflections of thin-walled metal tubes in space (EN). 624
- Hsia, Henry Tao Sze, Seifert, Howard S., and Karamcheti, Krishnamurty. Shocks induced by secondary fluid injection. 67
- Huber, William G. Large post-Saturn launch vehicles: Why? When? What? (EN). 269
- Hunt, Harold H. (see Rolsten, Robert F.)
- Hunt, J. G. (see Isserow, S.)
- Hunt, James L. (see Jones, Robert A.)
- Huson, G. R. (see Tick, S. J.)
- Isserow, S., Hunt, J. G., Jenkins, R. G., and Friedman, G. I. Fabrication of tungsten and tungsten-25 rhenium tubing. 1010
- Jackley, D. N. (see Karig, H. E.)
- Jackson, C. T., Jr. (see Schloetzer, F. F.)
- Jacobsen, John A. (see Chao, George T. Y.)
- Jenkins, R. G. (see Isserow, S.)
- Jones, Robert A. and Hunt, James L. An improved technique for obtaining quantitative aerodynamic heat-transfer data with surface coating materials (EN). 632
- Kafka, Paul G., Gaz, James, and Yee, Wee T. Measurement of aerodynamic heating of wind-tunnel models by means of temperature-sensitive paint (EN). 475
- Kalt, Sherwin and Badal, David L. Conical rocket nozzle performance under flow-separated conditions (EN). 447
- Kamperman, George W. Vibration isolation effectiveness of inertia pads resting on soil. 182
- Kaplan, M. H. (see Molitor, J. H.)
- Karamcheti, Krishnamurty (see Hsia, Henry Tao-Sze)
- Karig, H. E., Jackley, D. N., and Hidde, L. G. Experimental investigation of a once-through coaxial steam generator. 405
- Karrenberg, Hans K. Four methods for quickly establishing orbital systems (EN). 622
- Keith, R. C. (see Dean, L. E.)
- Keller, W. F. Study of spacecraft hover and translation modes above the lunar surface. 426
- Kennet, Haim and Wayne, John F. A Mars skip-out capsule for in-flight atmospheric measurements (EN). 980
- Kenny, Richard J. and Friedman, Paul A. Chemical pressurization of hypergolic liquid propellants. 746
- Kinsey, R. H. (see Gandel, M. G.)
- Kirby, Maurice J. (see Vaccaro, Robert J.)
- Konikoff, J. J. and Miller, R. A. Water recovery by membrane permeation (EN). 793
- Kosson, Robert L. (see Tobias, Ivan I.)
- Kramer, E. L. and Gronich, S. A transpiration-cooled nozzle as applied to a gas-core nuclear propulsion system. 345
- Kroeger, Henry R. and Coneybear, J. Frank. Electric propulsion possibilities using steam space power (EN). 830
- (see Coneybear, J. Frank)
- Kurkowski, Richard L. and Grover, Kenneth C. Sighting accuracy using a simulated vehicle-mounted space sextant. 876
- Kurtz, H. F., Jr., Naumcheff, M., and McNair, A. R. Orbital tracking and decay analysis of the Saturn I flights (EN). 818
- Kutschenreuter, Paul H., Jr. and Balent, Richard L. Hypersonic inlet performance from direct force measurements. 192
- LaBotz, Richard J. Hydrodynamic consideration and limitations in submerged rocket firings. 320
- Landau, Z. H. and Cegielski, J. M. Ballistic behavior of solid propellant grains under high acceleration. 358
- Langill, A. W., Jr. LITVC system response evaluation by pressure integration methods (EN). 445
- Lardner, Thomas J. Comment on "Application of Biot's variational method to convective heating of a slab" (TC). 479
- Lascody, D. N., Thorson, E. D., Hawthorne, H. W., and Markus, G. Mars round-trip mission analysis for the 1975-1985 time period. 775
- Lehmann, G. M. and Murthy, S. N. B. Interaction of a weak shock with a combustion region (EN). 828
- Lester, Harold C. and Morgan, Homer G. Determination of launch-vehicle response to detailed wind profiles. 62
- Letko, William (see Stone, Ralph W., Jr.)
- Leubben, Marvin G. (see Wales, Robert D.)

- Levine, P., Ellis, T. R., and Georgiev, S. Factors influencing the design and performance of Mars entry vehicles (SA) 130
- Libbey, Charles E. Deployment of parawings for use as recovery systems (EN) 274
- Lim, Y. C. (see Buckingham, A. G.)
- Lindberg, R. G., De Buono, G. J., and Anderson, M. M. Animal temperature sensing for orbital studies on circadian rhythms (EN) 986
- Liska, Donald J. and Zimmerman, Ward H. Effect of gravity gradient on attitude control of a space station 419
- Little, Winston W., Jr., Mason, Edward A., and Hansen, Kent F. Control problems during start-up of solid core nuclear rockets (EN) 276
- Loh, Michael M. H. (see Tai, Clement L.)
- Lowen, R. W. (see Sowle, D. H.)
- Lubowe, Anthony G. Application of dynamic programming to the optimum staging of rockets (EN) 110
- Luchter, Stephen. Internal vs external mounting of nuclear power plants for deep submersibles (EN) 110
- Lundholm, J. G., Jr., Prohaska, E. S., Hoyer, S., and Averell, J. A close-approach solar probe design feasibility and mission study 550
- Lyon, F. J. (see Hanley, G. M.)
- Lytle, Archie D. Determination of orbital parameters by use of an astrogroynamics concept 44
- MacGregor, Charles A. (see Wong, George S.)
- MacGregor, Neil (see Pritchard, Wilbur L.)
- Majerus, John N., Briar, Herman P., and Wiegand, James H. Behavior and variability of solid propellants and criteria for failure and for rejection (SA) 833
- Manda, Leo J. Boost-phase equilibrium pressures in a dual-thrust solid-propellant rocket motor (EN) 607
- Markus, G. (see Lascody, D. N.)
- Martikan, Fred O. Calldown frequencies from circular orbits to a specified landing site (EN) 114
- (see Nassif, Samuel H.)
- Mason, Edward A. (see Little, Winston, W., Jr.)
- Mathews, A. J. (see Sherrell, F. G.)
- Maykuth, D. J., Ratliff, J. L., and Ogden, H. R. A metallurgical evaluation of a new tungsten product 244
- Mayo, R. F. (see Barr, T. A., Jr.)
- McKannan, E. C. and Gause, R. L. Effects of nuclear radiation and cryogenic temperatures on nonmetallic engineering materials 558
- McKenna, K. J., Walker, J. H., and Winje, R. A. Engine-airframe coupling in liquid rocket systems (EN) 254
- McKevitt, F. X. and Walsh, T. J. Space engine performance prediction 379
- McLaughlin, Michael H. (see Grinberg, Ira M.)
- McMillan, A. R. (see Gehring, J. W.)
- McNair, A. R. (see Kurtz, H. F., Jr.)
- Mendelsohn, Andrew R. Contact effectiveness of a space radiator (EN) 995
- Messner, A. M. and Schliessmann, D. R. Transient thermal stresses in solid-propellant grains 565
- Mickelsen, William R. (see Reader, Paul D.)
- Mikeska, A. J. Stresses in an ablating, viscoelastic, case-bonded cylinder (EN) 804
- Miller, J. A. (see Buckingham, A. G.)
- Miller, R. A. (see Konikoff, J. J.)
- Milliken, S. A. Feasibility of large launch vehicle recovery 311
- Mitchell, Rex C. and Ryan, Norman W. Flame spread on solid propellant (EN) 610
- Molitor, J. H. and Kaplan, M. H. Design and performance of ion-engine systems for control of earth satellites 712
- Monroe, S. G. (see Nixon, J. A.)
- Montgomery, T. S. (see Barr, F. A.)
- Moore, L. C. and Gordon, E. NERVA thermal and fluid-flow analysis (EN) 791
- Morgan, Homer G. (see Lester, Harold C.)
- Morgan, S. P. and Yu, E. Y. Meteoritic disturbances of gravitationally oriented satellites 857
- Morita, William H. Parametric booster tankage design studies 212
- Moss, E. B. Some aspects of the pointing problem for optical communication in space 698
- Muller, Kurt (see Geideman, William A., Jr.)
- Mulligan, J. C. (see Hendel, Frank J.)
- Murthy, S. N. B. (see Lehmann, G. M.)
- Nassif, Samuel H. and Martikan Fred O. Integrated operating mode of the Apollo mission simulator 1005
- Naumcheff, M. (see Kurtz, H. F., Jr.)
- Needham, Robert A. (see Fenn, Raymond W., Jr.)
- Nelson, Donn K. Behavior of SNAP-10A during orbital re-entry 664
- Nelson, Edward N. Nonlinear pressure vessel theory (EN) 443
- Nelson, Kaye F. (see Chiarappa, Daniel J.)
- Nelson, Seymour T., Grey, Jerry, and Williams, Peter M. Conceptual study of a liquid-core nuclear rocket 384
- Newman, Richard L. A kinetic treatment of ablation (EN) 449
- Newton, Robert R. Orbital elements from the Doppler tracking of four satellites (EN) 634
- Nigam, Rajendra C. Bunching of satellites in their orbital plane (EN) 807
- Nixon, J. A. and Monroe, S. G. Heat transfer through diathermanous materials 907
- Ogden, H. R. (see Maykuth, D. J.)
- Ohman, L. H. A "square" flare (EN) 994
- Ordahl, D. D. and Rains, W. A. Recent developments and current status of hybrid rocket propulsion 923
- Page, Robert M. (see Park, Robert A.)
- Panelli, G. C. (see Wahlquist, A. L.)
- Panzarella, Philip P. (see Robison, William C.)
- Pappo, H. A. Determination of probability of success of mission given the component probabilities (EN) 118
- Park, Robert A., Page, Robert M., and Stableford, Charles V. Trajectory characteristics for a cometary mission 868
- Parker, W. F. Saturn S-II operations development progress (EN) 826
- Parsons, W. D. Roll-rate lag of rockets accelerating in the upper atmosphere (EN) 271
- Pendleton, Lane R. Survey of Polaris shock and vibration flight-test program (EN) 974
- Perel, J. (see Eilenberg, S. L.)
- Perkins, Roger A. Status of coated refractory metals 520
- Perlmutter, Lawrence D. and Carter, John P. Reference trajectory re-entry guidance without prelaunch data storage (EN) 967
- (see Haig, Chester R.)
- Plumley, Arnold G. Analytical model to determine aft-end igniter design parameters (EN) 824
- Posever, F. C., Rish, F. L., and Scully, C. N. Impact effects on meteoroid shielding configurations for velocities up to 60,000 fps 738
- Preiser, H. S. (see Thiruvengadam, A.)
- Price, D. A. (see Shapland, D. J.)
- Pritchard, Wilbur L. and MacGregor, Neil. Communication link performance for commercial and military satellites (EN) 614
- Prohaska, E. S. (see Lundholm, J. G., Jr.)
- Purmal, G. W. (see Worlock, R. M.)
- Pyle, Robert L. and Singer, S. Fred. Dependence of ground station acquisition effectiveness on geographic location and satellite orbit 410
- Queijo, M. J. (see Barker, L. Keith)
- Rainey, A. Gerald. Progress on the launch-vehicle buffeting problem (SA) 289
- Rains, W. A. (see Ordahl, D. D.)
- Ratliff, J. L. (see Maykuth, D. J.)
- Reader, Paul D. and Mickelsen, William R. Ion propulsion systems for spacecraft 577
- Reding, J. Peter (see Ericsson, Lars-Eric)
- Reed, Jack (see Friedman, Robert F.)
- Reeves, Donald Frederick. Variable-mass vehicle limit-cycle propellant consumption (EN) 102
- Volatile liquid pressurization control system (EN) 795
- Reinikka, E. Arnold and Sartell, Robert J. Thermal protection of ballistic entry vehicles 226
- Rish, F. L. (see Posever, F. C.)
- Rivello, Robert M. Preliminary design methods for optimizing insulated structures 944
- Roberson, Robert E. Radiation pressure torques from spatial variations in surface properties (EN) 605
- Robison, William C. and Panzarella, Philip P. Use of parallel injection for control of a bistable jet (EN) 1002
- Rogers, Philip W. (see Wilson, Paul E.)
- Rolsten, Robert F. and Hunt, Harold H. Phenomena resulting from hypervelocity impact 38
- Rosciszewski, Jan. Rocket motor with electric acceleration in the throat (EN) 278
- Reply by author to H. A. Hassan (TC) 1013
- Rosner, Daniel E. Correlation of radar attenuation with rocket exhaust temperature (EN) 601
- Rubins, P. M. and Cunningham, T. H. M. Shock-induced supersonic combustion in a constant-area duct 199
- Ryan, Norman W. (see Mitchell, Rex C.)
- Sagan, Carl (see Swan, Paul R.)
- Sartell, Robert J. (see Reinikka, E. Arnold)
- Schliessmann, D. R. (see Messner, A. M.)
- Schloetzer, F. F. and Jackson, C. T., Jr. Closed-loop simulation of inertial platform accelerometer inputs (EN) 812
- Schmidt, R. N. Effectiveness of solar absorber surfaces (EN) 101
- Schneider, A. M. (see Worlock, R. M.)
- Schuerch, H. Low-density, autorotating wings for manned re-entry 523
- Schuman, Merlin D. (see Dickerson Robert A.)
- Scully, C. N. (see Posever, F. C.)
- Seader, J. D. (see Chu, Hugh N.)
- Seaman, L. T. (see Bachofer, B. T.)
- Seifert, Howard S. (see Hsia, Henry Tao Sze)
- Seitz, W. (see Eilenberg, S. L.)
- Sellers, John P., Jr. Comment on "Free-flight investigations of subliming ablators and transpiration cooling at hypersonic velocities" (TC) 640
- Shapland, D. J., Price, D. A., Hearne, L. F. A configuration for re-entry from Mars missions using aerobraking 501
- Sherrell, F. G. and Mathews, A. J. A high-vacuum calibration system (EN) 799
- Shupert, Thomas C. and Ward, Terry L. Turbopump transient response test facility and program (EN) 820
- Singer, S. Fred (see Pyle, Robert L.)
- Sjogren, William L. and Trask, Donald W. Results on physical constants and related data from the radio tracking of Mariner (Venus) and Ranger III-VII missions 689
- Slachmuylders, E. J. Comment on "Spinning vehicle nutation damper" (TC) 1013
- Smith, George B., Jr. (see Chappee, James H.)
- Smith, Robert Lavell. Dynamics of an unusual spinning re-entry body 895
- Sohl, G. (see Worlock, R. M.)
- Sommerville, I. M. Transient performance prediction of a non-adiabatic, real-gas propulsion system (EN) 599
- Southerland, W. R. (see Breuer, D. W.)
- Sowle, D. H. and Lowen, R. W. Calculation of average radiation fluxes on satellites 153
- Spielberg, I. N. and Cohen, C. B. Janus: a manned orbital spacecraft with staged re-entry 531
- Stableford, Charles V. (see Park, Robert A.)
- Stai, Donald F., Bizjak, Frank, and Stephanou, S. E. Thermodynamic properties of nitrogen tetroxide 742
- Steele, C. R. Toroidal pressure vessels 937
- Steinberg, Morris A. (see Fenn, Raymond W., Jr.)
- Stephanou, S. E. (see Stai, Donald F.)
- Stetson, Kenneth F. Preliminary cone-ablation results 232
- Stone, Ralph W., Jr. and Letko, William. Tolerance to vehicle rotation of subjects using turning and nodding motion of the head while performing simple tasks 437
- Stubberud, Allen R. Stability of constant-altitude re-entry flight paths (EN) 813
- Sumner, T. L. (see Dean, L. E.)
- Surber, True E. Heat transfer in the vicinity of surface protuberances (EN) 978
- Swain, David W. and Bennett, Willard H. Attitude sensor for vehicle orientation in space flight (EN) 116

Swan, Paul R. and Sagan, Carl. Martian landing sites for the Voyager mission.....	18
Swet, C. J. A preliminary appraisal of the Cornucopia concept.....	431
Szego, G. C. Space power systems state of the art (SA).....	641
Taback, H. J., Day, E. E., and Browne, T. P. Combustion termination of solid rocket motors.....	332
Tai, Clement L. and Loh, Michael M. H. Planar motion of a rotating cable-connected space station in orbit.....	889
Taylor, M. V. (see Dean, L. E.)	
Tedrick, Richard N. Atmospheric acoustics as a factor in Saturn static testing (EN).....	258
Test, Frederick L. Transient characteristics of a steam generator (EN).....	262
Testaguzza, Louis, Wolfe, Gordon L., and DiGiorgio, James. Flight verification of satellite thermodynamic analytical techniques and application to manned spacecraft.....	537
Thacher, J. H. (see Dicken, G. M.)	
Thieme, James O. (see Every, Richard L.)	
Thiruvengadam, A., Couchman, C., III, and Preiser, H. S. Cavitation damage resistance of materials in liquid sodium (EN).....	267
Thodos, George (see Denzel, J. A.)	
Thorson, E. D. (see Lascody, D. N.)	
Tick, S. J., Huson, G. R., and Griese, R. Design of ablative thrust chambers and their materials.....	325
Tilton, E. L., III (see Copeland, Alan B.)	
Tobias, Ivan I. and Kosson, Robert L. Arc-jet propulsion for attitude and orbit control of an MORL.....	724
Trask, Donald W. (see Sjogran, William L.)	
Tschauner, Johann F. A. and Hempel, Peter R. Minimum-fuel rendezvous techniques (EN).....	802
Twiss, Peter M. Re-entry of space vehicle fragments.....	660
Vaccaro, Robert J. and Kirby, Maurice J. Rendezvous guidance of lifting aerospace vehicles.....	705
Van Houten, Robert and Baxter, W. G. Titanium, zirconium, and yttrium hydrides as space shielding materials (EN).....	469
Villers, Philippe. Application of solar-sail attitude stabilizers to thermionic power generation (EN).....	976
Vyce, J. Richard. An introduction to gyro optical pickoffs.....	681
Wachtler, William J. Weight considerations in the storage of secondary energy (EN).....	266
Wadleigh, K. H. and Galloway, A. J. Reply by authors to E. J. Slachmuylders (TC).....	1014
Wagner, W. E. Roll modulation for maximum re-entry lateral range.....	677
Wahlquist, A. L. and Panelli, G. C. Some aspects of the applications of hybrid propulsion systems (EN).....	452
Wales, Robert D. and Leubben, Marvin G. Evaporation of electroplated cadmium in high vacuum (EN).....	467
— and Leubben, Marvin G. Reply by authors to A. L. Davis (TC).....	1016
Walker, J. H. (see McKenna, K. J.)	
Walsh, T. J. (see McKevitt, F. X.)	
Ward, Terry L. (see Shupert, Thomas C.)	
Wayne, John F. (see Kennet, Haim)	
Weaver, Robert T. and Bert, Charles W. Strength of sandwich panels with thin-film facing and form cores (EN).....	
Wedekind, G. L. (see Chao, B. T.)	
Wei, Benjamin C. F. Destructive tests of full-size rocket motor cases and their application to lightweight design.....	363
Wheeler, P. C. (see Ergin, E. I.)	
Wiegand, James H. (see Majerus, John N.)	
Wilhelm, James R. Ablation of refrasil-phenolic nozzle inserts in solid propellant exhausts.....	337
Williams, Peter M. (see Nelson, Seymour T.)	
Willoughby, Donald A. Heat conduction in star-perforated solid propellant grains.....	239
Wilson, Louis (see Fischell, Robert E.)	
Wilson, Paul E., Dharmarajan, Sangiah, and Rogers, Philip W. Linear bending analysis of a pressurized multicell shell structure.....	206
Wilson, R. E. Laminar boundary-layer growth on slightly blunted cones at hypersonic speeds.....	490
Wingrove, Rodney C. Trajectory control problems in planetary entry of manned vehicles.....	883
Winje, R. A. (see McKenna, K. J.)	
Wolfe, Gordon L. (see Testaguzza, Louis)	
Wong, George S., MacGregor, Charles A., and Hoshide, Robert K. Suppression of cavitation and unstable flow in throttled turbopumps.....	73
Wong, M. W. (see Dubrow, B.)	
Worlock, R. M., Forrester, A. T., Purmal, G. W., Schneider, A. M., and Sohl, G. Automatic control systems for ions engines (EN).....	280
Wrobel, J. R. Some effects of gas stratification on choked nozzle flows.....	918
Yee, Wee T. (see Kafka, Paul G.)	
Young, N. O. Localization of the gas-liquid interface by capillary effects.....	1008
Yu, E. Y. (see Morgan, S. P.)	
Zimmerman, Frank J. Application of fiber metals to the meteoroid protection problem (EN).....	104
Zimmerman, Ward H. (see Liska, Donald J.)	
Zoutendyk, J. A. Space calibration of standard solar cells using high-altitude balloon flights.....	399

SUBJECTS

AERODYNAMICS OF BODIES, COMBINATIONS, AND INTERNAL FLOW

Effects on roll rate of mass and aerodynamic asymmetries for ballistic re-entry bodies. Louis S. Glover.....	220
Roll-rate lag of rockets accelerating in the upper atmosphere. W. D. Parsons (EN).....	271
Measured aerodynamic characteristics of a cone-cylinder-cone model with base separation at $M = 4.8$. Alan B. Copeland, Eugene E. Covert, and E. L. Tilton III (EN).....	998

AERODYNAMICS OF WINGS, ROTORS, AND CONTROL SURFACES

Leading surface optimization criteria for orbital lifting re-entry craft. Lawrence E. Hooks and Wilbur, L. Hankey Jr.....	516
Low-density, autorotating wings for manned re-entry. H. Schuerch.....	523

AUXILIARY SYSTEMS

Space power systems state of the art. G. C. Szego (SA).....	641
Space calibration of standard solar cells using high-altitude balloon flights. J. A. Zoutendyk.....	399
Experimental investigation of a once-through coaxial steam generator. H. E. Karig, D. N. Jackley, and L. G. Hidde.....	405
Behavior of SNAP-10A during orbital re-entry. Donn K. Nelson.....	664
Applications of SNAP-50 class powerplants to selected unmanned electric propulsion missions. W. R. Fimple and T. N. Edelbaum.....	669
Development status of low-power arc-jet engines. William A. Geideman Jr. and Kurt Muller.....	718
Arc-jet propulsion for attitude and orbit control of an MORL. Ivan I. Tobias and Robert L. Kosson.....	724
Three-fourths I_{max} rule for minimum-area space radiators. J. Frank Coneybear and Henry R. Kroeger (EN).....	98
Effectiveness of solar absorber surfaces. R. N. Schmidt (EN).....	101
Transient characteristics of a steam generator. Frederick L. Test (EN).....	262
Supersonic turbines in space power applications. Gianfranco Angelino (EN).....	609
Application of solar-sail attitude stabilizers to thermionic power generation. Phillippe Villers (EN).....	976
Heat dissipation of primary and secondary batteries. M. G. Gandel and R. H. Kinsey (EN).....	996

COMMUNICATIONS

Relativistic and classical Doppler electronic tracking accuracies. Jerome Hoffman.....	55
Dependence of ground station acquisition effectiveness on geographic location and satellite orbit. Robert L. Pyle and S. Fred Singer.....	410
Results on physical constants and related data from the radio tracking of Mariner (Venus) and Ranger III-VII missions. William L. Sjogren and Donald W. Trask.....	689
Some aspects of the pointing problem for optical communication in space. E. B. Moss.....	698
Signal loss vs antenna pointing error. William M. Bohannon (EN).....	461
Correlation of radar attenuation with rocket exhaust temperature. Daniel E. Rosner (EN).....	601
Communication link performance for commercial and military satellites. Wilbur L. Pritchard and Neil MacGregor (EN).....	614
Orbital tracking and decay analysis of the Saturn I flights. H. F. Kurtz Jr., M. Naumcheff, and A. R. McNair (EN).....	818
Determination of requirements for television displays. John H. Harshbarger.....	1008

FACILITIES, RESEARCH, AND SUPPORT

Multiple rocket firing unit for altitude testing. K. L. Farrow (EN).....	119
Atmospheric acoustics as a factor in Saturn static testing. Richard N. Tedrick (EN).....	258
Manned chamber testing of the Apollo prototype space suit. G. Frankel, G. Albright, and I. Axelrod (EN).....	822
Man-rating considerations in the design and operation of hard vacuum chambers. James H. Chappee and George B. Smith Jr. (EN).....	965
Integrated operating mode of the Apollo mission simulator. Samuel H. Nassiff and Fred. O. Marikan.....	1005

FLUID DYNAMICS

Shocks induced by secondary fluid injection. Henry Tao-Sze Hsia, Howard S. Seifert, and Krishnamurthy Karamcheti.....	67
Analysis of flow separation effects on the dynamics of a large space booster. Lars-Eric Ericsson and J. Peter Reding.....	481
Laminar boundary-layer growth on slightly blunted cones at hypersonic speeds. R. E. Wilson.....	490
An experimental investigation of stagnation-point injection. Edward A. Barber Jr.....	770
Some effects of gas stratification on choked nozzle flows. J. R. Wrobel.....	918
Rate of aerodynamic atomization of droplets. Robert A. Dickerson and Merlin D. Schuman (EN).....	99
Influence of ablation on the dynamics of slender re-entry configurations. James H. Grimes Jr. and John J. Casey (EN).....	106
Application of jet pumping to liquid injection thrust vector control. A. N. Baxter (EN).....	272
LITVC system response evaluation by pressure integration methods. A. W. Langill Jr. (EN).....	445
Forces due to gaseous slot jet boundary-layer interaction. Harvey Dershin (EN).....	597
Jet-damping effects: theory and experiment. D. W. Breuer and W. R. Southerland (EN).....	638
A "square" flare. L. H. Ohman (EN).....	994
Use of parallel injection for control of a bistable jet. William C. Robison and Philip P. Panzarella (EN).....	1002