This volume is the fourth issue of *Ames Research Center Publications* covering literature published in 1976. The previous issues covered the period from July 1, 1971 through December 31, 1975. Annual issues are intended for each subsequent calendar year. *Ames Research Center Publications* continues the earlier *Contributions of Ames Research Scientists to the Aerospace Literature*, which covered the fiscal years 1969, 1970 and 1971.

The bibliography is divided into two sections: Section I includes published works appearing during the calendar year 1976; and Section II includes publications for earlier years not included in previous annual bibliographies. Publications are listed by directorate, division, type of publication and author. The Ames organization code appears in the lower right hand corner of each page containing citations for divisions represented in the bibliography. Each NASA report is identified by a technical report number and by a NASA accession number so that most items can be ordered by using the information provided.

Additional information for ordering publications cited may be obtained by referring to NASA's *Scientific and Technical Aerospace Reports* (STAR), *Limited Scientific and Technical Aerospace Reports* (L-STAR), and *International Aerospace Abstracts* (IAA). The NASA unlimited reports are available in either hard copy or microfiche through the National Technical Information Service (NTIS), Springfield, VA 22151, or through the Government Printing Office (GPO), Washington, D.C. 20402. Items identified with an X accession number are often limited or classified and available only to certain individuals or organizations. These documents must be ordered from the NASA center or from the institution which produced them. Patents are available through the Commissioner of Patents, U.S. Patent Office, Washington, D.C. 20231.

Betty R. Sherwood
Compiler
TABLE OF CONTENTS

SECTION I - 1976 PUBLICATIONS

<table>
<thead>
<tr>
<th>ORGANIZATION</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of the Director (D)</td>
<td>1</td>
</tr>
<tr>
<td>Health and Safety Office (DS)</td>
<td>2</td>
</tr>
<tr>
<td>Planning and Analysis Office (DM)</td>
<td>3</td>
</tr>
<tr>
<td>Administration Directorate (A)</td>
<td></td>
</tr>
<tr>
<td>Services and Supply Division (AA)</td>
<td>5</td>
</tr>
<tr>
<td>Technical Information Division (AT)</td>
<td>6</td>
</tr>
<tr>
<td>Technology Utilization Office (AU)</td>
<td>7</td>
</tr>
<tr>
<td>Aeronautics and Flight Systems Directorate (F)</td>
<td>8</td>
</tr>
<tr>
<td>Aerodynamics Division (FA)</td>
<td>9</td>
</tr>
<tr>
<td>Aeronautical Systems Office (FM)</td>
<td>19</td>
</tr>
<tr>
<td>Aircraft Operations Division (FO)</td>
<td>20</td>
</tr>
<tr>
<td>Flight Systems Research Division (FS)</td>
<td>21</td>
</tr>
<tr>
<td>Research Aircraft Projects Office (FP)</td>
<td>35</td>
</tr>
<tr>
<td>Simulation Sciences Division (FL)</td>
<td>40</td>
</tr>
<tr>
<td>V/STOL Aircraft Technology Division (FV)</td>
<td>41</td>
</tr>
<tr>
<td>Astronautics Directorate (S)</td>
<td>44</td>
</tr>
<tr>
<td>Advanced Missions Office (SM)</td>
<td>45</td>
</tr>
<tr>
<td>Applications Division (SE)</td>
<td>47</td>
</tr>
<tr>
<td>Chemical Research Projects Office (SC)</td>
<td>49</td>
</tr>
<tr>
<td>Flight Project Development Division (SD)</td>
<td>55</td>
</tr>
<tr>
<td>Project Pioneer (SA)</td>
<td>59</td>
</tr>
<tr>
<td>Space Science Division (SS)</td>
<td>60</td>
</tr>
<tr>
<td>Thermo- and Gas-Dynamics Division (ST)</td>
<td>72</td>
</tr>
<tr>
<td>Federal Aviation Administration (T)</td>
<td>85</td>
</tr>
<tr>
<td>Life Sciences Directorate (L)</td>
<td>86</td>
</tr>
<tr>
<td>Biomedical Research Division (LR)</td>
<td>87</td>
</tr>
<tr>
<td>Biotechnology Division (LT)</td>
<td>92</td>
</tr>
<tr>
<td>Flight Experiments Office (LF)</td>
<td>99</td>
</tr>
<tr>
<td>Man-Vehicle Systems Research Division (LM)</td>
<td>100</td>
</tr>
<tr>
<td>Planetary Biology Division (LP)</td>
<td>101</td>
</tr>
<tr>
<td>Research Support Directorate (R)</td>
<td>105</td>
</tr>
<tr>
<td>Computation Division (RK)</td>
<td>106</td>
</tr>
<tr>
<td>Reliability and Quality Assurance Office (RQ)</td>
<td>107</td>
</tr>
<tr>
<td>Research Facilities and Instrumentation Division (RF)</td>
<td>108</td>
</tr>
<tr>
<td>Technical Services Division (RS)</td>
<td>111</td>
</tr>
<tr>
<td>Research Support Directorate (R)</td>
<td></td>
</tr>
<tr>
<td>Army Air Mobility Research &amp; Development Laboratory and Ames Directorate (X,Y)</td>
<td>112</td>
</tr>
</tbody>
</table>

SECTION II - ADDENDUM: PRIOR YEARS' PUBLICATIONS

<p>| Office of the Director (D)                        | 113  |
| Health and Safety Office (DS)                     |     |
| Aeronautics and Flight Systems Directorate (F)    | 116  |
| Aeronautics Division (FA)                         |     |</p>
<table>
<thead>
<tr>
<th>Organization</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight Systems Research Division (FS)</td>
<td>117</td>
</tr>
<tr>
<td>Research Aircraft Project Office (FP)</td>
<td>119</td>
</tr>
<tr>
<td>Astronautics Directorate (S)</td>
<td>120</td>
</tr>
<tr>
<td>Advanced Missions Office (SM)</td>
<td>121</td>
</tr>
<tr>
<td>Applications Division (SE)</td>
<td>122</td>
</tr>
<tr>
<td>Chemical Research Projects Office (SC)</td>
<td>123</td>
</tr>
<tr>
<td>Flight Project Development Division (SD)</td>
<td>124</td>
</tr>
<tr>
<td>Space Science Division (SS)</td>
<td>125</td>
</tr>
<tr>
<td>Thermo- and Gas-Dynamics Division (ST)</td>
<td>127</td>
</tr>
<tr>
<td>Life Sciences Directorate (L)</td>
<td></td>
</tr>
<tr>
<td>Biomedical Research Division (LR)</td>
<td>128</td>
</tr>
<tr>
<td>Biotechnology Division (LT)</td>
<td>129</td>
</tr>
<tr>
<td>Planetary Biology Division (LP)</td>
<td>130</td>
</tr>
<tr>
<td>Research Support Directorate (R)</td>
<td>131</td>
</tr>
<tr>
<td>Computation Division (RK)</td>
<td>132</td>
</tr>
<tr>
<td>Research Facilities and Instrumentation Division (RF)</td>
<td>133</td>
</tr>
<tr>
<td>Army Air Mobility Research &amp; Development Laboratory</td>
<td></td>
</tr>
<tr>
<td>and Ames Directorate (X,Y)</td>
<td>134</td>
</tr>
</tbody>
</table>

SECTION III — AUTHOR INDEX

Index .................................................................................. 137
SECTION I

1976 Publications
1. Jones, R. T.; and Nisbet, J. W.

2. Jones, R. T.

3. Mark, H.

PATENTS

4. Jones, R. T.
Oblique-Wing Supersonic Aircraft. 1976.
NASA-CASE-ARC-10470-3
US-PATENT-3,971,535
NASA TM-X-3329 N76-16007


NASA CR-137870

N76-24081
14. Vallee, J.; and Wilson, T.
NASA CR-137879 N76-28835

15. Vallee, J.; and Gibbs, B.
NASA TM-X-73167 N76-33123
17. Kubokawa, C. C.
18. Roberts, L.  
AGARD CP-187  
N76-25283

19. Roberts, L.  

20. Roberts, L.  
21. Bachalo, W. D.; and Holt, M.  
Three Dimensional Boundary Layer Separation in Supersonic Flow. In  
Separation. Proceedings of the Fluid Dynamics Symposium, Goettingen,  
AGARD CP-168 N76-17063

22. Bencze, D. P.  
Wind Tunnel Investigation of Nacelle-Airframe Interference at Mach  
Numbers of 0.9 to 1.4—Force Data. 1976.  
NASA TM-X-62489 N76-25143

23. Bencze, D. P.  
Wind Tunnel Investigation of Nacelle-Airframe Interference at Mach  
Numbers of 0.9 to 1.4—Pressure Data, vol. 1. 1976.  
NASA TM-X-73149 N76-26146

24. Bencze, D. P.  
Wind Tunnel Investigation of Nacelle-Airframe Interference at Mach  
Numbers of 0.9 to 1.4—Pressure Data, vol. 2. 1976.  
NASA TM-X-73088 N76-25144

The Effects of Blowing Over Various Trailing-Edge Flaps on an NACA 0006 Airfoil Section, Comparisons with Various Types of Flaps on Other Airfoil Sections, and an Analysis of Flow and Power Relationships for Blowing Systems. 1976.  
NASA TN-D-8293 N76-32133

26. Erickson, L. L.; Johnson, F. T.; and Ehlers, F. E.  
Advanced Surface Paneling Method for Subsonic and Supersonic Flow. In  
NASA CP-001 N77-17999

27. Hopkins, E. J.; and Lovette, G. H.  
NASA TM-X-3398 N77-16068

28. Hopkins, E. J.; and Lovette, G. H.  
NASA TM-X-3372 N76-29241
29. Hopkins, E. J.; and Nelson, E. R.
Effect of Wing Bend on the Experimental Force and Moment Characteristics of an Oblique Wing. 1976.
NASA TM-X-3343
N76-18072

30. Johnson, D. A.; Bachalo, W. D.; and Modaress, D.
Laser Velocimetry Applied to Transonic and Supersonic Aerodynamics.
AGARD CP-193
(Also published as NASA TM-X-73117)

31. Jorgensen, L. H.; and Nelson, E. R.
Experimental Aerodynamic Characteristics for Slender Bodies with Thin Wings and Tail at Angles of Attack from 0° to 58° and Mach Numbers from 0.6 to 2.0. 1976.
NASA TM-X-3310
N76-20079

32. Jorgensen, L. H.; and Howell, M. H.
Experimental Aerodynamic Characteristics for Slender Bodies with Thin Wings at Angles of Attack from 0° to 58° and Mach Numbers from 0.6 to 2.0. 1976.
NASA TM-X-3309
N76-15080

33. Jorgensen, L. H.
NASA TM-X-73123
N76-30158

34. Keener, E. R.; and Valdez, J.
Side Forces on a Tangent Ogive Forebody with a Fineness Ratio of 2.5 at High Angles of Attack and Low Speed. 1976.
NASA TM-X-73176
N77-18053

35. Latham, E. A.
Investigation of Two Bifurcated-Duct Inlet Systems from Mach 0 to 2.0 Over a Wide Range of Angles of Attack. 1976.
NASA TM-X-73118
N76-27166

36. Mendoza, J. P.; and Hicks, R. M.
NASA TM-X-3363
N76-18074

37. Mendoza, J. P.
Further Wind Tunnel Measurements of Pressure Signatures for a 0.0041-Scale Model of the Space Shuttle Orbiter. 1976.
NASA TM-X-73120
N76-28188
NASA TM-X-73136 N77-16016

AGARD CP-174 N76-25257

40. Nelms, W. P., Jr.; Murphy, R.; and Barlow, A.
NASA TM-X-73131 N76-27215

41. Perkin, B. R.; and Erickson, L. L.
NASA CP-001 N77-18009

42. Satyanarayana, B.
AGARD CP-177 N76-25193

43. Smith, R. C.; Jones, R. T.; and Summers, J. L.
NASA TM-X-73103 N76-22186

44. Sorensen, N. E.
NASA TM-X-73180 N77-12069

45. Tauber, M. E.; and Saunders, R. C., III.
NASA TM-X-73165 X77-10022

46. Tauber, M. E.; Fuhs, A. E.; and Paterson, J. A.
NASA TM-X-73173 N77-13061

47. Vanderplaats, G. N.
NASA TM-X-73104 N76-18526
48. Vanderplaats, G. N.; and Hicks, R. M.
Numerical Airfoil Optimization Using a Reduced Number of Design Coordinates. 1976.
NASA TM-X-73151

NASA CONTRACTOR REPORTS

49. Aderhold, J. R.; Gordon, G.; and Scott, G. W.
NASA CR-137894

50. Aderhold, J. R.; Gordon, G.; and Scott, G. W.
NASA CR-137895

51. Bradley, E. S.; Honrath, J.; Tomlin, K. H.; Swift, G.; Shumpert, P.; and Warnock, W.
NASA CR-137896

52. Bradley, E. S.
NASA CR-137897

53. Hawkins, J. E.; Kirkland, F. P.; and Turner, R. L.
NASA CR-2680

54. Merz, A. W.; and Hague, D. S.
NASA CR-137809

55. Pyle, R. S.; Sykora, R. G.; and Denman, S. C.
NASA CR-137900

56. Santman, D. M.
NASA CR-2747
57. Sun, C.-C.; and Childs, M. E.
NASA CR-2656

58. Taylor, R. B.
Vibratory Hub Load Data Reduction and Analysis from the Reverse Velocity Rotor Wind Tunnel Test, Phase IIIB. (D210-11004-1, Boeing Vertol Co., Philadelphia, Pa.; NAS2-8630.) 1976.
NASA CR-137780

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS


63. Clarkson, M. H.; Malcolm, G. N.; and Chapman, G. T.

64. Davis, S. S.

65. Davis, S. S.
66. Gwin, L. B.

67. Hanly, R. D.

68. Hanly, R. D.

69. Hicks, R. M.; Vanderplaats, G. N.; Murman, E. M.; and King, R. R.

70. Hopkins, E. J.

71. Johnson, D. A.; Bachalo, W. D.; and Modarress, D.

72. Johnson, D. A.; and Rose, W. C.

73. Johnson, E. H.

74. Johnson, E. H.; Rizzi, P.; Ashley, H.; and Segenreich, S. A.


84. Rose, W. C.

85. Rose, W. C.; and McDaid, E. P.

86. Satyanarayana, B.

87. Saunders, R. C., III; and Otten, L. J., III.

88. Saunders, R. C., III; and Otten, L. J., III.

89. Schwartz, I. R.

90. Schwartz, I. R.

91. Seginer, A.

92. Seginer, A.; and Rose, W. C.

93. Sorensen, N. E.; and Smeltzer, D. B.
(Also published as AIAA Paper 76-204.)
94. Sorensen, N. E.; Latham, E. A.; and Smeltzer, D. B.

95. Tauber, M. E.; and Kirk, D. B.

96. Vanderplaats, G. N.

97. Vanderplaats, G. N.

98. Vanderplaats, G. N.

99. Vanderplaats, G. N.

100. Wenzel, A. R.

PATENTS

101. Cheng, D. Y.

102. Cheng, D. Y.
System for Measuring Reynolds in a Turbulently Flowing Fluid.

103. Cheng, D. Y.
104. Gregory, T. J.
Rotating Launch Device for a Remotely Piloted Aircraft. 1976.
NASA-CASE-ARC-10979-1 US-PATENT-3,989,206
AIRCRAFT OPERATIONS DIVISION

PATENTS

106. Rogers, J. R.  
Smoke Generator. 1976.  
NASA-CASE-ARC-10905-1  
US-PATENT-3,990,987
107. Betzina, M. D.; and Brown, D. H.
Aerodynamic Characteristics of an A-4B Aircraft with Simulated and
Actual Gunfire Damage to One Wing. 1976.
NASA TM-X-73119 N76-30159

108. Bray, R. S.
Factors Influencing Tolerance to Wind Shears in Landing Approach. In
Aircraft Safety and Operating Problems: Proceedings of a Conference
NASA SP-416 N77-18085

109. Corsiglia, V. R.; and Orloff, K. L.
Scanning Laser-Velocity Surveys and Analysis of Multiple Vortex
Wakes of an Aircraft. 1976.
NASA TM-X-73169 N77-13985

110. Corsiglia, V. R.; and Rossow, V. J.
Wind-Tunnel Investigation of the Effect of Porous Spoilers on the Wake
of a Subsonic Transport Model. 1976.
NASA TM-X-73091 N76-19054

111. Davis, J. E.; Bonnett, W. S.; and Medan, R. T.
NASA-Ames Three-Dimensional Potential Flow Analysis System (POTFAN)
NASA TM-X-73074 N76-32877

112. Eckert, W. T.; Mort, K. W.; and Jope, J.
Aerodynamic Design Guidelines and Computer Program for Estimation of
NASA TN-D-8243 N77-11993

113. Eckert, W. T.; Mort, K. W.; and Piazza, J. E.
An Experimental Investigation of End Treatments for Nonreturn Wind
Tunnels. 1976.
NASA TM-X-3402 N76-26225

114. Edwards, F. G.; Bull, J. S.; Foster, J. D.; Hegarty, D. M.; and
Drinkwater, F. J., III.
Delayed Flap Approach Procedures for Noise Abatement and Fuel
NASA SP-416 N77-18086

-21-
115. Foster, J. D.; and Lasagna, P. L.
NASA TM-X-73172
N77-20078

NASA SP-416
N77-18084

117. Goto, N.
NASA TM-X-73170
N77-14745

NASA TM-X-73174
X77-70860

119. Gutman, S.
NASA TM-X-73135
N76-26217

120. Hess, R. A.
NASA TM-X-73146
N76-30223

121. Hess, R. A.
NASA TM-X-73101
N76-21217

122. Hodder, B. K.
NASA TM-X-73183
N77-14027

123. Hruby, R. J.; Wilson, R. L.; and Carestia, R. A.
NASA TM-X-73155
N77-13057
124. Hynes, C. S.; and Scott, B. C.  
NASA SP-416 N77-18090

125. Johnson, W.  
NASA TM-X-73153 N76-29268

126. Johnson, W.  
Elementary Applications of a Rotorcraft Dynamic Stability Analysis. 1976. 
NASA TM-X-73161 N76-33129

127. Johnson, W.  
NASA TM-X-73158 N76-30148

128. Johnson, W.  
NASA TM-X-73138 N76-28933

129. Kelly, M. W.; Dickinson, S. O.; and Maynard, E. E.  
AGARD CP-210 N77-11972

130. Komoda, M.  
NASA TN-D-8180 N76-18141

131. Koutsoyannis, S. P.  
NASA CP-2001-vol. 3 N77-10308

132. Kurkowski, R. L.; Barber, M. R.; and Garodz, L. J.  
NASA TN-D-8222 N76-21175

133. Luebs, A. B.; Bradfute, J. G.; and Ciffone, D. L.  
NASA TM-X-73197 N77-18052
134. Maskew, B.
NASA TM-X-73115 N76-23162

135. Medan, R. T.
N77-12996

136. Medan, R. T.; and Bullock, R. B.
NASA TM-X-73127 N77-13000

137. Meyer, G.; and Cicolani, L.
NASA TM-X-3409 N76-31172

138. Mort, K. W.; Kelly, M. W.; and Hickey, D. H.
AGARD CP-174 N76-25223

139. Orloff, K. L.; Corsiglia, V. R.; Biggers, J. C.; and Ekstedt, T. W.
NASA TM-X-73171 N77-11390

140. Sammonds, R. I.; Stinnett, G. W., Jr.; and Larsen, W. E.
Wake Vortex Encounter Hazards Criteria for Two Aircraft Classes. 1976.
NASA TM-X-73113 N76-28206

141. Smith, D. W.; Neuman, F.; Watson, D. M.; and Hardy, G. H.
NASA TM-X-3409 N76-31156

142. Snyder, C. T.
NASA TM-X-3409 N76-31164
143. Soderman, P. T.
Test-Section Noise of the Ames 7- by 10-Foot Wind Tunnel No. 1. 1976.
NASA TM-X-73134
N76-26948

144. Sudderth, R. W.; and McNeill, W. E.
Development of Longitudinal Handling Qualities Criteria for Large
Advanced Supersonic Aircraft. In SCAR Conference, Langley Research
Center, Hampton, Va., Nov. 9-12, 1976. Proceedings. Washington,
171-192.
NASA CP-001 N77-18006

145. Toda, M.; Brown, S. C.; and Burrous, C. N.
Simulation of an Automatically-Controlled STOL Aircraft in a Microwave
NASA TM-X-73154 N77-11063

146. White, K. C.; Lasagna, P. L.; and Putnam, T. W.
Preliminary Measurements of Aircraft Airframe Noise with the NASA
CV-990 Aircraft. 1976.
NASA TM-X-73116 N76-26145

147. Wingrove, R. C.
Accident Investigation — Analysis of Aircraft Motions from ATC Radar
Recordings. In Aircraft Safety and Operating Problems; Proceedings of a
Conference Held at Langley Research Center, Hampton, Va., Oct. 18-20,
p. 179-190.
NASA SP-416 N77-18091

NASA CONTRACTOR REPORTS

148. Clement, W. F.
Investigation of the Use of an Electronic Multifunction Display and an
Electromechanical Horizontal Situation Indicator for Guidance and
Control of Powered-Lift Short-Haul Aircraft. Final Report. (TR-1072-1,
NASA CR-137922 N77-12055

149. Crumrine, R. J.
Flight Simulation Study to Determine MLS Lateral Course Width Require­ments on Final Approach for General Aviation. (Crumrine (Ralph J.),
NASA CR-137859 N76-31215

150. Curtiss, H. C., Jr.
The Longitudinal Equations of Motion of a Tilt Prop/Rotor Aircraft
Including the Effects of Wing and Prop/Rotor Blade Flexibility.
(TR-1273, Princeton Univ., N.J. (Dept. of Aerospace and Mechanical
Sciences.); NSG-2045.) 1976.
NASA CR-137855 N76-28226

151. Debra, D. B.; and Sorenson, J.
On the Applicability of Integrated Circuit Technology to General Aviation
Orientation Estimation. Final Report. (Stanford University. (Guidance
and Control Laboratory.); NAS2-9083.) 1976.
NASA CR-151952 N77-17356

-25-
152. Eberlein, A. J.; and Lahn, T. G. 
NASA CR-137730  N76-16061

153. Erickson, J. C., Jr. 
NASA CR-137917  N76-32200

154. Evans, P. F.; and Hackett, J. E. 
NASA CR-137888  N77-10014

155. Gorham, J. A. 
NASA CR-137950  N77-17033

156. Grgurich, J.; and Bradbury, P. 
NASA CR-137972  N77-14019

157. Hackett, J. E.; Boles, R. A.; and Lilley, D. E. 
Ground Simulation and Tunnel Blockage for a Jet-Flapped, Basic STOL Model Tested to Very High Lift Coefficients. (Lockheed-Georgia Co., Marietta; NAS2-8745.) 1976.
NASA CR-137857  N76-28227

158. Hall, W. E., Jr.; and Buenz, D. 
NASA CR-137826  N76-19146

159. Hoffman, W. C.; and Hollister, W. M. 
NASA CR-137909  N76-33179

160. Jackson, D. O.; and Lambregts, A. A. 
NASA CR-137906  N77-19066

-26-
161. Jaeck, C. L.  
NASA CR-137913 N76-32972

162. Jaeck, C. L.  
NASA CR-137914 N77-17071

163. Joppa, R. G.  
NASA CR-137839 N76-28232

164. Maroti, L. A.; Hill, P. G.; Armstrong, R. L.; and Haines, D. M.  
NASA CR-2721 N77-10002

165. Morrison, J. A.  
NASA CR-137975 N77-17034

166. Powell, J. D.  
NASA CR-151963 X77-10024

167. Radford, R. C.; Schelhorn, A. E.; Siracuse, R. J.; Till, R. D.; and Wasserman, R.  
NASA CR-137828 N76-24208

168. Reeves, P. M.; Joppa, R. G.; and Ganzer, V. M.  
NASA CR-2639 N76-17074

169. Schmidt, S. F.; and Mann, F. I.  
NASA CR-137939
Flight Evaluation of Two-Segment Approaches Using Area Navigation
NASA CR-2679
N76-20107

171. Seacord, C. L.; and Vaughn, D.
Computer Technology Forecast Study for General Aviation. (Honeywell,
Inc., St. Louis Park, Minn. (Government and Aeronautical Products
Div.); NAS2-8971.) 1976.
NASA CR-137889
N76-30214

172. Strout, F. G.
Flight Effects on Noise Generated by the JT8D-17 Engine in a Quiet
Nacelle and a Conventional Nacelle as Measured in the NASA-Ames
40- by 80-Foot Wind Tunnel, Contractor Report. (D6-42813, Boeing
NASA CR-137797
X76-10314

173. Strout, F. G.
Flight Effects on Noise Generated by the JT8D-17 Engine in a Quiet
Nacelle and a Conventional Nacelle as Measured in the NASA-Ames
NASA CR-2576
N76-26202

174. Ahtye, W. F.; and Kojima, G. K.
Correlation Microphone for Measuring Airframe Noise in Large-Scale
Wind Tunnels. In American Institute of Aeronautics and Astronautics.
AIAA Paper 76-553.

175. Athans, M.; Ku, R.; and Gershwin, S. B.
The Uncertainty Threshold Principle: Some Fundamental Limitations of
Optimal Decision Making under Dynamic Uncertainty. In IEEE Conference
on Decision and Control, including the Symposium on Adaptive Processes,
(Supported by NASA Grant NGL 22-009-124)

176. Barman, J. F.; and Erzberger, H.
Fixed-Range Optimum Trajectories for Short-Haul Aircraft. Journal of

177. Bensoussan, A.; Delfour, M. C.; and Mitter, S. K.
The Linear Quadratic Optimal Control Problem for Infinite Dimensional
Systems over an Infinite Horizon; Survey and Examples. In IEEE
Conference on Decision and Control, including the Symposium on Adaptive
(Supported by NASA Grant NGL 22-009-124)
178. Blanvillain, P.; and Johnson, T. L.
Invariants of Optimal Minimal-Order Observer-Based Compensators.
In IEEE Conference on Decision and Control, Including the Symposium on
New York, Institute of Electrical and Electronics Engineers, 1976.
p. 186-191. (Supported by NASA Grant NGL 22-009-124)

179. Brown, S. C.; Burrous, C. N.; Goka, T.; and Park, K. E.
Microwave Landing System Requirements for STOL Operations.

180. Bull, J. S.
Energy Management — The Delayed Flap Approach.

181. Chong, C.-Y.; and Athans, M.
On the Periodic Coordination of Linear Stochastic Systems.
(Also published in International Federation of Automatic Control.

182. Ciffone, D. L.
Vortex Interactions in Multiple Vortex Wakes Behind Aircraft.
In American Institute of Aeronautics and Astronautics. Aerospace Sciences

183. Corsiglia, V. R.; Rossow, V. J.; and Ciffone, D. L.
Experimental Study of the Effect of Span Loading on Aircraft Wakes.

184. Falarski, M. D.
The Aerodynamic and Acoustic Characteristics of an Over-the-Wing Target-
Type Thrust Reverser Model.

185. Falarski, M. D.; Wilby, J. F.; and Aiken, T. N.
Augmentor Wing Propulsive-Lift Concept Acoustic Characteristics.

186. Falarski, M. D.; Wilby, J. F.; and Aiken, T. N.
Correlation of Internal Surface Turbulence with Far-Field Noise of
the Augmentor Wing Propulsive-Lift Concept.
In American Institute of Aeronautics and Astronautics. Aerospace Sciences Meeting, 14th,

187. Fridman, J. D.; Young, R. M.; Seavey, R. E.; and Orloff, K. L.
Modular High Accuracy Tracker for Dual Channel Laser Doppler Velocimeter.
In Minnesota Symposium on Laser Anemometry, Bloomington, Minn., Oct.
188. Gutman, S.; and Leitmann, G.  
Optimal Strategies in the Neighborhood of a Collision Course.  

189. Gutman, S.; and Leitmann, G.  
Stabilizing Feedback Control for Dynamical Systems with Bounded Uncertainty.  

190. Hermann, R.  

191. Hermann, R.  

192. Hermann, R.  

193. Hermann, R.  

194. Hess, R. A.; and Wheat, L. W.  


196. Kaji, S.  
197. Kroeger, R. A.; and Feistel, T. W.
Reduction of Stall-Spin Entry Tendencies through Wing Aerodynamic Design.

198. Kwong, R. H.; and Willsky, A. S.

199. Martin, C. F.; and Hermann, R.

200. Martin, D. N.; and Johnson, T. L.

201. McCloud, J. L., III.

202. Neuman, F.; and Merrick, R. B.

203. Neuman, F.; and Martin, C. F.

204. Olson, L. E.; and Dvorak, F. A.

205. Orloff, K. L.; Corsiglia, V. R.; Biggers, J. C.; and Ekstedt, T. W.

206. Orloff, K. L.; Myer, F. C.; Mikasa, M. F.; and Phillips, J. R.
207. Patel, R. V.  

208. Patel, R. V.  

209. Platzman, L. K.; and Johnson, T. L.  


211. Rossow, V. J.  

212. Safonov, M. G.; and Athans, M.  

213. Sammonds, R. I.; Stinnett, G. W., Jr.; and Larsen, W. E.  

214. Siljak, D. D.; and Vukcevic, M. B.  

215. Siljak, D. D.; and Sundareshan, S. K.  

216. Siljak, D. D.; and Vukcevic, M. B.  
217. Siljak, D. D.; and Vukcević, M. B.
Multilevel Control of Large-Scale Systems: Decentralization, Stabilization, Estimation and Reliability. In Large-Scale Dynamical Systems. Saeks, R., Editor. Los Angeles, Point Lobos Press, 1976. p. 34-57. (Supported by NASA Grant NGR 05-017-010)

218. Siljak, D. D.; and Sundareshan, M. K.
A Multilevel Optimization of Large-Scale Dynamic Systems. IEEE Transactions on Automatic Control, vol. AC-21, Feb. 1976, p. 79-84. (Supported by NASA Grant NGR 05-017-010)

219. Siljak, D. D.

220. Strout, F. G.; and Atencio, A., Jr.

221. Teneketzis, D.; and Sandell, N. R., Jr.

222. Toda, M.; Patel, R.; and Sridhar, B.

223. Willsky, A. S.

224. Wong, P. K.; and Athans, M.

225. Yu, Y. H.
226. Pope, J. M.; and Fryer, T. B.
NASA-CASE-ARC-10583-1
US-PATENT-3,971,362
227. Anderson, J. L.; and Beltramo, M. N. 
NASA TM-X-73186 X77-70859

228. Ardema, M. D. 
NASA TM-X-73168 X76-78467

229. Ardema, M. D. 
NASA TM-X-73141 N76-26918

230. Bowles, J. V.; Waters, M. H.; and Galloway, T. L. 
Thrust and Wing Loading Requirements for Short Haul Aircraft Constrained by Engine Noise and Field Length. 1976. 
NASA TN-D-8144 N76-14113

231. Cook, W. L.; and Hickey, D. H. 
AGARD CP-187 N76-25293

232. Gambucci, B. J.; Aoyagi, K.; and Rolls, L. S. 
NASA TM-X-73139 N76-27170

233. Gambucci, B. J.; Aoyagi, K.; and Rolls, L. S. 
NASA TM-X-73164 N77-12999

234. Hill, G. C.; and Bowles, J. V. 
NASA TM-X-73162 N76-33190

235. Innis, R. C.; and Quigley, H. C. 
NASA SP-416 N77-18083

NASA TM-X-73106 X76-72618
237. Whittley, D. C.; and Cook, W. L.
AGARD CP-187 N76-25292

NASA CONTRACTOR REPORTS

238. Bland, M. P.; and Konsewicz, R. K.
Simulation Test Results for Lift/Cruise Fan Research and Technology Aircraft (MDC-A4439, McDonnell Aircraft Co., St. Louis, Mo.; NAS2-9144.) 1976.
NASA CR-137979 N77-14007

239. Coykendall, R. E.; Curry, J. K.; Domke, A. E.; and Madsen, S. E.
NASA CR-137891 N76-31079

NASA CR-137937 N77-14029

NASA CR-137938 N77-14030

242. Esker, D. W.
NASA CR-137959 N77-11107

243. Gotlieb, P.; Lewis, G. E.; and Little, L. J.
NASA CR-137971 N77-11064

244. Hopkins, J. P.; and Wharton, H. E.
NASA CR-137926 N77-15007
245. Hopkins, J. P.; and Wharton, H. E.
NASA CR-137927
N77-15008

246. Kadman, Y.
NASA CR-137748
N76-21160

247. Kelley, H. J.; and Lefton, L.
NASA CR-137819
N76-21188

NASA CR-151926
N77-18133

249. Magee, J. P.; and Alexander, H. R.
NASA CR-137946
X77-72672

250. Magee, J. P.; Alexander, H. R.
NASA CR-151936
N77-17001

251. Magee, J. P.; and Alexander, H. R.
NASA CR-151937
N77-17002

252. Magee, J. P.; and Alexander, H. R.
NASA CR-151938
N77-17003

-37-
253. Magee, J. P.; and Alexander, H. R.
NASA CR-151939

254. McVeigh, M. A.; and Widdison, C. A.
NASA CR-151949

255. McVeigh, M. A.
NASA CR-151950

256. Merrill, G. L.
NASA CR-137944

257. Morrison, W. D., Jr.
NASA CR-137928

258. Morrison, W. D., Jr.
NASA CR-137929

259. O'Brien, W. J.
NASA CR-151931

260. O'Brien, W. J.
NASA CR-151932

261. O'Brien, W. J.
NASA CR-151933

-38-
262. Sambell, K. W.
NASA CR-2690
N76-22175

263. Wind Tunnel and Ground Static Investigation of a Large Scale Model
of a Lift/Cruise Fan V/STOL Aircraft. (MDC-A4318, McDonnell Aircraft
NASA CR-137916
N76-32178

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

264. Anderson, J. L.; and Andrastek, D. A.
Operating Cost Model for Local Service Airlines. In Society of Allied
Weight Engineers. Annual Conference, 35th, Philadelphia, Pa., May

265. Ardema, M. D.
Characteristics of the Boundary-Layer Equations of the Minimum
Time-to-Climb Problem. In Allerton Conference on Circuit and System

266. Cassanto, J. M.; and Lane, J. W.
1976, p. 1050-1053.

267. Cochrane, J. A.; and Carros, R. J.
Hybrid Upper Surface Blown Flap Propulsive-Lift Concept for the QSRA.

268. Galloway, T. L.
Aircraft Concepts for Service to Small Communities. In Society of
Allied Weight Engineers. Annual Conference, 35th, Philadelphia, Pa.,

269. Schairer, E. T.; and Galloway, T. L.
Parametric Analysis of Advanced Technology Applied to a Single Engine
Trainer. In Society of Automotive Engineers. Business Aircraft
270. Cleveland, W. B.
N  NASA TN-D-8331 N77-11693

271. Webster, L. D.
N  NASA CR-137860 N76-22218

272. Cox, J.; Winovich, W.; and Carlson, W. C. A.
V/STOL AIRCRAFT TECHNOLOGY DIVISION

FORMAL REPORTS.

273. Anderson, J. L.; and Beltramo, M. N.
   NASA TM-X-73186

274. Andrastek, D. A.
   Study of Short-Haul Aircraft Operating Economics: Phase II — An
   Analysis of the Impact of Jet Modernization on Local Service Airline
   NASA CR-137863

   Mathematical Model for Lift/Cruise Fan V/STOL Aircraft Simulator
   Programming Data. (MDC-A4571, McDonnell Aircraft Co., St. Louis, Mo.;
   NAS2-9144.) 1976.
   NASA CR-151916

276. Elliott, D.-W.
   Lift Cruise Fan V/STOL Aircraft Conceptual Design Study T-39 Modifica-
   Columbus, Ohio. (Aircraft Div.); NAS2-9307.) 1976.
   NASA CR-151925

277. Gobetz, F. W.; and Dubin, A. P.
   Cost/Benefit Trade-Offs for Reducing the Energy Consumption of
   Commercial Air Transportation (RECAT). Final Report. (UTRC-R76-
   912036-16, United Technologies Research Center, East Hartford, Conn.;
   NAS2-8608.) 1976.
   NASA CR-137877

278. Gobetz, F. W.; and Le Shane, A. A.
   Cost/Benefit Trade-Offs for Reducing the Energy Consumption of
   Commercial Air Transportation (RECAT). Summary Report. (UTRC-R76-
   912036-17, United Technologies Research Center, East Hartford, Conn.;
   NAS2-8608.) 1976.
   NASA CR-137878

279. Kraus, E. F.; and Van Abkoude, J. C.
   Cost/Benefit Tradeoffs for Reducing the Energy Consumption of the
   Commercial Air Transportation System. Summary Report, 5 Nov. 1974–
   Calif.; NAS2-8618.) 1976.
   NASA CR-137925

NASA CONTRACTOR REPORTS

274. Andrastek, D. A.
   Study of Short-Haul Aircraft Operating Economics: Phase II — An
   Analysis of the Impact of Jet Modernization on Local Service Airline
   NASA CR-137863

   Mathematical Model for Lift/Cruise Fan V/STOL Aircraft Simulator
   Programming Data. (MDC-A4571, McDonnell Aircraft Co., St. Louis, Mo.;
   NAS2-9144.) 1976.
   NASA CR-151916

276. Elliott, D.-W.
   Lift Cruise Fan V/STOL Aircraft Conceptual Design Study T-39 Modifica-
   Columbus, Ohio. (Aircraft Div.); NAS2-9307.) 1976.
   NASA CR-151925

277. Gobetz, F. W.; and Dubin, A. P.
   Cost/Benefit Trade-Offs for Reducing the Energy Consumption of
   Commercial Air Transportation (RECAT). Final Report. (UTRC-R76-
   912036-16, United Technologies Research Center, East Hartford, Conn.;
   NAS2-8608.) 1976.
   NASA CR-137877

278. Gobetz, F. W.; and Le Shane, A. A.
   Cost/Benefit Trade-Offs for Reducing the Energy Consumption of
   Commercial Air Transportation (RECAT). Summary Report. (UTRC-R76-
   912036-17, United Technologies Research Center, East Hartford, Conn.;
   NAS2-8608.) 1976.
   NASA CR-137878

279. Kraus, E. F.; and Van Abkoude, J. C.
   Cost/Benefit Tradeoffs for Reducing the Energy Consumption of the
   Commercial Air Transportation System. Summary Report, 5 Nov. 1974–
   Calif.; NAS2-8618.) 1976.
   NASA CR-137925

-41-
280. Kraus, E. F.
Cost/Benefit Tradeoffs for Reducing the Energy Consumption of the
Beach, Calif.; NAS2-8618.) 1976.
NASA CR-137923 N77-23072

281. Shain, W. M.
Test Data Report. Low Speed Wind Tunnel Tests of a Full Scale, Fixed
Geometry Inlet, with Engine, at High Angles of Attack. (T6-6094,
NASA CR-151927 N77-14996

282. Summerfield, J. R.
A Study of Commuter Airline Economics. Final Report. (Summerfield
NASA CR-152035 N77-29114

283. Van Abkoude, J. C.
Cost/Benefit Tradeoffs for Reducing the Energy Consumption of the
Commercial Air Transportation System. Vol. 2: Market and Economic
Long Beach, Calif.; NAS2-8618.) 1976.
NASA CR-137924 N77-23073

284. Anderson, J. L.
Development of Transport Aircraft Systems Cost and Weight. In Society
of Allied Weight Engineers. Southwestern Regional Meeting, 3rd, San
(Also published as NASA TM-X-73186)

285. Anderson, J. L.; and Andrastek, D. A.
Operating Cost Model for Local Service Airlines. In Society of Allied
Weight Engineers. Annual Conference, 35th, Philadelphia, Pa., May

286. Anderson, J. L.
A Parametric Determination of Transport Aircraft Price. Society of
(Also published as SAWE Paper 1071)

287. Ardema, M. D.
Characteristics of the Boundary-Layer Equations of the Minimum
Time-to-Climb Problem. In Allerton Conference on Circuit and System

288. Ardema, M. D.; Harper, M.; Smith, C. L.; Waters, M. H.; and
Williams, L. J.
Conceptual Design of Reduced Energy Transports. Journal of Aircraft,
289. Ardema, M. D.
Solution of the Minimum Time-to-Climb Problem by Matched Asymptotic

290. Galloway, T. L.
Aircraft Concepts for Service to Small Communities. In Society of
Allied Weight Engineers. Annual Conference, 35th, Philadelphia, Pa.,

291. Galloway, T. L.; and Smith, M. R.
General Aviation Design Synthesis Utilizing Interactive Computer
Graphics. In Society of Automotive Engineers. Business Aircraft

292. Harper, M.
A Hybrid Airship Concept for Naval Missions. In American Institute
of Aeronautics and Astronautics. Aircraft Systems and Technology

Review of V/STOL Lift/Cruise Fan Technology. In American Institute of
Aeronautics and Astronautics. Aircraft Systems and Technology Meeting,

294. Williams, L. J.
Air Transportation Energy Efficiency — Alternatives and Implications.
In Society of Allied Weight Engineers. Annual Conference, 35th,
295. Bader, M.
ADVANCED MISSIONS OFFICE

FORMAL REPORTS

296. Colin, L.; Evans, L. C.; Greeley, R.; Quaide, W. L.; Schaupp, R. W.; Seiff, A.; and Young, R. E.  
NASA TM-X-62450 N76-22128

NASA CONTRACTOR REPORTS

297. Hinrichs, C. A.  
NASA CR-137876 N77-14295

298. McCall, M. T.; Rouch, L.; and Maycock, J. N.  
NASA CR-137836 N76-28566

NASA CR-137880 N77-14296

NASA CR-137846 N76-29140

NASA CR-137847 N76-29141

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

302. Anderson, J. E.; Fester, D. A.; and Dugan, D. W.  
APPLICATIONS DIVISION

FORMAL REPORTS

304. Connors, M. M.; Lindsey, G.; and Miller, R. H.
NASA TM-X-74160 N76-29443

305. Jones, H. W., Jr.
Simulation and Modeling of the Deep Space Receiver Interaction with
Channel Decoding Performance. 1976.
NASA TM-X-73140 N76-28267

306. Knauer, S.
Study and Simulation of Spatial Video Compression for Remotely Piloted
Vehicles. 1976.
NASA TM-X-73137 N76-28450

307. Linlor, W. I.
NASA TR-R-438 N76-19539

NASA CONTRACTOR REPORTS

308. Burns, W.; and Herz, M. J.
Development and Field Testing of a Light Aircraft Oil Surveillance
NASA CR-2739 N76-33472

309. Davies, R.; Scott, M.; Mitchell, C.; and Torbett, A.
User Data Dissemination Concepts for Earth Resources. Executive
Summary Report. (WDL-TR-7187A, Systems Control, Inc., Palo Alto,
NASA CR-137904 N76-33594

310. Davies, R.; Scott, M.; Mitchell, C.; and Torbett, A.
(WDL-TR-7187, Systems Control, Inc., Palo Alto, Calif.; Aeronutronic
NASA CR-137905 N76-33595

Appendixes. (WDL-TR-7187-APP, Systems Control, Inc., Palo Alto, Calif.;
NAS2-8964.) 1976.
NASA CR-137910 N76-33596
312. Arno, R. D.; and Page, W.

313. Down, K. S.; Sites, M. J.; and Lumb, D. R.

314. Jones, H. W., Jr.

315. Knauer, S. C.


324. Anderson, R. A.; Price, J. O.; McClure, A. H.; and Tustin, È. A. 
Final Report. 1976. (D6-42614, Boeing Commercial Airplane Co., Seattle, 
Wash.; NAS2-7978.) 1976. 
NASA CR-137838 N76-22330

325. Delano, C. B.; and Milligan, R. J. 
Foam Composite Structures. (AEROTHERM-76-193, Acurex Corp., Mountain 
NASA CR-137834 N76-23358

326. Gaume, J. G. 
NASA CR-137802 N76-20800

327. Halberstadt, M. L. 
Fabrication and Test of Experimental Automotive Friction Materials. 
NASA CR-137852 N77-15102

328. Haley, G.; Silverman, B.; and Tajima, Y. 
Development of Fire Resistant, Nontoxic Aircraft Interior Materials. 
(Lockheed-California Co., Burbank; NAS2-8835.) 1976. 
NASA CR-137920 N77-14205

329. Harrison, E. S. 
Plasticized Phenolphthalein Polycarbonate. (AEROTHERM-76-202, Acurex 
NASA CR-137890 N76-28422

330. McKee, R. G.; and Alvares, N. J. 
The Response of Smoke Detectors to Pyrolysis and Combustion Products 
from Aircraft Interior Materials. Final Report. (Stanford Research 
NASA CR-137949 N76-32141

331. Mendenhall, G. D.; Stanford, T. B.; and Nathan, R. A. 
Chemiluminescence Study on Thermal Degradation of Aircraft Tire 
NASA CR-137856 N76-28423

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

332. Bucci, T. J.; Hilado, C. J.; and Lopez, M. T. 
A Technique for Extracting Blood Samples from Mice in Fire Toxicity 

333. Fewell, L. L. 
Analysis of the Thermal Reaction Products of Para Polyphenylene by 
Combined Gas Chromatography-Mass Spectrometry. Journal of Chromatographic 
334. Fish, R. H.

335. Gemmer, R. V.; and Golub, M. A.


337. Golub, M. A.; Rosenberg, M. L.; and Gemmer, R. V.
(Also published in Rubber Chemistry and Technology, vol. 50, 1977, p. 704-713)


339. Hilado, C. J.; and Johnson, A. C.
(Supported by NASA Grant NSG 2039)

340. Hilado, C. J.; and Miller, C. M.

341. Hilado, C. J.; and Damant, G. H.
(Supported by NASA Grant NSG 2039)

342. Hilado, C. J.; Márcussen, W. H.; Furst, A.; and Leon, H. A.

343. Hilado, C. J.; Smouse, K. Y.; Kourtides, D. A.; and Parker, J. A.

344. Hilado, C. J.; Solís, A. N.; Márcussen, W. H.; and Furst, A.
345. Hilado, C. J.; and LaBossiere, L. A.

346. Hilado, C. J.; and LaBossiere, L. A.

347. Hilado, C. J.; and LaBossiere, L. A.

348. Hilado, C. J.

349. Hilado, C. J.

350. Hilado, C. J.; Smouse, K. Y.; and Leon, H. A.

351. Hilado, C. J.

352. Hilado, C. J.

353. Hilado, C. J.

354. Hilado, C. J.; Saxton, G. L.; Kourtides, D. A.; Parker, J. A.; and Gilwee, W. J.

355. Hilado, C. J.
356. Hilado, C. J.  

357. Hilado, C. J.; and Furst, A.  

358. Hilado, C. J.; Slattengren, C. L.; Furst, A.; Kourtides, D. A.; and Parker, J. A.  


360. Hilado, C. J.; and Furst, A.  

361. Hilado, C. J.; and Lopez, M. T.  


366. Marcussen, W. H.; and Hilado, C. J.
Fire Gas Characterization by Animal Exposure in Full-Scale Tests.
In Western Pharmacology Society. Proceedings, vol. 19, 1976,
p. 401-404.

367. Mendenhall, G. D.; Nathan, R. A.; and Golub, M. A.
Chemiluminescence Study of the Autoxidation of cis-1,4-Polyisoprene.

368. Young, W.; Hilado, C. J.; Kourtides, D. A.; and Parker, J. A.
A Study of the Toxicology of Pyrolysis Gases from Synthetic
Polymers. Journal of Combustion Toxicology, vol. 3, May 1976,
p. 157-165. (Also published in International Conference on Fire-

PATENTS

369. Gilwee, W. J.; and Parker, J. A.

370. Harrison, E. S.; Delano, C. B.; and Riccitiello, S. R.
Polymeric Foams from Cross-Linkable Poly-n-arylenebenzimidazoles.
1976.

371. Sawko, P. M.; and Riccitiello, S. R.

372. Sawko, P. M.; and Riccitiello, S. R.
Intumescent Coating Containing 4,4'-Dinitrosulfanilide. 1976.
373. Brennan, P. J.; and Groll, M.  
ESA SP-112-VOL-1 N76-32390

374. Brennan, P. J.; and Kirkpatrick, J. P.  
ESA SP-112-VOL-1 N76-32428

375. Groll, M.; and Kirkpatrick, J. P.  
ESA SP-112-VOL-1 N76-32389

376. Groll, M.; Pittman, R. B.; and Eninger, J. E.  
ESA SP-112-VOL-1 N76-32380

377. Kirkpatrick, J. P.; and Groll, M.  
NASA TM-X-73096 N76-18375

378. Murphy, J. P.  
NASA TM-X-73130 N76-26264

NASA CONTRACTOR REPORTS

NASA CR-151941 N77-14413

NASA CR-137882 N76-25525

-55-
381. Eninger, J. E.; and Edwards, D. K.

382. Eninger, J. E.; Edwards, D. K.; and Luedke, E. E.

383. Eninger, J. E.; Luedke, E. E.; and Wanous, D. J.

384. Feldman, K. T.

385. Grote, M. G.; and Mezines, S. A.
NASA CR-137812 N76-20176

386. Pelzmann, R. F., Jr.

387. Saaski, E. W.

388. Saaski, E. W.; and Hanson, R. J.

390. Intrieri, P. F.; De Rose, C. E.; and Kirk, D. B.

391. Kirkpatrick, J. P.; and Brennan, P. J.

392. Loehrke, R. I.; and Débs, R. J.

393. Lorell, K. R.; Murphy, J. P.; and Swift, C. D.

394. Lorell, K. R.

395. Thomas, N. L.; and Chisel, D. M.

396. Wright, J. P.; Brennan, P. J.; McCreight, C. R.

397. Young, L. S.
398. Thomas, N. L.
   Optical Alignment Device. 1976.
   NASA-CASE-ARC-10932-1
   US-PATENT-APPL-SN-681001

400. Hall, C. F.; Mark, H.; and Wolfe, J. H.

401. Moore, J. W.; Van Allen, J. A.; Hyde, J. R.; and Nunamaker, R. S.

402. Spahr, J. R.; and Hall, C. F.

PATENTS

403. Wirth, M. N.
NASA-CASE-ARC-10899-1

US-PATENT-3,990,049
404. Bergstrom, R. W., Jr.  
Modeling the Urban Boundary Layer. 1976.  
NASA TM-X-73099  
N76-17740

Canning, T. N.; and Jackson, R. W.  
FY 1976 Progress Report on a Feasibility Study Evaluating the Use of  
NASA TM-X-73181  
N77-14969

Erichman, J.; Polkowski, G.; Davis, A.; Kyte, F.; Cunningham, G.; and  
Nelson, G.  
Preliminary Soil Modification Effects in Loess. In Blanchard, M. B.;  
Oberbeck, V. R.; Bunch, T. E.; Reynolds, R. T.; Canning, T. N.; and  
Jackson, R. W. FY 1976 Progress Report on a Feasibility Study  
Evaluating the Use of Surface Penetrators for Planetary Exploration.  
NASA TM-X-73181  
N77-14969

407. Brownlee, D. E.; Tomandl, D.; Blanchard, M. B.; Ferry, G. V.; and  
Kyte, F.  
An Atlas of Extraterrestrial Particles Collected with NASA U-2 Aircraft—  
NASA TM-X-73152  
N76-31108

408. Bunch, T. E.; Quaide, W. L.; and Polkowski, G.  
Initial Basalt Target Site Selection Evaluation for the Mars Penetrator  
Drop Test. 1976.  
NASA TM-X-73111  
N76-20047

409. Bunch, T. E.  
A Primer of Basaltic and Stratiform Igneous Rocks and Their Extra-  
terrestrial Analogs. 1976.  
NASA TM-X-73114  
N76-26608

410. Carr, M. H.; and Cassen, P.  
Geological Basis for the Exploration of the Planets. Washington,  
NASA SP-417  
N77-15965

411. Carr, M. H.; Wilhelms, D. E.; Greeley, R.; and Guest, J. E.  
Stratigraphy and Structural Geology. In Greeley, R.; and Carr, M. H.,  
Editors. A Geological Basis for the Exploration of the Planets.  
Washington, National Aeronautics and Space Administration, 1976.  
p. 13-32.  
NASA SP-417  
N77-15963
412. Dyal, P.; Iufer, E.; Parkin, C. W.; and Daily, W. D. 
Magnetic Field Experiment for the Mars Penetrator. In Blanchard, M. B.; 
Oberbeck, V. R.; Bunch, T. E.; Reynolds, R. T.; Canning, T. N.; and 
Jackson, R. W. FY 1976 Progress Report on a Feasibility Study 
Evaluating the Use of Surface Penetrators for Planetary Exploration. 
NASA TM-X-73181 N77-14969

413. Erickson, E. F.; and Matthews, S. 
1976. 
NASA TM-X-73156 N76-29097

414. Greeley, R.; and Bunch, T. E. 
Basalt Models for the Mars Penetrator Mission: Geology of the Amboy 
Lava Field, California. 1976. 
NASA TM-X-73125 N76-30619

A Geological Basis for the Exploration of the Planets. Washington, 
National Aeronautics and Space Administration, 1976. 
NASA SP-417 N77-15961

A Geological Basis for the Exploration of the Planets. Introduction. 
NASA SP-417 N77-15962

417. Kyte, F. T. 
Identifying Unknown Minerals and Compounds from X-Ray Diffraction 
Patterns Using the Johnson and Vand FORTRAN 4 Computer Program. 1976. 
NASA TM-X-73092 N76-20575

418. Reller, J. O., Jr. 
NASA TM-X-73105 N76-26252

419. Reller, J. O., Jr.; Neel, C. B.; and Haughney, L. C. 
The Experiment Operator. 1976. 
NASA TM-X-73150 N77-14177

420. Reller, J. O., Jr.; Neel, C. B.; and Haughney, L. C. 
NASA TM-73205 N77-27165

421. Reller, J. O., Jr. 
Appendix C — Data-Handling Systems — Planning and implementation; 
Appendix D — Communications; Appendix E — Mission Documentation. 
1976. 
NASA TM-X-73182 N77-19151
422. Simpson, J. P.
Infrared Emission from the Atmosphere Above 200 km. 1976.
NASA TN-D-8138 N76-19043

423. Spudis, P.; and Greeley, R.
Surficial Geology of Mars: A Study in Support of a Penetrator
NASA TM-X-73184 N77-15960

424. Thompson, R. I.; and Erickson, E. F.
An Investigation of the Optimization of Parameters Affecting the
Implementation of Fourier Transform Spectroscopy at 20-500 \mu from the
C-141 Airborne Infrared Observatory. 1976.
NASA TM-X-73159 N76-30127

425. Bedinger, J. F.; and Constantinides, E.
Airborne Photography of Chemical Releases and Analysis of Twilight Sky
NASA CR-137832 N76-18723

426. Hague, D. S.; and Merz, A. W.
Application of Trajectory Optimization Techniques to Upper Atmosphere
Sampling Flights Using the F-15 Eagle Aircraft. (Aerophysics Research
NASA CR-137973 N77-13586

NASA CR-137807 X76-72036

428. Arons, J.; and Lea, S. M.
Accretion Onto Magnetized Neutron Stars: Normal Mode Analysis of the
Interchange Instability at the Magnetopause. Astrophysical Journal,

429. Arons, J.; and Lea, S. M.
Accretion Onto Magnetized Neutron Stars: Structure and Interchange

Morrison, R.; and Oberbeck, V.
Cosmic Ray Exposure Ages of Apollo 17 Samples and the Age of Tycho.
Other Bodies, p. 2817-2832. (Geochimica et Cosmochimica Acta,
Supplement 7)

432. Barnes, A.
On the Nonexistence of Plane-Polarized Large Amplitude Alfvén Waves.

433. Bergstrom, R. W.; and Cogley, A. C.
Viscous Boundary Layers in Rotating Fluids Driven by Periodic Flows.

434. Black, D. C.; and Bodenheimer, P.
Evolution of Rotating Interstellar Clouds. II - The Collapse of Protostars of 1, 2, and 5 M.

Riegel, C. A.; and Maples, A. L.
Model Predictions of Latitude-Dependent Ozone Depletion Due to Aerospace Vehicle Operations.
In American Institute of Aeronautics and Astronautics. Aerospace Sciences Meeting, 14th, Washington, D. C.,

Riegel, C. A.; Capone, L. A.; and Becker, T.
Model Predictions of Latitude-Dependent Ozone Depletion Due to Supersonic Transport Operations.

437. Brownlee, D. E.; Ferry, G. V.; and Tomandl, D.
p. 1270-1271.

438. Burns, J. A.

439. Burns, J. A.

440. Cameron, A. G. W.; and Pollack, J. B.

441. Cameron, R. M.

443. Cassen, P.; Young, R. E.; Schubert, G.; and Reynolds, R. T. 
Implications of an Internal Dynamo for the Thermal History of Mercury. 

444. Cassen, P.; and Pettibone, D. 

445. Chackerian, C., Jr.; and Valero, F. P. J. 
Absolute Intensity Measurement of the 4-0 Vibration-Rotation Band of 
1976, p. 338-345.

446. Chackerian, C., Jr. 
Electric Dipole Moment Function of the X'\Sigma^+ State of CO: Vibration-
Rotation Matrix Elements for Transitions of Gas Laser and Astrophysical 
Interest. Journal of Chemical Physics, vol. 65, Nov. 15, 1976, 
p. 4228-4233.

447. Clague, D. A.; and Bunch, T. E. 
Formation of Ferrobasalt at East Pacific Mid-ocean Spreading Centers. 

448. Cogley, A. C. 
Circularly Polarized Inertial Wave Vectors in Rotating Fluids. Journal 

449. Cogley, A. C.; and Borucki, W. J. 
Exponential Approximation for Daily Average Solar Heating or Photolysis. 

and Masursky, H. 
North Polar Region of Mars: Imaging Results from Viking 2. Science, 

451. Dana, R. A.; and Petrosian, V. 
Approximate Solutions of Radioactive Transfer in Dusty Nebulae. 

452. Dryer, M.; Smith, Z. K.; Steinolfson, R. S.; Mihalov, J. D.; Wolfe, J. H.; 
and Chao, J.-K. 
Interplanetary Disturbances Caused by the August 1972 Solar Flares as 
Observed by Pioneer 9. Journal of Geophysical Research, vol. 81, 

453. Durisen, R. H.; Savedoff, M. P.; and Van Horn, H. M. 
On the White Dwarf HZ 43 as an Extreme-Ultraviolet Source. Astrophysical 
454. Dyal, P.; Parkin, C. W.; and Daily, W. D.
Structure of the Lunar Interior from Magnetic Field Measurements. In
Other Bodies, p. 3077-3095. (Geochimica et Cosmochimica Acta,
Supplement 7)

455. Edmonds, J. D.
A Relativistic "Higher Spin" Quaternion Wave Equation Giving a Variation
on the Pauli Equation. Foundations of Physics, vol. 6, Feb. 1976,
p. 33-36.

456. Eilek, J. A.; and Caroff, L. J.
Cloud Acceleration by Cosmic Rays in the Vicinity of Compact Luminous

457. Frank, L. A.; Ackerson, K. L.; Wolfe, J. H.; and Mihalov, J. D.
Observations of Plasmas in the Jovian Magnetosphere. Journal of

458. Fricker, P. E.; Reynolds, R. T.; Summers, A. L.; and Cassen, P. M.
Does Mercury Have a Molten Core? Nature, vol. 259, Jan. 29, 1976,
p. 293-294.

Mars: Wind Friction Speeds for Particle Movement. Geophysical Research

460. Greeley, R.
Modes of Emplacement of Basalt Terrains and an Analysis of Mare Volcanism
in the Orientale Basin. In Lunar Science Conference, 7th, Houston,
Vol. 3, The Moon and Other Bodies, p. 2747-2759. (Geochimica et
Cosmochimica Acta, Supplement 7)

461. Guest, J. E.; and Gault, D. E.
Crater Populations in the Early History of Mercury. Geophysical

462. Hackwell, J. A.; Gehrz, R. D.; Smith, J. R.; and Strecker, D. W.

463. Hashimoto, K.; and Matsumoto, H.
Temperature Anisotropy and Beam Type Whistler Instabilities. Physics

Large Scale Cratering of the Lunar Highlands: Some Monte Carlo Model
Considerations. In Lunar Science Conference, 7th, Houston, Texas,
Vol. 3, The Moon and Other Bodies, p. 2931-2945. (Geochimica et
Cosmochimica Acta, Supplement 7)


476. McCormick, P. T.; Michelson, P. F.; Pettibone, D.W.; and Whitten, R. C. 
On the Energy Deposition of Photoelectrons in the Atmosphere of Venus. 

477. Mihalov, J. D.; Wolfe, J. H.; and Frank, L. A. 

478. Miller, J. H.; Giver, L. F.; and Boese, R. W. 
Intensity Measurements for the (2, 0) γ-Band of O2, b'Sg- X3Σg-. 
Journal of Quantitative Spectroscopy and Radiative Transfer, vol. 16, 
July 1976, p. 595-598.

479. Miller, R. H. 
July 15, 1976, p. 408-413.

480. Miller, R. H. 
Validity of Disk Galaxy Simulations. Journal of Computational Physics, 

481. Mulholland, D. R.; and Neel, C. B. 
Airborne Simulation of Shuttle/Spacelab Management and Operation. In 
Space Congress, 13th, Cocoa Beach, Fla., April 7-9, 1976. Technology 
for the New Horizon; Proceedings. Cocoa Beach, Fla., Canaveral Council 

482. Mutch, T. A.; Arvidson, R. E.; Binder, A. B.; Huck, F. O.; 
Pollack, J. B.; and Sagan, C. 
Fine Particles on Mars: Observations with the Viking 1 Lander Cameras. 

Morris, E. C.; Patterson, W. R.; Pollack, J. B.; Sagan, C.; and Taylor, G. R. 
The Surface of Mars: The View from the Viking 1 Lander. Science, 

484. Mutch, T. A.; Grenander, S. U.; Jones, K. L.; Patterson, W.; 
Arvidson, R. E.; Guinness, E. A.; Avrin, P.; Carlston, C. E.; Binder, A. B.; 
Sagan, C.; Dunham, E. W.; Fox, P. L.; Pieri, D. C.; Huck, F. O.; 
Liebes, S.; Tucker, R. B.; Morris, E. C.; Pollack, J. B.; Saunders, R. S.; 
and Wolf, M. R. 
The Surface of Mars: The View from the Viking 2 Lander. Science, 

485. Nier, A. O.; Hanson, W. B.; Seiff, A.; McElroy, M. B.; Spencer, N. W.; 
Duckett, R. J.; Knight, T. C. D.; and Cook, W. S. 
Composition and Structure of the Martian Atmosphere: Preliminary 

486. Noerdlinger, P. D. 
An Improved Radiation Metric. General Relativity and Gravitation, vol. 7, 
Feb. 1976, p. 239-249.
487. Oberbeck, V. R.; and Morrison, R. H. 

488. Okrusch, M.; Bunch, T. E.; and Bank, H. 

489. Pollack, J. B.; Toon, O. B.; Summers, A.; Van Camp, W.; and Baldwin, B. 

490. Pollack, J. B.; Haberle, R.; Greeley, R.; and Iversen, J. 


492. Pollack, J. B.; Toon, O. B.; Sagan, C.; Summers, A.; Baldwin, B.; and Van Camp, W. 

493. Pollack, J. B.; Leovy, C. B.; Mintz, Y. H.; and Van Camp, W. 

494. Poppoff, I. G.; and Whitten, R. C. 

495. Prasad, S. S.; and Capone, L. A. 

496. Quaide, W. L. 

497. Reginato, R. J.; Idso, S. B.; Vedder, J. F.; Jackson, R. D.; Blanchard, M. B.; and Coettelman, R. 

498. Scarf, F. L.; Mihalov, J. D.; Wolfe, J. H.; Burlaga, L. F. 

-68-
499. Schubert, C.; and Young, R. E.
Cooling Earth by Whole Mantle Subsolidus Convection - Constraint on

500. Schultz, P. H.; Greeley, R.; and Gault, D. E.
Degradation of Small Mare Surface Features. In Lunar Science Con-
(Geochimica et Cosmochimica Acta, Supplement 7)

501. Seiff, A.; and Kirk, D. B.
Structure of Mars' Atmosphere up to 100 Kilometers from the Entry
1300-1303.

502. Seiff, A.
The Viking Atmosphere Structure Experiment - Techniques, Instruments,
and Expected Accuracies. Space Science Instrumentation, vol. 2,

503. Shimazaki, T.; and Whitten, R. C.
A Comparison of One-Dimensional Theoretical Models of Stratospheric
Minor Constituents. Reviews of Geophysics and Space Physics, vol. 14,

504. Shimizu, M.; and Shimazaki, T.
Evolution of the Ionosphere. Journal of Geophysical Research, vol. 81,
Sept. 1, 1976, p. 4785-4788.

505. Smith, E. J.; and Wolfe, J. H.
Observations of Interaction Regions and Corotating Shocks Between
One and Five Au: Pioneers 10 and 11. Geophysical Research Letters,

506. Snetsinger, K. G.
Rock Types of the Franciscan Formation, Coyote Hills, Alameda County,

507. Starr, W. L.
Absorption Cross Sections of Some Atmospheric Molecules for
Resonantly Scattered O I 1304-Å Radiation. Journal of Geophysical

508. Tan, A.; and Capone, L. A.

509. Thompson, R. I.; Ericson, E. F.; Witteborn, P. C.; and Strecker, D. W.
Combined Ground and Aircraft Based 1-4 Micron Spectra of LkH-α 101.
510. Toon, O. B.; and Pollack, J. B.  

511. Toon, O. B.; Pollack, J. B.; and Khare, B. N.  

512. Treffers, R. R.; Fink, U.; Larson, H. P.; and Gautier, T. N., III.  

513. Vedder, J. F.  

514. Vedder, J. F.  

515. White, B. R.; Greeley, R.; Iversen, J. D.; and Pollack, J. B.  

516. Whitten, R. C.; Cuzzi, J.; Borucki, W. J.; and Wolfe, J. H.  

517. Witteborn, F. C.; and Young, L. S.  

518. Witteborn, F. C.; and Young, L. S.  

519. Wolfe, J. H.  
PATENTS

520. Craig, R. A.; and Pritchard, H. O.
Reduction of Nitric Oxide Emissions from a Combustor. 1976.

521. Matsumoto, Y.; and Lum, H.
Sampling Video Compression System. 1976.

522. Reinisch, R. F.; Gloria, H. R.; Goldsberry, R. E.; and Adamson, M. J.
Ultraviolet and Thermally Stable Polymer Compositions. 1976.
523. Baldwin, B.; and Hung, C. M. 
Calculation of a Separated Turbulent Boundary Layer. In Advances in 
NASA CP-2001 N77-10361

524. Ballhaus, W. F.; Bailey, F. R.; and Frick, J. 
NASA CP-2001 N77-10348

525. Billman, K. W., Editor. 
NASA SP-395 N76-21505

526. Boitnott, C. A. 
Temperature Dependency of the Photoabsorption Cross Section for 
CF₂Cl₂. 1976. 
NASA TM-X-73177 N77-10691

527. Gower, M. C.; and Billman, K. W. 
Collisionless Dissociation and Isotopic Enrichment of SF₆ Using High-
NASA TM-X-73133 N76-25911

528. Hansen, C. F. 
Molecular Physics of Equilibrium Gases; A Handbook for Engineers. 
NASA SP-3096 N76-22004

529. Kubota, H. 
A Simplified Analytical Solution for the Thermal Response of a One-
NASA TN-D-8129 N76-14417

530. MacCormack, R. W. 
NASA TM-X-73129 N76-27175

531. Marvin, J. G. 
532. McKenzie, R. L.
NASA TR-R-466 N77-10877

533. Nachtscheim, P. R.; and Blome, J. C.
NASA TM-X-73210 N77-28302

534. Nixon, D.
NASA TM-X-74227 N77-12335

535. Pitts, W.; and Canning, T. N.
NASA TM-X-73181 N77-14969

536. Ramani, S. V.; and Williams, D. P.
NASA TM-X-73191 N77-16116

537. Rao, D. B.; and Nelson, H. G.
NASA TM-X-73166 N76-31332

538. Rubesin, M. W.
NASA TM-X-73128 N76-25147

539. Sandborn, V. A.; and Seegmiller, H. L.
NASA TN-D-8367 N77-11343
(Also published as NASA TM-X-62488)

540. She, C. Y.; and Billman, K. W.
NASA SP-395 N76-21513

541. Srinivasan, G.; and Smith, J. A.
NASA TM-X-73201 N77-20428
542. Tobak, M.; and Schiff, L. B.
NASA TR-R-456 N76-15082

543. Vijaya Shankar, V. S.; Kutler, P.; and Anderson, D.
NASA TM-X-73178 N77-18387

544. Yoshikawa, K. K.; and Itikawa, Y.
NASA TN-D-8100 N76-15408

545. Agopian, K. G.
NASA CR-137957 X76-11673

546. Christensen, H. E.; Krieger, R. J.; McNeilly, W. R.; and Vetter, H. C.
NASA CR-137842 N76-28243

547. Christensen, H. E.; Krieger, R. J.; McNeilly, W. R.; and Vetter, H. C.
NASA CR-137843 N76-28244

548. Christensen, H. E.; Krieger, R. J.; McNeilly, W. R.; and Vetter, H. C.
NASA CR-137844 N76-28245

549. Christensen, H. E.; Krieger, R. J.; McNeilly, W. R.; and Vetter, H. C.
NASA CR-137845 N76-28246

550. Hung, C. M.
NASA CR-2783 N77-14376
551. Kanninen, M. F.; Rybicki, E. F.; Griffith, W. I.; and Broek, D.  
Fundamental Analysis of the Failure of Polymer-Based Fiber Reinforced  
Composites. 1976.  
NASA CR-2689 N76-22315

552. Keihm, S. J.; and Langseth, M. G.  
Modeling Studies for a Mars Penetrator Heat Flow Measurement.  
(TR-CU-1-77, Lamont-Doherty Geological Observatory, Palisades, N.Y.;  
NASA CR-151946 N77-17395

User's Manual for Space-Shuttle Computer Programs. (NEAR-TR-110,  
NASA CR-137862 N76-76392

554. Mezines, S. A.; Rusert, E. L.; and Disser, E. F.  
Heat Shield Characterization: Outer Planet Atmospheric Entry Probe.  
NASA CR-137881 N76-29538

555. Neuner, G. J.; and Delano, C. B.  
Development of an Improved Coating for Polybenzimidazole Foam. 1976.  
NASA CR-2697 N76-24314

556. Todd, G.  
System Update of a Combined Scanning Electron Microscope-Auger Electron  
Spectrometer (SEM-AES). (Alten Associates, Mountain View, Calif.;  
NAS2-9042.) 1976.  
NASA CR-137962 N77-71178

557. Tsugé, S.; and Sagara, K.  
Formulation and Closure of Compressible Turbulence Equations in the  
Light of Kinetic Theory. (NEAR-TR-109, Neilson Engineering and Research,  
NASA CR-137808 N76-19378

558. Vinokur, M.  
The Relation of Finite Element and Finite Difference Methods. Final  
NASA CR-2764 N77-14796

559. Wilcox, D. C.; and Chambers, T. L.  
Computation of Turbulent Boundary Layers on Curved Surfaces.  
NASA CR-137853 N76-22155
560. Acharya, M.
Effects of Compressibility on Boundary-Layer Turbulence. In American
Institute of Aeronautics and Astronautics. Fluid and Plasma Dynamics
76-334.

561. Arnold, J. O.; Whiting, E. E.; and Sharbaugh, L. F.
A Nearly Exact MCSCF+CI Calculation of the Dissociation Energy of OH.

562. Baldwin, B. S.; and MacCormack, R. W.
Modifications of the Law of the Wall and Algebraic Turbulence Modelling
for Separated Boundary Layers. In American Institute of Aeronautics
and Astronautics. Fluid and Plasma Dynamics Conference, 9th, San

563. Bauer, E.; Poppa, H.; and Viswanath, Y.
Adsorption of Oxygen on W(100): Adsorption Kinetics and Structure.

564. Beam, R. M.; and Warming, R. F.
An Implicit Finite-Difference Algorithm for Hyperbolic Systems in
Conservation-Law Form. Journal of Computational Physics, vol. 22,
Sept. 1976, p. 87-110.

565. Billman, K. W.; and Stallcop, J. R.
Adequacy of Classical Inverse Bremsstrahlung Theory for Low-Temperature

566. Biron, D. F.; and Leonard, A.
Nonlinear Transport of Electrons and Ions in a Thermionic Diode. Trans­

567. Biron, D. F.; and Leonard, A.
Nonlinear Transport of Electrons in a Vacuum Diode. Transport Theory and

568. Chausee, D. S.; Kutler, P.; and Holtz, T.
Inviscid Supersonic/Hypersonic Body Flowfield and Aerodynamics from
Shock-Capturing Technique Calculations. Journal of Spacecraft and

569. Chen, M. H.; Crasemann, B.; Yin, L. I.; Tsang, T.; and Adler, I.
Widths of Atomic 4s and 4p Vacancy States, 46 < Z < 50. Physical

570. Cooper, D. M.; and Nicholls, R. W.
Transition Probability Data for Seven Band Systems C2. Spectroscopy

571. Covington, M. A.; Liu, G. N.; and Lincoln, K. A.
Free-Jet Expansions from Laser-Vaporized Planar Surfaces. In American
Institute of Aeronautics and Astronautics. Aerospace Sciences Meeting,
572. Cox, J.; Winovich, W.; and Carlson, W. C. A.

573. Crisalli, A. J.; and Walker, J. D. A.

574. Dannenberg, R. E.; and Slapnicar, P. I.

575. Deiwrite, G. S.

576. Deiwrite, G. S.

577. Gilbreath, W. P.; and Adamson, M. J.

578. Glover, R. M.; and Weinhold, F.


580. Hague, D. S.; Merz, A. W.; and Page, W. A.

-77-
581. Heinemann, K.; and Poppa, H.
Direct Observation of Small Cluster Mobility and Ripening. Thin

582. Horstman, C. C.
A Turbulence Model for Nonequilibrium Adverse Pressure Gradient Flows.
In American Institute of Aeronautics and Astronautics. Fluid and
AIAA Paper 76-412.

583. Howe, J. T.
Entry into Outer Planet Environments: II. Performance of Volume
Reflecting Hyperpure Silica Heat Shields. In American Institute of
Aeronautics and Astronautics. Thermophysics Conference, 11th, San

584. Hung, C. M.; and MacCormack, R. W.
Numerical Solutions of Supersonic and Hypersonic Laminar Compression

585. Hung, C. M.; and MacCormack, R. W.
Numerical Simulation of Supersonic and Hypersonic Turbulent Compression
Corner Flows Using Relaxation Models. In American Institute of
Aeronautics and Astronautics. Fluid and Plasma Dynamics Conference,

586. Hussaini, M. Y.; and Sastry, M. S.
The Laminar Compressible Boundary Layer on a Rotating Sphere with
Heat Transfer. Journal of Heat Transfer. American Society of
Mechanical Engineers. Transactions, Series C, vol. 98, Aug. 1976,
p. 533-535.

587. Jaffe, R. L.; and Morokuma, K.
MCSCF Potential Energy Surface for Photodissociation of Formaldehyde.

588. Khan, I. H.
The Effect of Thermal Exposure on the Mechanical Properties of
Aluminum-Graphite Composites. Metalurgical Transactions. A. Physical

589. Klopfer, G. H.; and Holt, M.
Steady Transonic Flow through Plane and Axisymmetric Nozzles. In
International Union of Theoretical and Applied Mechanics. Symposium
p. 376-383.
590. Kutler, P.; and Shankar, V.  

591. Kutler, P.; and Shanker, V. S. V.  

592. Lee, E. H.; Popa, H.; and Pound, G. M.  

593. Leonard, A.  

594. Liu, C.-H.; and Howe, J. T.  

595. Lomax, H.  

596. Lomax, H.  

597. Lundell, J. H.; and Dickey, R. R.  

598. MacCormack, R. W.; and Stevens, K. C., Jr.  

599. MacCormack, R. W.  
600. MacCormack, R. W.; Rizzi, A. W.; and Inouye, M.  
Steady Supersonic Flowfields with Embedded Subsonic Regions. In  
Computational Methods and Problems in Aeronautical Fluid Dynamics.  

601. Martin, E. D.  
Advances in the Application of Fast Semidirect Computational Methods  
in Transonic Flow. In International Union of Theoretical and Applied  

602. Martin, E. D.  
(Also published in AIAA Computational Fluid Dynamics Conference, 2d,  

603. Martin, E. D.  
A Technique for Accelerating Iterative Convergence in Numerical  
Integration, with Application in Transonic Aerodynamics. In Padé  
Approximants Method and Its Applications to Mechanics. Cabannes, H.,  
in Physics, vol. 47)

604. Mateer, G. G.; Brosh, A.; and Viegas, J. R.  
A Normal Shock-Wave Turbulent Boundary-Layer Interaction at Transonic  
AIAA Paper 76-161.

605. McDevitt, J. B.; Levy, L. L., Jr.; and Deiward, G. S.  

606. McKenzie, R. L.  
Vibration-Translation Energy Transfer in Anharmonic Diatomic  
Molecules. II. The Vibrational Quantum-Number Dependence. Journal  
of Chemical Physics, vol. 64, Feb. 15, 1976, p. 1498-1508.

607. Menees, G. P.; and Park, C.  
Nitric Oxide Formation by Meteoroids in the Upper Atmosphere.  

608. Métois, J. J.; Heinemann, K.; and Poppa, H.  
In situ Investigation of the Mobility of Small Gold Clusters on  

609. Mikulla, V.; and Horstman, C. C.  
Turbulence Measurements in Hypersonic Shock-Wave Boundary-Layer  
(Also published as AIAA Paper 76-162)
610. Monson, D. J.

611. Moorhead, R. D.

612. Nachtsheim, P. R.; Tindle, E.; and Howe, J. T.

613. Nelson, H. G.

614. Nelson, H. G.; and Moorhead, R. D.

615. Nelson, H. G.

616. Otten, L. J., III; and Van Kuren, J. T.

617. Park, C.

618. Park, C.

619. Park, C.

620. Park, C.
621. Poppa, H.; and Lee, E. H.

622. Poppa, H.

623. Rakich, J. V.; and Lanfranco, M. J.

624. Ramani, S. V.; and Williams, D. P.


626. Rao, D. B.; and Nelson, H. G.

627. Rizzi, A.; and Bailey, H.

628. Rizzi, A. W.; and Bailey, H. E.

629. Rizzi, A.
630. Rubesin, M. W.; Okuno, A. F.; Levy, L. L., Jr.; McDevitt, J. B.; and Seegmiller, H. L.
(Also published as NASA TM-X-73157)

631. Schiff, L. B.

632. Schiff, L. B.

633. Steger, J. L.; and Kutler, P.

634. Stewart, D. A.; and Leiser, D. B.

635. Sumison, H. T.

636. Taki, S.; and Fujiwara, T.

637. Tannehill, J. C.; Holst, T. L.; Rakich, J. V.; and Keyes, J. W.

638. Tannehill, J. C.; Holst, T. L.; and Rakich, J. V.

639. Tsubé, S.; and Sagara, K.
640. Warming, R. F.; and Beam, R. M.

641. Williams, D.

PATENTS

642. Gilbreath, W. P.; Adamson, M. J.; and Fassbender, A. G.
Electrical Conductivity Cell and Method for Fabricating the Same. 1976.
NASA-CASE-ARC-10810-1
US-PATENT-3,938,035

643. Goldstein, H. E.; Leiser, D. B.; and Katvala, V. E.
Reaction Cured Glass and Glass Coatings. 1976.
NASA-CASE-ARC-11051-1
US-PATENT-APPL-SN-726910

644. Goldstein, H. E.; Smith, M.; and Leiser, D.
Silica Reusable Surface Insulation. 1976.
NASA-CASE-ARC-10721-1
US-PATENT-3,952,083

645. Heinemann, K.
NASA-CASE-ARC-10448-3
US-PATENT-3,996,468

646. Mateer, G. G.; and Brosh, A.
NASA-CASE-ARC-11046-1
US-PATENT-APPL-SN-712419
648. Johnson, E. J.; Dominque, G. J.; and Klein, G. D.
Anatomical Locus of the Common Enterobacterial Antigen. Zeitschrift
für Immunitätsforschung, experimentelle und klinische Immunologie, vol.

649. Klein, H. P.
General Constraints on the Viking Biology Investigation. Origins

650. Klein, H. P.

651. Klein, H. P.

652. Klein, H. P.; Horowitz, N. H.; Levin, G. V.; Oyama, V. I.;
Berdahl, B. J.; Carle, G. C.; Brown, F. S.; and Johnson, R. D.
The Viking Biological Investigation: Preliminary Results. Science,

and Levin, G. V.
The Viking Mission Search for Life on Mars. Nature, vol. 262,
July 1, 1976, p. 24-27.

654. Young, R. S.; and Klein, H. P.
The Voyages of Viking 2. Is There Life on Mars? Spaceflight, vol. 18,
Apr. 1976, p. 118-123.
655. Dorchak, K. J.; and Greenleaf, J. E.
NASA TM-X-3306 N76-18780

656. Greenleaf, J. E.; Greenleaf, C. J.; Van Derveer, D.; and Dorchak, K. J.
NASA TM-X-3307 N76-20807

657. Kollias, J.; Van Derveer, D.; Dorchak, K. J.; and Greenleaf, J. E.
NASA TM-X-3308 N76-18781

658. Reiber, J. H. C.
NASA TR-R-461 N76-27880

659. Schappell, R. T.; Polhemus, J. T.; and Ganiaris, N. J.
NASA CR-151935 N77-18730

660. Amtmann, E.; Oyama, J.; and Fisher, G. L.

661. Amtmann, E.; and Oyama, J.

662. Brown, P. A.; Brown, T. H.; and Vernikos-Danellis, J.


673. Johnson, J. E., Jr.; Mehler, W. R.; and Oyama, J.  
The Effects of Centrifugation on the Morphology of the Lateral  
Vestibular Nucleus in the Rat: A Light and Electron Microscopic  

674. Kaciuba-Uściłko, H.; Brzezińska, Z.; and Greenleaf, J. E.  
Effect of Propranolol on Throxine-Induced Changes in Body Temperature  
and Metabolism During Exercise in Dogs. Acta Physiologica Polonica,  

675. Kaciuba-Uściłko, H.; Brzezińska, Z.; and Greenleaf, J. E.  
Role of Catecholamines in Thyroxine-Induced Changes in Metabolism  
and Body Temperature During Exercise in Dogs. Experientia, vol. 32,  

676. Keil, L.C.; and Ellis, S.  
Plasma Vasopressin and Renin Activity in Women Exposed to Bed Rest  
and +G2 Acceleration. Journal of Applied Physiology, vol. 40,  

and Barchas, J. D.  
Tryptoline Inhibition of Serotonin Uptake in Rat Forebrain Homogenates.  

678. Lin, C. H.; Heritage, J. P.; Gustafson, T. K.; Chiao, R. Y.; and  
McTague, J. P.  
Birefringence Arising from Reorientation of Polarizability Anisotropy  
of Molecules in Collisionless Gases. Physical Review A -- General  

679. Madsen, M.; Peppler, W.; and Mazess, R. B.  
Vertebral and Total Body Bone Mineral Content by Dual Photon  
Absorptiometry. Calcified Tissue Research, vol. 21, Sept. 1976,  
p. 361-364. (Supported by NASA grant NGL 50-002-051 and NIH grant  
NIH-AM-17892)

Parker, J. A.; Butte, J. C.; and Cummins, J. M.  
Apparatus and Methodology for Fire-Gas Characterization by Means of  
p. 24-31. (Also published in International Conference on Fire Safety,  

681. McCutcheon, E. P.; Miranda, R.; Fryer, T. B.; and Carlson, E. L.  
An Inductively Powered Implantable Multichannel Telemetry System for  
Cardiovascular Data. In International Symposium on Biotelemetry, 3d,  
Pacific Grove, Calif., 1976. Biotelemetry III; Proceedings. Fryer,  
T. B.; Miller, H. A.; and Sandler, H., Editors. New York, Academic  
682. Orne, D.; and Young, D. R.

683. Oyama, J.

684. Robinson, A. B.; Dirren, H.; Sheets, A.; Miquel, J.; and Lundgren, P. R.

685. Rockwell, D. A.; Hodgson, M. G.; Beljan, J. R.; and Winget, C. M.

686. Sandler, H.

687. Sandler, H.

688. Sandler, H.; Rositano, S. A.; McCutcheon, E. P.

689. Sobocińska, J.; and Greenleaf, J. E.

690. Stone, H. L.; Golarz de Bourne, M. N.; McClure, H. M.; Bourne, G. H.; and Sandler, H.


PATENTS


BIOTECHNOLOGY DIVISION

FORMAL REPORTS

701. Baty, D. L.
NASA TM-X-73170 N77-14745

702. Baty, D. L.
Rationale and Description of a Coordinated Cockpit Display for Aircraft Flight Management. 1976.
NASA TM-X-3457 N77-11044

703. Billings, C. E.; Lauber, J. K.; Funkhouser, H.; Lyman, E. G.; and Huff, E. M.
NASA TM-X-3445 N76-33845

704. Billings, C. E.; Lauber, J. K.; Cooper, G. E.; and Ruffell-Smith, H. P.
NASA SP-416 N77-18113

705. Ephrath, A. R.
NASA TM-X-73170 N77-14745

706. Gartner, W. B.; and Murphy, M. R.
NASA TN-D-8365 N77-11674

707. Hart, S. G.; and Simpson, C. A.
NASA TM-X-73170 N77-14745

708. Howard, J. C.
The Influence of Altitude and Sink Rate Errors on Pilot Performance During the Final Approach and Landing Phase of a Simulated RPRV Mission. 1976.
NASA TM-X-73108 X76-10297
709. Howard, J. C.
NASA TM-X-73170 N77-14745

710. Kreifeldt, J.; Parkin, L.; Rothschild, P.; and Wempe, T.
NASA TM-X-73170 N77-14745

711. Lauber, J. K.; Billings, C. E.; Stevenson, J. E.; Ruffell-Smith, H. P.; and Cooper, G. E.
NASA SP-416 N77-18114

NASA TM-X-3494 N77-16002

713. Randle, R. J.
NASA TN-D-8141 N76-18185

714. Roscoe, S. N.; Olzak, L. A.; and Randle, R. J.
AGARD CP-201 N77-16055

715. Simpson, C. A.
NASA TM-X-73170 N77-14745

716. Williams, D. H.
NASA TM-X-73160 N76-30196
717. Williams, D. H.; and Simpson, C. A.
NASA SP-416

NASA CONTRACTOR REPORTS

718. Baer, J. A.
NASA CR-137816 N76-18792

719. Budininkas, P.
NASA CR-151930 N77-14732

720. Holland, F. F.; Klein, E.; Smith, J. K.; and Eyer, C.
NASA CR-137814 N76-28393

721. Leith, J. R.; and Hixon, C. W.
NASA CR-137974 N77-11673

722. Marshall, R. D.; and Powell, J. D.
NASA CR-137930 N77-11672

723. Onischak, M.
NASA CR-137919 N77-11677

724. Putnam, D. F.
NASA CR-137934 N77-11676


JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS


734. Flamm, D. L.; and Wydeven, T. L.  

735. Howard, J. C.  

736. Machol, R. E.  

737. Malmstrom, F. V.; and Randle, R. J.  

738. Miquel, J.; Herman, M. M.; Benton, E. V.; and Welch, G.  

739. Miquel, J.; Lundgren, P. R.; Bensch, K. G.; and Atlan, H.  

740. Montgomery, L. D.  

741. Montgomery, L. D.; and Williams, B. A.  

742. Murphy, M. R.  

743. Niijima, A.  

744. Palmer, E.; and Petitt, J.  
745. Palmer, E.; and Petitt, J.
In AIAA Visual and Motion Simulation Conference, Dayton, Ohio, April

746. Palmer, E. A.; and Cronn, F. W.

747. Riedesel, M. L.; and Williams, B. A.
Continuous 24-Hour Oxygen Consumption Studies of Myotis velifer.

748. Satinoff, E.; McEwen, G. N., Jr.; and Williams, B. A.
Behavioral Fever in Newborn Rabbits. Science, vol. 193, Sept. 17,
1976, p. 1139-1140.

749. Schubert, F. H.; Clark, D. C.; and Quattrone, P. D.
Integrated Testing of an Electrochemical Depolarized CO\textsubscript{2} Concentrator
(EDC) and a Bosch CO\textsubscript{2} Reduction Subsystem (BRS). In American Society
of Mechanical Engineers. Inter Society Conference on Environmental

750. Shapira, J.; Vann, L. S.; and Furst, A.
Adaptation to Glycerol and Triacetin Ingestion in Rats — Influence
of Total Dietary Protein. Western Pharmacology Society. Proceedings,

751. Wydeven, T.; and Kubacki, R.
Antireflection Coating Prepared by Plasma Polymerization of

PATENTS

752. Chase, W. D.

753. Chase, W. D.

754. Elkins, W.; Williams, B. A.; and Tickner, E. G.
NASA-CASE-ARC-11007-1 US-PATENT-APPL-SN-652948

755. Elkins, W.; Williams, B. A.; and Tickner, E. G.
Liquid Cooled Brassiere and Method of Diagnosing Malignant Tumors
Therewith. 1976.
NASA-CASE-ARC-11007-1 US-PATENT-3,995,621
756. Haines, R. F.

757. Haines, R. F.; Fitzgerald, J. W.; and Rositano, S. A.

758. Johnson, C. C.; and Wydeven, T.

759. Vykukal, H. C.
Spacesuit Mobility Joints. 1976.

760. Vykukal, H. C.; Chambers, A. B.; and St. John, R. H.

761. Webbon, B. W.; Vykukal, H. C.; and Williams, B. A.
762. Sweet, H. C.; and Simmonds, R. C.
Specifications for and Preliminary Design of a Plant Growth Chamber
for Orbital Experiments. 1976.
NASA TM-X-73189 N77-16681

763. Schulz, J. R.; and Anselmi, R. T.
Urea/Ammonium Ion Removal System for the Orbiting Frog Otolith
Experiment. Final Report. (MCR-76-6, Martin Marietta Corp., Denver,
Colo.; NAS2-8165.) 1976.
NASA CR-137833 N76-20797

764. Berry, W. E.; Tremor, J. W.; and Aepli, T. C.
Biomedical Experiments Scientific Satellite (BESS). In American
Society of Mechanical Engineers. Intersociety Conference on Environ­
76-ENAS-57.

765. Martin, J. P.; Johnson, R. D.; Kok, B.; and Radmer, R.
Unified Mars Detection System. In Future Space Activities; Goddard
Memorial Symposium, 13th, Washington, D.C., April 11, 1975. Tarzana,
Calif., American Astronautical Society, 1976. p. 123-149. (Also
published in Journal of the Astronautical Sciences, vol. 23, Apr.-June,
1975, p. 99-119)
NAN-VEHICLE SYSTEMS RESEARCH DIVISION

FORMAL REPORTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Author(s)</th>
<th>Title</th>
<th>Source</th>
</tr>
</thead>
</table>

### JOURNAL ARTICLES, MEETING-PAPERS, BOOKS AND CHAPTERS OF BOOKS

<table>
<thead>
<tr>
<th>Number</th>
<th>Author(s)</th>
<th>Title</th>
<th>Source</th>
</tr>
</thead>
</table>


786. Lanyi, J. K.; and Hilliker, K.  

787. Lee, C.; Bada, J. L.; and Peterson, E.  

788. Loew, G. H.; Kirchner, R. F.; and Lawless, J. G.  

789. Lozier, R. H.; Niederberger, W.; Bogomolni, R. A.; Hwaeng, S.-B.; and Stoeckenius, W.  

790. McElhaney, R. N.; and Souza, K. A.  

791. Middaugh, C. R.; and MacElroy, R. D.  

792. Middaugh, C. R.; and MacElroy, R. D.  

793. Oyama, V. I.; Berdahl, B. J.; Carle, G. C.; Lehwalt, M. E.; and Ginoza, H. S.  

794. Renthal, R.; and Lanyi, J. K.  

795. Satyanarayana, T.; and Klein, H. P.  
796. Singleton, R., Jr.

797. Stull, M. A.; and Alexander, G.

798. Sweeney, M. A.; Toste, A. P.; and Ponnamperuma, C.

799. Tomlinson, G. A.; and Hochstein, L. I.

800. West, M. W.; Koch, R. A.; and Chang, S.
PATENTS

801. Dimeff, J.; and Kerwin, W. J.  
NASA-CASE-ARC-10445-1  
US-PATENT-3,978,364

802. Dimeff, J.  
NASA-CASE-ARC-10631-1  
US-PATENT-3,943,368

803. Dimeff, J.  
Modulated Hydrogen Ion Flame Detector. 1976.  
NASA-CASE-ARC-10322-1  
US-PATENT-3,938,956

804. Dimeff, J.  
NASA-CASE-ARC-10760-1  
US-PATENT-3,953,734
FORMAL REPORTS


JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS


808. Bloomquist, C. E.; and Graham, W. C.
NASA CR-137854 N76-22271


JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS


816. Kojima, G. K.; McCutcheon, E. P.; Carlison, E. L.; and Lee, R. D. 
A Miniature Implantable Echo Ultrasonometer. In International 
III; Proceedings. Fryer, T. B.; Miller, H. A.; and Sandler, H., 

817. McEwen, G. N., Jr.; Miranda, R.; Fryer, T. B.; Satinoff, E.; and 
Williams, B. A. 
A System for Continuous Measurement of Metabolism, Body Temperature, 
Feeding, Drinking, and Activity in Unrestrained Rats. In Interna­
Biotelemetry III; Proceedings. Fryer, T. B.; Miller, H. A.; and 

818. Miranda, R.; McEwen, G. N.; Fryer, T. B.; and Williams, B. A. 
An Extracorporeal Multichannel Telemetry System for Physiological 
Applications. In International Symposium on Biotelemetry, 3d, Pacific 
Miller, H. A.; and Sandler, H., Editors. New York, Academic Press, 

819. Oro, J.; and Stephen Sherwood, F. 
p. 37-47.

820. Silverberg, G. D.; Remm, A. K.; Corbin, S. D.; Fryer, T. B.; Becker, 
D. H.; and Hopkins, W. C. 
Intercranial Pressure Monitoring Using an Implanted Epidural Capacit­
tance Transducer and Telemetry. In International Symposium on 

821. Westbrook, R. M.; Fryer, T. B.; and Rositano, S. A. 
A Wideband EMG Telemetry System. In International Symposium on 

PATENTS

822. Coon, G. W. 
Trielectrode Capacitive Pressure Transducer. 1976. 

823. Gunter, W. D., Jr. 
Psuedo-Backscatter Laser Doppler Velocimeter Employing Antiparallel- 
Reflector in the Forward Direction. 1976. 
NASA-CASE-ARC-10970-1 US-PATENT-APPL-SN-691046

824. Gunter, W. D., Jr. 
Schlieren System Employing Antiparallel Reflector in the Forward 
Direction. 1976. 
825. Lee, R. D.
   Biomedical Ultrasonoscope. 1976.
   NASA-CASE-ARC-10994-1
   US-PATENT-APPL-SN-728369

826. Parra, G. T.
   Angle Detector. 1976.
   NASA-CASE-ARC-11036-1
   US-PATENT-APPL-SN-740457

827. Vallotton, W. C.
   An artificial Leg Employing a Mechanical Energy Storage Device for
   Hip Disarticulation. 1976.
   NASA-CASE-ARC-10916-1
   US-PATENT-APPL-SN-701448
PATENTS

828. Delaplaine, R. W.; and Mossolani, D. L.
   Rotary Leveling Base Platform. 1976.
   NASA-CASE-ARC-10981-1 US-PATENT-APPL-SN-738218

   Readout Electrode Assembly for Measuring Biological Impedance. 1976.
   NASA-CASE-ARC-10816-1 US-PATENT-3,957,037
ARMY AIR MOBILITY RESEARCH AND DEVELOPMENT LABORATORY
AND AMES DIRECTORATE

FORMAL REPORTS


831. Bousman, W. G.

832. Boxwell, D. A.; and Schmitz, F. H.
In-Flight Far-Field Measurement of Helicopter Impulsive Noise. 1976. AD-A025979 N77-12060

833. Hodges, D. H.
Nonlinear Equations of Motion for Cantilever Rotor Blades in Hover with Pitch Link Flexibility, Twist, Precone, Droop, Sweep, Torque Offset, and Blade Root Offset. 1976. NASA TM-X-73112 N76-26152

834. Hodges, D. H.; andOrmiston, R. A.

835. Immen, F. H.

836. McCroskey, W. J.

837. U.S. Army Air Mobility Research and Development Laboratory.
Technical Reports Published in FY-76 and FY-77. 1976. AD-B016225L X77-74133

-112-
NASA CONTRACTOR REPORTS

838. Curtiss, H. C., Jr.; and Putnam, W. F.
NASA CR-151924 N77-12040

839. Hohenemser, K. H.; Banerjee, D.; and Yin, S. K.
NASA CR-137963 N77-10003

840. Hohenemser, K. H.; and Crews, S. T.
NASA CR-137964 N77-10004

841. Nash, John F.
NASA CR-2767 N77-13987

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

842. Bousman, W. G.; Sharpe, D. L.; and Ormiston, R. A.

843. Caradonna, F. X.; and Philippe, J. J.

844. Caradonna, F. X.; and Isom, M. P.

845. Clark, L. T.; Chalupnik, J. D.; and Hodder, B.

846. Hodder, B. K.
847. Hodges, D. H.; and Ormiston, R. A.

848. Marr, R. L.; Willis, J. M.; and Churchill, G. B.

849. McCroskey, W. J.; Carr, L. W.; and McAlister, K. W.

850. Ormiston, R. A.

851. Ormiston, R. A.

852. Schmitz, F. H.; and Boxwell, D. A.

853. Schmitz, F. H.; and Vause, C. R.

854. Vause, C. R.; Schmitz, F. H.; and Boxwell, D. A.

PATENTS

SECTION II

ADDENDUM

Publications Not Received in Time to Include in Previous Annual Issues
ADDENDUM

PRIOR YEARS' PUBLICATIONS

OFFICE OF THE DIRECTOR

HEALTH AND SAFETY OFFICE

FORMAL REPORTS

856. Hughes, L.; and LaDou, J.
Annual Health Examination Program, Ames Research Center.
In Conference of NASA Clinic Directors, Environmental Health Officials,
and Medical Program Advisors, Williamsburg, Va., March 18-20, 1975.

Proceedings. Washington, National Aeronautics and Space Administration,

NASA TM-74848

N77-30727
ADDENDUM

AERONAUTICS AND FLIGHT SYSTEMS DIRECTORATE

AERONAUTICS DIVISION

NASA CONTRACTOR REPORTS

857. Brewer, G. D.; and Morris, R. E.
Minimum Energy, Liquid Hydrogen Supersonic Cruise Vehicle Study.
(LR-27347, Lockheed-California Co., Burbank; NAS2-8781.) 1975.
NASA CR-137776 N76-17101

858. Gregory, T. J.; Nelms, W. P., Jr.; and Karmarkar, J.
Remotely Piloted Aircraft in the Civil Environment. In Conference on
Remotely Manned Systems (RMS), Jet Propulsion Laboratory, California
Institute of Technology, Pasadena, Calif., June 9-11, 1975. Technology
and Applications.
NASA CR-148013 N77-29772

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

859. Cook, W. J.; Presley, L. L.; and Chapman, G. T.
Use of Shock Tubes in High Reynolds Number Transonic Testing. In
International Shock Tube Symposium, 10th, Kyoto, Japan, July 14-16,
p. 472-479.

860. Johnson, D. A.; and Rose, W. C.
Turbulent Measurements in Supersonic Boundary Layer Flows Using
Laser Velocimetry. In International Workshop on Laser Velocimetry,
West Lafayette, Ind., Purdue University, 1974. p. 1-13; discussion,
ADDENDUM

FLIGHT SYSTEMS RESEARCH DIVISION

FORMAL REPORTS

861. Franklin, J. A.; and Innis, R. C.
Longitudinal Handling Qualities During Approach and Landing of a
Powered Lift STOL Aircraft.
NASA TM-X-62144 N77-33151

862. Meyer, G.; and Wehrend, W. R.
NASA Ames Active Control Aircraft Flight Experiments (ACA) Program.
In Systems Reliability Issues for Future Aircraft; a Workshop Sponsored
by Ames Research Center, Held at Massachusetts Institute of Technology,
NASA CP-003 N77-22808

863. Systems Reliability Issues for Future Aircraft; a Workshop Sponsored
by Ames Research Center, Held at Massachusetts Institute of Technology,
NASA CP-003 N77-22810

NASA CONTRACTOR REPORTS

864. Bergquist, R. R.; Carlson, R. G.; Landgrebe, A. J.; and Egolf, T. A.
User's Manual for the Coupled Mode Version of the Normal Modes Rotor
Aeroelastic Analysis Computer Program. (SER-50910, Sikorsky Aircraft,
Stratford, Conn.; NAS2-6463.) 1974.
NASA CR-137899 N76-29153

865. Flight Test System for Study of Space Shuttle Vehicle Guidance and
Navigation Concepts. Final Report. (PU3-71-0386-00-00, Sperry Rand
NASA CR-137788 X76-10060

866. Goldman, A.; Williams, W. J.; and Murcray, D. G.
Measurements of Trace Constituents from Atmospheric Infrared Emission
and Absorption Spectra — a Feasibility Study. Final Report. (Denver
Univ., Colo. (Dept. of Physics and Astronomy); NAS2-8200.) 1974.
NASA CR-137762 N76-13673

867. Morrison, J. A.
Engineering Flight Evaluation Report. (ROT-75252, United Air Lines,
NASA CR-137755 N75-32093

868. Schmidt, S. F.
(REPT-75-38, Analytical Mechanics Associates, Inc., Mountain View,
Calif.; NAS2-8552.) 1975.
NASA CR-137777 X76-10286
ADDENDUM

869. Tashker, M.
NASA CR-137861 N76-28233

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

870. Gutman, S.; and Leitmann, G.

871. Jury, E. I.; and Gutman, S.

872. Patel, R. V.
ADDENDUM

RESEARCH AIRCRAFT PROJECT OFFICE

NASA CONTRACTOR REPORTS

873. Renselaer, D. J.; Nishida, R. S.; and Wilkin, C. A.
Small Scale Noise and Wind Tunnel Tests of Upper Surface Blowing
International Corp., Los Angeles, Calif. (Aircraft Div.); NAS2-8607.)
1975.
NASA CR-137747

874. Sambell, K. W.
Vol. IV. STOL Substantiating Data. (D313-099-002-VOL-4, Bell
Helicopter Co., Fort Worth, Tex.; NAS2-8259.) 1975.
NASA CR-137765

-119-
ADDENDUM

ASTRONAUTICS DIRECTORATE

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

875. Fudali, R. F.; and Chapman, D. R.
ADDENDUM

ADVANCED MISSIONS OFFICE

NASA CONTRACTOR REPORTS


ADDENDUM

APPLICATIONS DIVISION

NASA CONTRACTOR REPORTS


ADDENDUM

CHEMICAL RESEARCH PROJECTS OFFICE

NASA CONTRACTOR REPORTS

885. Baldwin, R. C.; Chatfield, D. A.; Delano, C. B.; Einhorn, I. N.; Futrelle, J. E.; Milligan, R. J.; and Rafter, R. T.
NASA CR-137783 X76-10189

886. Bilow, N.; Karre, L. E.; and Noji, H. S.
NASA CR-137817 N76-71969
887. Mayfield, E. B.; and White, K. P., III. 
Pre-Flare Association of Magnetic Fields and Millimeter-Wave Radio 
(Lab. Operations); NAS2-8561.) 1975.  
NASA CR-137794 X76-71201
ADDENDUM

SPACE SCIENCE DIVISION

FORMAL REPORTS

888. Bergstrom, R. W.; Bornstein, R. D.; and Lee, R. L.
NASA TM-X-74263

889. Bergstrom, R. W.; Lee, R. L.; and Bornstein, R. D.
Workshop on Modeling the Urban Boundary Layer, Summary. 1975.
NASA TM-X-74264

890. Toon, O. B.; Gierasch, P. J.; and Sagan, C.
(Sponsored by NASA Grant NGR 33-010-220) NASA SP-366

NASA CONTRACTOR REPORTS

891. Greeley, R., Editor.
NASA CR-152416

892. Russell, P. B.; Viezee, W.; and Hake, R. D.
NASA CR-137931

893. Russell, P. B.; Viezee, W.; and Hake, R. D.
NASA CR-137933

-125-
ADDENDUM

894. Viezee, W.; Hake, R. D.; and Russell, P. B.
NASA CR-137932.

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

895. Savage, H. F.; Loewenstein, M.; and Whitten, R. C.
In-situ Measurements of NO and O₃ in the Lower Stratosphere. In
International Conference on the Environmental Impact of Aerospace
Operations in the High Atmosphere, 2nd, San Diego, Calif., July 8-10,
p. 5-10.

896. Valero, F. P. J.
Spectrum of Al VII in the VUV. Optical Society of America. Journal,
ADDENDUM

THERMO- AND GAS-DYNAMICS DIVISION

NASA CONTRACTOR REPORTS

897. Helliwell, W. S.
NASA CR-137955 X76-11813

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

898. Bailey, F. R.

899. Schneider, C.-P.; and Park, C.
(Also published in Physics of Fluids, vol. 18, Aug. 1975, p. 969-981)
900. Mehler, W. R.; and Nauta, W. J. H.
NASA TM-X-74193 N76-77290
(Also published in Confinia Neurologica, vol. 36, 1974, p. 205-222)

901. Johnson, K. L.
Shuttle Spacelab Animal Holding Facility Prototype Development Plan.
(Lockheed Missiles and Space Co., Sunnyvale, Calif.; NAS2-8688.) 1975.
NASA CR-137775 X76-72038

902. Johnson, K. L.
Shuttle Spacelab Animal Holding Facility Study. (Lockheed Missiles
NASA CR-137774 X76-72039

903. Reiber, J. H. C.
Real-Time Detection and Data Acquisition System for the Left
Ventricular Outline. In Cardiovascular Imaging and Image
Processing Conference, Stanford University, July 1975. Cardiovascular
Imaging and Image Processing: Theory and Practice; Proceedings.
Harrison, D. C.; Sandler, H.; and Miller, H. A., Editors. Palos
Verdes Estates, Calif., Society of Photo-Optical Instrumentation
Engineers, 1975. p. 139-147. (SPIE Proceedings, vol. 72) (Also
published as NASA CR-149387)
ADDENDUM

BIOTECHNOLOGY DIVISION

FORMAL REPORTS


NASA CONTRACTOR REPORTS


JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS


ADDENDUM

PLANETARY BIOLOGY DIVISION

JOURNAL ARTICLES, MEETING PAPERS, BOOKS AND CHAPTERS OF BOOKS

913. Deal, P. H.; Souza, K. A.; and Mack, H. M.

914. Zeitman, B.; and Lawless, J. G.
ADDENDUM

RESEARCH SUPPORT DIRECTORATE

PATENTS

915. Dimeff, J.
Optically Selective, Acoustically Resonant Gas Detecting Transducer.
1975.
ADDENDUM

COMPUTATION DIVISION

FORMAL REPORTS

916. Rasmussen, D.
(Also published as NASA CR-149387)
ADDENDUM

RESEARCH FACILITIES AND INSTRUMENTATION DIVISION

NASA CONTRACTOR REPORTS

917. Bentley, P. B.
Advanced Recording and Preprocessing of Physiological Signals.
(Stanford Research Inst., Menlo Park, Calif.; NAS2-8836 SRI Proj.
4260.) 1975.
NASA CR-137795

N76-18788
ADDENDUM

ARMY AIR MOBILITY RESEARCH AND DEVELOPMENT LABORATORY
AND AMES DIRECTORATE

FORMAL REPORTS

   AD-A032002
   N77-77507

   AD-A022866
   N76-79298

NASA CONTRACTOR REPORTS

   NASA CR-137967
   N77-10007

   NASA CR-137968
   N77-10008

   NASA CR-137772
   N76-10005

   NASA CR-137966
   N77-10006

   NASA CR-137965
   N77-10005
925. Trenka, A. R.

NASA CR-137779 N76-18139
AUTHOR INDEX
A.

Acharya, M., 560
Ackerson, K. L., 457
Adamson, M. J., 522, 577, 642
Aderhold, J. R., 49, 50, 81, 82
Adler, I., 569
Aeppli, T. C., 764
Agopian, K. G., 545
Ahtye, W. F., 174
Aiken, T. N., 185, 186
Alexander, G., 797
Alexander, H.-R., 249, 250, 251, 252, 253
Alvares, N. J., 330
Amtmann, E., 660, 661
Anderson, D., 543
Anderson, E. B., 170
Anderson, J. E., 302
Anderson, J. L., 227, 264, 273, 284, 285, 286
Anderson, R. A., 324, 364
Andrastek, D. A., 264, 274
Anselmi, R. T., 763
Aoyagi, K., 232, 233
Aoyagi, M., 805, 806
Ardema, M. D., 228, 229, 265, 287, 288, 289
Armstrong, R. L., 164
Arno, R. D., 312
Arnold, D. B., 364
Arnold, J. O., 561
Arons, J., 428, 429
Arvidson, R., 430
Arvidson, R. E., 482, 484
Ashley, H., 74
Atencio, A., Jr., 220
Athans, M., 175, 181, 212, 224
Atlan, H., 729, 739
Averner, M. M., 767, 770
Avrin, P., 484

B.

Bachalo, W. D., 21, 30, 71
Bada, J. L., 787
Bader, M., 295
Baer, J. A., 718
Bailey, F. R., 524, 898
Bailey, H., 627
Bailey, H. E., 628
Bailey, R. O., 38
Baker, R. A., 771
Bakke, A. P., 809
Baldwin, B., 431, 489, 492, 523
Baldwin, B. S., 562

-137-
Baldwin, R. C., 885
Ballhaus, W. F., 524
Ballou, E. V., 730
Banerjee, D., 839, 924
Bank, H., 488
Barber, M. R., 132
Barclay, J. D., 677
Barlow, A., 40
Barman, J. F., 176
Barnes, A., 432
Baty, D. L., 701, 702, 731
Bauer, E., 563
Baum, J. W., 5
Beam, R. M., 564, 640
Becker, D. H., 820
Becker, T., 436
Beljan, J. R., 685, 694, 695
Bedither, J. F., 425
Beltramo, M. N., 227, 273
Bencze, D. P., 22, 23, 24.
Bensch, K. G., 739
Bensoussan, A., 177
Bentley, P. E., 917
Benton, E. V., 738
BerdaH, B. J., 652, 793
Bergquist, R. R., 864
Bergstrom, R. W., 433, 472, 473, 888, 889
Bergstrom, R. W., Jr., 404
Bernauer, E. M., 691
Berry, W. E., 764
Betzina, M. D., 107
Biggers, J. C., 139, 205
Billings, C. E., 703, 704, 711
Billman, K. W., 525, 527, 540, 565
Bilow, N., 886
Binder, A. B., 482, 483, 484
Binding, A. T., 364
Biron, D. F., 566, 567
Black, D. C., 434
Blanchard, M., 406
Blanchard, M. B., 405, 407, 497
Bland, M. P., 238, 275
Bloomquist, P., 178
Blaisius, K. R., 450
Blizard, D. A., 732
Blume, J. C., 533
Bloomquist, C. E., 808
Bodenheimer, P., 434
Bodenheimer, R. E., 879, 880
Boese, R. W., 478
Bogomolni, R. A., 771, 789
Boitnott, C. A., 526
Carlston, C. E., 484
Carmichael, R. L., 83
Caroff, L. J., 456
Carr, L. W., 849
Carr, M. H., 410, 411, 415, 416, 450
Carros, R. J., 267
Cassanto, J. M., 266
Cassen, F., 410, 443, 444
Cassen, P. M., 458
Catalano, G., 664
Chackerian, C., Jr., 445, 446
Chalupnik, J. D., 845
Chambers, A. B., 760
Chambers, T. L., 559
Chang, S., 772, 781, 800
Changeris, D. G., 665
Chao, J.-K., 452
Chapman, D. R., 875
Chapman, G. T., 63, 75, 859
Chargin, M. K., 809
Chase, W. D., 733, 752, 753
Chatfield, D. A., 885
Chausee, D. S., 568
Chen, M. H., 569, 805, 806
Cheng, C.-N., 912
Cheng, D. Y., 101, 102, 103
Chiao, R. Y., 678
Childs, M. E., 57
Chisel, D. M., 395, 475
Chong, C.-Y., 181
Christensen, H. E., 546, 547, 548, 549
Christenson, J. V., 118
Christie, C., 118
Churchill, G. B., 848
Cicolani, L., 137
Ciffone, D. L., 133, 182, 183
Clague, D. A., 447
Clark, D. G., 749
Clark, L. T., 845
Clarkson, M. H., 63, 77
Clement, W. F., 148
Cleveland, W. B., 270
Cochrane, J. A., 267
Cogley, A. C., 433, 448, 449
Colin, L., 296
Connors, M. M., 304
Conrad, B., 195
Constantinides, E., 425
Convertino, V. A., 691
Cook, W. J., 859
Cook, W. L., 231, 237
Cook, W. S., 485
Coon, G. W., 822
Cooper, D. M., 570

-140-
Cooper, G. E., 704, 711
Corbin, S. D., 820
Corsiglia, V. R., 109, 110, 139, 183, 205
Covington, N. A., 571
Cowings, F., 732
Cowley, J. R., Jr., 399
Cox, J., 572
Coykendall, R. E., 239
Craig, R. A., 520
Crasemann, B., 569, 805, 806
Crews, S. T., 840, 923
Crisalli, A. J., 573
Cronin, S. E., 912
Cronn, F. W., 746
Crumrine, R. J., 149
Cummins, J. M., 680
Cunningham, G., 406
Curry, J. K., 239
Curtiss, H. C., Jr., 150, 838, 920
Cutts, J. A., 450
Cuzzi, J., 516

D.

Daily, W. D., 412, 454
Dalton, B. P., 776
Damant, G. H., 341
Dana, R. A., 451
Dannenberg, R. E., 574
Davies, R., 309, 310
Davis, A., 406
Davis, J. E., 111
Davis, S. S., 64, 65
Deal, P. H., 769, 913
Dean, W. C., II, 909
DeBra, D. B., 151
Debs, R. J., 392
Deiwert, G. S., 575, 576, 605
Delano, C. B., 325, 370, 555, 885
Delaplaine, R. W., 828
Delfour, M. C., 177
Demers, L. M., 665
Denery, D. G., 195
Demman, S. C., 55
De Rose, C. E., 390
DeRoshia, G., 669
DeRoshia, C. W., 666
De Vincenzi, D. L., 768, 769, 773
De Young, D. S., 469
Dickey, R. R., 597
Dickinson, S. O., 129
Dimeff, J., 801, 802, 803, 804, 915
Dirren, H., 684
Disser, E. F., 554
Dods, J. B., Jr., 25
Dolkas, C. B., 729
Dominique, G. J., 648
Domke, A. E., 239
Dorchak, K. J., 655, 656, 657
Dougherty, E., 906
Douglass, D. L., 625
Dowel, E. H., 921
Down, K. S., 313
Draemel, R., 363
Drinkwater, F. J., III, 114
Drozd, R., 430
Dryer, M., 452
Dubach, J., 442
Dubin, A. P., 277
Duckett, R. J., 485
Dugan, D. W., 302
Dunham, E. W., 484
Durisen, R. H., 453
Dvorak, F. A., 204
Dyal, P., 412, 454

E.

Eberlein, A. J., 152
Eckert, W. T., 112, 113
Edmonds, J. D., 455
Edwards, D. K., 381, 382
Edwards, F. G., 114
Egolf, T. A., 864
Ehlers, F. E., 26
Eilek, J. A., 456
Einhorn, I. N., 885
Ekstedt, T. W., 139, 205
Elkins, W., 754, 755
Elliott, D. W., 276
Elliott, G. R., 677
Ellis, S., 667, 676
Engelbert, D. F., 809
Eninger, J. E., 376, 381, 382, 383
Ephrath, A. R., 705
Erickson, E. F., 413, 424
Erickson, H. H., 668
Erickson, J. C., Jr., 153
Erickson, L. L., 26, 41
Ericson, E. F., 509
Erlichman, J., 406
Erzberger, H., 176
Esker, D. W., 242
Esser, A. F., 774
Evans, J. W., 669
Evans, L. C., 296
Evans, P. F., 154
Byer, C., 720

F.

Fajfar, B., 275
Falarski, M. D., 184, 185, 186
Fassbender, A. G., 642
Feistel, T. W., 197
Feldman, K. T., 384
Fels, M. F., 6
Ferry, G. V., 407, 437
Fester, D. A., 302
Fewell, L. L., 317, 333
Fink, U., 512
Fish, R. H., 318, 334
Fisher, F., 363
Fisher, G. L., 660
Fitzgerald, J. W., 757
Flamm, D. L., 734
Fontenot, J. A., 318
Ford, F., 811
Foster, J. D., 114, 115
Fox, P. L., 484
Frank, L. A., 457, 477
Franklin, J. A., 116, 861
Freund, W. R., 663
Frick, J., 524
Fricker, P. E., 458
Fridman, J. D., 187
Fryer, T., 663
Fryer, T. B., 226, 681, 812, 813, 814, 815, 817, 818, 820, 821
Fudali, R. F., 875
Fuhs, A. E., 46
Fujiwara, T., 636
Funkhouser, H., 703
Furst, A., 338, 342, 344, 357, 358, 360, 680, 750
Futrell, J. H., 885

G.

Galloway, T. L., 230, 268, 269, 290, 291
Gambucci, B. J., 232, 233
Ganias, N. J., 659
Ganzer, V. M., 168
Garodz, L. J., 132
Gartner, W. B., 706
Gault, D. E., 461, 464, 500
Gaume, J. G., 326, 364
Gautier, T. N., III, 512
Gehrz, R. D., 462
Gemmer, R. V., 335, 337
Gershwin, S., 175
Ghista, D. N., 670
Gibbone, R. V., 464
Gibbs, B., 15
Gibson, R. J., 906
Giersach, P. J., 890
Gilbreath, W. P., 577, 642
Gilwee, W. J., 354, 369
Gilwee, W. J., Jr., 336, 362, 365
Ginoza, H. S.; 793
Giver, L. P., 478
Glick, J. M., 696
Gloria, H. R., 522
Glover, R. M., 578
Gobetz, F. W., 277, 278
Goettelman, R., 497
Goka, T., 179
Golarz de Bourne, M. N., 690
Goldman, A., 866
Goldsberry, R. E., 522
Goldstein, H. E., 643, 644
Golub, M. A., 323, 335, 337, 367
Gonzalez, R. C., 879, 880
Goodman, R. M., 906
Goodwin, A. L., 693
Goodwin, F. K., 553
Gordon, G., 49, 50
Gorham, J. A., 155
Gotlieb, P., 243
Goto, N., 117
Gower, M. C., 526
Graboske, H. C., Jr., 491
Graham, W. C., 808
Gray, H. R., 579
Greely, R., 296, 411, 414, 415, 416, 423, 450, 459, 460, 466, 467, 468, 490, 500, 515, 891
Greenleaf, C. J., 656
Greenleaf, J. E., 655, 656, 657, 671, 672, 674, 675, 689, 691, 697
Gregory, T. J., 82, 104, 858
Grenander, S. U., 484
Grgurich, J., 156
Griffith, R. V., 5
Griffith, W. I., 551
Grindeland, R. E., 667
Groll, M., 373, 375, 376, 377
Grossman, A. S., 491
Grote, M. G., 385
Grunbaum, B. W., 698
Guest, J. E., 411, 461
Guinness, E., 430
Guinness, E. A., 484
Gunter, W. D., Jr., 823, 824
Gupta, J. N., 879, 880
Gustafson, T. K., 678
Gutman, S., 119, 188, 189, 870, 871
Gwin, L. B., 66

H.

Haberle, R., 490
Habibi, A., 883, 884
Hackett, J. E., 154, 157
Hackwell, J. A., 462
Hague, D. S., 54, 426, 580
Haines, D. M., 164
Haines, R. F., 671, 756, 757
Hake, R. D., 892, 893, 894
Halberstadt, M. L., 321, 327
Haley, G., 328
Hall, C. F., 400, 402
Hall, G. F., 922
Hall, W. E., Jr., 158
Hanly, R. D., 67, 68
Hansen, C. F., 528
Hanson, R. J., 388
Hanson, W. B., 485
Hardy, C. H., 116, 141
Harper, M., 288, 292
Harrison, E. S., 329, 370
Hart, S. C., 707
Hasegawa, H., 363
Hashimoto, K., 463
Haughney, L. C., 419, 420
Hawkins, J. E., 53
Heath, J. E., 911
Negarty, D. M., 114
Heinemann, K., 581, 608, 625, 645
Heinrich, M. R., 775
Helliwell, W. S., 897
Helmle, L. C., 729
Hendricks, T. C., 303
Heritage, J. P., 678
Herman, M. M., 738
Hermanu, R., 190, 191, 192, 193, 199
Herz, M. J., 308
Hess, R. A., 120, 121, 194
Hewitt, J. E., 5
Hickey, D. E., 138, 231
Hicks, R. M., 36, 48, 69
Hill, G. C., 234
Hill, J. W., 907, 908
Hill, P. G., 164
Hill, R. E., 464
Hilliker, K., 786
Hinrichs, C. A., 297
Hixon, C. W., 721
Hobbs, L., 906
Hobby, G. L., 652
Hochstein, L. I., 776, 777, 799
Hodder, B., 845
Hodder, B. K., 122, 846
Hodges, D. H., 833, 834, 847, 855
Hodgson, M. G., 685
Hörz, F., 464
Hoffman, W. C., 159
Hohenberg, C., 430
Hohenemser, K. H., 839, 840, 923, 924
Holland, F. F., 720
Holley, D. C., 669
Hollister, W. M., 159
Holman, R. B., 677
Holst, T. L., 637, 638
Holt, M., 21, 79, 589
Holtz, T., 80, 568
Honrath, J., 51
Hopkins, E. J., 27, 28, 29, 70
Hopkins, J. P., 244, 245
Hopkins, W. C., 820
Horowitz, N. H., 652, 653
Horstman, C. C., 582, 609
Howard, F. S., 579
Howard, J. C., 708, 709, 735
Howard, W. H., 696, 699
Howe, J. T., 583, 594, 612
Howell, M. H., 32
Hruby, R. J., 123
Hsu, M.-T., 362
Hsu, M.-T. S., 359, 365
Huang, K.-N., 805, 806
Hubbard, J. S., 652
Huck, F. O., 482, 483, 484
Huff, E. M., 703
Hughes, L., 5, 856
Hung, C. M., 523, 550, 584, 585
Huntress, W. T., Jr., 442
Hussaini, M. Y., 586
Hwang, K., 879, 880

-146-
Hwang, S.-B., 789
Hyde, J. R., 401
Hynes, C. S., 124, 647

I.
Idso, S. B., 497
Immen, F. H., 835
Innis, R. C., 116, 235, 861
Inouye, M., 600
Intrieri, P. F., 390
Intrilligator, D. S., 465
Isom, M. P., 844
Itikawa, Y., 544
Iufer, E., 412
Iversen, J., 459, 490
Iversen, J. D., 466, 467, 468, 515

J.
Jackson, C. T., Jr., 195
Jackson, D. O., 160
Jackson, R. D., 497
Jackson, R. W., 405
Jaeck, C. L., 161, 162
Jaffe, R. L., 587
Johnson, A. C., 339
Johnson, C. C., 758
Johnson, D. A., 30, 71, 72, 78, 860
Johnson, E. H., 73, 74
Johnson, E. J., 648
Johnson, F. T., 26
Johnson, J. E., Jr., 673
Johnson, K. L., 901, 902
Johnson, R. D., 652, 765
Johnson, R. E., 579
Johnson, T. L., 178, 200, 209
Johnson, W., 125, 126, 127, 128, 919
Jones, H. W., Jr., 305, 314
Jones, K. L., 484
Jones, R. T., 1, 2, 4, 43
Jope, J., 112
Joppa, R. G., 163, 168
Jorgensen, L. H., 31, 32, 33
Jungclaus, G. A., 778
Jury, E. I., 871

K.
Kaciuba-Uściłko, H., 672, 674, 675
Kadman, Y., 246
Kahn, R., 484
Kaji, S., 196
Kanninen, M. F., 551
Karmarkar, J., 858
Karre, I. E., 886
Katvala, V. E., 643
Keener, E. R., 34, 75
Keihm, S. J., 552
Keil, C. L., 665, 671, 676
Kellar, K. J., 677
Kelley, H. J., 247
Kelly, M. W., 129, 138
Kenyon, D. H., 779
Kerwin, W. J., 801
Keyes, J. W., 637
Khan, I. H., 588
Khare, B. N., 511
King, R. R., 69
Kirchner, R. E., 788
Kirk, D. B., 95, 390, 501
Kirkland, F. P., 53
Kirkpatrick, J. P., 374, 375, 377, 391
Klein, E., 720
Klein, G. D., 648
Klein, H. P., 649, 650, 651, 652, 653, 654, 795
Klopfer, G. H., 589
Knauer, S., 306
Knaurer, S. C., 315
Knight, T. C. D., 485
Koch, R. A., 800
Kojima, G. K., 174, 816
Kok, B., 765
Kollias, J., 657
Kolozowski, S., 672
Komoda, M., 130
Konigsberg, E., 700
Konsewicz, R. K., 238, 275
Korsak, A. J., 195
Kostiw, L. L., 780
Koutsoyannis, S. P., 131
Kraus, E. F., 279, 280
Kreifeldt, J., 710
Krieger, R. J., 546, 547, 548, 549
Kroeger, R. A., 197
Kronzon, Y., 76
Kruse, R. L., 75
Ku, R., 175
Kubacki, R., 751
Kubokawa, C. C., 17
Kubota, H., 529
Kuehner, A. V., 5
Kuhn, G. D., 553
Kurkowski, R. L., 132
Kutler, P., 543, 568, 590, 591, 633
Kvenvolden, K. A., 912
Kwong, R. H., 198
Kyte, F., 406, 407, 417

L.

LaDou, J., 856
Lahav, N., 781
Lahn, T. G., 152
Lambregts, A. A., 160
Landgrebe, A. J., 864
Lane, J. W., 266
Lanfranco, M. J., 623
Langseth, M. G., 552
Lányi, J. K., 782, 783, 784, 785, 786, 794
Larsen, W. E., 140, 213
Larson, H. P., 512
Lasagna, P. L., 115, 146, 210
Latham, E. A., 35, 94
Lauber, J. K., 703, 704, 711
Lawless, J. G., 778, 914
Lea, S. M., 428, 429, 469, 470, 471
Leach, C. S., 693, 694
Leach, R., 459
Lederberg, J., 652, 653
Lee, C., 787
Lee, E. H., 592, 621
Lee, R. D., 816, 825
Lee, R. L., 472, 473, 888, 889
Lefton, L., 247
Lehwalt, M. E., 793
Leiser, D., 644
Leiser, D. B., 634, 643
Leith, J. R., 721
Leitmann, G., 188, 189, 870
Leonard, A., 566, 567, 593
Leovy, C. B., 493
Lerner, N. R., 362, 365
Le Shane, A. A., 278
Levin, G. V., 652, 653
Levinthal, E. C., 482, 483, 484
Levy, L. L., Jr., 605, 630
Lewis, G. E., 243
Liebes, S., 484
Liebes, S., Jr., 482, 483
Lilley, D. E., 157
Lin, C. H., 678
Lincoln, K. A., 571
Lindsey, G., 304
Linlor, W. I., 307
Little, L. J., 243
Liu, C.-H.; 594
Liu, G. N., 571
Loehrke, R. I., 392
Loew, G. H., 788
Loewenstein, M., 895
Lomax, H., 595, 596
Lopez, M. T., 332, 361
Lorell, K. R., 393, 394
Lovette, G. H., 27, 28
Lozier, R. H., 771, 789
Luebs, A. B., 133
Luedke, E. E., 382, 383
Lum, H., 521
Lumb, D. R., 313
Lundell, J. H., 597
Lundgren, P. R., 684, 739
Lyman, E. G., 703
Lyman, J., 694, 695

MacCormack, R. W., 530, 562, 584, 585, 585, 598, 599, 600
MacDonald, R. E., 782, 783, 784
MacElroy, R. D., 767, 770, 772, 791, 792
Machol, R. E. 736
Mack, H. M., 913
Madsen, M., 679
Madsen, S. F., 239
Magee, J. P., 249, 250, 251, 252, 253
Malcolm, G. N., 63, 77
Malmstrom, F. V., 737
Mancini, R. E., 810
Mann, F. I., 169
Mansfield, J. A., 321
Maples, A. L., 435
Mark, H., 3, 400, 805, 806
Maroti, L. A., 164
Marr, R. L., 848
Marshall, R. D., 722
Martin, C. F., 199, 203
Martin, D. N., 200
Martin, E. D., 601, 602, 603
Martin, J. P., 765
Martin, F. W., 647
Marvin, J. C., 531
Maskew, B., 134
Masursky, H., 450
Mateer, G. G., 604, 646
Miller, J. H., 478, 479, 480
Miller, N. E., 732
Miller, R. H., 304
Milligan, R. J., 325, 885
Mintz, Y. H., 493
Miquel, J., 684, 729, 738, 739
Miranda, R., 681, 817, 818
Mitchell, C., 309, 310
Mitter, S. K., 177
Modarress, D., 30, 71, 78, 79
Monson, D. J., 610
Montgomery, L. D., 671, 740, 741, 829
Moody, D. L., Jr., 829
Moore, C. B., 778
Moore, J. W., 401
Moore, R., 491
Moorhead, R. D., 611, 614
Morgan, C., 430
Morokuma, K., 587
Morris, E. C., 482, 483, 484
Morris, R. E., 857
Morris, S. J., Jr., 38
Morrison, J. A., 165, 170, 867
Morrison, R., 430
Morrison, R. H., 487.
Morrison, W. D., Jr., 257, 258
Mort, K. W., 112, 113, 138
Mossolani, D. L., 828
Muhlestein, L., Jr., 39
Mulholland, D. R., 481
Murcray, D. G., 866
Murman, E. M., 69
Murphy, J. P., 378, 393
Murphy, M. R., 706, 742
Murphy, R., 40
Mutch, T. A., 482, 483, 484
Myer, F. C., 206

N.

Nachtscheim, P. R., 533, 612
Nash, J. F., 841
Nathan, R. A., 331, 367
Nauta, W. J. H., 900
Nazar, K., 672
Neel, C. B., 419, 420, 481
Nelms, W. P., Jr., 38, 40, 80, 81, 82, 858
Nelson, E. R., 29, 31
Nelson, G., 406
Nelson, H. G., 537, 579, 613, 614, 615, 626
Neuman, F., 141, 202, 203
Neuner, G. J., 555
Nicholls, R. W., 570
Niederberger, W., 789
Nier, A. O., 485
Niijima, A., 743
Nisbet, J. W., 1
Nishida, R. S., 873
Nissenbaum, A., 779
Nixon, D., 534
Noerdlinger, P. D., 486
Noji, H. S., 886
Norris, R. S., 906
Nummedal, D., 482
Nunamaker, R. S., 401
Nylen, W. E., 170

O.
Oberbeck, V., 430
Oberbeck, V. R., 405, 487
O'Brien, W. J., 259, 260, 261
Okrusch, M., 488
Okuno, A. F., 630
Olson, L. E., 204
Olzak, L. A., 714
Oischak, M., 723
Orloff, K. L., 109, 139, 187, 205, 206
Ormiston, R. A., 834, 842, 847, 850, 851, 855
Orne, D., 682, 692
Oro, J., 819
Otten, L. J., III, 87, 88, 616
Oyama, J., 660, 661, 673, 683
Oyama, V. I., 652, 653, 693

P.

Page, W., 312
Page, W. A., 580
Palladino, J., 906
Palmer, E., 744, 745
Palmer, E. A., 746
Park, C., 607, 617, 618, 619, 620, 899
Park, K. E., 179
Parkin, C. W., 412, 454
Parkin, L., 710
Parra, G. T., 826
Patel, R., 222

Patel, R. V., 207, 208, 872
Paterson, J. A., 46
Patterson, W., 484
Patterson, W. R., 483
Pelzmann, R. F., Jr., 386
Peppler, W., 679
Perkin, B. R., 41
Perkins, R. G., Jr., 293
Perkins, S. C., Jr., 553
Peters, D. A., 855
Peterson, E., 787
Petrosian, V., 451
Pettibone, D., 444
Pettibone, D. W., 476
Pettit, J., 744, 745
Philippe, J. J., 843
Phillips, J. R., 206
Piazza, J. E., 113
Pieri, D. C., 484
Pittman, R. B., 376
Pitts, W., 535
Platzman, L. K., 209
Polhemus, J. T., 659
Polkowski, G., 406, 408
Pollack, J., 459
Pollack, J. B., 431, 440, 466, 467, 468, 482, 483, 484, 489, 490, 491, 492, 493, 510, 511, 515
Pollack, G., 776
Pollock, G. E., 912
Ponnamperuma, C., 798
Pope, J. M., 226
Poppa, H., 563, 581, 592, 608, 621, 622
Poppoff, I. G., 494
Pound, G. M., 592
Powell, J. D., 166, 722, 725
Prasad, S. S., 442, 494
Presley, L. L., 859
Price, J. O., 324
Pritchard, H. O., 520
Putnam, D. F., 724
Putnam, R. E., 83
Putnam, T. W., 146, 210
Putnam, W. F., 838
Pyle, R. S., 55
Q:
Quaide, W., 406
Quaide, W. L., 296, 408, 496
Quattrone, P. D., 749
Quigley, H. C., 235, 293
Radford, R. C., 167
Radmer, R., 765
Rafter, R. T., 885
Ragent, B., 664
Rakich, J. V., 623, 637, 638
Ramani, S. V., 536, 624
Rambaut, P. C., 693
Randle, R. J., 713, 714, 737
Rao, D. B., 537, 625, 626
Rasmussen, D., 807, 916
Ream, A. K., 820
Reeves, P. M., 168
Reginato, R. J., 497
Reiber, J. H. C., 658, 903
Reilly, T. J., 667
Reinisch, R. F., 522
Reller, J. O., Jr., 418, 419, 420, 421
Renselaer, D. J., 873
Renthal, R., 784, 794
Reynolds, R. T., 405, 443, 458
Rhee, S. K., 321
Rich, A., 652, 653
Riedesel, M. L., 747
RiegeI, C. A., 435, 436
Rindi, A., 5
Rizzi, A., 627, 629
Rizzi, A. W., 600, 628
Rizzi, P., 74
Roberts, L., 18, 19, 20
Robinson, A. B., 684
Rochelle, R. W., 879, 880
Rockwell, D. A., 685
Roebelem, G. J., Jr., 909, 910
Rogers, J. R., 106
Rolls, L. S., 232, 233, 293
Rom, J., 76
Roscoe, S. N., 714
Rose, W. C., 72, 84, 85, 92, 860
Rosenberg, M. L., 337
Rosenblatt, L. S., 694
Rositano, S., 811
Rositano, S. A., 671, 688, 757, 821
Rosser, R. W., 316, 322
Rossow, W. J., 110, 183, 211
Rothschild, P., 710
Rouch, L., 298
Rowland, C. W., 484
Rubasin, M. W., 538, 630
Ruffell-Smith, H. P., 704, 711
<table>
<thead>
<tr>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seginer, A.</td>
<td>76, 91, 92</td>
</tr>
<tr>
<td>Seiff, A.</td>
<td>296, 485, 501, 502</td>
</tr>
<tr>
<td>Severs, W. B.</td>
<td>665</td>
</tr>
<tr>
<td>Shade, H.</td>
<td>406</td>
</tr>
<tr>
<td>Shain, W. M.</td>
<td>281</td>
</tr>
<tr>
<td>Shankar, V.</td>
<td>590, 591</td>
</tr>
<tr>
<td>Shapira, J.</td>
<td>750</td>
</tr>
<tr>
<td>Sharbaugh, L. F.</td>
<td>561</td>
</tr>
<tr>
<td>Sharpe, D. L.</td>
<td>842</td>
</tr>
<tr>
<td>She, C. Y.</td>
<td>540</td>
</tr>
<tr>
<td>Sheets, A.</td>
<td>684</td>
</tr>
<tr>
<td>Shigemoto, J. M.</td>
<td>475</td>
</tr>
<tr>
<td>Shimazaki, T.</td>
<td>503, 504</td>
</tr>
<tr>
<td>Shimizu, M.</td>
<td>504</td>
</tr>
<tr>
<td>Shumar, J. W.</td>
<td>725</td>
</tr>
<tr>
<td>Shumpert, P.</td>
<td>51</td>
</tr>
<tr>
<td>Siljak, D. D.</td>
<td>214, 215, 216, 217, 218, 219</td>
</tr>
<tr>
<td>Silverberg, G. D.</td>
<td>820</td>
</tr>
<tr>
<td>Silverman, B.</td>
<td>328</td>
</tr>
<tr>
<td>Simmonds, R. C.</td>
<td>762</td>
</tr>
<tr>
<td>Simpson, C. A.</td>
<td>707, 715, 717</td>
</tr>
<tr>
<td>Simpson, J. P.</td>
<td>422</td>
</tr>
<tr>
<td>Singleton, R. Jr.</td>
<td>796</td>
</tr>
<tr>
<td>Siracuse, R. J.</td>
<td>167</td>
</tr>
<tr>
<td>Sites, M. J.</td>
<td>313</td>
</tr>
<tr>
<td>Slapnicar, P. I.</td>
<td>574</td>
</tr>
<tr>
<td>Slattengren, C. L.</td>
<td>358</td>
</tr>
<tr>
<td>Smeltzer, D. B.</td>
<td>93, 94</td>
</tr>
<tr>
<td>Smith, A. R.</td>
<td>5</td>
</tr>
<tr>
<td>Smith, C. L.</td>
<td>288</td>
</tr>
<tr>
<td>Smith, D. W.</td>
<td>116, 141</td>
</tr>
<tr>
<td>Smith, E. J.</td>
<td>505</td>
</tr>
<tr>
<td>Smith, J. A.</td>
<td>541</td>
</tr>
<tr>
<td>Smith, J. K.</td>
<td>720</td>
</tr>
<tr>
<td>Smith, J. R.</td>
<td>462</td>
</tr>
<tr>
<td>Smith, M.</td>
<td>644</td>
</tr>
<tr>
<td>Smith, M. R.</td>
<td>291</td>
</tr>
<tr>
<td>Smith, R. C.</td>
<td>43</td>
</tr>
<tr>
<td>Smith, W.</td>
<td>664</td>
</tr>
<tr>
<td>Smith, Z. K.</td>
<td>452</td>
</tr>
<tr>
<td>Smouse, K. Y.</td>
<td>343, 350</td>
</tr>
<tr>
<td>Snetsinger, K.</td>
<td>406</td>
</tr>
<tr>
<td>Snetsinger, K. C.</td>
<td>506</td>
</tr>
<tr>
<td>Snyder, C. T.</td>
<td>142</td>
</tr>
<tr>
<td>Sobocińska, J.</td>
<td>689</td>
</tr>
<tr>
<td>Sodeman, P. T.</td>
<td>143</td>
</tr>
<tr>
<td>Solis, A. N.</td>
<td>344</td>
</tr>
<tr>
<td>Sorensen, N. E.</td>
<td>44, 93, 94</td>
</tr>
<tr>
<td>Sorensen, J.</td>
<td>151</td>
</tr>
<tr>
<td>Souza, K. A.</td>
<td>774, 780, 790, 913</td>
</tr>
<tr>
<td>Spahr, J. R.</td>
<td>402</td>
</tr>
<tr>
<td>Spencer, N. W.</td>
<td>485</td>
</tr>
<tr>
<td>Spitze, L. A.</td>
<td>730</td>
</tr>
<tr>
<td>Spudis, P.</td>
<td>423</td>
</tr>
</tbody>
</table>
Sridhar, B., 222
Srinivasan, G., 541
Srinivasan, T. M., 670
Stallcop, J. R., 565
Stanford, T. B., 331
Starr, W. L., 507
Steiger, J. L., 633
Steinle, F., Jr., 39
Stemolfs, R. S., 452
Stephen Sherwood, F., 819
Stephens, L. D., 5
Stevens, K. G., Jr., 598
Stevenson, J. E., 711
Stewart, D. A., 634
Stinnett, G. W., Jr., 140, 213
Stoeckenius, W., 771, 789
Stone, H. L., 668, 690
Straat, P. A., 652
Strecker, D. W., 462, 509
Strelmel, R. W., 691
Strout, F. G., 172, 173, 220
Stull, M. A., 797
Sudderth, R. W., 144
Summerfield, J. R., 282
Summers, A., 431, 489, 492
Summers, A. L., 458
Summers, J. L., 43
Sumison, H. T., 635
Sun, C.-C., 57
Sundareshan, S. K., 215, 218
Sweeney, M. A., 798
Sweet, H. C., 762
Swift, C. D., 393
Swift, G., 51
Swisher, J. H., 579
Sword, A. J., 907, 908
Sykora, R. G., 55

T.

Tajima, Y., 328
Taki, S., 636
Tan, A., 508
Tan, M. K., 728
Tannehill, J. C., 637, 638
Tashker, M., 869
Tauber, M. E., 45, 46, 95
Taylor, G. R., 483, 484
Taylor, R. B., 58
Teneketzis, D., 221
Thomas, N. L., 395, 398
Thomas, R. H., 5
Thompson, G. A., 692
Thompson, R. I., 424, 509
Tickner, E. G., 754, 755
Till, R. D., 167
Tindle, E., 303, 612
Tobak, M., 542
Toda, M., 145, 222
Todd, G., 556
Tomandl, D., 407, 437
Tomlin, K. N., 51
Tomlinson, G. A., 799
Toon, O. B., 431, 489, 492, 510, 511, 890
Torbett, A., 309, 310
Toridis, T. G., 670
Toste, A. P., 798
Traybar, J. J., 921
Treffers, R. R., 512
Tremor, J. W., 764
Trenka, A. R., 925
Tsang, T., 569
Tsug&., S., 557, 639
Tucker, R. B., 484
Turner, R. L., 53
Tustin, E., 364
Tustin, E. A., 324

V.
Valdez, J., 34
Valero, F. P. J., 445, 896
Vallee, J., 14, 15
Vallotton, W. C., 809, 810, 827
Van Abkoude, J. C., 279, 283
Van Allen, J. A., 401
Van Camp, W., 431, 489, 492, 493
Vanderplaats, G. N., 47, 48, 69, 96, 97, 98, 99
Van Derveer, D., 656, 657
Van Horn, H. M., 453
Van Kuren, J. T., 616
Vann, L. S., 750
Vaughn, D., 171
Vause, C. R., 853, 854
Vedder, J. F., 497, 513, 514
Vernikos-Danellis, J., 662, 677, 693, 694
Vetter, H. C., 546, 547, 548, 549
Viegas, J. R., 604
Viezee, W., 892, 893, 894
Vijaya Shankar, V. S., 543
Vinokur, M., 558
Vistnes, L., 664
Viswanath, Y., 563
Vukcević, M. B., 214, 216, 217
Vykukal, H. C., 759, 760, 761, 905

W.

Walker, J. D. A., 573
Wall, S. D., 484
Wanous, D. J., 383
Warming, R. F., 564, 640
Warner, D. N., Jr., 116
Warnock, W., 51
Wasserman, R., 167
Waters, M. H., 230, 288
Watson, D. L. M., 116
Watson, D. M., 141
Watson, E. C., 25
Watson, V. R., 435, 436
Webbon, B. W., 761
Webster, L. D., 271
Wehrend, W. R., 862
Weinhold, F., 578
Welch, G., 738
Welles, C. G., 5
Wempe, T., 710
Wenzel, A. R., 100
West, M. W., 800
Westbrook, R. M., 821
Wharton, H. E., 244, 245
Wheat, L. W., 194
White, E., 459
White, B. R., 466, 515
White, K. C., 146, 210
White, K. P., III, 887
Whiting, E. E., 561
Whitten, R. C., 435, 436, 442, 476, 494, 503, 516, 895
Whittley, D. C., 237
Widdison, C. A., 254
Wilby, J. F., 185, 186
Wilcox, D. C., 559
Wilhelms, D. E., 411
Wilkin, C. A., 873
Williams, B. A., 697, 741, 747, 748, 754, 755, 761, 817, 818
Williams, D., 641
Williams, D. H., 716, 717
Williams, D. P., 536, 624
Williams, L. J., 288, 294
Williams, W. J., 866
Williamson, R. B., 363

-160-
Willis, J. M., 848
Willsky, A. S., 198, 223
Wilson, J. B., 879, 880
Wilson, R. L., 123
Wilson, T., 14
Winget, C., 14
Winget, C. M., 666, 669, 685, 693, 694, 695
Wingrove, R. C., 147
Winovich, W., 572
Wintz, P. A., 879, 880
Wirth, M. N., 403
Witteborn, F. C., 509, 517, 518
Wolf, M. R., 452, 484
Wolfe, J. H., 400, 457, 465, 477, 498, 505, 515, 519
Wong, P. K., 224
Wood, P. C., 730
Woodward, H. T., 436
Wright, J. P., 396
Wydeven, T., 730, 751, 758
Wydeven, T. L., 734

Y.

Yager, T. J., 323
Yang, S. H., 667
Yasuda, Y., 474
Yearwood-Drayton, V., 783
Yin, L. I., 569
Yin, S. K., 839, 924
Yoshikawa, K. K., 544
Young, D. R., 682, 692, 696
Young, L. S., 397, 517, 518
Young, R. E., 296, 443, 499
Young, R. M., 187
Young, R. S., 654
Young, W., 368
Yu, Y. H., 225
Yuen, G. U., 778

Z.

Zeitman, B., 914
Ziemba, A., 672
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Government Accession No</td>
<td></td>
</tr>
<tr>
<td>3. Recipient's Catalog No</td>
<td></td>
</tr>
<tr>
<td>4. Title and Subtitle</td>
<td>AMES RESEARCH CENTER PUBLICATIONS - 1976</td>
</tr>
<tr>
<td>5. Report Date</td>
<td></td>
</tr>
<tr>
<td>6. Performing Organization Code</td>
<td></td>
</tr>
<tr>
<td>7. Author(s)</td>
<td></td>
</tr>
<tr>
<td>9. Performing Organization Name and Address</td>
<td>Ames Research Center, NASA Moffett Field, California 94035</td>
</tr>
<tr>
<td>10. Work Unit No.</td>
<td>992-23-10-90-01</td>
</tr>
<tr>
<td>11. Contract or Grant No.</td>
<td></td>
</tr>
<tr>
<td>12. Sponsoring Agency Name and Address</td>
<td>National Aeronautics and Space Administration Washington, D.C. 20546</td>
</tr>
<tr>
<td>13. Type of Report and Period Covered</td>
<td>Technical Memorandum</td>
</tr>
<tr>
<td>15. Supplementary Notes</td>
<td></td>
</tr>
<tr>
<td>17. Key Words (Suggested by Author(s))</td>
<td>Bibliographies NASA programs Research projects</td>
</tr>
<tr>
<td>18. Distribution Statement</td>
<td>Unlimited</td>
</tr>
<tr>
<td>19. Security Classif. (of this report)</td>
<td>Unclassified</td>
</tr>
<tr>
<td>20. Security Classif. (of this page)</td>
<td>Unclassified</td>
</tr>
<tr>
<td>21. No of Pages</td>
<td>167</td>
</tr>
<tr>
<td>22. Price*</td>
<td>$6.75</td>
</tr>
</tbody>
</table>

*For sale by the National Technical Information Service, Springfield, Virginia 22161